

# Kansas Board of Regents Mandatory Retirement Plan

Retirement Plan Committee Meeting  
Fall 2020



Prepared as of June 30, 2020



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## **Market Overview**

### Overview

The second quarter of 2020 can be characterized by renewed optimism following the sharp decline in March. Capital markets posted strong returns for the quarter despite rising coronavirus cases, high unemployment rates, negative GDP growth and reduced consumer activity. This may seem counterintuitive, but investors discounted the current weak economic environment with the opportunity for a strong recovery with fiscal and monetary stimulus.

### Fixed Income Markets

The U.S. Treasury yield curve remained mostly unchanged as the Federal Reserve maintained short-term rates at the range of 0.00%-0.25%. Rates between 2-10 years declined slightly, while 30+ year yields inched higher. The Federal Reserve corporate bond purchasing program curbed some investor concerns over widespread defaults, causing investment grade spreads to narrow. High yield bonds also fared well despite some lingering solvency concerns, particularly from brick-and-mortar retail and oil-related industries.

### Domestic Equity Markets

The S&P 500 increased +20% for the quarter, which is the strongest quarter return since 1998. Year-to-date returns for the index are negative at -3%. However, market cap weighted indices can be a deceiving indicator of stock market strength because of the heavier weighting by the largest companies. While companies like Microsoft, Amazon, Apple and Alphabet have fared relatively well, the average year-to-date return of the S&P 500 constituents is -13%. Small cap stocks continue to face challenges as over half of the Russell 2000 constituents have year-to-date declines in excess of 20%.

The technology sector continued its rally as investors migrated toward firms that benefit from the shift in consumption and business habits. The consumer discretionary and energy sectors also performed well in the quarter, following some of the weakest sector performance in the first quarter. Technology and consumer discretionary sectors are the only two broad sectors with positive returns year-to-date. Despite the strong 2<sup>nd</sup> quarter, energy remains the biggest laggard year-to-date declining over 35%.

Equity valuations substantially increased during the quarter. The forward P/E of the S&P 500 increased from 16.7 last quarter to 21.7 at the end of June. This jump in P/E is attributed to a rapid recovery of stock prices coupled with a decline in forward earnings estimates in the remainder of 2020. While P/E ratios are above the 25-year average, the stock market earnings yield looks attractive relative to investment-grade corporate fixed income yields.

### International Equity Markets

Similar to the U.S. stock market, international equities rallied after a considerable first quarter sell off. Economies closely tied to natural resources and commodities such as Canada, Brazil, and South Africa, fared well for the quarter, although remain depressed over the past year. Many southeast Asian economies also fared well due to their export-heavy and technology- focused economies. These markets include China, Korea, and Taiwan.

At the end of the quarter, the forward P/E for the MSCI All-Country World ex USA index was 16.7, which is higher than the 20-year average of 13.5, but well below the forward P/E of the S&P 500.

A weakening U.S. Dollar had a +2.2% positive effect on performance for U.S. based investors for the quarter, which is a reversal from the multi-year trend of U.S. Dollar strength.

Like the U.S. markets, growth stocks outperformed value stocks across all market capitalizations with similar underperformance from value-oriented sectors like utilities, staples and financials.

As of June 30, U.S. stocks represent 58% of the global economy by market capitalization while developed Europe (including the U.K.) represent 17%, Japan represents 7%, Canada represents 3% and emerging markets represent 12%. China accounts for 5% of total global market capitalization.

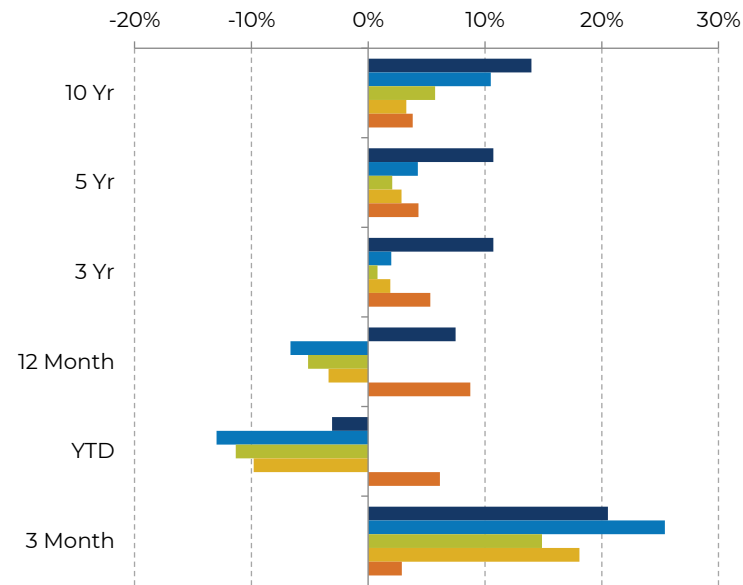
### Economic Overview

The first quarter GDP figures showed an economic contraction of 5.0%. This contraction includes the initial effect of social distancing but not the extensive stay-at-home orders that occurred in April and May, which will be reflected in the second quarter GDP figures. As of July 14, 2<sup>nd</sup> quarter 2020 U.S. GDP is forecasted to decline 35%.

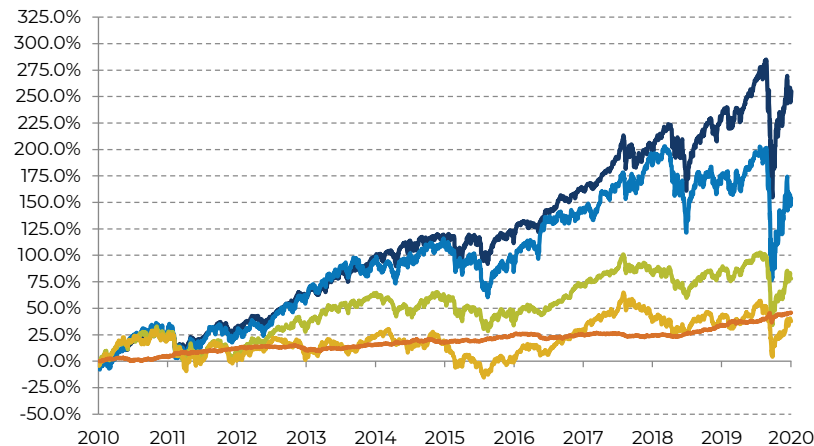
Labor markets experienced extreme dislocation as much of the service industry across the country shut down resulting in a sharp increase in jobless claims. The June 30<sup>th</sup> unemployment rate was 11%, which is an improvement from 15% peak in April. Large dispersions in employment surfaced between education levels as the hardest hit sectors such as hospitality and retail sectors employ fewer individuals with advanced degrees. As of June 30<sup>th</sup>, the unemployment rate for those without a high school diploma was 17%, while those with a bachelor's degree was merely 7%.

The global shutdown put a halt on global production drastically reducing demand for natural resources and commodities. Headline inflation rose a mere 0.6% over the past year and remained below the long-term average of 3.9%. Energy prices notably declined 12.6% over the past year following the sharp decline in oil prices during the quarter. Price declines were also evident in consumer-related goods like used vehicles, apparel and transportation services.

Business activity and manufacturing indexes rebounded to levels above 50 in June, following steep declines in April and May. Consumer confidence also rebounded but remains well-below the levels prior to the pandemic.



|                 | 3 Month | YTD    | 12 Month | 3 Yr  | 5 Yr  | 10 Yr |
|-----------------|---------|--------|----------|-------|-------|-------|
| US Large Stocks | 20.5%   | -3.1%  | 7.5%     | 10.7% | 10.7% | 14.0% |
| US Small Stocks | 25.4%   | -13.0% | -6.7%    | 2.0%  | 4.3%  | 10.5% |
| Intl Developed  | 14.9%   | -11.3% | -5.1%    | 0.8%  | 2.1%  | 5.7%  |
| Intl Emerging   | 18.1%   | -9.8%  | -3.4%    | 1.9%  | 2.9%  | 3.3%  |
| Bonds           | 2.9%    | 6.1%   | 8.7%     | 5.3%  | 4.3%  | 3.8%  |



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



# Fixed Income Markets Summary

Second Quarter 2020

Data Source: Bloomberg

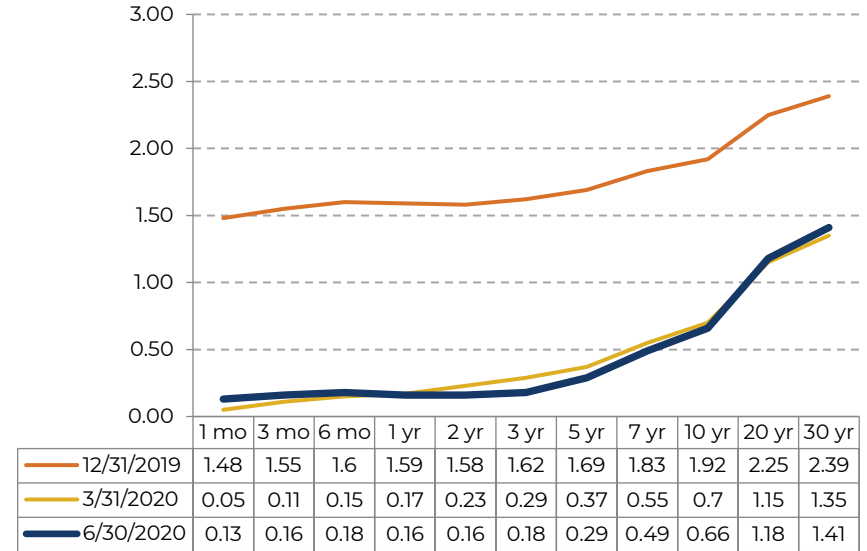
## Broad Fixed Income Sectors

|                      | Qtr   | 1 Year | 3 Year | 5 Year | 10 Year |
|----------------------|-------|--------|--------|--------|---------|
| Aggregate Bond Index | 2.9   | 8.7    | 5.3    | 4.3    | 3.8     |
| Government           | 0.5   | 10.3   | 5.5    | 4.0    | 3.3     |
| Mortgage-Backed      | 0.7   | 5.7    | 4.0    | 3.2    | 3.1     |
| Corporate            | 8.2   | 9.1    | 6.1    | 5.5    | 5.2     |
| High Yield Corporate | 10.2  | 0.0    | 3.3    | 4.8    | 6.7     |
| Global ex US         | 3.4   | 0.7    | 2.5    | 2.9    | 2.0     |
| EM Debt              | 10.0  | 3.0    | 4.2    | 5.2    | 6.0     |
| TIPS                 | 4.2   | 8.3    | 5.0    | 3.7    | 3.5     |
| Municipal            | 3.3   | 4.3    | 3.7    | 3.5    | 3.8     |
| Inflation            | (0.8) | 0.1    | 1.6    | 1.5    | 1.6     |

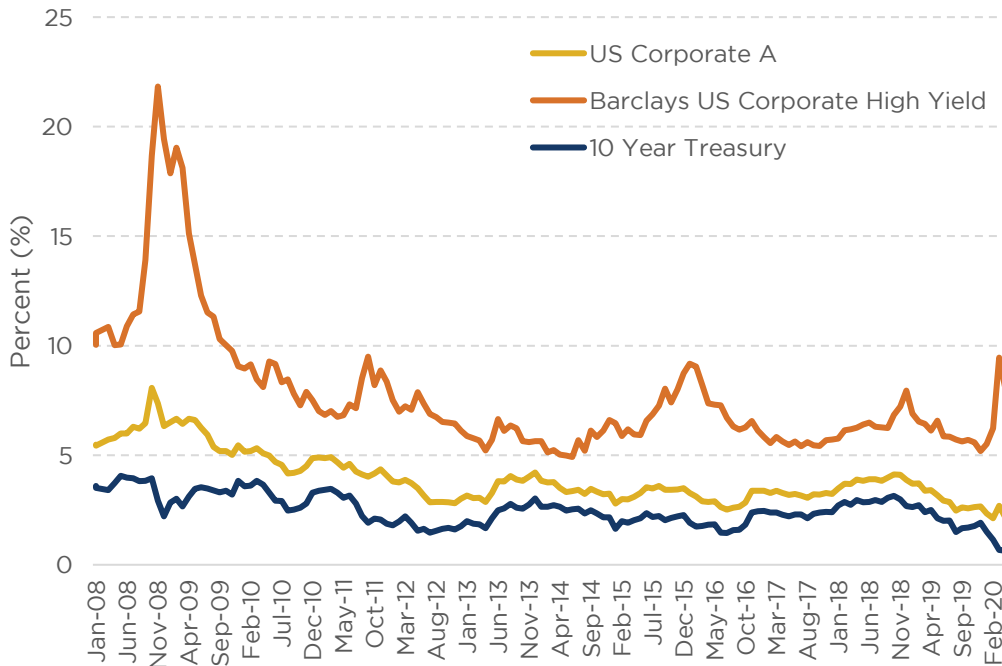
## Maturity

|                        | Qtr | 1 Year | 3 Year | 5 Year | 10 Year |
|------------------------|-----|--------|--------|--------|---------|
| 1-3 Year US Aggregate  | 0.9 | 4.0    | 2.8    | 2.1    | 1.6     |
| 3-5 Year US Aggregate  | 1.8 | 6.5    | 4.1    | 3.2    | 3.0     |
| 5-7 Year US Aggregate  | 3.7 | 8.6    | 5.1    | 4.0    | 3.8     |
| 7-10 Year US Aggregate | 5.7 | 10.9   | 6.3    | 5.0    | 4.8     |
| 10+ Year US Aggregate  | 6.2 | 18.9   | 10.4   | 9.0    | 7.6     |

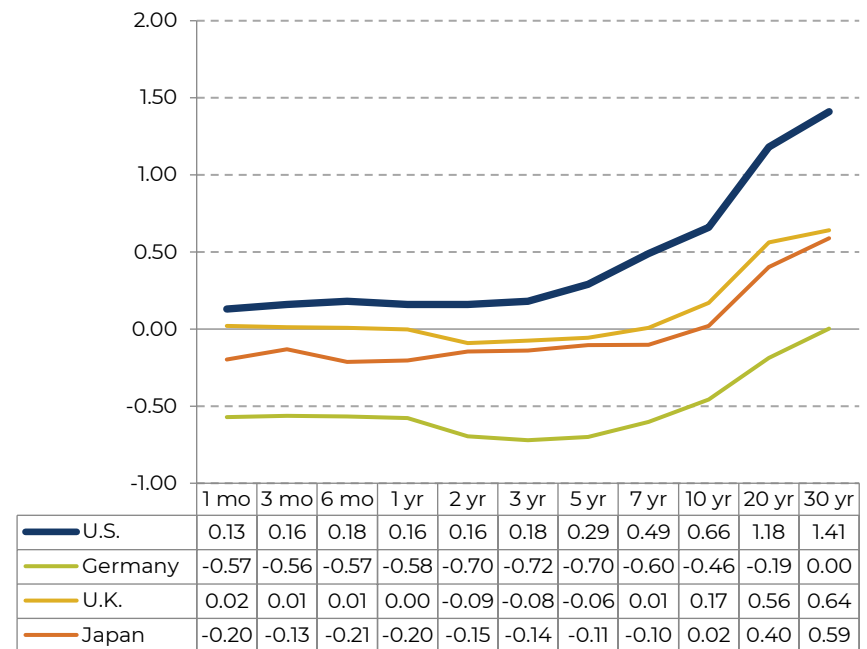
## US Treasury Yield Curve



## Historical Yields



## Global Yield Curve





# Domestic Capital Markets Summary

Second Quarter 2020

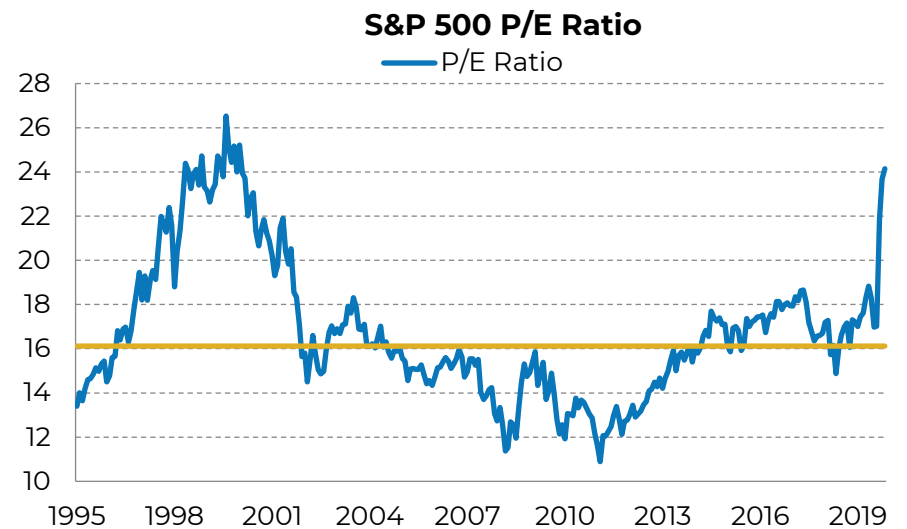
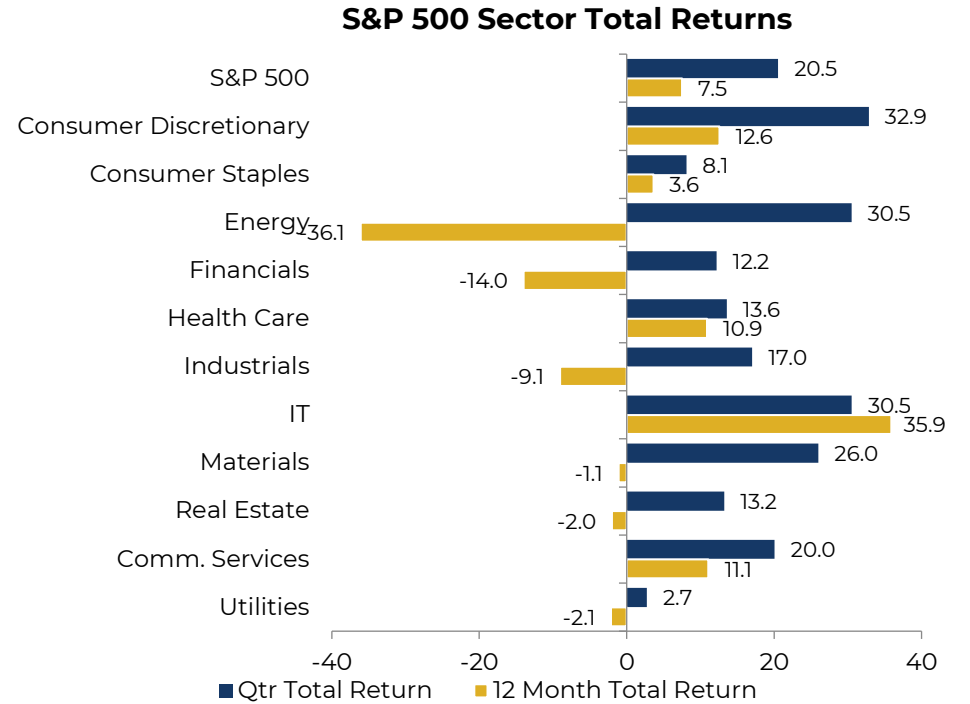
Data Source: Bloomberg

| Quarter | Value |       |        | Blend  |        |        | Growth |        |        |
|---------|-------|-------|--------|--------|--------|--------|--------|--------|--------|
|         | Value | Blend | Growth | Value  | Blend  | Growth | Value  | Blend  | Growth |
| Large   | 14.3  | 21.8  | 27.8   | (16.3) | (2.8)  | 9.8    | (16.3) | (2.8)  | 9.8    |
| Mid     | 19.9  | 24.6  | 30.3   | (18.1) | (9.1)  | 4.2    | (18.1) | (9.1)  | 4.2    |
| Small   | 18.9  | 25.4  | 30.6   | (23.5) | (13.0) | (3.1)  | (23.5) | (13.0) | (3.1)  |

| 1 Yr  | Value  |       |        | Blend |       |        | Growth |       |        |
|-------|--------|-------|--------|-------|-------|--------|--------|-------|--------|
|       | Value  | Blend | Growth | Value | Blend | Growth | Value  | Blend | Growth |
| Large | (8.9)  | 7.5   | 23.3   | 1.8   | 10.6  | 19.0   | 1.8    | 10.6  | 19.0   |
| Mid   | (11.8) | (2.3) | 11.9   | (0.6) | 5.8   | 14.8   | (0.6)  | 5.8   | 14.8   |
| Small | (17.5) | (6.7) | 3.5    | (4.4) | 2.0   | 7.8    | (4.4)  | 2.0   | 7.8    |

| 5 Yrs | Value |       |        | Blend |       |        | Growth |       |        |
|-------|-------|-------|--------|-------|-------|--------|--------|-------|--------|
|       | Value | Blend | Growth | Value | Blend | Growth | Value  | Blend | Growth |
| Large | 4.6   | 10.5  | 15.9   | 10.4  | 14.0  | 17.2   | 10.4   | 14.0  | 17.2   |
| Mid   | 3.3   | 6.7   | 11.6   | 10.3  | 12.3  | 15.1   | 10.3   | 12.3  | 15.1   |
| Small | 1.2   | 4.3   | 6.8    | 7.8   | 10.5  | 12.9   | 7.8    | 10.5  | 12.9   |

Style box returns represented by Russell Indices



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



# International Capital Markets Summary

Second Quarter 2020

Data Source: Bloomberg

## Quarter

|       | Value | Blend | Growth |
|-------|-------|-------|--------|
| Large | 12.3  | 15.3  | 18.1   |
| Mid   | 15.5  | 19.9  | 22.6   |
| Small | 18.1  | 22.8  | 27.2   |

## YTD

|       | Value  | Blend  | Growth |
|-------|--------|--------|--------|
| Large | (19.1) | (10.6) | (1.5)  |
| Mid   | (20.8) | (12.6) | (6.9)  |
| Small | (19.8) | (12.8) | (5.8)  |

## 1 Yr

|       | Value  | Blend | Growth |
|-------|--------|-------|--------|
| Large | (15.2) | (4.6) | 7.1    |
| Mid   | (15.3) | (5.8) | 0.9    |
| Small | (12.0) | (4.3) | 3.3    |

## 3 Yrs

|       | Value | Blend | Growth |
|-------|-------|-------|--------|
| Large | (3.9) | 1.4   | 6.9    |
| Mid   | (4.3) | 0.2   | 3.2    |
| Small | (3.7) | (0.2) | 3.2    |

## 5 Yrs

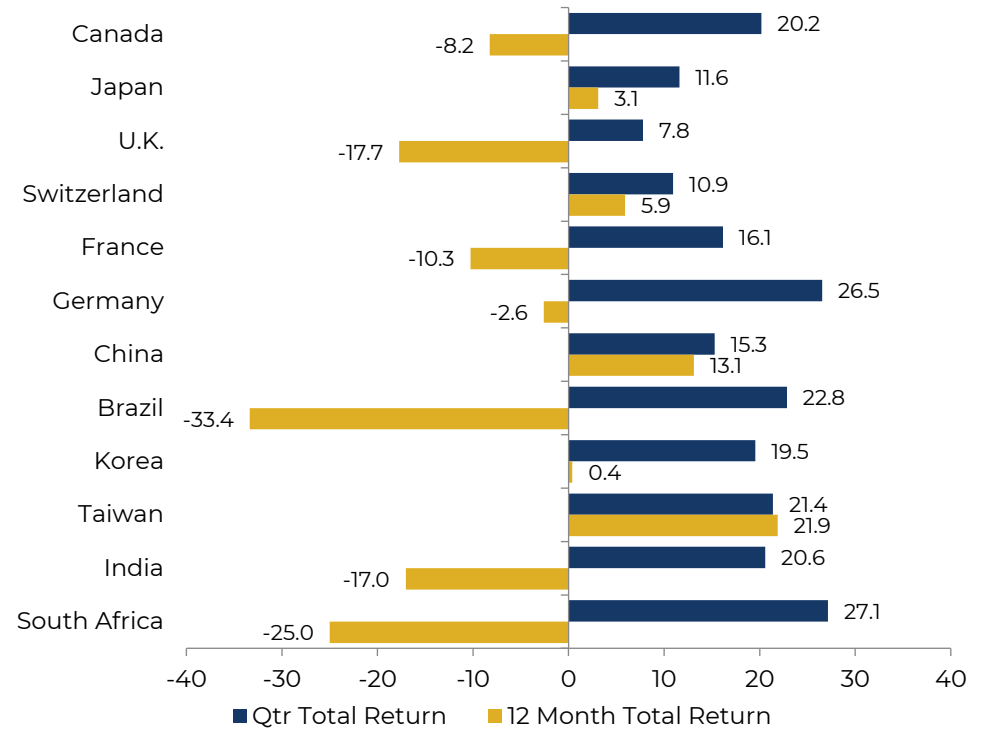
|       | Value | Blend | Growth |
|-------|-------|-------|--------|
| Large | (1.4) | 2.2   | 6.0    |
| Mid   | (0.7) | 2.3   | 4.3    |
| Small | 0.5   | 2.5   | 4.4    |

## 10 Yrs

|       | Value | Blend | Growth |
|-------|-------|-------|--------|
| Large | 2.6   | 4.9   | 7.2    |
| Mid   | 3.8   | 5.5   | 6.5    |
| Small | 4.8   | 6.0   | 7.2    |

Style box returns represented by MSCI ACWI ex USA Indices

## Total Return by Country (In US\$)

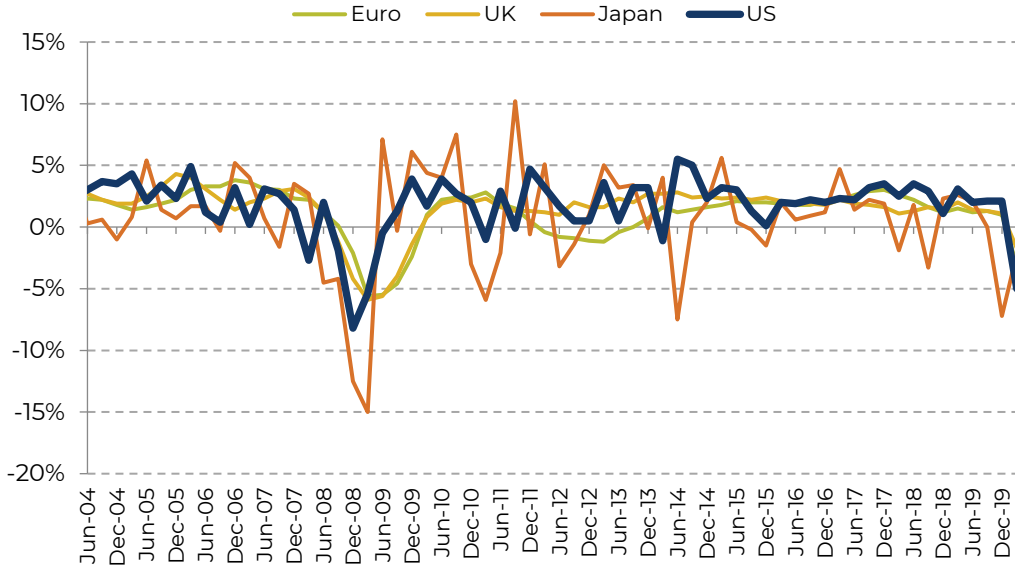


## Foreign Currency

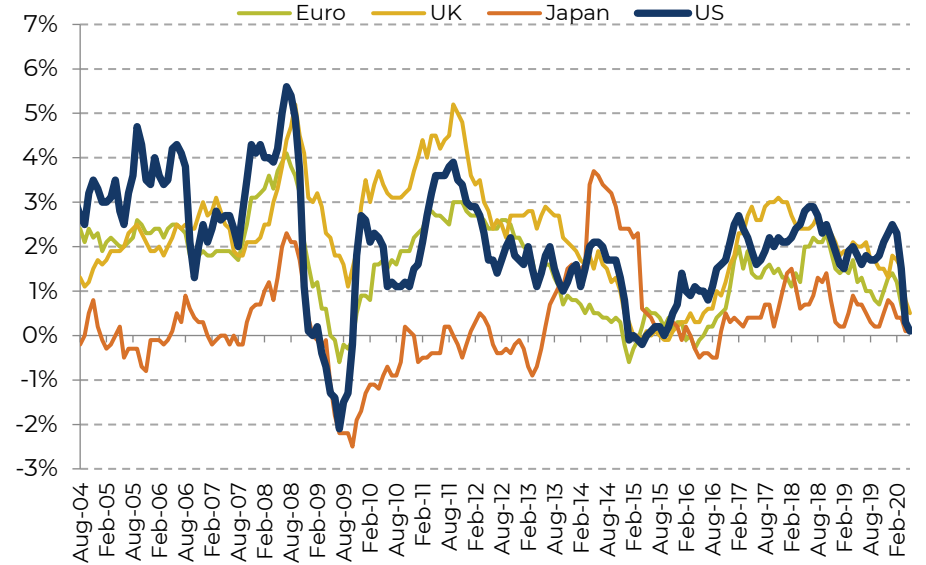
|                | Quarter      | 1 Year | 3 Year | 5 Year | 10 Year |      |
|----------------|--------------|--------|--------|--------|---------|------|
| <b>Baskets</b> | Global ex-US | 2.2    | -2.1   | -1.1   | -1.0    | -1.6 |
|                | EAFE         | 2.3    | -0.9   | -0.4   | -0.6    | -1.1 |
|                | Emerging     | 1.3    | -4.8   | -2.6   | -2.2    | -2.7 |
| <b>Majors</b>  | USD/JPY      | 0.4    | 0.1    | -1.3   | -2.5    | 2.0  |
|                | USD/EUR      | -1.8   | 1.2    | 0.6    | -0.2    | 0.9  |
|                | USD/GBP      | 0.1    | 2.4    | 1.7    | 4.8     | 1.9  |



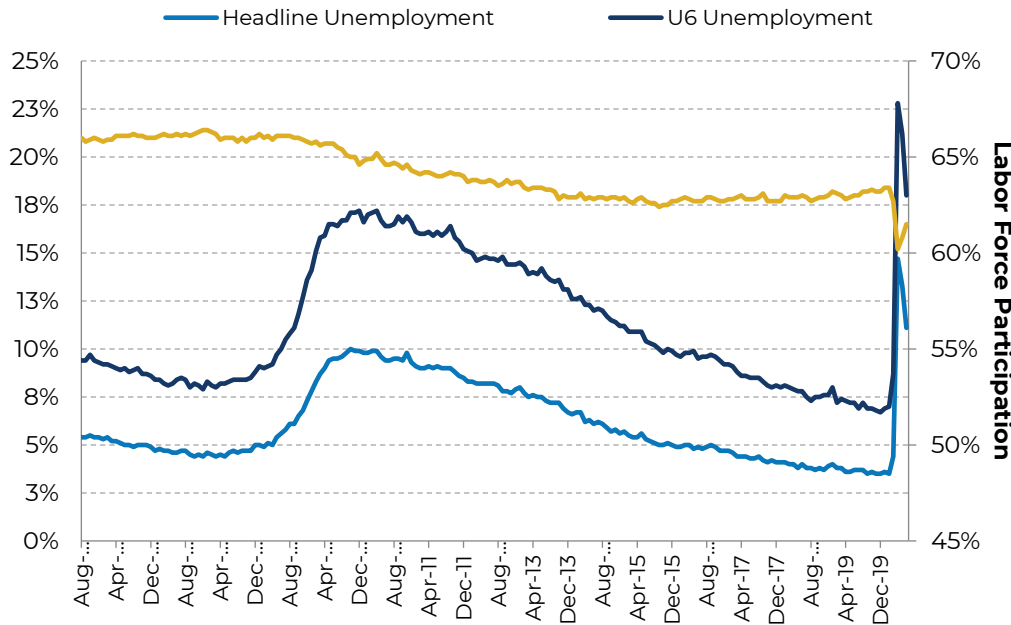
### Gross Domestic Product



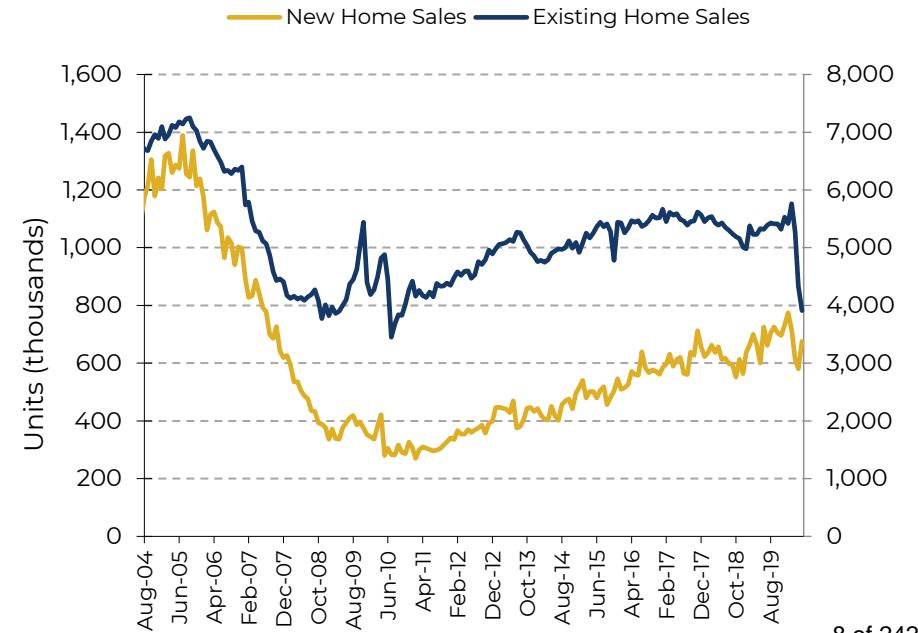
### Consumer Prices (Year over Year in Percent)



### Employment



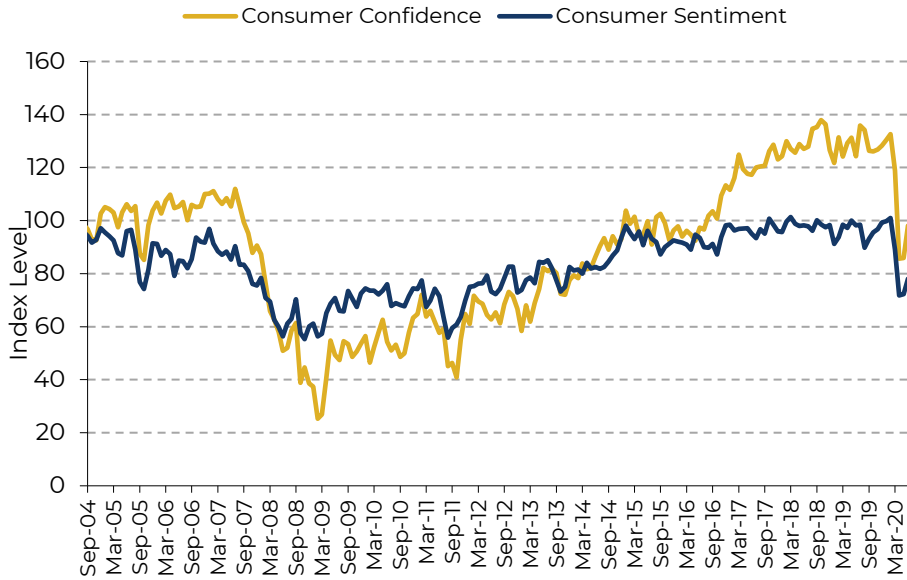
### New and Existing Home Sales



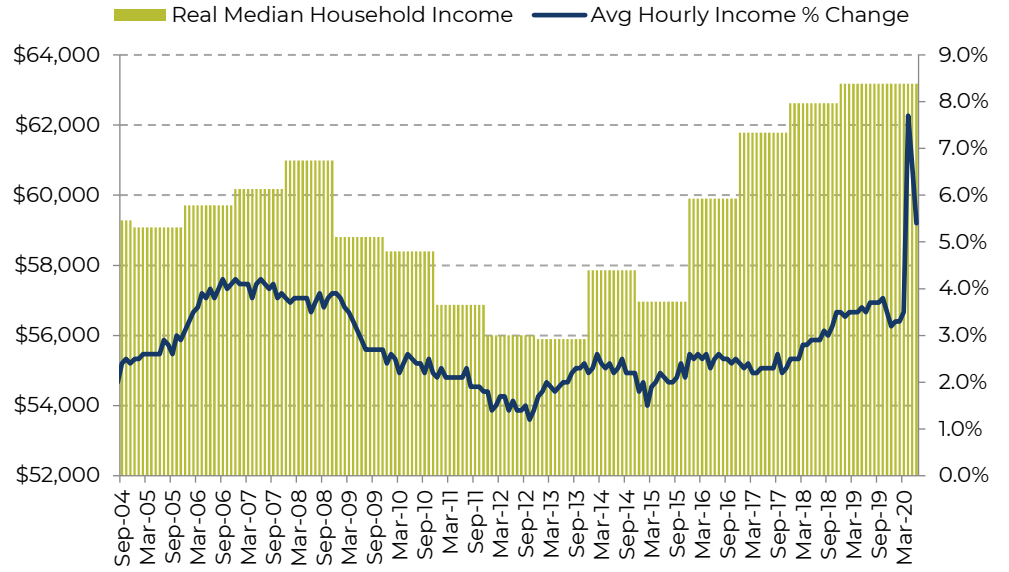




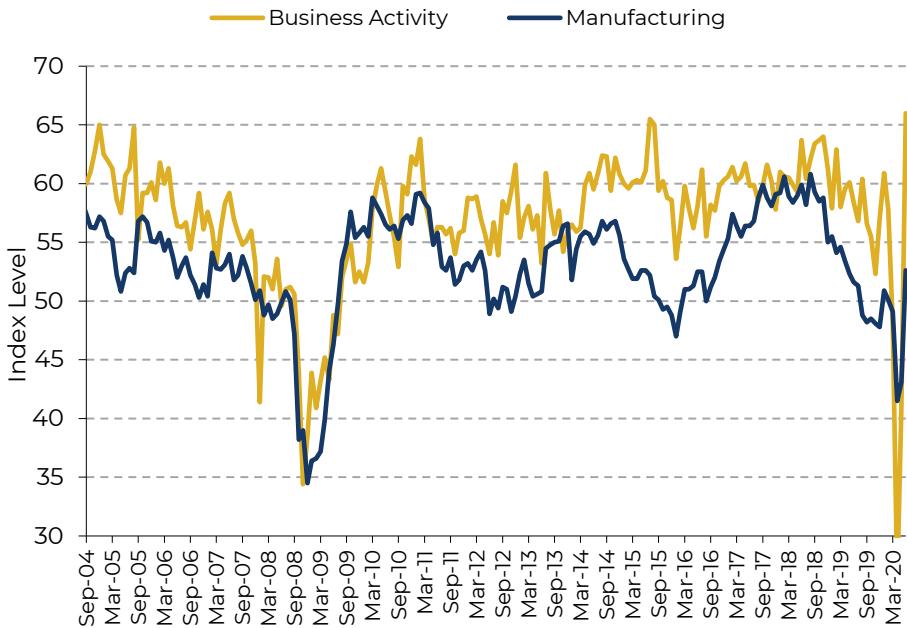
### Consumer Confidence



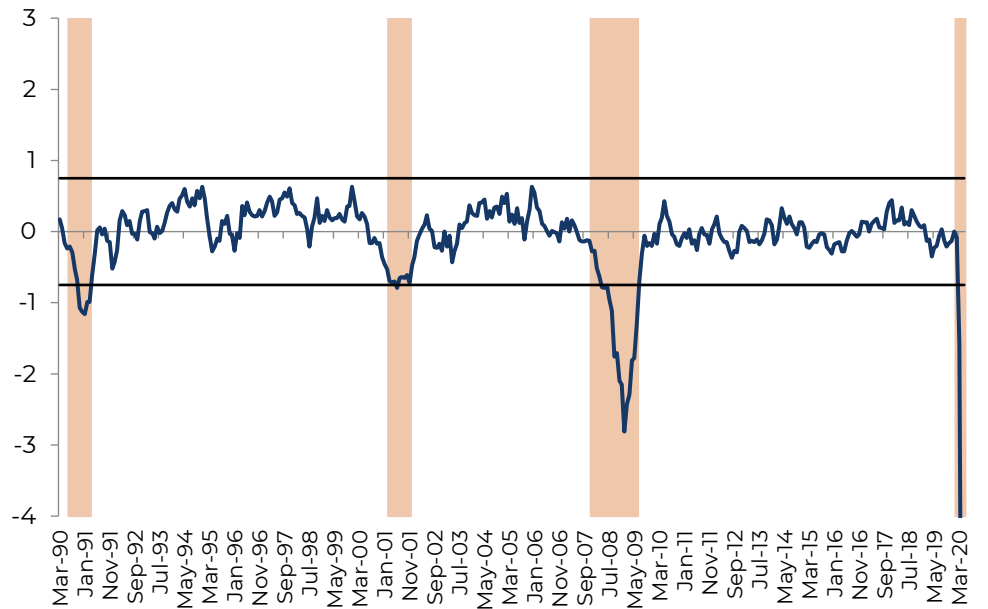
### Income and Wages



### ISM Business Activity & Manufacturing



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



# Asset Classes - Annual Returns

Data as of 6/30/2020.

| <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> | <u>YTD</u> |
|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| 5%          | 79%         | 27%         | 8%          | 18%         | 39%         | 14%         | 1%          | 21%         | 37%         | 2%          | 31%         | 6%         |
| 2%          | 58%         | 27%         | 4%          | 18%         | 34%         | 10%         | 1%          | 21%         | 25%         | 2%          | 26%         | 0%         |
| 0%          | 37%         | 19%         | 3%          | 17%         | 32%         | 6%          | 1%          | 17%         | 22%         | 0%          | 26%         | 0%         |
| -26%        | 32%         | 15%         | 2%          | 16%         | 23%         | 5%          | 0%          | 12%         | 16%         | -2%         | 22%         | -3%        |
| -34%        | 27%         | 15%         | 0%          | 16%         | 7%          | 2%          | -1%         | 11%         | 15%         | -4%         | 18%         | -5%        |
| -36%        | 26%         | 8%          | -2%         | 16%         | 2%          | 1%          | -2%         | 3%          | 7%          | -11%        | 14%         | -10%       |
| -37%        | 6%          | 7%          | -4%         | 4%          | 0%          | 0%          | -4%         | 2%          | 4%          | -11%        | 9%          | -11%       |
| -43%        | 3%          | 1%          | -12%        | 2%          | -2%         | -2%         | -5%         | 1%          | 2%          | -14%        | 2%          | -13%       |
| -53%        | 0%          | 0%          | -18%        | 0%          | -3%         | -5%         | -15%        | 0%          | 1%          | -15%        | 2%          | -13%       |

|                               |
|-------------------------------|
| <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

## Fall 2020 RPC Meeting

- **Outstanding Items from the Spring 2020 RPC Meeting**

Advanced Capital Group reviewed the six-month progress of the two funds currently on Watch. Both were placed on watch at the Spring 2019 RPC meeting and include:

- TIAA-CREF Large-Cap Value Institutional
- TIAA-CREF Mid-Cap Value Institutional

The Voya Small Cap Opportunities fund was replaced in the Voya lineup in July 2020 by the Loomis Sayles Small Cap Growth Fund. Additionally, the Fidelity Advisor International Small Cap was to the Voya platform to provide additional diversification to foreign small cap equity stocks.

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)**

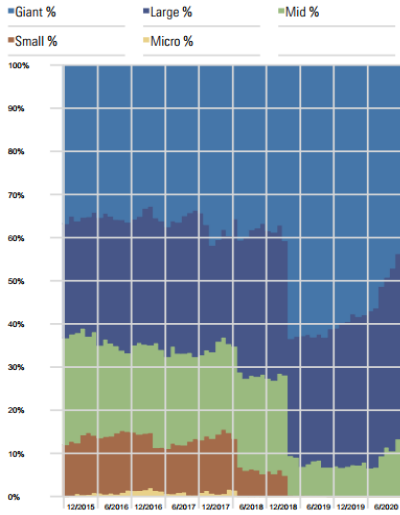
- Rationale for being placed on Watch at Spring 2019 RPC Meeting:

- 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.

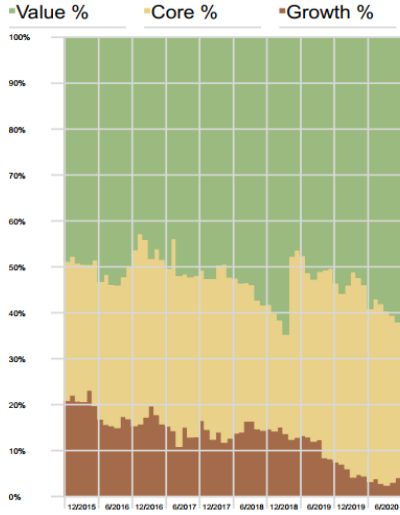
At the time he had been with TIAA for less than five years, however he had 23 years of equity investment industry experience.

- 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 Spring 2020 RPC Meeting (Plan assets in fund = \$48.9M or 1.5% of TIAA Assets and 2,404 participants)
  - As reported in the Spring 2020 meeting, 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. Charles 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.
  - This fund lagged peers and benchmark during a volatile first half of 2020. During the downturn of the first quarter driven by coronavirus fears, underperformance can be attributed to poorly performing stocks in financials and a 3% underweight to utilities, which were seen as a safe haven in the volatile market. As the market partially recovered in the second quarter, stock selection in health care and materials were the largest detractors from performance relative to the benchmark. Performance under Carr's tenure is in line with the benchmark as of 6.30.2020.
  - When Carr took over the fund, there were minor changes to the overall strategy. Non-U.S. stock exposure was lowered, and Carr implemented a "pragmatic value" strategy which is expected to invest in low-quality, deeper value names early in the business cycle and favor high-quality names later in the cycle. For the first full year of the current strategy, quality metrics beat the benchmark and peer group. Current quality characteristics for the fund, however, are in line with peers and benchmark, indicating that Carr is implementing some of the cyclical aspects of the strategy. The charts on the following page show various style and quality metrics of the fund over time.

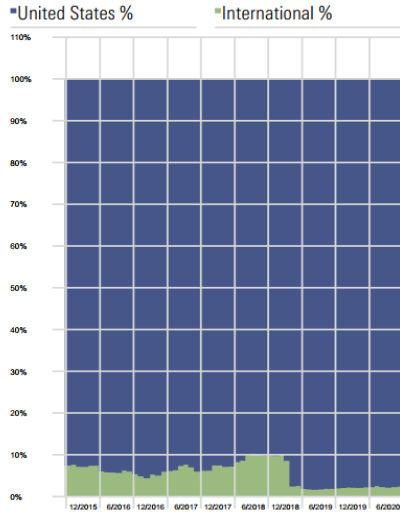
### Equity Market Capitalization



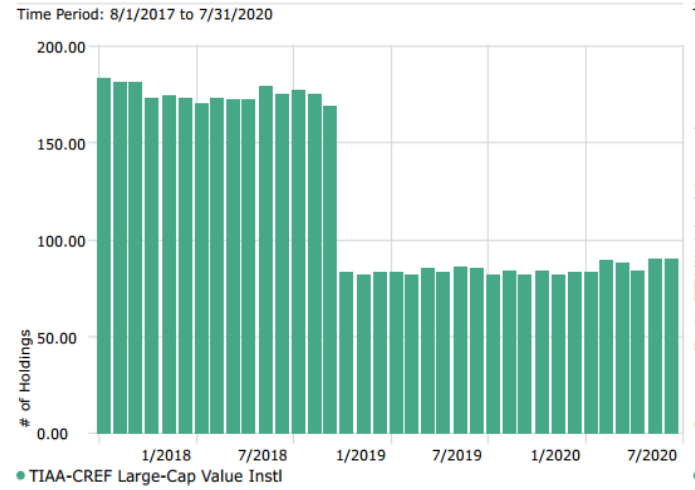
### Equity Style Valuation



### International Exposure

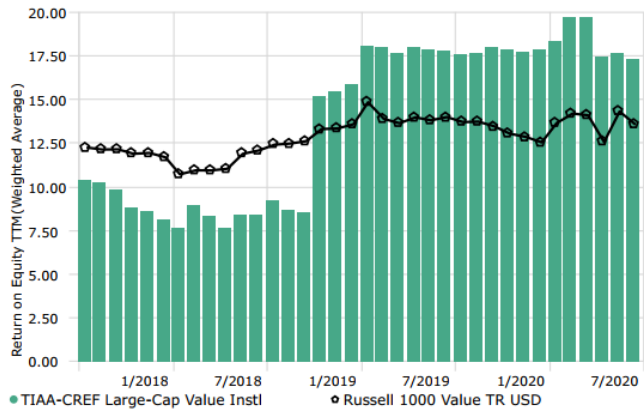


### Number of Portfolio Holdings



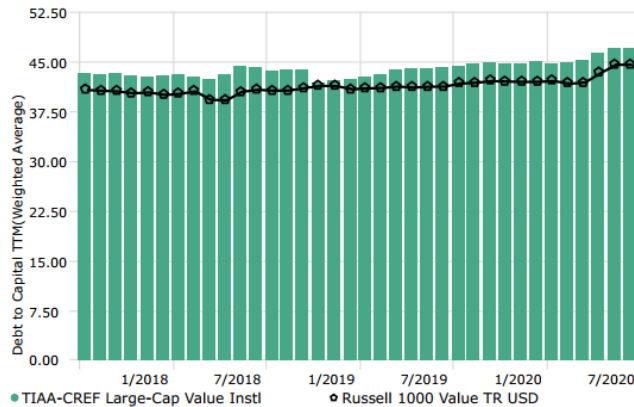
### Return on Equity TTM

Time Period: 8/1/2017 to 7/31/2020



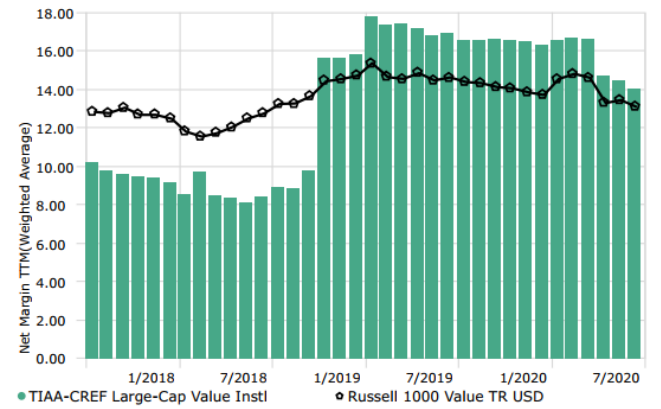
### Portfolio Debt to Capital TTM

Time Period: 8/1/2017 to 7/31/2020



### Net Profit Margin TTM

Time Period: 8/1/2017 to 7/31/2020



Source: Morningstar Direct

**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 06.30.2020 (Fall 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. | 13.94 | 70   | -8.04 | 54   | 0.04   | 78   | 3.06   | 75   | 9.30    | 66   |
| +/- Russell 1000 Value Index     | -0.35 |      | 0.80  |      | -2.18  |      | -1.41  |      | -0.45   |      |
| US Fund Large Value Peer Group   | 15.68 |      | -7.59 |      | 2.22   |      | 4.47   |      | 9.75    |      |

- **ACG Recommendation: Remain on Watch. Despite some underperformance during the first half of 2020, near-term performance results have improved under the new manager. 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 Spring 2021 RPC Meeting.**

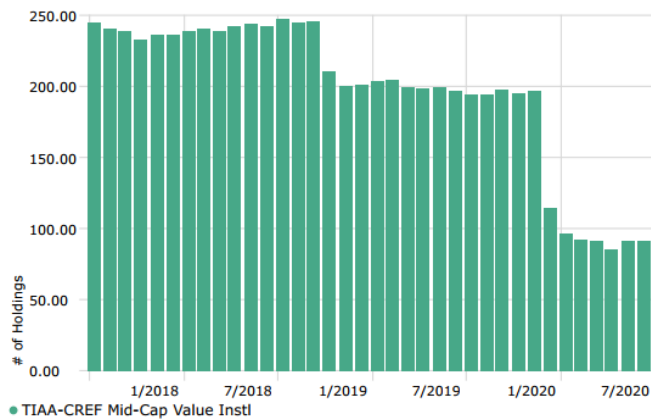
- **TIAA-CREF Mid-Cap Value Institutional (Mid-Cap Value Option)**

- 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 Spring 2020 RPC Meeting (Plan assets in fund = \$40.8M or 1.2% of TIAA Assets and 2,551 participants)
  - Additional Manager and Strategy Change: As reported at the Spring 2020 meeting, 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 prior to taking over this fund.
  - 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 dividend 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 fund currently holds 90 names. The resulting portfolio should be expected to outperform when quality and dividend-paying stocks outperform. The following charts confirm the change in portfolio qualities, including a higher dividend focus and changes in quality metrics under both Cutler and Chalupnik and Staples.



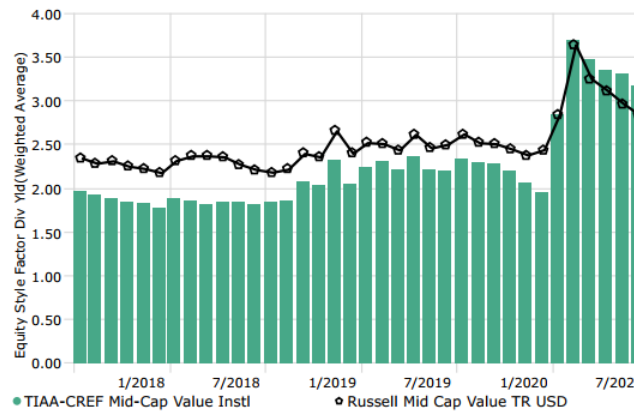
### Number of Portfolio Holdings

Time Period: 8/1/2017 to 7/31/2020



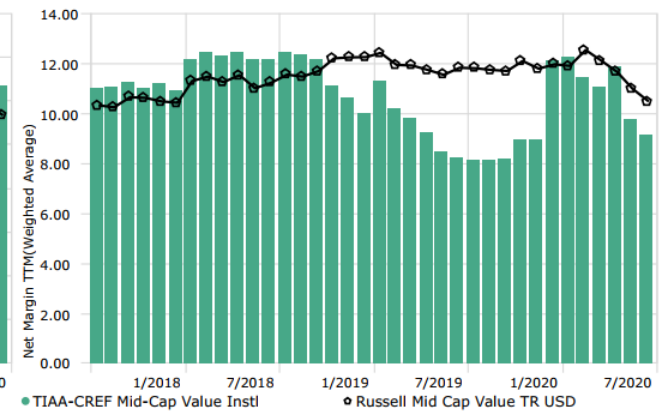
### Dividend Yield (Weighted Average)

Time Period: 8/1/2017 to 7/31/2020



### Net Profit Margin TTM

Time Period: 8/1/2017 to 7/31/2020



- During Mr. Cutler's tenure as lead portfolio manager, the fund modestly underperformed the Russell MidCap Value Index (by 50 bps cumulative) and outperformed peer group average by 1.4% on a cumulative basis.
- Although the management tenure is still short and the change occurred just prior to a volatile market, performance under the new management team through 6.30.2020 trails the benchmark by 10.0%. Year-to-date, stock selection in financials detracted 1.6% from performance relative to the benchmark, while stock selection in industrials detracted 1%. The fund's assets decreased by 36% over the past year. The strategy and manager change during a volatile market continues to warrant careful monitoring. The impact on trailing returns of can be seen in the chart on the next page.

**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> |
|--------------------------------|--------------|-------------|--------------|-------------|---------------|-------------|---------------|-------------|----------------|-------------|
| TIAA-CREF Mid Cap Value Instl. | 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> |
|--------------------------------|--------------|-------------|--------------|-------------|---------------|-------------|---------------|-------------|----------------|-------------|
| TIAA-CREF Mid Cap Value Instl. | 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 06.30.2020 (Fall 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> |
|--------------------------------|--------------|-------------|--------------|-------------|---------------|-------------|---------------|-------------|----------------|-------------|
| TIAA-CREF Mid Cap Value Instl. | 16.41        | 82          | -17.95       | 82          | -3.84         | 85          | 0.33          | 80          | 8.41           | 65          |
| +/- Russell MidCap Value Index | -3.54        |             | -6.14        |             | -3.29         |             | -2.99         |             | -1.88          |             |
| US Fund Mid Value Peer Group   | 19.39        |             | -13.56       |             | -1.95         |             | 2.10          |             | 8.86           |             |

- **ACG Recommendation: Remain on Watch due to the additional management change. We will evaluate again at the Spring 2021 RPC Meeting.**

- **Other Fund Items**

ACG has no additional fund recommendations this quarter for either the TIAA or the Voya plan.

# Plan Asset Summary

|                                   | 6/30/2020               |                             | 12/31/2019              |                         | 6/30/2019                   |                  | 12/31/2018              |                             | 6/30/2018               |                         | 12/31/2017                  |                  |                         |       |              |                         |          |              |
|-----------------------------------|-------------------------|-----------------------------|-------------------------|-------------------------|-----------------------------|------------------|-------------------------|-----------------------------|-------------------------|-------------------------|-----------------------------|------------------|-------------------------|-------|--------------|-------------------------|----------|--------------|
| Money Market/Stable Value         | \$ 1,171,373,824        | 28.5%                       | \$ 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%            |                         |       |              |                         |          |              |
| Fixed Income (Domestic/Foreign)   | \$ 235,581,448          | 5.7%                        | \$ 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%             |                         |       |              |                         |          |              |
| Balanced                          | \$ 694,436,115          | 16.9%                       | \$ 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%            |                         |       |              |                         |          |              |
| Equity - Domestic                 | \$ 1,535,718,998        | 37.4%                       | \$ 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%            |                         |       |              |                         |          |              |
| Equity - Foreign                  | \$ 311,190,960          | 7.6%                        | \$ 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%             |                         |       |              |                         |          |              |
| Real Estate                       | \$ 159,585,315          | 3.9%                        | \$ 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%             |                         |       |              |                         |          |              |
| <b>KBOR Mandatory Plan Totals</b> | <b>\$ 4,107,886,660</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>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         | \$ 116,028,210          | 16.4%                       | 2.8%                    | \$ 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%         |
| Fixed Income (Domestic/Foreign)   | \$ 41,825,613           | 5.9%                        | 1.0%                    | \$ 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%         |
| Balanced                          | \$ 150,918,104          | 21.3%                       | 3.7%                    | \$ 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%         |
| Equity - Domestic                 | \$ 316,531,128          | 44.7%                       | 7.7%                    | \$ 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%         |
| Equity - Foreign                  | \$ 64,758,411           | 9.1%                        | 1.6%                    | \$ 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%         |
| Real Estate                       | \$ 18,001,755           | 2.5%                        | 0.4%                    | \$ 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%         |
| <b>Voya Total</b>                 | <b>\$ 708,063,222</b>   |                             | <b>17.2%</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>TIAA-CREF</b>                  |                         |                             |                         |                         |                             |                  |                         |                             |                         |                         |                             |                  |                         |       |              |                         |          |              |
| Money Market/Stable Value         | \$ 1,042,101,503        | 31.2%                       | 25.4%                   | \$ 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%        |
| Fixed Income (Domestic/Foreign)   | \$ 191,825,684          | 5.7%                        | 4.7%                    | \$ 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%         |
| Balanced                          | \$ 540,636,537          | 16.2%                       | 13.2%                   | \$ 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%        |
| Equity - Domestic                 | \$ 1,183,152,466        | 35.4%                       | 28.8%                   | \$ 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%        |
| Equity - Foreign                  | \$ 243,190,406          | 7.3%                        | 5.9%                    | \$ 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%         |
| Real Estate                       | \$ 141,578,994          | 4.2%                        | 3.4%                    | \$ 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%         |
| <b>TIAA-CREF Total</b>            | <b>\$ 3,342,485,589</b> |                             | <b>81.4%</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>Lincoln Financial</b>          |                         |                             |                         |                         |                             |                  |                         |                             |                         |                         |                             |                  |                         |       |              |                         |          |              |
| Money Market/Stable Value         | \$ 9,231,235            | 22.4%                       | 0.2%                    | \$ 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)   | \$ 1,558,073            | 3.8%                        | 0.0%                    | \$ 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                          | \$ 2,111,621            | 5.1%                        | 0.1%                    | \$ 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                 | \$ 26,206,722           | 63.5%                       | 0.6%                    | \$ 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                  | \$ 2,127,801            | 5.2%                        | 0.1%                    | \$ 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                       | \$ 4,566                | 0.0%                        | 0.0%                    | \$ 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>\$ 41,240,017</b>    |                             | <b>1.0%</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>Security Benefit</b>           |                         |                             |                         |                         |                             |                  |                         |                             |                         |                         |                             |                  |                         |       |              |                         |          |              |
| Money Market/Stable Value         | \$ 4,012,876            | 24.9%                       | 0.1%                    | \$ 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)   | \$ 372,078              | 2.3%                        | 0.0%                    | \$ 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                          | \$ 769,854              | 4.8%                        | 0.0%                    | \$ 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                 | \$ 9,828,682            | 61.1%                       | 0.2%                    | \$ 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                  | \$ 1,114,342            | 6.9%                        | 0.0%                    | \$ 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%         | \$ -                    | 0.0%     | 0.0%         |
| <b>Security Benefit Total</b>     | <b>\$ 16,097,831</b>    |                             | <b>0.4%</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>  |



**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<br>CREF Equity Index<br>TIAA-CREF S&P 500 Index   | Amana Growth<br>CREF Growth<br>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<br>TIAA Stable Value<br>TIAA Traditional |  | CREF Inflation-Linked Bond                        |
| Medium                |  | CREF Bond Market<br>PGIM Total Return Bond Fund  |   |
| Low                   |  |  |   |
| Other                 |  |  |   |
|                       | Real Estate  | Balanced   | Foreign Bond                                      |
|                       | TIAA Real Estate Account                                   | CREF Social Choice<br>TIAA-CREF Lifecycle Ret Income, 2010,<br>2015, 2020, 2025, 2030, 2035, 2040, 2045,<br>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

January 1, 2020 - June 30, 2020

| Fund                                    | Beginning Balance 1/1/2020 | Contributions        | Withdrawals            | Exchanges     | Inter Vendor Transfers | Fees            | Investment Earnings    | Plan Servicing Credit | Ending Balance 6/30/2020 | Difference b/t Beg. and Ending Balances |
|---|----------------------------|----------------------|------------------------|---------------|------------------------|-----------------|------------------------|-----------------------|--------------------------|---|
| TIAA Traditional                        | \$ 913,023,842             | \$ 3,877,757         | \$ (24,893,582)        | \$ 8,067,708  | \$ (569,265)           | \$ (275)        | \$ 18,199,384          | \$ 518,786            | \$ 918,224,355           | \$ 5,200,513                            |
| TIAA Stable Value                       | 53,898,908                 | 697,085              | (2,581,835)            | 7,859,699     | (6,824)                | -               | 619,766                | -                     | 60,486,799               | 6,587,891                               |
| CREF Money Market R3                    | 47,380,847                 | 604,281              | (3,109,795)            | 18,230,825    | 86,079                 | -               | 198,112                | -                     | 63,390,350               | 16,009,503                              |
| CREF Bond Market R3                     | 112,391,062                | 1,398,128            | (2,981,521)            | (199,076)     | (5,437)                | -               | 5,632,044              | -                     | 116,235,200              | 3,844,138                               |
| PGIM Total Return Bond R6               | 9,708,671                  | 204,844              | (291,280)              | 6,335,755     | 83,682                 | -               | 478,414                | -                     | 16,520,087               | 6,811,416                               |
| Amana Participation Institutional       | 486,242                    | 5,917                | (35,172)               | 82,065        | -                      | -               | 12,011                 | -                     | 551,063                  | 64,821                                  |
| CREF Inflation-Linked Bond R3           | 55,738,037                 | 752,012              | (1,481,962)            | 1,209,718     | (5,111)                | -               | 2,306,641              | -                     | 58,519,334               | 2,781,297                               |
| TIAA-CREF Large-Cap Value Instl         | 60,464,152                 | 773,136              | (1,247,327)            | (1,139,243)   | (28)                   | -               | (9,923,159)            | -                     | 48,927,533               | (11,536,619)                            |
| CREF Stock R3                           | 603,559,268                | 4,409,944            | (15,059,847)           | (17,393,834)  | (56,601)               | -               | (36,615,950)           | -                     | 538,842,979              | (64,716,289)                            |
| CREF Equity Index R3                    | 93,753,874                 | 963,781              | (1,135,617)            | (6,632,631)   | 18                     | -               | (3,679,347)            | -                     | 83,270,077               | (10,483,796)                            |
| TIAA-CREF S&P 500 Index Instl           | 172,182,731                | 3,309,570            | (4,081,105)            | 3,496,631     | (25,072)               | -               | (5,497,784)            | -                     | 169,384,972              | (2,797,760)                             |
| Amana Growth Institutional              | 2,159,620                  | 109,422              | (42,373)               | 524,942       | -                      | -               | 176,917                | -                     | 2,928,528                | 768,908                                 |
| Wells Fargo Growth Inst                 | 35,682,642                 | 549,628              | (359,229)              | 3,114         | -                      | -               | 4,581,088              | -                     | 40,457,243               | 4,774,601                               |
| CREF Growth R3                          | 143,523,297                | 1,635,577            | (2,156,507)            | (5,164,221)   | -                      | -               | 15,332,333             | -                     | 153,170,480              | 9,647,183                               |
| TIAA-CREF Mid-Cap Value Instl           | 57,617,848                 | 834,986              | (964,924)              | (3,395,859)   | (4,185)                | -               | (13,314,171)           | -                     | 40,773,696               | (16,844,153)                            |
| Vanguard Mid Cap Index Admiral          | 4,041,951                  | 232,000              | (64,210)               | 3,895,207     | 172                    | -               | (212,826)              | -                     | 7,892,294                | 3,850,343                               |
| TIAA-CREF Mid-Cap Growth Instl          | 21,950,007                 | 417,717              | (552,012)              | (3,048,041)   | 9                      | -               | 316,626                | -                     | 19,084,306               | (2,865,701)                             |
| Royce Opportunity Instl                 | 7,318,232                  | 182,135              | (45,388)               | (140,567)     | (4,134)                | -               | (1,518,439)            | -                     | 5,791,840                | (1,526,392)                             |
| TIAA-CREF Small-Cap Blend Idx Inst      | 61,395,182                 | 1,041,550            | (1,209,632)            | (2,365,996)   | (10,769)               | -               | (8,256,477)            | -                     | 50,593,858               | (10,801,324)                            |
| AB Small Cap Growth I                   | 18,380,560                 | 559,230              | (314,289)              | 1,251,309     | 752                    | -               | 2,157,099              | -                     | 22,034,660               | 3,654,101                               |
| CREF Global Equities R3                 | 93,995,217                 | 986,142              | (1,172,564)            | (4,670,499)   | (24,058)               | -               | (3,876,080)            | -                     | 85,238,159               | (8,757,058)                             |
| TIAA-CREF International Eq Idx Instl    | 76,148,026                 | 1,344,487            | (1,295,509)            | 796,410       | (9,392)                | -               | (8,461,621)            | -                     | 68,522,401               | (7,625,625)                             |
| American Funds Europacific Growth R6    | 61,585,276                 | 939,617              | (1,514,929)            | (139,447)     | (7,054)                | -               | (2,937,698)            | -                     | 57,925,764               | (3,659,512)                             |
| Pear Tree Polaris Fgn Val Sm Cap R6     | 25,807                     | 704                  | -                      | 10,474        | -                      | -               | (2,796)                | -                     | 34,189                   | 8,381                                   |
| DFA Emerging Markets I                  | 36,472,194                 | 681,723              | (696,914)              | (168,353)     | (9,091)                | -               | (4,809,666)            | -                     | 31,469,893               | (5,002,301)                             |
| TIAA Real Estate Account                | 149,951,245                | 2,071,042            | (3,672,187)            | (4,773,631)   | (12,459)               | -               | (1,985,016)            | -                     | 141,578,994              | (8,372,251)                             |
| Cref Social Choice R3                   | 90,546,525                 | 1,049,601            | (1,682,651)            | 6,997,065     | 93,679                 | -               | (394,359)              | -                     | 96,609,860               | 6,063,335                               |
| TIAA-CREF Lifecycle Retire Income Instl | 3,591,441                  | 35,792               | (255,527)              | (221,542)     | -                      | -               | (7,514)                | -                     | 3,142,650                | (448,791)                               |
| TIAA-CREF Lifecycle 2010 Institutional  | 9,393,267                  | 397,138              | (204,520)              | 128,062       | (15)                   | -               | 17,503                 | -                     | 9,731,435                | 338,168                                 |
| TIAA-CREF Lifecycle 2015 Institutional  | 23,191,037                 | 609,480              | (1,573,252)            | (382,573)     | -                      | -               | (208,558)              | -                     | 21,636,134               | (1,554,903)                             |
| TIAA-CREF Lifecycle 2020 Institutional  | 30,617,639                 | 1,313,912            | (868,581)              | (1,208,472)   | -                      | -               | (312,440)              | -                     | 29,542,059               | (1,075,580)                             |
| TIAA-CREF Lifecycle 2025 Institutional  | 44,772,094                 | 2,016,671            | (441,937)              | (1,414,681)   | (68,734)               | -               | (835,393)              | -                     | 44,028,020               | (744,074)                               |
| TIAA-CREF Lifecycle 2030 Institutional  | 54,856,580                 | 2,432,216            | (645,441)              | (1,469,972)   | -                      | -               | (1,441,955)            | -                     | 53,731,428               | (1,125,152)                             |
| TIAA-CREF Lifecycle 2035 Institutional  | 66,611,842                 | 3,231,173            | (668,646)              | (1,350,594)   | -                      | -               | (2,153,834)            | -                     | 65,669,941               | (941,901)                               |
| TIAA-CREF Lifecycle 2040 Institutional  | 99,497,889                 | 4,786,152            | (1,563,375)            | (2,284,911)   | (1,140)                | -               | (3,810,299)            | -                     | 96,624,316               | (2,873,573)                             |
| TIAA-CREF Lifecycle 2045 Institutional  | 61,962,549                 | 4,835,278            | (567,172)              | (879,815)     | (179,377)              | -               | (2,852,578)            | -                     | 62,318,886               | 356,337                                 |
| TIAA-CREF Lifecycle 2050 Institutional  | 45,199,300                 | 4,426,853            | (651,665)              | (526,807)     | 29,773                 | -               | (2,063,738)            | -                     | 46,413,717               | 1,214,417                               |
| TIAA-CREF Lifecycle 2055 Institutional  | 7,153,972                  | 1,822,568            | (48,123)               | 149,708       | (5,241)                | -               | (229,466)              | -                     | 8,843,419                | 1,689,446                               |
| TIAA-CREF Lifecycle 2060 Institutional  | 1,996,452                  | 509,028              | (22,311)               | (67,823)      | -                      | -               | (70,674)               | -                     | 2,344,672                | 348,220                                 |
| <b>Totals</b>                           | <b>\$ 3,432,225,325</b>    | <b>\$ 56,048,279</b> | <b>\$ (80,152,910)</b> | <b>\$ 105</b> | <b>\$ (709,822)</b>    | <b>\$ (275)</b> | <b>\$ (65,443,899)</b> | <b>\$ 518,786</b>     | <b>\$ 3,342,485,589</b>  | <b>\$ (89,739,735)</b>                  |

# Performance: TIAA-CREF

January 1, 2020 - June 30, 2020

| Fund                                    | Beginning Balance: 01/01/2020 |               | Ending Balance: 6/30/2020 |               | Six Month Return |
|---|-------------------------------|---------------|---------------------------|---------------|------------------|
| TIAA Traditional                        | \$                            | 913,023,842   | \$                        | 918,224,355   | 1.85%            |
| TIAA Stable Value                       |                               | 53,898,908    |                           | 60,486,799    | 1.07%            |
| CREF Money Market R3                    |                               | 47,380,847    |                           | 63,390,350    | 0.38%            |
| CREF Bond Market R3                     |                               | 112,391,062   |                           | 116,235,200   | 5.10%            |
| PGIM Total Return Bond R6               |                               | 9,708,671     |                           | 16,520,087    | 3.75%            |
| Amana Participation Institutional       |                               | 486,242       |                           | 551,063       | 1.87%            |
| CREF Inflation-Linked Bond R3           |                               | 55,738,037    |                           | 58,519,334    | 4.14%            |
| TIAA-CREF Large-Cap Value Instl         |                               | 60,464,152    |                           | 48,927,533    | -16.47%          |
| CREF Stock R3                           |                               | 603,559,268   |                           | 538,842,979   | -5.86%           |
| CREF Equity Index R3                    |                               | 93,753,874    |                           | 83,270,077    | -3.55%           |
| TIAA-CREF S&P 500 Index Instl           |                               | 172,182,731   |                           | 169,384,972   | -3.08%           |
| Amana Growth Institutional              |                               | 2,159,620     |                           | 2,928,528     | 5.98%            |
| Wells Fargo Growth Inst                 |                               | 35,682,642    |                           | 40,457,243    | 12.89%           |
| CREF Growth R3                          |                               | 143,523,297   |                           | 153,170,480   | 11.56%           |
| TIAA-CREF Mid-Cap Value Instl           |                               | 57,617,848    |                           | 40,773,696    | -23.60%          |
| Vanguard Mid Cap Index Admiral          |                               | 4,041,951     |                           | 7,892,294     | -7.18%           |
| TIAA-CREF Mid-Cap Growth Instl          |                               | 21,950,007    |                           | 19,084,306    | 4.60%            |
| Royce Opportunity Instl                 |                               | 7,318,232     |                           | 5,791,840     | -17.97%          |
| TIAA-CREF Small-Cap Blend Idx Inst      |                               | 61,395,182    |                           | 50,593,858    | -12.87%          |
| AB Small Cap Growth I                   |                               | 18,380,560    |                           | 22,034,660    | 10.82%           |
| CREF Global Equities R3                 |                               | 93,995,217    |                           | 85,238,159    | -4.01%           |
| TIAA-CREF International Eq Idx Instl    |                               | 76,148,026    |                           | 68,522,401    | -10.71%          |
| American Funds Europacific Growth R6    |                               | 61,585,276    |                           | 57,925,764    | -4.77%           |
| Pear Tree Polaris Fgn Val Sm Cap R6     |                               | 25,807        |                           | 34,189        | -17.79%          |
| DFA Emerging Markets I                  |                               | 36,472,194    |                           | 31,469,893    | -12.79%          |
| TIAA Real Estate Account                |                               | 149,951,245   |                           | 141,578,994   | -1.36%           |
| Cref Social Choice R3                   |                               | 90,546,525    |                           | 96,609,860    | -1.04%           |
| TIAA-CREF Lifecycle Retire Income Instl |                               | 3,591,441     |                           | 3,142,650     | 0.00%            |
| TIAA-CREF Lifecycle 2010 Institutional  |                               | 9,393,267     |                           | 9,731,435     | 0.00%            |
| TIAA-CREF Lifecycle 2015 Institutional  |                               | 23,191,037    |                           | 21,636,134    | -0.41%           |
| TIAA-CREF Lifecycle 2020 Institutional  |                               | 30,617,639    |                           | 29,542,059    | -0.88%           |
| TIAA-CREF Lifecycle 2025 Institutional  |                               | 44,772,094    |                           | 44,028,020    | -1.63%           |
| TIAA-CREF Lifecycle 2030 Institutional  |                               | 54,856,580    |                           | 53,731,428    | -2.38%           |
| TIAA-CREF Lifecycle 2035 Institutional  |                               | 66,611,842    |                           | 65,669,941    | -3.19%           |
| TIAA-CREF Lifecycle 2040 Institutional  |                               | 99,497,889    |                           | 96,624,316    | -3.94%           |
| TIAA-CREF Lifecycle 2045 Institutional  |                               | 61,962,549    |                           | 62,318,886    | -4.72%           |
| TIAA-CREF Lifecycle 2050 Institutional  |                               | 45,199,300    |                           | 46,413,717    | -4.84%           |
| TIAA-CREF Lifecycle 2055 Institutional  |                               | 7,153,972     |                           | 8,843,419     | -4.97%           |
| TIAA-CREF Lifecycle 2060 Institutional  |                               | 1,996,452     |                           | 2,344,672     | -5.04%           |
| Totals/Weighted Average Return          | \$                            | 3,432,225,325 | \$                        | 3,342,485,589 | -1.40%           |
| Weighted Average Variable Funds Return  |                               |               |                           |               | -2.73%           |
| Weighted Average Fixed Income Return    |                               |               |                           |               | 1.80%            |

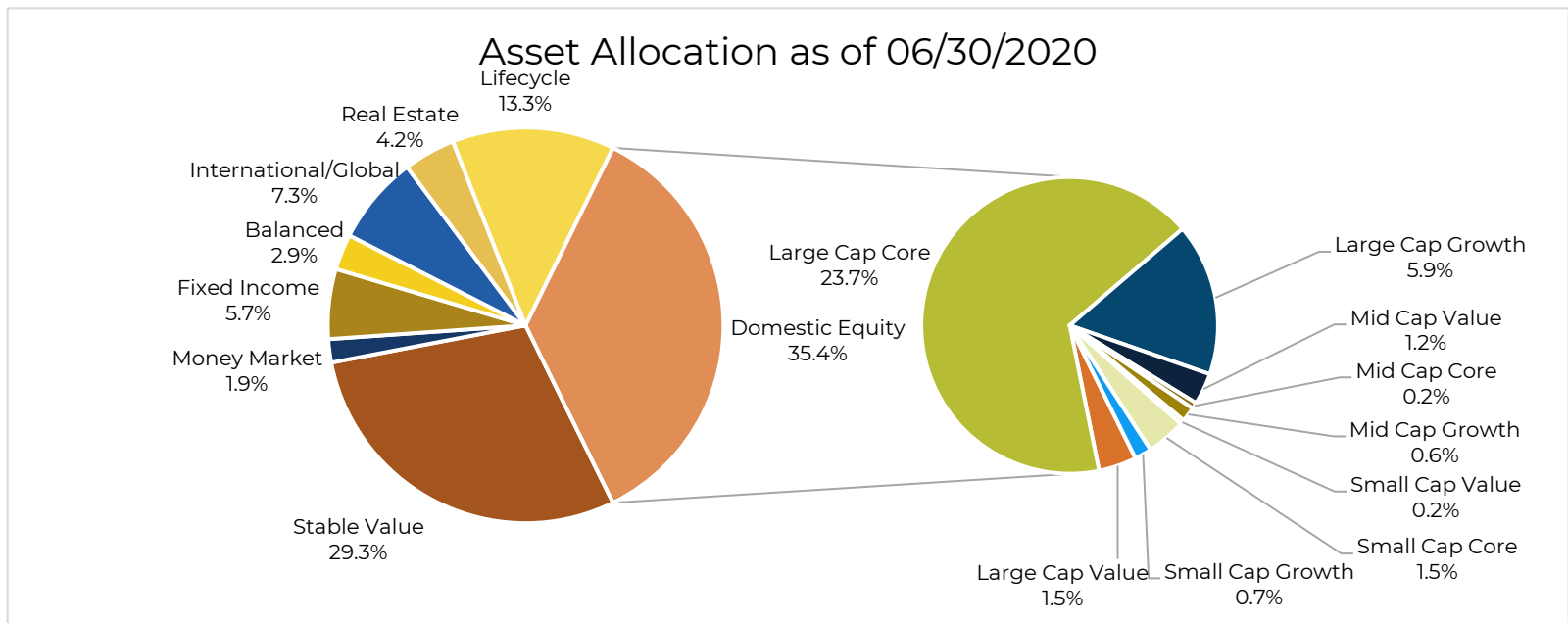
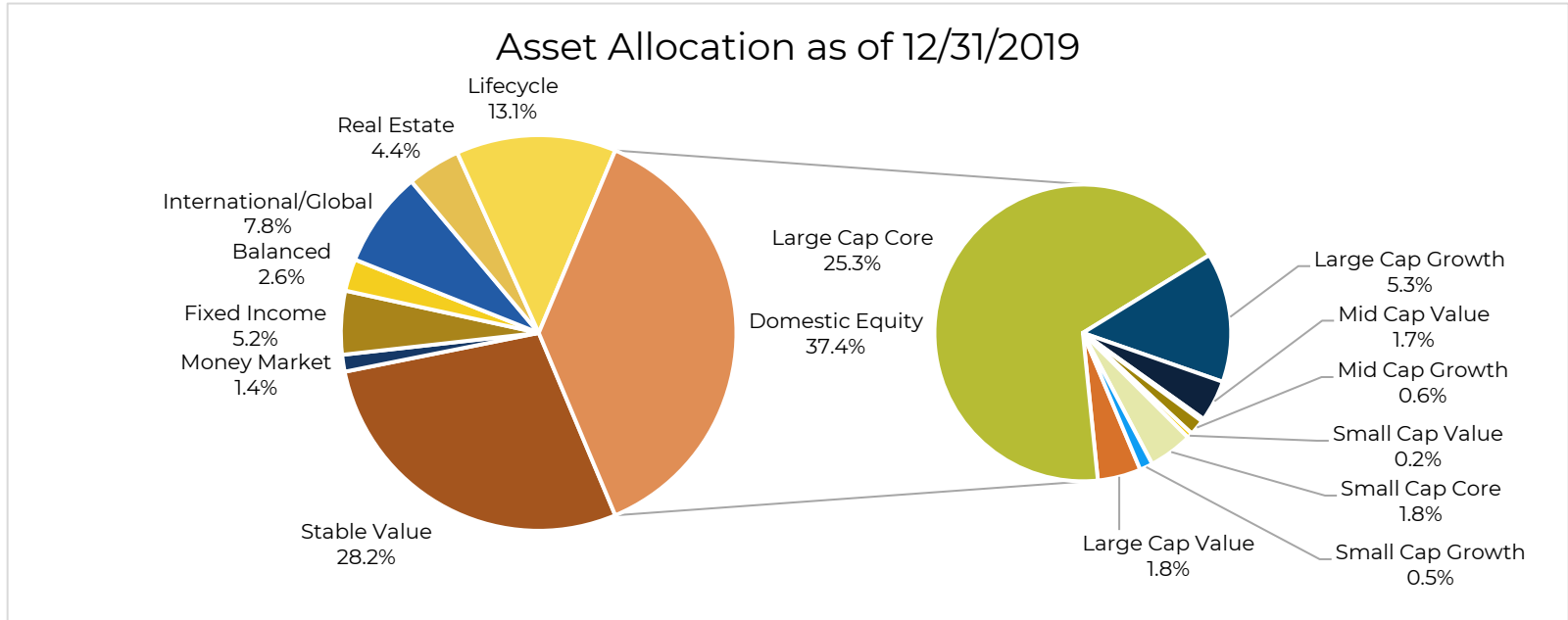
# Fee Analysis: TIAA-CREF

January 1, 2020 - June 30, 2020

| Fund  | Ticker | Percent of Balance | Expense Ratio |
|---|--------|--------------------|---------------|
| TIAA Traditional  | -      | 27.5%              | 0.49%         |
| TIAA Stable Value   | -      | 1.8%               | 0.74%         |
| CREF Money Market R3  | QCMMIX | 1.9%               | 0.23%         |
| CREF Bond Market R3   | QCBMIX | 3.5%               | 0.27%         |
| PGIM Total Return Bond R6   | PTRQX  | 0.5%               | 0.39%         |
| Amana Participation Institutional                                       | AMIPX  | 0.0%               | 0.64%         |
| CREF Inflation-Linked Bond R3   | QCILIX | 1.8%               | 0.22%         |
| TIAA-CREF Large-Cap Value Instl   | TRLIX  | 1.5%               | 0.41%         |
| CREF Stock R3   | QCSTIX | 16.1%              | 0.30%         |
| CREF Equity Index R3  | QCEQIX | 2.5%               | 0.22%         |
| TIAA-CREF S&P 500 Index Instl   | TISPX  | 5.1%               | 0.05%         |
| Amana Growth Institutional  | AMIGX  | 0.1%               | 0.79%         |
| Wells Fargo Growth Inst   | SGRNX  | 1.2%               | 0.75%         |
| CREF Growth R3  | QCGRIX | 4.6%               | 0.24%         |
| TIAA-CREF Mid-Cap Value Instl   | TIMVX  | 1.2%               | 0.44%         |
| Vanguard Mid Cap Index Admiral  | VIMAX  | 0.2%               | 0.05%         |
| TIAA-CREF Mid-Cap Growth Instl  | TRPWX  | 0.6%               | 0.48%         |
| Royce Opportunity Instl   | ROFIX  | 0.2%               | 1.08%         |
| TIAA-CREF Small-Cap Blend Idx Inst                                      | TISBX  | 1.5%               | 0.06%         |
| AB Small Cap Growth I   | QUAIX  | 0.7%               | 0.91%         |
| CREF Global Equities R3   | QCGLIX | 2.6%               | 0.27%         |
| TIAA-CREF International Eq Idx Instl                                    | TCIEX  | 2.1%               | 0.06%         |
| American Funds Europacific Growth R6                                    | RERGX  | 1.7%               | 0.46%         |
| Pear Tree Polaris Fgn Val Sm Cap R6                                     | QUSRX  | 0.0%               | 1.05%         |
| DFA Emerging Markets I  | DFEMX  | 0.9%               | 0.43%         |
| TIAA Real Estate Account  | QREARX | 4.2%               | 0.83%         |
| Cref Social Choice R3   | QCSCIX | 2.9%               | 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  | 0.6%               | 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  | 2.0%               | 0.43%         |
| TIAA-CREF Lifecycle 2040 Institutional                                  | TCOIX  | 2.9%               | 0.44%         |
| TIAA-CREF Lifecycle 2045 Institutional                                  | TTFIX  | 1.9%               | 0.45%         |
| TIAA-CREF Lifecycle 2050 Institutional                                  | TFTIX  | 1.4%               | 0.45%         |
| TIAA-CREF Lifecycle 2055 Institutional                                  | TTRIX  | 0.3%               | 0.45%         |
| TIAA-CREF Lifecycle 2060 Institutional                                  | TLXNX  | 0.1%               | 0.45%         |
| Totals/Weighted Average Expense Ratio                                   |        |                    | 0.39%         |
| Weighted Average Expense Ratio ex- TIAA Traditional + TIAA Stable Value |        |                    | 0.34%         |

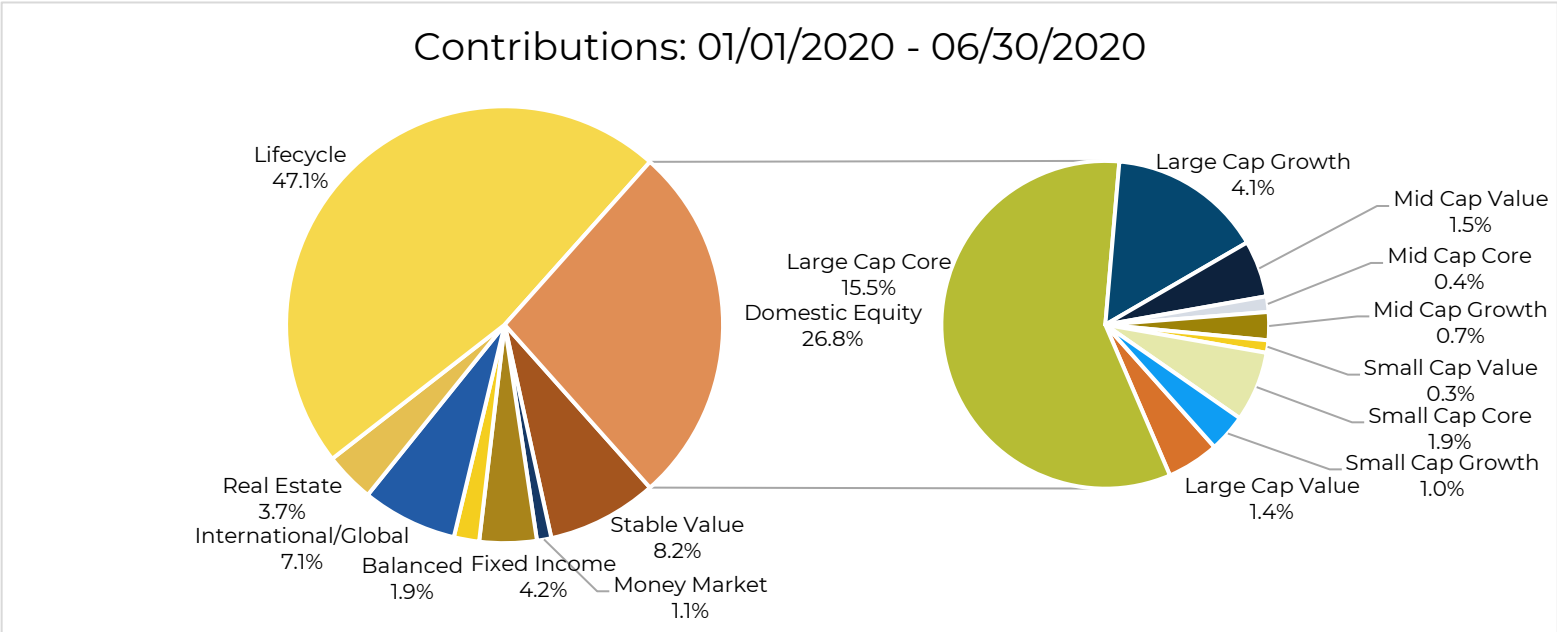
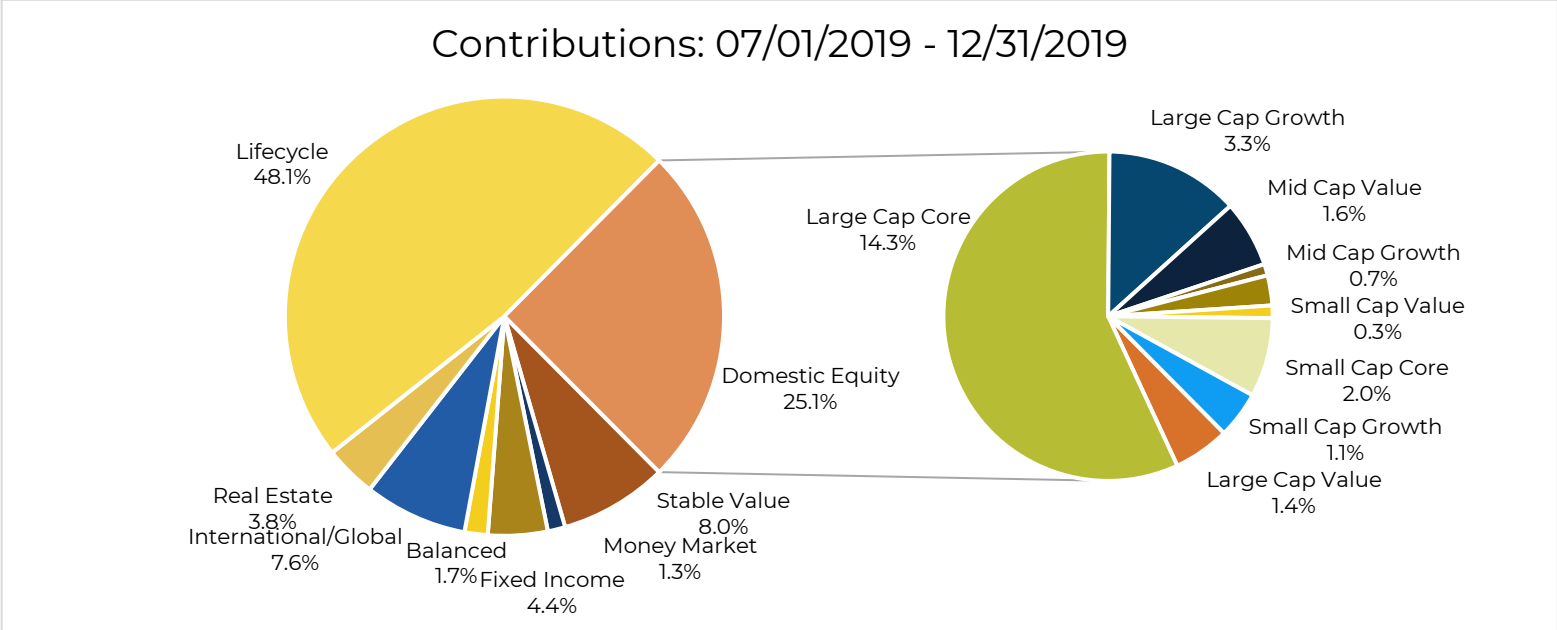


# Asset Allocation: TIAA-CREF



\*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

January 1, 2020 - June 30, 2020

| Fund                                    | Number of Participants |
|---|------------------------|
| TIAA Traditional                        | 10,622                 |
| TIAA Stable Value                       | 1,923                  |
| CREF Money Market R3                    | 1,629                  |
| CREF Bond Market R3                     | 3,599                  |
| PGIM Total Return Bond R6               | 516                    |
| Amana Participation Instl               | 40                     |
| CREF Inflation-Linked Bond R3           | 2,885                  |
| TIAA-CREF Lg Cap Val Inst               | 2,404                  |
| CREF Equity Index R3                    | 1,787                  |
| TIAA-CREF S&P 500 Index Instl           | 3,510                  |
| Amana Growth Institutional              | 214                    |
| Wells Fargo Advantage Growth            | 811                    |
| CREF Growth R3                          | 2,959                  |
| TIAA-CREF Mid Cap Val Inst              | 2,551                  |
| Vanguard Mid Cap Index Admiral          | 616                    |
| TIAA-CREF Mid Cap Gr Inst               | 981                    |
| Royce Opportunity Fd                    | 494                    |
| TIAA-CREF Sm Cap Bl Idx Inst            | 3,012                  |
| AB Small Cap Growth R6                  | 1,403                  |
| CREF Stock R3                           | 6,502                  |
| CREF Global Equities R3                 | 3,042                  |
| TIAA-CREF International Eq Idx Inst     | 2,906                  |
| American Funds Europacific Growth R6    | 2,709                  |
| Pear Tree Polaris Fgn Val Sm Cap R6     | 8                      |
| DFA Emerging Markets I                  | 2,438                  |
| TIAA Real Estate                        | 6,113                  |
| Cref Social Choice R3                   | 2,103                  |
| TIAA-Cref Lifecycle Retirement Inc Inst | 78                     |
| TIAA-Cref Lifecycle 2010 Inst           | 824                    |
| TIAA-Cref Lifecycle 2015 Inst           | 652                    |
| TIAA-Cref Lifecycle 2020 Inst           | 709                    |
| TIAA-Cref Lifecycle 2025 Inst           | 833                    |
| TIAA-Cref Lifecycle 2030 Inst           | 938                    |
| TIAA-Cref Lifecycle 2035 Inst           | 1,277                  |
| TIAA-Cref Lifecycle 2040 Inst           | 1,991                  |
| TIAA-Cref Lifecycle 2045 Inst           | 1,954                  |
| TIAA-Cref Lifecycle 2050 Inst           | 2,159                  |
| TIAA-Cref Lifecycle 2055 Inst           | 854                    |
| TIAA-Cref Lifecycle 2060 Inst           | 302                    |

**Total Unique Participants**

**25,102**



# 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  | Pass       | Pass  | ✓                | ✓                | ✓               | ✓                 | ✗                   | ✓                | ✓                        |
| Amana Participation Institutional (AMIPX)            | Pass  | Note       | Pass  | ✓                |                  |                 |                   |                     |                  |                          |
| TIAA-CREF Large-Cap Value Instl (TRLIX)              | Pass  | Note       | Pass  | ✗                | ✓                | ✗               | ✓                 | ✗                   | ✓                | ✗                        |
| CREF Equity Index R3 (QCEQIX)                        | Pass  | Pass       | Pass  | ✓                | ✓                | ✓               | ✓                 | ✓                   | ✓                | ✓                        |
| TIAA-CREF S&P 500 Index Instl (TISPX)                | Pass  | Pass       | Pass  | ✓                | ✓                | ✓               | ✓                 | ✓                   | ✓                | ✓                        |
| Amana Growth Institutional (AMIGX)                   | Note  | Pass       | Pass  | ✓                | ✓                | ✓               | ✗                 | ✓                   | ✓                | ✓                        |
| CREF Growth R3 (QCGRIX)                              | Pass  | Pass       | Pass  | ✓                | ✓                | ✓               | ✓                 | ✓                   | ✓                | ✓                        |
| Wells Fargo Growth Inst (SGRNX)                      | Pass  | Pass       | Pass  | ✓                | ✓                | ✓               | ✓                 | ✗                   | ✓                | ✓                        |
| TIAA-CREF Mid-Cap Value Instl (TIMVX)                | Pass  | Note       | Pass  | ✗                | ✓                | ✓               | ✓                 | ✓                   | ✓                | ✓                        |
| Vanguard Mid Cap Index Adm (VIMAX)                   | Pass  | Pass       | Pass  | ✓                | ✓                | ✓               | ✓                 | ✓                   | ✓                | ✓                        |
| TIAA-CREF Mid-Cap Growth Instl (TRPWX)               | Pass  | 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)                     | Pass  | 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  | Note       | Pass  | ✓                | ✓                | ✓               | ✓                 | ✓                   | ✓                | ✓                        |
| DFA Emerging Markets I (DFEMX)                       | Pass  | Pass       | Note  | ✗                | ✓                | ✓               | ✓                 | ✓                   | ✓                | ✓                        |
| TIAA Real Estate Account (QREARX)                    | Pass  | Pass       | Pass  | ✓                | ✓                |                 |                   |                     |                  |                          |
| CREF Social Choice R3 (QCSCIX)                       | Pass  | Pass       | Pass  | ✓                | ✓                | ✓               | ✓                 | ✓                   | ✓                | ✓                        |
| CREF Stock R3 (QCSTIX)                               | Pass  | Pass       | Pass  | ✓                | ✓                | ✓               | ✓                 | ✓                   | ✓                | ✓                        |
| TIAA-CREF Lifecycle 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.

**Amana Participation**

The fund's assets increased by 49% over the past year. The fund's assets are \$0.13 billion. *2Q 2020*

**Recommendation: No Action**

**TIAA-CREF Large-Cap Value**

This fund lagged peers and benchmark during a volatile first half of 2020. During the downturn of the first quarter, underperformance can be attributed to poorly performing stocks in financials and a 3% underweight to utilities, which were seen as a safe haven in the volatile market. As the market partially recovered in the second quarter, stock selection in health care and materials were the largest detractors from performance relative to the benchmark. Near-term and longer-term performance also trails the benchmark, although much of these returns took place under a different manager. The current lead manager, Charlie Carr, took over the strategy in November 2018 when longtime co-manager Tom Kolefas retired. Former lead PM Rich Cutler remained on the fund as a co-manager until the beginning of 2020 when he left the firm as part of a management team consolidation between TIAA and Nuveen. When Carr took over the fund, there were minor changes to the overall strategy. Non-U.S. stock exposure was lowered, and Carr implemented a "pragmatic value" strategy which is expected to invest in low-quality, deeper value names early in the business cycle and favor high-quality names later in the cycle. Sector weightings remained 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. The first full calendar year under the current manager and strategy saw higher quality metrics and better returns than peers and benchmark. Current quality characteristics for the fund are in line with peers and benchmark, indicating that Carr is implementing some of the cyclical aspects of the strategy. *2Q 2020*

**Recommendation: Watch**

**Amana Growth Institutional**

In May 2020, Nick Kaiser stepped down as portfolio manager. Scott Klimo, who has been with the strategy since 2012, will take over as lead manager. Klimo has spent 8 years working alongside Kaiser, gradually taking on new responsibility along the way. In anticipation of the change, Christopher Paul joined the team as a supporting portfolio manager in April 2020. Paul joined Saturna Capital in 2016. Before Saturna, Paul was director of research for Cannell Capital. *2Q 2020*

**Recommendation: No Action**

**TIAA-CREF Mid-Cap Value**

TIAA-CREF Mid-Cap Value underperformed the Russell Mid Cap Value index in each of the trailing ten calendar years and year-to-date, although all performance prior to January 2020 was under previous fund management and different strategies. This fund has changed management and process twice in the last 18 months. From 2004 to November 2018, this fund was run by Tom Kolefas using a moderate value process that kept the number of holdings over 200 and sector weightings close to the benchmark, hoping to add value through stock selection alone. The resulting portfolio was unable to add significant value relative to the benchmark over time. In November 2018, Kolefas abruptly retired and his co-manager, Rich Cutler, took over management. Cutler altered the strategy to focus heavily on companies that are underperforming relative to their historical profitability and have some catalyst for normalization. Under Cutler's management, quality metrics were lower than in previous years. In January 2020, Richard Cutler was fired and replaced by two co-PMs, David Chalupnik and Evan Staples, who run several large cap value and blend strategies for Nuveen. This change was part of a larger effort to consolidate investment personnel following the merger of TIAA and Nuveen in 2014. Chalupnik has run the Nuveen Large Cap Select strategy since 2004 and has comanaged with Staples since 2017. Prior to taking over this fund, however, the management team does not appear to have experience managing a mid-cap value strategy. Under Chalupnik and Staples, this fund aims to hold companies with strong or improving fundamentals that have both near-term and long-term catalysts and a yield premium relative to the index. They reduced the number of holdings from 200 to 100-125 and aim for turnover of 70-80% on average. The fund currently holds 83 names. Year-to-date, stock selection in financials detracted 1.6% from performance relative to the benchmark, while stock selection in industrials detracted 1%. The strategy and manager change during a volatile market continues to warrant careful monitoring. The fund's assets decreased by 36% over the past year. The fund's assets are \$1.7 billion. *2Q 2020*

**Recommendation: Watch**

**Royce Opportunity**

Fund management tends to invest in smaller companies than peers. Because micro-cap companies generally tend to be more volatile than more established names, the team mitigates some of these risks by investing in a large amount of companies and diversifying types of investment theses. 45% of the portfolio is currently in micro-cap names, compared to a category average allocation of 1%. The fund has historically fallen near the line between small cap value and small cap blend style boxes in Morningstar and drifts between the two boxes, although it consistently has one of the smallest average market caps in its peer group. The fund currently falls just over the line into small cap blend but the portfolio strategy remains consistent with its mandate.

Shareholders of the fund's parent company, Legg Mason, approved an equity sale to Franklin Templeton Investments. The merger is not expected to have a material change to fund's investment objective, strategy, portfolio management or investment expenses. *2Q 2020*

**Recommendation: No Action**

#### American Funds Europacific Growth

Following a difficult quarter for the fund, performance rebounded during the second quarter. In particular, stock selection in technology and consumer discretionary sectors contributed 1.2% and 2% respectively. The portfolio managers were able to take advantage of the market turmoil to find opportunities to invest both in companies they believed were well-positioned to benefit from the changing environment and in companies they felt were oversold with the potential to turn around. They were able to trim holdings that had appreciated and invest in better opportunities. The portfolio is tilted toward companies that have “the potential to capitalize on long-term secular growth opportunities focused on companies in the next-gen technology ecosystem and those that can benefit from the growth of the middle class in emerging markets. Most sectors are near index weight. The consumer staples sector is underweight relative to the index by almost 10% and industrials is underweighted almost 5%. *2Q 2020*

**Recommendation: No Action**

#### Pear Tree Polaris Foreign Value Small Cap

The fund's assets decreased by 34% over the past year. The fund's assets are \$0.65 billion. *2Q 2020*

**Recommendation: No Action**

#### DFA Emerging Markets

While this fund ranks below peer group median on a near-term and long-term basis, this underperformance can be solely attributed to style headwinds. The emerging markets peer group includes all emerging markets funds, regardless of growth, value, or size orientation. This fund's management uses quantitative profitability, market cap, and valuation metrics to weight portfolio positions in an attempt to focus on names that have greater upside potential. The valuation component of the process results in this fund falling in the most value-oriented quintile of the peer group, which has been a headwind over a decade in which growth-oriented EM stocks outperformed value-oriented peers by 5.1% annualized. The fund strategy remains steady despite routine management rotations during the first quarter of 2020. *2Q 2020*

**Recommendation: No Action**

#### TIAA-CREF Lifecycle Target Date Series

The assets of the longer-dated vintages increased in excess of 30% over the past year. This cash flow has not had a material impact on the management of the target date fund series. *2Q 2020*

**Recommendation: No Action**



# Performance Summary

|  | Allocation           |       | Performance (%) as of 06/30/2020 |            |            |            |            | Net Expense Ratio |
|--|----------------------|-------|----------------------------------|------------|------------|------------|------------|-------------------|
|  | Market Value (\$000) | %     | 1 Quarter                        | 1 Year     | 3 Years    | 5 Years    | 10 Years   |                   |
| Total Plan                                       | 3,342,486            | 100.0 | -                                | -          | -          | -          | -          | -                 |
| CREF Money Market R3 (QCMMIX)                    | 63,390               | 1.9   | 0.06 (7)                         | 1.30 (11)  | 1.39 (37)  | 0.90 (35)  | 0.45 (36)  | 0.23              |
| +/- Blmbg. Barc. U.S. Treasury Bills: 1-3 Months |                      |       | 0.04                             | -0.17      | -0.29      | -0.22      | -0.14      | -                 |
| Money Market-Taxable Median                      |                      |       | 0.01                             | 1.08       | 1.29       | 0.80       | 0.40       | -                 |
| TIAA Stable Value                                | 60,487               | 1.8   | 0.54                             | 2.14       | 1.88       | 1.72       | -          | -                 |
| +/- Ryan 3 Yr GIC Master Index                   |                      |       | -0.06                            | -0.30      | -0.25      | -0.11      | -          | -                 |
| TIAA Traditional                                 | 918,224              | 27.5  | 0.93                             | 3.74       | 3.79       | 3.87       | 3.97       | -                 |
| +/- Blmbg. Barc. U.S. Treasury: 7-10 Year        |                      |       | 0.04                             | -9.02      | -3.03      | -1.21      | -0.71      | -                 |
| CREF Inflation-Linked Bond R3 (QCILIX)           | 58,519               | 1.8   | 3.59 (88)                        | 5.68 (65)  | 3.77 (66)  | 2.86 (61)  | 2.85 (51)  | 0.22              |
| +/- Blmbg. Barc. U.S. TIPS 1-10 Year             |                      |       | -0.17                            | -0.07      | -0.17      | -0.11      | 0.19       | -                 |
| Inflation-Protected Bond Median                  |                      |       | 4.72                             | 6.82       | 4.22       | 3.09       | 2.87       | 0.74              |
| CREF Bond Market R3 (QCBMIX)                     | 116,235              | 3.5   | 4.90 (31)                        | 7.69 (68)  | 5.09 (44)  | 4.38 (23)  | 3.88 (36)  | 0.27              |
| +/- Blmbg. Barc. U.S. Aggregate Index            |                      |       | 2.00                             | -1.05      | -0.23      | 0.08       | 0.06       | -                 |
| Intermediate Core Bond Median                    |                      |       | 4.09                             | 8.33       | 4.99       | 4.07       | 3.73       | 0.66              |
| PGIM Total Return Bond R6 (PTRQX)                | 16,520               | 0.5   | 6.78 (26)                        | 6.90 (62)  | 5.50 (16)  | 5.08 (8)   | 5.32 (7)   | 0.39              |
| +/- Blmbg. Barc. U.S. Aggregate Index            |                      |       | 3.88                             | -1.84      | 0.18       | 0.78       | 1.50       | -                 |
| Intermediate Core-Plus Bond Median               |                      |       | 5.85                             | 7.47       | 4.86       | 4.17       | 4.19       | 0.79              |
| Amana Participation Institutional (AMIPX)        | 551                  | 0.0   | 5.50                             | 4.20       | 3.22       | -          | -          | 0.64              |
| +/- Dow Jones Sukuk Index                        |                      |       | -1.43                            | -2.87      | -1.93      | -          | -          | -                 |
| TIAA-CREF Large-Cap Value Instl (TRLIX)          | 48,928               | 1.5   | 13.94 (69)                       | -8.04 (51) | 0.04 (80)  | 3.06 (75)  | 9.30 (65)  | 0.41              |
| +/- Russell 1000 Value Index                     |                      |       | -0.35                            | 0.80       | -1.78      | -1.58      | -1.11      | -                 |
| Large Value Median                               |                      |       | 15.11                            | -8.04      | 1.92       | 4.43       | 9.81       | 0.99              |
| CREF Equity Index R3 (QCEQIX)                    | 83,270               | 2.5   | 21.88 (22)                       | 6.35 (45)  | 9.84 (42)  | 9.81 (38)  | 13.40 (35) | 0.22              |
| +/- Russell 3000 Index                           |                      |       | -0.15                            | -0.18      | -0.20      | -0.22      | -0.32      | -                 |
| Large Blend Median                               |                      |       | 20.44                            | 5.80       | 9.23       | 9.27       | 12.78      | 0.92              |
| TIAA-CREF S&P 500 Index Instl (TISPX)            | 169,385              | 5.1   | 20.53 (44)                       | 7.49 (21)  | 10.68 (18) | 10.67 (12) | 13.91 (12) | 0.05              |
| +/- S&P 500 Index                                |                      |       | -0.01                            | -0.02      | -0.05      | -0.06      | -0.08      | -                 |
| Large Blend Median                               |                      |       | 20.44                            | 5.80       | 9.23       | 9.27       | 12.78      | 0.92              |





# Performance Summary

|  | Allocation           |     | Performance (%) as of 06/30/2020 |             |            |            |            |      |  | Net Expense Ratio |
|--|----------------------|-----|----------------------------------|-------------|------------|------------|------------|------|--|-------------------|
|  | Market Value (\$000) | %   | 1 Quarter                        | 1 Year      | 3 Years    | 5 Years    | 10 Years   |      |  |                   |
| Amana Growth Institutional (AMIGX)         | 2,929                | 0.1 | 22.69 (84)                       | 16.24 (65)  | 17.97 (41) | 15.15 (32) | 14.30 (73) | 0.79 |  |                   |
| +/- S&P 500 Index                          |                      |     | 2.15                             | 8.73        | 7.24       | 4.42       | 0.31       | -    |  |                   |
| Large Growth Median                        |                      |     | 27.21                            | 19.20       | 16.68      | 13.70      | 15.60      | 1.06 |  |                   |
| CREF Growth R3 (QCGRIX)                    | 153,170              | 4.6 | 29.32 (28)                       | 20.48 (43)  | 17.99 (40) | 14.47 (41) | 16.66 (29) | 0.24 |  |                   |
| +/- Russell 1000 Growth Index              |                      |     | 1.48                             | -2.80       | -1.00      | -1.42      | -0.57      | -    |  |                   |
| Large Growth Median                        |                      |     | 27.21                            | 19.20       | 16.68      | 13.70      | 15.60      | 1.06 |  |                   |
| Wells Fargo Growth Inst (SGRNX)            | 40,457               | 1.2 | 34.70 (11)                       | 20.79 (40)  | 21.32 (13) | 15.43 (28) | 17.38 (18) | 0.75 |  |                   |
| +/- Russell 3000 Growth Index              |                      |     | 6.71                             | -1.15       | 3.11       | 0.20       | 0.46       | -    |  |                   |
| Large Growth Median                        |                      |     | 27.21                            | 19.20       | 16.68      | 13.70      | 15.60      | 1.06 |  |                   |
| TIAA-CREF Mid-Cap Value Instl (TIMVX)      | 40,774               | 1.2 | 16.41 (81)                       | -17.95 (85) | -3.84 (84) | 0.33 (80)  | 8.41 (62)  | 0.44 |  |                   |
| +/- Russell Midcap Value Index             |                      |     | -3.54                            | -6.14       | -3.30      | -2.99      | -1.88      | -    |  |                   |
| Mid-Cap Value Median                       |                      |     | 19.49                            | -12.59      | -1.28      | 2.27       | 8.93       | 1.08 |  |                   |
| Vanguard Mid Cap Index Adm (VIMAX)         | 7,892                | 0.2 | 24.96 (25)                       | -0.20 (15)  | 6.45 (8)   | 6.99 (8)   | 12.47 (5)  | 0.05 |  |                   |
| +/- CRSP U.S. Mid Cap TR Index             |                      |     | -0.01                            | 0.00        | -0.02      | -0.02      | -0.15      | -    |  |                   |
| Mid-Cap Blend Median                       |                      |     | 23.86                            | -6.65       | 2.27       | 4.54       | 10.62      | 1.04 |  |                   |
| TIAA-CREF Mid-Cap Growth Instl (TRPWX)     | 19,084               | 0.6 | 32.24 (36)                       | 8.35 (59)   | 12.68 (57) | 9.31 (71)  | 13.48 (63) | 0.48 |  |                   |
| +/- Russell Midcap Growth Index            |                      |     | 1.98                             | -3.56       | -2.08      | -2.29      | -1.61      | -    |  |                   |
| Mid-Cap Growth Median                      |                      |     | 30.03                            | 11.15       | 13.43      | 10.47      | 13.99      | 1.17 |  |                   |
| Royce Opportunity Instl (ROFIX)            | 5,792                | 0.2 | 30.60 (6)                        | -8.99 (7)   | -1.64 (10) | 2.83 (9)   | 9.10 (8)   | 1.08 |  |                   |
| +/- Russell 2000 Value Index               |                      |     | 11.69                            | 8.49        | 2.71       | 1.57       | 1.28       | -    |  |                   |
| Small Value Median                         |                      |     | 21.03                            | -18.00      | -5.08      | -0.17      | 7.47       | 1.23 |  |                   |
| TIAA-CREF Small-Cap Blend Idx Inst (TISBX) | 50,594               | 1.5 | 25.45 (28)                       | -6.48 (18)  | 2.14 (18)  | 4.46 (18)  | 10.67 (18) | 0.06 |  |                   |
| +/- Russell 2000 Index                     |                      |     | 0.03                             | 0.15        | 0.13       | 0.17       | 0.17       | -    |  |                   |
| Small Blend Median                         |                      |     | 24.06                            | -10.65      | 0.11       | 3.06       | 9.70       | 1.11 |  |                   |
| AB Small Cap Growth I (QUAIX)              | 22,035               | 0.7 | 37.07 (21)                       | 15.58 (11)  | 20.18 (11) | 14.11 (8)  | 17.76 (3)  | 0.91 |  |                   |
| +/- Russell 2000 Growth Index              |                      |     | 6.49                             | 12.10       | 12.32      | 7.25       | 4.84       | -    |  |                   |
| Small Growth Median                        |                      |     | 31.68                            | 4.20        | 9.25       | 8.43       | 13.25      | 1.24 |  |                   |
| CREF Global Equities R3 (QCGLIX)           | 85,238               | 2.6 | 22.61 (25)                       | 5.19 (34)   | 6.58 (40)  | 6.29 (44)  | 9.82 (38)  | 0.27 |  |                   |
| +/- MSCI World Index                       |                      |     | 3.07                             | 1.79        | -0.71      | -1.21      | -0.75      | -    |  |                   |
| World Large Stock Median                   |                      |     | 19.24                            | 1.72        | 5.10       | 5.78       | 9.28       | 1.14 |  |                   |



# Performance Summary

|  | Allocation           |      | Performance (%) as of 06/30/2020 |            |            |            |            | Net Expense Ratio |
|--|----------------------|------|----------------------------------|------------|------------|------------|------------|-------------------|
|  | Market Value (\$000) | %    | 1 Quarter                        | 1 Year     | 3 Years    | 5 Years    | 10 Years   |                   |
| TIAA-CREF International Eq Idx Instl (TCIEX)         | 68,522               | 2.1  | 15.98 (63)                       | -4.65 (52) | 0.99 (41)  | 2.25 (38)  | 6.03 (25)  | 0.06              |
| +/- MSCI EAFE (Net) Index                            |                      |      | 1.10                             | 0.48       | 0.18       | 0.20       | 0.30       | -                 |
| Foreign Large Blend Median                           |                      |      | 16.55                            | -4.61      | 0.67       | 1.84       | 5.45       | 0.99              |
| American Funds Europacific Growth R6 (RERGX)         | 57,926               | 1.7  | 22.77 (27)                       | 3.17 (62)  | 4.76 (59)  | 4.90 (52)  | 7.48 (52)  | 0.46              |
| +/- MSCI AC World ex USA (Net)                       |                      |      | 6.65                             | 7.97       | 3.63       | 2.64       | 2.51       | -                 |
| Foreign Large Growth Median                          |                      |      | 20.19                            | 5.06       | 5.56       | 4.98       | 7.52       | 1.12              |
| Pear Tree Polaris Foreign Value Small Cap R6 (QUSRX) | 34                   | 0.0  | 18.30 (47)                       | -9.24 (43) | -3.16 (37) | -0.02 (49) | 6.32 (19)  | 1.05              |
| +/- MSCI AC World ex USA Small Cap (Net)             |                      |      | -4.53                            | -4.90      | -2.99      | -2.52      | 0.27       | -                 |
| Foreign Small/Mid Value Median                       |                      |      | 18.25                            | -9.65      | -4.02      | -0.03      | 5.75       | 1.12              |
| DFA Emerging Markets I (DFEMX)                       | 31,470               | 0.9  | 19.68 (51)                       | -7.26 (75) | -0.10 (68) | 2.14 (61)  | 3.11 (53)  | 0.43              |
| +/- MSCI Emerging Markets (Net) Index                |                      |      | 1.60                             | -3.87      | -2.00      | -0.72      | -0.16      | -                 |
| Diversified Emerging Mkts Median                     |                      |      | 19.68                            | -3.22      | 1.21       | 2.66       | 3.20       | 1.32              |
| TIAA Real Estate Account (QREARX)                    | 141,579              | 4.2  | -1.46                            | 0.99       | 3.75       | 4.42       | 8.17       | 0.83              |
| +/- NCREIF Fund Index-Open End Diversified Core (EW) |                      |      | -0.19                            | -1.57      | -2.24      | -3.21      | -2.73      | -                 |
| CREF Social Choice R3 (QCSCIX)                       | 96,610               | 2.9  | 14.00 (37)                       | 6.01 (22)  | 6.89 (22)  | 6.69 (22)  | 8.39 (39)  | 0.24              |
| +/- 40% BBg US Agg   42% R3000   18% MSCI EAFE + Can |                      |      | 1.00                             | 0.23       | 0.03       | 0.11       | -0.10      | -                 |
| Allocation--50% to 70% Equity Median                 |                      |      | 13.38                            | 3.49       | 5.34       | 5.42       | 8.00       | 1.10              |
| CREF Stock R3 (QCSTIX)                               | 538,843              | 16.1 | 21.33 (21)                       | 2.31 (29)  | 6.45 (28)  | 6.97 (17)  | 10.65 (12) | 0.30              |
| +/- 70% R3000   30% ACWI ex US                       |                      |      | 1.06                             | -0.75      | -0.91      | -0.74      | -0.45      | -                 |
| Allocation--85%+ Equity Median                       |                      |      | 19.79                            | 0.91       | 5.11       | 5.60       | 9.59       | 1.25              |
| TIAA-CREF Lifecycle Retire Income Instl (TLRIX)      | 3,143                | 0.1  | 10.71 (7)                        | 4.70 (53)  | 5.42 (17)  | 5.27 (6)   | 6.79 (3)   | 0.37              |
| +/- CREF Lifecycle Composite Income                  |                      |      | 1.04                             | -1.61      | -0.67      | -0.30      | 0.05       | -                 |
| Target-Date Retirement Median                        |                      |      | 8.31                             | 4.77       | 4.74       | 4.40       | 5.16       | 0.74              |
| TIAA-CREF Lifecycle 2010 Institutional (TCTIX)       | 9,731                | 0.3  | 10.71 (24)                       | 4.79 (59)  | 5.54 (24)  | 5.42 (17)  | 7.34 (8)   | 0.37              |
| +/- CREF Lifecycle Composite 2010                    |                      |      | 1.00                             | -1.50      | -1.11      | -0.56      | -0.09      | -                 |
| Target-Date 2000-2010 Median                         |                      |      | 8.55                             | 4.94       | 5.15       | 4.98       | 6.68       | 0.59              |
| TIAA-CREF Lifecycle 2015 Institutional (TCNIX)       | 21,636               | 0.6  | 11.62 (16)                       | 4.66 (49)  | 5.69 (31)  | 5.62 (25)  | 7.84 (9)   | 0.38              |
| +/- CREF Lifecycle Composite 2015                    |                      |      | 1.02                             | -1.51      | -0.70      | -0.35      | 0.01       | -                 |
| Target-Date 2015 Median                              |                      |      | 9.72                             | 4.64       | 5.28       | 5.15       | 7.28       | 0.65              |



# Performance Summary

|  | Allocation           |     | Performance (%) as of 06/30/2020 |           |           |           |            | Net Expense Ratio |
|--|----------------------|-----|----------------------------------|-----------|-----------|-----------|------------|-------------------|
|  | Market Value (\$000) | %   | 1 Quarter                        | 1 Year    | 3 Years   | 5 Years   | 10 Years   |                   |
| TIAA-CREF Lifecycle 2020 Institutional (TCWIX) | 29,542               | 0.9 | 12.61 (12)                       | 4.61 (38) | 5.88 (23) | 5.87 (19) | 8.43 (9)   | 0.39              |
| +/- CREF Lifecycle Composite 2020              |                      |     | 1.09                             | -1.42     | -0.75     | -0.41     | -0.03      | -                 |
| Target-Date 2020 Median                        |                      |     | 10.54                            | 4.38      | 5.33      | 5.27      | 7.70       | 0.73              |
| TIAA-CREF Lifecycle 2025 Institutional (TCYIX) | 44,028               | 1.3 | 14.14 (11)                       | 4.29 (50) | 6.07 (27) | 6.12 (22) | 9.03 (13)  | 0.41              |
| +/- CREF Lifecycle Composite 2025              |                      |     | 1.19                             | -1.42     | -0.79     | -0.49     | -0.07      | -                 |
| Target-Date 2025 Median                        |                      |     | 12.09                            | 4.29      | 5.64      | 5.63      | 8.37       | 0.72              |
| TIAA-CREF Lifecycle 2030 Institutional (TCRIX) | 53,731               | 1.6 | 15.71 (12)                       | 4.08 (38) | 6.27 (26) | 6.36 (27) | 9.57 (14)  | 0.42              |
| +/- CREF Lifecycle Composite 2030              |                      |     | 1.32                             | -1.28     | -0.79     | -0.57     | -0.16      | -                 |
| Target-Date 2030 Median                        |                      |     | 13.86                            | 3.75      | 5.80      | 5.93      | 8.81       | 0.76              |
| TIAA-CREF Lifecycle 2035 Institutional (TCIIX) | 65,670               | 2.0 | 17.27 (20)                       | 3.80 (30) | 6.42 (22) | 6.58 (25) | 10.09 (12) | 0.43              |
| +/- CREF Lifecycle Composite 2035              |                      |     | 1.42                             | -1.16     | -0.82     | -0.62     | -0.22      | -                 |
| Target-Date 2035 Median                        |                      |     | 15.65                            | 3.06      | 5.85      | 6.11      | 9.27       | 0.74              |
| TIAA-CREF Lifecycle 2040 Institutional (TCOIX) | 96,624               | 2.9 | 18.77 (14)                       | 3.56 (25) | 6.53 (21) | 6.73 (23) | 10.34 (9)  | 0.44              |
| +/- CREF Lifecycle Composite 2040              |                      |     | 1.48                             | -0.83     | -0.79     | -0.68     | -0.27      | -                 |
| Target-Date 2040 Median                        |                      |     | 17.12                            | 2.49      | 5.84      | 6.23      | 9.41       | 0.78              |
| TIAA-CREF Lifecycle 2045 Institutional (TTFIX) | 62,319               | 1.9 | 20.10 (8)                        | 3.20 (27) | 6.48 (21) | 6.80 (22) | 10.35 (12) | 0.45              |
| +/- CREF Lifecycle Composite 2045              |                      |     | 1.40                             | -0.66     | -0.79     | -0.71     | -0.31      | -                 |
| Target-Date 2045 Median                        |                      |     | 18.18                            | 1.95      | 5.80      | 6.29      | 9.52       | 0.75              |
| TIAA-CREF Lifecycle 2050 Institutional (TFTIX) | 46,414               | 1.4 | 20.31 (6)                        | 3.14 (28) | 6.50 (21) | 6.87 (19) | 10.40 (13) | 0.45              |
| +/- CREF Lifecycle Composite 2050              |                      |     | 1.39                             | -0.62     | -0.78     | -0.70     | -0.29      | -                 |
| Target-Date 2050 Median                        |                      |     | 18.34                            | 1.89      | 5.78      | 6.33      | 9.67       | 0.79              |
| TIAA-CREF Lifecycle 2055 Institutional (TTRIX) | 8,843                | 0.3 | 20.51 (6)                        | 3.07 (28) | 6.50 (20) | 6.92 (17) | -          | 0.45              |
| +/- CREF Lifecycle Composite 2055              |                      |     | 1.36                             | -0.59     | -0.78     | -0.72     | -          | -                 |
| Target-Date 2055 Median                        |                      |     | 18.85                            | 1.42      | 5.78      | 6.32      | -          | 0.75              |
| TIAA-CREF Lifecycle 2060 Institutional (TLXNX) | 2,345                | 0.1 | 20.68 (4)                        | 3.03 (29) | 6.52 (25) | 6.97 (27) | -          | 0.45              |
| +/- CREF Lifecycle Composite 2060              |                      |     | 1.30                             | -0.54     | -0.77     | -0.73     | -          | -                 |
| Target-Date 2060+ Median                       |                      |     | 18.83                            | 1.81      | 5.89      | 6.59      | -          | 0.74              |



# Performance Summary - Calendar Year

|  | Performance (%) |             |            |            |             |            |            |            |  |
|--|-----------------|-------------|------------|------------|-------------|------------|------------|------------|--|
|  | 2019            | 2018        | 2017       | 2016       | 2015        | 2014       | 2013       | 2012       |  |
| CREF Money Market R3 (QCMMIX)                    | 2.02 (24)       | 1.46 (53)   | 0.50 (44)  | 0.13 (29)  | 0.00 (84)   | 0.00 (79)  | 0.00 (79)  | 0.00 (76)  |  |
| +/- Blmbg. Barc. U.S. Treasury Bills: 1-3 Months | -0.19           | -0.36       | -0.32      | -0.13      | -0.03       | -0.02      | -0.05      | -0.08      |  |
| Money Market-Taxable Median                      | 1.83            | 1.47        | 0.46       | 0.03       | 0.01        | 0.01       | 0.01       | 0.01       |  |
| TIAA Stable Value                                | 1.99            | 1.81        | 1.51       | 1.46       | 1.60        | 1.77       | -          | -          |  |
| +/- Ryan 3 Yr GIC Master Index                   | -0.39           | -0.15       | -0.09      | 0.07       | 0.44        | 0.74       | -          | -          |  |
| TIAA Traditional                                 | 3.75            | 3.86        | 3.80       | 4.11       | 3.91        | 4.08       | 4.08       | 4.09       |  |
| +/- Blmbg. Barc. U.S. Treasury: 7-10 Year        | -4.75           | 2.96        | 1.25       | 3.06       | 2.28        | -4.92      | 10.12      | -0.07      |  |
| CREF Inflation-Linked Bond R3 (QCILIX)           | 6.53 (74)       | -0.49 (17)  | 1.85 (77)  | 4.23 (56)  | -1.68 (42)  | 3.32 (29)  | -9.02 (70) | 6.40 (58)  |  |
| +/- Blmbg. Barc. U.S. TIPS 1-10 Year             | -0.32           | -0.24       | -0.05      | 0.22       | -1.16       | 2.41       | -3.44      | 1.36       |  |
| Inflation-Protected Bond Median                  | 7.85            | -1.51       | 2.74       | 4.41       | -1.90       | 2.68       | -8.67      | 6.52       |  |
| CREF Bond Market R3 (QCBMIX)                     | 9.03 (29)       | -0.19 (42)  | 4.12 (18)  | 3.47 (18)  | 0.51 (33)   | 5.52 (56)  | -2.01 (46) | 5.29 (52)  |  |
| +/- Blmbg. Barc. U.S. Aggregate Index            | 0.31            | -0.20       | 0.58       | 0.82       | -0.04       | -0.45      | 0.01       | 1.08       |  |
| Intermediate Core Bond Median                    | 8.57            | -0.32       | 3.43       | 2.61       | 0.26        | 5.62       | -2.08      | 5.37       |  |
| Royce Opportunity Instl (ROFIX)                  | 28.36 (9)       | -19.83 (91) | 22.02 (1)  | 29.94 (24) | -13.46 (94) | -0.41 (92) | 43.69 (6)  | 22.70 (7)  |  |
| +/- Russell 2000 Value Index                     | 5.97            | -6.97       | 14.18      | -1.80      | -5.99       | -4.63      | 9.17       | 4.65       |  |
| Small Value Median                               | 21.82           | -15.23      | 8.74       | 25.84      | -6.21       | 4.34       | 36.10      | 16.27      |  |
| Amana Participation Institutional (AMIPX)        | 6.95            | 0.11        | 2.68       | 2.56       | -           | -          | -          | -          |  |
| +/- Dow Jones Sukuk Index                        | -3.85           | -0.16       | -1.63      | -1.45      | -           | -          | -          | -          |  |
| TIAA-CREF Large-Cap Value Instl (TRLIX)          | 28.81 (15)      | -14.10 (94) | 12.52 (87) | 18.60 (16) | -4.69 (70)  | 9.16 (79)  | 34.43 (28) | 19.68 (7)  |  |
| +/- Russell 1000 Value Index                     | 2.27            | -5.83       | -1.14      | 1.26       | -0.86       | -4.29      | 1.90       | 2.17       |  |
| Large Value Median                               | 25.47           | -8.87       | 16.18      | 14.57      | -3.51       | 11.00      | 31.85      | 15.49      |  |
| CREF Equity Index R3 (QCEQIX)                    | 30.73 (44)      | -5.37 (48)  | 20.84 (58) | 12.49 (22) | 0.24 (51)   | 12.17 (52) | 32.99 (36) | 15.98 (39) |  |
| +/- Russell 3000 Index                           | -0.29           | -0.13       | -0.29      | -0.25      | -0.24       | -0.39      | -0.56      | -0.44      |  |
| Large Blend Median                               | 30.19           | -5.53       | 21.16      | 11.16      | 0.29        | 12.29      | 32.19      | 15.71      |  |
| TIAA-CREF S&P 500 Index Instl (TISPX)            | 31.42 (25)      | -4.45 (25)  | 21.77 (31) | 11.87 (32) | 1.35 (23)   | 13.60 (21) | 32.24 (49) | 15.94 (42) |  |
| +/- S&P 500 Index                                | -0.07           | -0.07       | -0.06      | -0.09      | -0.03       | -0.09      | -0.15      | -0.06      |  |
| Large Blend Median                               | 30.19           | -5.53       | 21.16      | 11.16      | 0.29        | 12.29      | 32.19      | 15.71      |  |



# Performance Summary - Calendar Year

|  | Performance (%) |             |            |            |             |            |             |            |
|--|-----------------|-------------|------------|------------|-------------|------------|-------------|------------|
|  | 2019            | 2018        | 2017       | 2016       | 2015        | 2014       | 2013        | 2012       |
| Amana Growth Institutional (AMIGX)         | 33.41 (41)      | 2.67 (11)   | 29.29 (46) | 7.85 (17)  | -0.21 (86)  | 14.29 (10) | 22.95 (100) | 11.21 (93) |
| +/- S&P 500 Index                          | 1.92            | 7.05        | 7.46       | -4.11      | -1.59       | 0.60       | -9.44       | -4.79      |
| Large Growth Median                        | 32.39           | -1.82       | 28.77      | 2.93       | 4.47        | 10.52      | 34.49       | 15.59      |
| CREF Growth R3 (QCGRIX)                    | 31.66 (59)      | -2.46 (55)  | 31.83 (28) | 2.92 (51)  | 6.46 (31)   | 13.66 (16) | 35.00 (45)  | 15.87 (46) |
| +/- Russell 1000 Growth Index              | -4.73           | -0.95       | 1.62       | -4.16      | 0.79        | 0.61       | 1.52        | 0.61       |
| Large Growth Median                        | 32.39           | -1.82       | 28.77      | 2.93       | 4.47        | 10.52      | 34.49       | 15.59      |
| Wells Fargo Growth Inst (SGRNX)            | 37.65 (11)      | 0.55 (25)   | 35.14 (10) | -0.56 (82) | 2.94 (62)   | 4.12 (96)  | 33.72 (58)  | 17.14 (33) |
| +/- Russell 3000 Growth Index              | 1.80            | 2.67        | 5.55       | -7.95      | -2.15       | -8.32      | -0.51       | 1.93       |
| Large Growth Median                        | 32.39           | -1.82       | 28.77      | 2.93       | 4.47        | 10.52      | 34.49       | 15.59      |
| TIAA-CREF Mid-Cap Value Instl (TIMVX)      | 27.05 (45)      | -14.15 (58) | 11.13 (79) | 17.40 (52) | -5.35 (60)  | 12.85 (24) | 32.55 (69)  | 16.60 (47) |
| +/- Russell Midcap Value Index             | -0.01           | -1.86       | -2.21      | -2.60      | -0.57       | -1.90      | -0.91       | -1.91      |
| Mid-Cap Value Median                       | 26.69           | -13.46      | 13.37      | 17.57      | -4.30       | 10.15      | 34.16       | 16.46      |
| Vanguard Mid Cap Index Adm (VIMAX)         | 31.03 (16)      | -9.23 (21)  | 19.25 (17) | 11.22 (78) | -1.34 (16)  | 13.76 (9)  | 35.15 (42)  | 15.99 (69) |
| +/- CRSP U.S. Mid Cap TR Index             | -0.06           | -0.01       | -0.05      | -0.03      | -0.06       | -0.07      | -0.12       | -0.71      |
| Mid-Cap Blend Median                       | 26.23           | -11.28      | 16.17      | 15.99      | -2.97       | 9.25       | 33.68       | 17.37      |
| TIAA-CREF Mid-Cap Growth Instl (TRPWX)     | 33.39 (52)      | -8.17 (78)  | 26.21 (37) | 1.95 (79)  | -0.63 (55)  | 7.74 (48)  | 36.78 (40)  | 17.96 (17) |
| +/- Russell Midcap Growth Index            | -2.08           | -3.42       | 0.94       | -5.38      | -0.43       | -4.16      | 1.04        | 2.15       |
| Mid-Cap Growth Median                      | 33.75           | -5.45       | 24.77      | 5.64       | -0.13       | 7.53       | 35.88       | 14.80      |
| Royce Opportunity Instl (ROFIX)            | 28.36 (9)       | -19.83 (91) | 22.02 (1)  | 29.94 (24) | -13.46 (94) | -0.41 (92) | 43.69 (6)   | 22.70 (7)  |
| +/- Russell 2000 Value Index               | 5.97            | -6.97       | 14.18      | -1.80      | -5.99       | -4.63      | 9.17        | 4.65       |
| Small Value Median                         | 21.82           | -15.23      | 8.74       | 25.84      | -6.21       | 4.34       | 36.10       | 16.27      |
| TIAA-CREF Small-Cap Blend Idx Inst (TISBX) | 25.53 (36)      | -10.84 (32) | 14.83 (25) | 21.58 (40) | -4.14 (46)  | 5.15 (47)  | 38.98 (38)  | 16.61 (34) |
| +/- Russell 2000 Index                     | 0.00            | 0.17        | 0.18       | 0.27       | 0.27        | 0.26       | 0.16        | 0.26       |
| Small Blend Median                         | 24.69           | -11.76      | 13.31      | 20.86      | -4.37       | 4.99       | 38.19       | 15.90      |
| AB Small Cap Growth I (QUAIX)              | 36.11 (16)      | -0.67 (19)  | 34.91 (6)  | 6.80 (78)  | -0.91 (33)  | -1.41 (85) | 45.72 (23)  | 15.42 (36) |
| +/- Russell 2000 Growth Index              | 7.63            | 8.64        | 12.74      | -4.52      | 0.47        | -7.01      | 2.42        | 0.83       |
| Small Growth Median                        | 28.13           | -5.81       | 21.93      | 10.76      | -2.27       | 3.16       | 41.76       | 14.38      |
| CREF Global Equities R3 (QCGLIX)           | 28.28 (39)      | -12.36 (77) | 24.81 (40) | 5.11 (55)  | -0.34 (40)  | 4.17 (37)  | 27.27 (38)  | 18.45 (32) |
| +/- MSCI World Index                       | -0.12           | -4.16       | 1.74       | -3.04      | -0.02       | -1.33      | -0.10       | 1.91       |
| World Large Stock Median                   | 26.49           | -9.66       | 23.74      | 5.52       | -1.36       | 3.24       | 25.79       | 16.22      |



# Performance Summary - Calendar Year

|  | Performance (%) |             |            |            |             |            |            |            |
|--|-----------------|-------------|------------|------------|-------------|------------|------------|------------|
|  | 2019            | 2018        | 2017       | 2016       | 2015        | 2014       | 2013       | 2012       |
| TIAA-CREF International Eq Idx Instl (TCIEIX)        | 21.79 (52)      | -13.25 (17) | 25.32 (52) | 1.22 (49)  | -0.49 (34)  | -5.51 (54) | 21.96 (27) | 19.09 (27) |
| +/- MSCI EAFE (Net) Index                            | -0.22           | 0.54        | 0.29       | 0.22       | 0.32        | -0.61      | -0.82      | 1.77       |
| Foreign Large Blend Median                           | 21.84           | -14.63      | 25.36      | 1.13       | -1.23       | -5.33      | 20.35      | 17.98      |
| American Funds Europacific Growth R6 (RERGX)         | 27.40 (61)      | -14.91 (57) | 31.17 (46) | 1.01 (27)  | -0.48 (63)  | -2.29 (30) | 20.58 (48) | 19.64 (43) |
| +/- MSCI AC World ex USA (Net)                       | 5.89            | -0.71       | 3.98       | -3.49      | 5.18        | 1.58       | 5.29       | 2.81       |
| Foreign Large Growth Median                          | 27.86           | -14.28      | 30.73      | -1.50      | 0.38        | -4.15      | 20.15      | 19.09      |
| Pear Tree Polaris Foreign Value Small Cap R6 (QUSRX) | 20.77 (31)      | -18.81 (34) | 33.44 (27) | 2.75 (57)  | -1.27 (67)  | 6.85 (2)   | 25.20 (41) | 27.52 (14) |
| +/- MSCI AC World ex USA Small Cap (Net)             | -1.65           | -0.61       | 1.79       | -1.16      | -3.87       | 10.88      | 5.47       | 9.00       |
| Foreign Small/Mid Value Median                       | 18.98           | -19.79      | 30.49      | 3.20       | 0.99        | -5.40      | 24.37      | 22.59      |
| DFA Emerging Markets I (DFEMX)                       | 16.03 (80)      | -13.62 (21) | 36.57 (47) | 12.09 (24) | -15.81 (68) | -1.71 (38) | -3.12 (65) | 19.16 (47) |
| +/- MSCI Emerging Markets (Net) Index                | -2.41           | 0.96        | -0.71      | 0.90       | -0.89       | 0.48       | -0.52      | 0.93       |
| Diversified Emerging Mkts Median                     | 19.78           | -16.23      | 35.89      | 8.88       | -14.01      | -2.84      | -1.34      | 18.98      |
| TIAA Real Estate Account (QREARX)                    | 5.51            | 4.79        | 4.37       | 5.20       | 8.16        | 12.22      | 9.65       | 10.06      |
| +/- NCREIF Fund Index-Open End Diversified Core (EW) | -0.57           | -3.46       | -3.43      | -4.07      | -7.01       | -0.06      | -3.69      | -0.97      |
| CREF Social Choice R3 (QCSCIX)                       | 20.80 (24)      | -4.29 (26)  | 14.27 (50) | 7.40 (39)  | -0.87 (43)  | 6.83 (38)  | 16.67 (57) | 10.98 (76) |
| +/- 40% BBg US Agg   42% R3000   18% MSCI EAFE + Can | 0.34            | 0.27        | -0.07      | 0.38       | -0.99       | 0.01       | 0.54       | -0.66      |
| Allocation--50% to 70% Equity Median                 | 19.30           | -5.68       | 14.21      | 6.85       | -1.15       | 5.99       | 17.23      | 12.25      |
| CREF Stock R3 (QCSTIX)                               | 27.45 (15)      | -9.65 (57)  | 23.43 (10) | 9.17 (29)  | -0.84 (29)  | 6.41 (29)  | 27.83 (37) | 17.26 (15) |
| +/- 70% R3000   30% ACWI ex US                       | -0.68           | -1.72       | 0.47       | -1.11      | 0.51        | -1.01      | -0.06      | 0.63       |
| Allocation--85%+ Equity Median                       | 25.24           | -9.40       | 20.25      | 7.59       | -1.83       | 5.10       | 27.07      | 15.14      |
| TIAA-CREF Lifecycle Retire Income Instl (TLRIX)      | 15.30 (18)      | -3.84 (74)  | 12.10 (2)  | 6.04 (21)  | 0.25 (3)    | 4.53 (46)  | 9.85 (12)  | 11.51 (4)  |
| +/- CREF Lifecycle Composite Income                  | -0.40           | -0.90       | 1.55       | 0.23       | 0.43        | -1.33      | 0.84       | 2.14       |
| Target-Date Retirement Median                        | 13.20           | -3.29       | 8.68       | 5.23       | -1.10       | 4.41       | 5.43       | 8.55       |
| TIAA-CREF Lifecycle 2010 Institutional (TCTIX)       | 15.43 (14)      | -3.92 (78)  | 12.76 (2)  | 6.20 (43)  | 0.38 (5)    | 4.59 (64)  | 12.00 (19) | 12.67 (5)  |
| +/- CREF Lifecycle Composite 2010                    | -0.51           | -2.08       | 1.57       | 0.11       | 0.61        | -1.54      | 0.71       | 2.30       |
| Target-Date 2000-2010 Median                         | 14.02           | -3.23       | 10.12      | 5.95       | -0.63       | 4.84       | 10.59      | 10.46      |
| TIAA-CREF Lifecycle 2015 Institutional (TCNIX)       | 16.51 (26)      | -4.41 (69)  | 13.85 (6)  | 6.40 (53)  | 0.42 (3)    | 4.78 (66)  | 13.96 (24) | 13.47 (10) |
| +/- CREF Lifecycle Composite 2015                    | -0.54           | -0.93       | 1.60       | -0.07      | 0.70        | -1.58      | 0.64       | 2.25       |
| Target-Date 2015 Median                              | 15.06           | -3.86       | 11.53      | 6.47       | -0.92       | 5.32       | 12.51      | 11.71      |



# Performance Summary - Calendar Year

|  | Performance (%) |             |           |           |           |           |            |           |
|--|-----------------|-------------|-----------|-----------|-----------|-----------|------------|-----------|
|  | 2019            | 2018        | 2017      | 2016      | 2015      | 2014      | 2013       | 2012      |
| TIAA-CREF Lifecycle 2020 Institutional (TCWIX) | 17.79 (23)      | -5.18 (74)  | 15.58 (6) | 6.66 (47) | 0.42 (4)  | 4.86 (66) | 16.50 (19) | 14.62 (5) |
| +/- CREF Lifecycle Composite 2020              | -0.51           | -1.21       | 1.90      | -0.35     | 0.82      | -1.77     | 0.57       | 2.41      |
| Target-Date 2020 Median                        | 16.24           | -4.45       | 12.76     | 6.58      | -1.04     | 5.54      | 13.43      | 12.13     |
| TIAA-CREF Lifecycle 2025 Institutional (TCYIX) | 19.44 (27)      | -6.05 (74)  | 17.40 (5) | 7.00 (56) | 0.36 (3)  | 4.87 (75) | 19.33 (20) | 15.60 (5) |
| +/- CREF Lifecycle Composite 2025              | -0.56           | -1.39       | 2.04      | -0.61     | 0.89      | -2.02     | 0.73       | 2.41      |
| Target-Date 2025 Median                        | 18.48           | -5.37       | 14.90     | 7.15      | -1.11     | 5.78      | 16.82      | 13.59     |
| TIAA-CREF Lifecycle 2030 Institutional (TCRIX) | 21.27 (28)      | -7.09 (72)  | 19.21 (6) | 7.33 (59) | 0.38 (4)  | 4.71 (79) | 22.07 (15) | 16.53 (6) |
| +/- CREF Lifecycle Composite 2030              | -0.44           | -1.74       | 2.14      | -0.88     | 1.05      | -2.41     | 0.80       | 2.34      |
| Target-Date 2030 Median                        | 20.52           | -6.28       | 16.73     | 7.66      | -1.27     | 5.89      | 18.78      | 14.07     |
| TIAA-CREF Lifecycle 2035 Institutional (TCIIX) | 23.04 (27)      | -8.04 (81)  | 21.11 (5) | 7.52 (68) | 0.24 (5)  | 4.67 (82) | 24.76 (11) | 17.32 (3) |
| +/- CREF Lifecycle Composite 2035              | -0.36           | -2.01       | 2.38      | -1.27     | 1.10      | -2.55     | 0.83       | 2.14      |
| Target-Date 2035 Median                        | 22.37           | -7.17       | 18.41     | 8.13      | -1.35     | 6.04      | 20.89      | 14.92     |
| TIAA-CREF Lifecycle 2040 Institutional (TCOIX) | 24.56 (24)      | -8.92 (86)  | 22.91 (1) | 7.78 (66) | 0.09 (7)  | 4.63 (82) | 26.33 (8)  | 17.52 (4) |
| +/- CREF Lifecycle Composite 2040              | -0.41           | -2.20       | 2.54      | -1.59     | 1.16      | -2.67     | 0.81       | 1.98      |
| Target-Date 2040 Median                        | 23.66           | -7.89       | 19.49     | 8.37      | -1.49     | 6.10      | 21.97      | 15.22     |
| TIAA-CREF Lifecycle 2045 Institutional (TTFIX) | 25.87 (19)      | -9.59 (92)  | 23.62 (1) | 8.06 (63) | 0.13 (7)  | 4.61 (83) | 26.25 (8)  | 17.56 (4) |
| +/- CREF Lifecycle Composite 2045              | -0.38           | -2.32       | 2.44      | -1.66     | 1.21      | -2.69     | 0.73       | 2.02      |
| Target-Date 2045 Median                        | 24.64           | -8.22       | 20.36     | 8.57      | -1.48     | 6.18      | 23.04      | 15.67     |
| TIAA-CREF Lifecycle 2050 Institutional (TFTIX) | 26.19 (16)      | -9.82 (91)  | 24.04 (1) | 8.10 (63) | 0.18 (7)  | 4.59 (82) | 26.25 (11) | 17.53 (5) |
| +/- CREF Lifecycle Composite 2050              | -0.31           | -2.44       | 2.60      | -1.81     | 1.26      | -2.71     | 0.73       | 1.99      |
| Target-Date 2050 Median                        | 24.79           | -8.41       | 20.60     | 8.65      | -1.50     | 6.22      | 23.19      | 15.77     |
| TIAA-CREF Lifecycle 2055 Institutional (TTRIX) | 26.36 (18)      | -9.86 (91)  | 24.23 (1) | 8.27 (62) | 0.13 (7)  | 4.58 (84) | 26.24 (10) | 17.65 (2) |
| +/- CREF Lifecycle Composite 2055              | -0.38           | -2.38       | 2.53      | -1.84     | 1.21      | -2.72     | 0.72       | 2.11      |
| Target-Date 2055 Median                        | 25.13           | -8.48       | 20.83     | 8.59      | -1.50     | 6.37      | 23.57      | 15.94     |
| TIAA-CREF Lifecycle 2060 Institutional (TLXNX) | 26.70 (12)      | -10.06 (87) | 24.40 (1) | 8.39 (63) | 0.19 (10) | -         | -          | -         |
| +/- CREF Lifecycle Composite 2060              | -0.29           | -2.47       | 2.43      | -1.92     | 1.27      | -         | -          | -         |
| Target-Date 2060+ Median                       | 25.32           | -8.58       | 21.00     | 8.96      | -1.08     | -         | -          | -         |

|  | 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)                | 0.88  | 0.88  | 0.86   | -0.08 | -0.09 | -0.06  | 83.15     | 79.93  | 75.76  |             | -10.83 | -3.90  | 0.19               | 0.23  | 0.21   |
| Money Market-Taxable Median                  | 0.81  | 0.83  | 0.80   | -0.06 | -0.12 | -0.06  | 76.91     | 71.15  | 67.75  |             | -44.44 | -57.70 | 0.18               | 0.22  | 0.19   |
| Blmbg. Barc. U.S. Treasury Bills: 1-3 Months |       |       |        |       |       |        |           |        |        |             |        |        | 0.20               | 0.25  | 0.23   |
| TIAA Stable Value                            | 0.68  | 0.55  |        | 0.44  | 0.72  |        | 88.57     | 94.28  |        |             |        |        | 0.07               | 0.08  |        |
| Ryan 3 Yr GIC Master Index                   |       |       |        |       |       |        |           |        |        |             |        |        | 0.08               | 0.13  | 0.18   |
| TIAA Traditional                             | 0.00  | 0.00  | 0.00   | 3.78  | 3.87  | 3.97   | 20.48     | 23.41  | 21.81  | -38.88      | -40.37 | -36.01 | 0.04               | 0.05  | 0.05   |
| Blmbg. Barc. U.S. Treasury: 7-10 Year        |       |       |        |       |       |        |           |        |        |             |        |        | 5.29               | 5.14  | 5.49   |
| CREF Inflation-Linked Bond R3 (QCILIX)       | 0.94  | 1.00  | 1.21   | 0.04  | -0.09 | -0.35  | 95.46     | 98.69  | 115.74 | 95.31       | 101.51 | 122.41 | 2.51               | 2.64  | 4.08   |
| Inflation-Protected Bond Median              | 1.34  | 1.30  | 1.29   | -0.67 | -0.45 | -0.36  | 120.00    | 120.46 | 121.86 | 132.68      | 131.19 | 132.38 | 3.71               | 3.50  | 4.35   |
| Blmbg. Barc. U.S. TIPS 1-10 Year             |       |       |        |       |       |        |           |        |        |             |        |        | 2.64               | 2.60  | 3.19   |
| CREF Bond Market R3 (QCBMIX)                 | 1.04  | 1.01  | 1.00   | -0.40 | 0.02  | 0.06   | 104.33    | 105.67 | 103.43 | 124.77      | 113.36 | 106.58 | 3.75               | 3.37  | 3.10   |
| Intermediate Core Bond Median                | 1.01  | 1.00  | 1.00   | -0.25 | -0.15 | -0.03  | 100.02    | 99.63  | 99.85  | 110.49      | 107.49 | 103.03 | 3.41               | 3.17  | 3.02   |
| Blmbg. Barc. U.S. Aggregate Index            |       |       |        |       |       |        |           |        |        |             |        |        | 3.23               | 3.05  | 2.93   |
| PGIM Total Return Bond R6 (PTRQX)            | 1.26  | 1.22  | 1.17   | -1.08 | -0.12 | 0.86   | 126.51    | 129.78 | 135.12 | 179.66      | 151.51 | 128.66 | 5.46               | 4.74  | 4.22   |
| Intermediate Core-Plus Bond Median           | 1.02  | 0.98  | 0.96   | -0.58 | -0.03 | 0.57   | 103.97    | 103.73 | 106.71 | 133.49      | 119.90 | 104.37 | 4.18               | 3.75  | 3.39   |
| Blmbg. Barc. U.S. Aggregate Index            |       |       |        |       |       |        |           |        |        |             |        |        | 3.23               | 3.05  | 2.93   |
| Amana Participation Institutional (AMIPX)    | 0.77  |       |        | -0.72 |       |        | 67.49     |        |        | 75.21       |        |        | 3.60               |       |        |
| Dow Jones Sukuk Index                        |       |       |        |       |       |        |           |        |        |             |        |        | 4.59               | 3.84  | 3.30   |
| TIAA-CREF Large-Cap Value Instl (TRLIX)      | 1.02  | 1.04  | 1.06   | -1.73 | -1.63 | -1.53  | 99.59     | 102.14 | 102.51 | 107.73      | 111.52 | 111.04 | 18.34              | 16.37 | 15.14  |
| Large Value Median                           | 0.99  | 0.99  | 1.00   | 0.12  | -0.11 | -0.54  | 100.15    | 98.81  | 98.06  | 99.66       | 99.33  | 100.58 | 17.83              | 15.58 | 14.24  |
| Russell 1000 Value Index                     |       |       |        |       |       |        |           |        |        |             |        |        | 17.84              | 15.52 | 14.09  |
| CREF Equity Index R3 (QCEQIX)                | 1.00  | 1.00  | 1.00   | -0.16 | -0.18 | -0.26  | 99.28     | 99.21  | 99.04  | 99.96       | 100.06 | 100.38 | 17.39              | 15.19 | 13.87  |
| Large Blend Median                           | 0.96  | 0.96  | 0.97   | -0.21 | -0.15 | -0.28  | 96.40     | 95.71  | 97.17  | 96.65       | 96.54  | 98.32  | 16.77              | 14.70 | 13.61  |
| Russell 3000 Index                           |       |       |        |       |       |        |           |        |        |             |        |        | 17.45              | 15.23 | 13.91  |
| TIAA-CREF S&P 500 Index Instl (TISPX)        | 1.00  | 1.00  | 1.00   | -0.04 | -0.05 | -0.06  | 99.84     | 99.77  | 99.75  | 100.01      | 99.99  | 100.06 | 16.71              | 14.62 | 13.35  |
| Large Blend Median                           | 1.00  | 1.00  | 1.01   | -1.16 | -1.12 | -1.00  | 97.29     | 96.79  | 98.71  | 100.98      | 102.40 | 103.13 | 16.77              | 14.70 | 13.61  |
| S&P 500 Index                                |       |       |        |       |       |        |           |        |        |             |        |        | 16.71              | 14.63 | 13.36  |
| Amana Growth Institutional (AMIGX)           | 0.87  | 0.89  | 0.90   | 7.93  | 5.21  | 1.55   | 107.95    | 106.08 | 96.34  | 77.09       | 83.13  | 90.36  | 15.13              | 13.57 | 12.65  |
| Large Growth Median                          | 1.01  | 1.02  | 1.04   | 5.47  | 2.62  | 1.06   | 112.52    | 109.93 | 105.87 | 88.30       | 98.57  | 98.93  | 17.55              | 15.77 | 14.81  |
| S&P 500 Index                                |       |       |        |       |       |        |           |        |        |             |        |        | 16.71              | 14.63 | 13.36  |

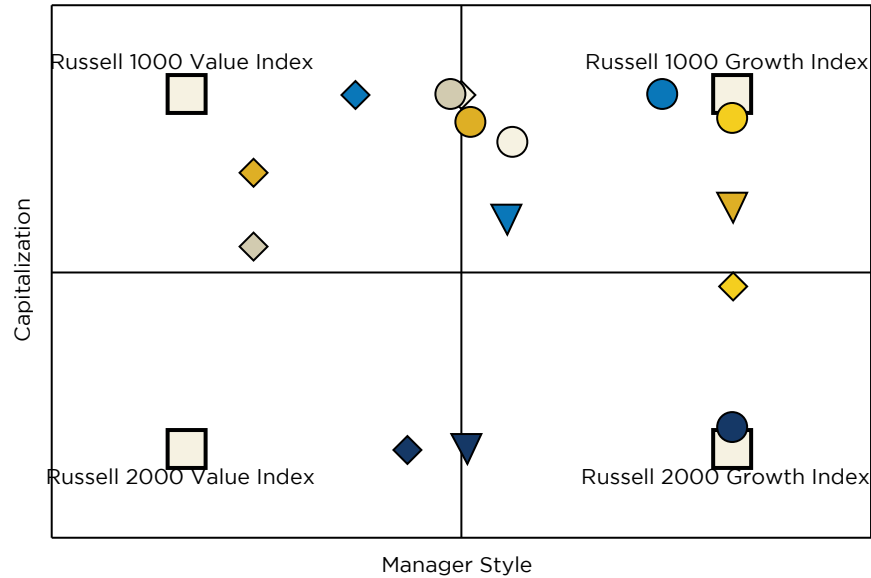


|  | Beta  |       |        | Alpha |       |        | 3 Yrs  | Up Market |        | Down Market |        | Standard Deviation |       |       |        |
|--|-------|-------|--------|-------|-------|--------|--------|-----------|--------|-------------|--------|--------------------|-------|-------|--------|
|  | 3 Yrs | 5 Yrs | 10 Yrs | 3 Yrs | 5 Yrs | 10 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   | -1.17 | -1.65 | -0.97  | 98.76  | 99.86     | 101.35 | 102.24      | 108.38 | 107.08             | 17.84 | 15.94 | 14.47  |
| Large Growth Median                          | 1.00  | 1.00  | 1.03   | -1.65 | -2.02 | -1.65  | 94.70  | 96.17     | 98.06  | 100.98      | 105.98 | 107.63             | 17.55 | 15.77 | 14.81  |
| Russell 1000 Growth Index                    |       |       |        |       |       |        |        |           |        |             |        |                    | 17.40 | 15.36 | 13.94  |
| Wells Fargo Growth Inst (SGRNX)              | 1.14  | 1.13  | 1.12   | 0.64  | -1.43 | -1.20  | 111.46 | 107.47    | 108.80 | 104.80      | 111.30 | 114.89             | 20.53 | 18.30 | 16.64  |
| Large Growth Median                          | 0.98  | 0.99  | 1.01   | -0.77 | -1.25 | -1.16  | 95.66  | 96.68     | 98.07  | 99.05       | 103.22 | 106.19             | 17.55 | 15.77 | 14.81  |
| Russell 3000 Growth Index                    |       |       |        |       |       |        |        |           |        |             |        |                    | 17.66 | 15.59 | 14.18  |
| TIAA-CREF Mid-Cap Value Instl (TIMVX)        | 1.04  | 1.03  | 1.02   | -3.15 | -2.90 | -1.83  | 95.85  | 93.02     | 95.48  | 108.99      | 106.60 | 103.52             | 21.84 | 18.48 | 16.18  |
| Mid-Cap Value Median                         | 1.00  | 1.00  | 1.02   | -0.65 | -1.00 | -1.43  | 100.25 | 98.69     | 99.04  | 102.28      | 104.00 | 106.87             | 21.17 | 18.23 | 16.50  |
| Russell Midcap Value Index                   |       |       |        |       |       |        |        |           |        |             |        |                    | 20.92 | 17.82 | 15.78  |
| Vanguard Mid Cap Index Adm (VIMAX)           | 1.00  | 1.00  | 1.01   | -0.01 | -0.02 | -0.21  | 99.97  | 99.91     | 100.07 | 100.04      | 100.02 | 100.94             | 19.76 | 16.98 | 15.53  |
| Mid-Cap Blend Median                         | 1.06  | 1.05  | 1.05   | -4.10 | -2.44 | -2.20  | 99.03  | 99.91     | 98.30  | 112.27      | 113.52 | 112.57             | 21.35 | 18.38 | 16.56  |
| CRSP U.S. Mid Cap TR Index                   |       |       |        |       |       |        |        |           |        |             |        |                    | 19.76 | 16.99 | 15.41  |
| TIAA-CREF Mid-Cap Growth Instl (TRPWX)       | 1.05  | 1.05  | 1.05   | -2.36 | -2.52 | -2.03  | 99.22  | 98.81     | 101.10 | 107.39      | 109.95 | 111.62             | 21.01 | 18.27 | 16.84  |
| Mid-Cap Growth Median                        | 1.00  | 1.00  | 1.01   | -1.02 | -0.74 | -0.81  | 96.27  | 95.93     | 97.48  | 98.27       | 100.86 | 103.46             | 20.16 | 17.75 | 16.48  |
| Russell Midcap Growth Index                  |       |       |        |       |       |        |        |           |        |             |        |                    | 19.86 | 17.19 | 15.85  |
| Royce Opportunity Instl (ROFIX)              | 1.17  | 1.15  | 1.16   | 4.29  | 1.89  | 0.40   | 122.63 | 115.96    | 115.48 | 108.05      | 108.23 | 113.04             | 27.62 | 24.24 | 22.08  |
| Small Value Median                           | 1.03  | 1.00  | 0.99   | -0.38 | -1.28 | -0.23  | 101.23 | 96.27     | 97.91  | 101.37      | 100.20 | 98.52              | 24.19 | 21.10 | 18.73  |
| Russell 2000 Value Index                     |       |       |        |       |       |        |        |           |        |             |        |                    | 23.25 | 20.57 | 18.54  |
| TIAA-CREF Small-Cap Blend Idx Inst (TISBX)   | 1.00  | 1.00  | 1.00   | 0.13  | 0.17  | 0.17   | 100.10 | 100.20    | 100.20 | 99.66       | 99.55  | 99.54              | 22.57 | 20.06 | 18.48  |
| Small Blend Median                           | 1.00  | 0.99  | 0.98   | -1.77 | -1.03 | -0.44  | 96.51  | 93.78     | 95.24  | 100.87      | 99.23  | 96.55              | 22.68 | 20.07 | 18.41  |
| Russell 2000 Index                           |       |       |        |       |       |        |        |           |        |             |        |                    | 22.61 | 20.10 | 18.52  |
| AB Small Cap Growth I (QUAIX)                | 1.00  | 1.01  | 1.00   | 11.57 | 6.88  | 4.48   | 121.25 | 114.97    | 106.89 | 83.99       | 89.95  | 88.95              | 23.23 | 21.20 | 19.67  |
| Small Growth Median                          | 0.98  | 0.96  | 0.95   | 1.71  | 1.78  | 1.07   | 100.00 | 97.58     | 95.43  | 91.57       | 90.91  | 90.95              | 22.67 | 20.21 | 18.67  |
| Russell 2000 Growth Index                    |       |       |        |       |       |        |        |           |        |             |        |                    | 22.65 | 20.38 | 19.06  |
| CREF Global Equities R3 (QCGLIX)             | 1.06  | 1.04  | 1.03   | -1.00 | -1.38 | -0.96  | 103.87 | 101.34    | 100.76 | 108.66      | 109.19 | 105.95             | 17.12 | 15.04 | 14.33  |
| World Large Stock Median                     | 0.99  | 0.99  | 1.00   | -1.73 | -1.28 | -1.11  | 95.03  | 95.24     | 97.63  | 100.20      | 99.43  | 101.53             | 16.35 | 14.64 | 14.32  |
| MSCI World Index                             |       |       |        |       |       |        |        |           |        |             |        |                    | 16.02 | 14.32 | 13.79  |
| TIAA-CREF International Eq Idx Instl (TCIEX) | 1.01  | 0.98  | 0.99   | 0.20  | 0.24  | 0.33   | 100.28 | 97.86     | 100.01 | 99.19       | 96.55  | 98.34              | 15.21 | 14.10 | 15.04  |
| Foreign Large Blend Median                   | 1.04  | 1.00  | 0.99   | -0.05 | -0.13 | -0.13  | 101.25 | 97.81     | 97.02  | 101.32      | 97.61  | 98.30              | 15.78 | 14.55 | 15.13  |
| MSCI EAFE (Net) Index                        |       |       |        |       |       |        |        |           |        |             |        |                    | 14.96 | 14.29 | 15.00  |
| American Funds Europacific Growth R6 (RERGX) | 1.10  | 1.03  | 0.99   | -1.65 | -0.76 | 0.53   | 106.74 | 101.78    | 100.40 | 115.21      | 105.87 | 97.74              | 16.66 | 15.01 | 14.86  |
| Foreign Large Growth Median                  | 1.04  | 1.01  | 0.99   | -0.51 | -0.39 | 0.63   | 99.19  | 97.77     | 100.10 | 102.76      | 100.75 | 96.55              | 15.86 | 14.69 | 15.04  |
| MSCI AC World ex USA (Net)                   |       |       |        |       |       |        |        |           |        |             |        |                    | 14.86 | 14.13 | 14.68  |

|  | 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) | 0.98  | 0.97  | 0.91   | -2.96 | -2.35 | 0.80   | 92.20     | 91.86  | 91.97  | 105.33      | 103.30 | 87.90  | 18.51              | 16.52 | 15.34  |
| Foreign Small/Mid Value Median                       | 1.00  | 0.99  | 0.91   | -3.67 | -2.36 | -0.43  | 93.38     | 91.93  | 92.04  | 109.76      | 103.90 | 91.06  | 19.37              | 17.01 | 15.34  |
| MSCI AC World ex USA Small Cap (Net)                 |       |       |        |       |       |        |           |        |        |             |        |        | 18.69              | 16.56 | 16.31  |
| DFA Emerging Markets I (DFEMX)                       | 1.02  | 1.00  | 0.99   | -1.89 | -0.64 | -0.09  | 97.96     | 98.62  | 99.33  | 105.64      | 101.35 | 99.86  | 18.90              | 17.91 | 17.82  |
| Diversified Emerging Mkts Median                     | 1.00  | 0.97  | 0.98   | -0.53 | 0.01  | 0.06   | 98.24     | 97.56  | 98.59  | 100.32      | 95.85  | 96.40  | 18.85              | 17.82 | 17.90  |
| MSCI Emerging Markets (Net) Index                    |       |       |        |       |       |        |           |        |        |             |        |        | 18.26              | 17.71 | 17.81  |
| TIAA Real Estate Account (QREARX)                    |       |       |        |       |       |        |           |        |        |             |        |        | 1.19               | 1.12  | 1.77   |
| NCREIF Fund Index-Open End Diversified Core (EW)     |       |       |        |       |       |        |           |        |        |             |        |        |                    |       |        |
| CREF Social Choice R3 (QCSCIX)                       | 1.05  | 1.03  | 1.00   | -0.24 | -0.05 | -0.09  | 101.27    | 100.71 | 98.50  | 101.34      | 99.73  | 97.89  | 10.48              | 9.11  | 8.32   |
| Allocation--50% to 70% Equity Median                 | 1.08  | 1.07  | 1.08   | -1.71 | -1.30 | -1.02  | 99.64     | 100.43 | 103.91 | 111.05      | 109.44 | 111.56 | 10.95              | 9.62  | 9.20   |
| 40% BBg US Agg   42% R3000   18% MSCI EAFE + Can     |       |       |        |       |       |        |           |        |        |             |        |        | 9.98               | 8.84  | 8.26   |
| CREF Stock R3 (QCSTIX)                               | 1.03  | 1.02  | 1.02   | -1.02 | -0.82 | -0.61  | 99.37     | 99.34  | 99.92  | 103.34      | 103.30 | 102.56 | 17.15              | 15.04 | 14.20  |
| Allocation--85%+ Equity Median                       | 0.99  | 0.98  | 0.96   | -1.78 | -1.65 | -1.08  | 91.39     | 91.47  | 92.84  | 98.99       | 100.03 | 98.02  | 16.68              | 14.68 | 13.55  |
| 70% R3000   30% ACWI ex US                           |       |       |        |       |       |        |           |        |        |             |        |        | 16.61              | 14.71 | 13.87  |
| TIAA-CREF Lifecycle Retire Income Instl (TLRIX)      | 1.10  | 1.10  | 1.10   | -1.20 | -0.78 | -0.56  | 100.51    | 103.27 | 104.77 | 110.45      | 111.17 | 109.94 | 7.73               | 6.83  | 6.34   |
| Target-Date Retirement Median                        | 0.86  | 0.85  | 0.82   | -0.41 | -0.31 | -0.36  | 81.70     | 82.62  | 81.85  | 82.70       | 86.25  | 86.35  | 6.03               | 5.33  | 4.87   |
| CREF Lifecycle Composite Income                      |       |       |        |       |       |        |           |        |        |             |        |        | 6.95               | 6.16  | 5.73   |
| TIAA-CREF Lifecycle 2010 Institutional (TCTIX)       |       |       |        |       |       |        |           |        |        |             |        |        | 7.80               | 7.01  | 6.97   |
| Target-Date 2000-2010 Median                         |       |       |        |       |       |        |           |        |        |             |        |        | 6.37               | 5.93  | 6.16   |
| CREF Lifecycle Composite 2010                        |       |       |        |       |       |        |           |        |        |             |        |        |                    |       |        |
| TIAA-CREF Lifecycle 2015 Institutional (TCNIX)       | 1.09  | 1.08  | 1.09   | -1.15 | -0.76 | -0.62  | 100.26    | 102.55 | 104.48 | 108.77      | 109.47 | 109.41 | 8.61               | 7.72  | 7.78   |
| Target-Date 2015 Median                              | 0.95  | 0.95  | 1.00   | -0.76 | -0.51 | -0.50  | 90.29     | 91.69  | 97.96  | 97.88       | 98.29  | 102.71 | 7.51               | 6.74  | 7.18   |
| CREF Lifecycle Composite 2015                        |       |       |        |       |       |        |           |        |        |             |        |        | 7.87               | 7.09  | 7.11   |
| TIAA-CREF Lifecycle 2020 Institutional (TCWIX)       | 1.08  | 1.07  | 1.08   | -1.15 | -0.78 | -0.63  | 99.95     | 101.81 | 103.69 | 107.65      | 108.06 | 107.77 | 9.49               | 8.56  | 8.72   |
| Target-Date 2020 Median                              | 0.93  | 0.93  | 0.98   | -0.90 | -0.60 | -0.54  | 87.15     | 89.16  | 95.34  | 94.50       | 96.17  | 99.40  | 8.21               | 7.55  | 7.97   |
| CREF Lifecycle Composite 2020                        |       |       |        |       |       |        |           |        |        |             |        |        | 8.75               | 7.94  | 8.03   |
| TIAA-CREF Lifecycle 2025 Institutional (TCYIX)       | 1.07  | 1.07  | 1.08   | -1.16 | -0.85 | -0.69  | 100.44    | 102.37 | 104.02 | 107.48      | 109.02 | 108.56 | 10.82              | 9.73  | 9.87   |
| Target-Date 2025 Median                              | 0.97  | 0.98  | 1.01   | -1.09 | -0.71 | -0.72  | 90.76     | 93.27  | 97.62  | 98.61       | 99.60  | 102.34 | 9.86               | 8.95  | 9.25   |
| CREF Lifecycle Composite 2025                        |       |       |        |       |       |        |           |        |        |             |        |        | 10.04              | 9.07  | 9.11   |
| TIAA-CREF Lifecycle 2030 Institutional (TCRIX)       | 1.07  | 1.07  | 1.07   | -1.16 | -0.94 | -0.77  | 100.83    | 102.31 | 103.59 | 107.10      | 108.81 | 108.09 | 12.18              | 10.95 | 11.01  |
| Target-Date 2030 Median                              | 1.00  | 1.00  | 0.99   | -1.22 | -0.80 | -0.76  | 93.94     | 95.54  | 97.16  | 100.74      | 101.29 | 100.82 | 11.39              | 10.26 | 10.17  |
| CREF Lifecycle Composite 2030                        |       |       |        |       |       |        |           |        |        |             |        |        | 11.34              | 10.22 | 10.20  |

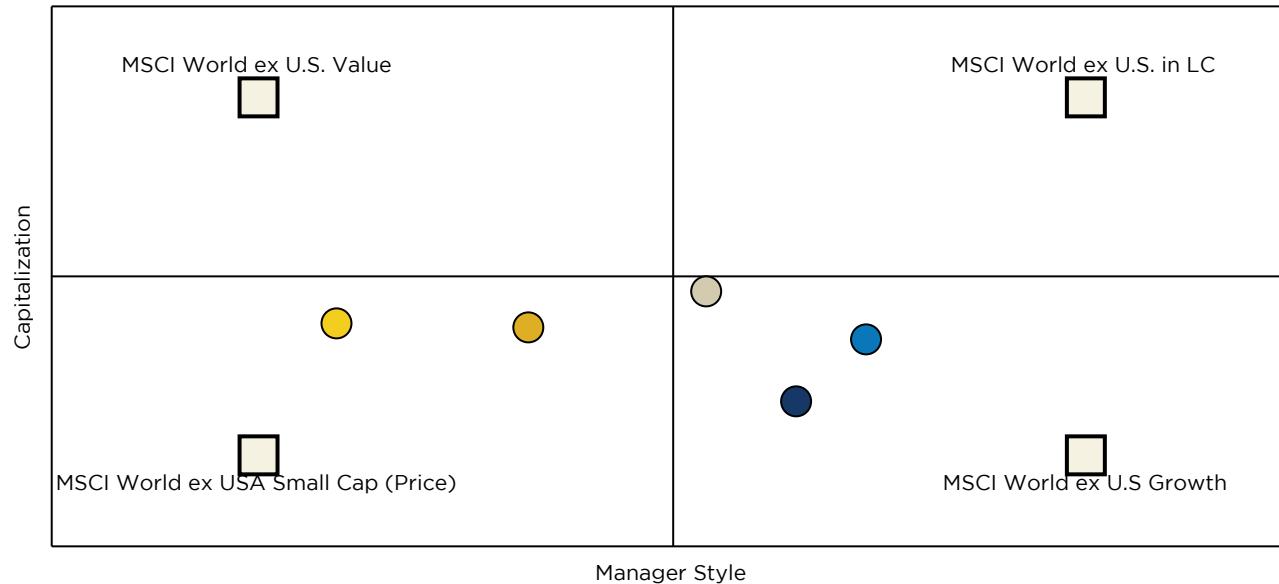
|  | Beta  |       |        | Alpha |       |        | Up Market |        |        | Down Market |        |        | Standard Deviation |       |        |
|--|-------|-------|--------|-------|-------|--------|-----------|--------|--------|-------------|--------|--------|--------------------|-------|--------|
|  | 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 |
| TIAA-CREF Lifecycle 2035 Institutional (TCIIX) | 1.07  | 1.06  | 1.07   | -1.16 | -0.96 | -0.80  | 101.72    | 102.67 | 103.27 | 107.82      | 109.04 | 107.68 | 13.53              | 12.13 | 12.12  |
| Target-Date 2035 Median                        | 1.02  | 1.00  | 1.01   | -1.41 | -1.01 | -1.00  | 96.48     | 96.18  | 97.13  | 104.73      | 102.73 | 102.28 | 12.90              | 11.45 | 11.52  |
| CREF Lifecycle Composite 2035                  |       |       |        |       |       |        |           |        |        |             |        |        | 12.64              | 11.38 | 11.31  |
| TIAA-CREF Lifecycle 2040 Institutional (TCOIX) | 1.06  | 1.05  | 1.06   | -1.09 | -0.96 | -0.78  | 101.58    | 102.75 | 103.15 | 106.70      | 108.93 | 107.49 | 14.85              | 13.28 | 12.85  |
| Target-Date 2040 Median                        | 1.00  | 0.99  | 0.99   | -1.37 | -1.01 | -0.93  | 94.64     | 94.57  | 94.91  | 101.71      | 100.78 | 100.29 | 14.08              | 12.47 | 12.01  |
| CREF Lifecycle Composite 2040                  |       |       |        |       |       |        |           |        |        |             |        |        | 13.97              | 12.55 | 12.08  |
| TIAA-CREF Lifecycle 2045 Institutional (TTFIX) | 1.05  | 1.05  | 1.06   | -1.03 | -0.96 | -0.79  | 101.63    | 102.79 | 102.99 | 106.31      | 108.80 | 107.34 | 15.94              | 14.05 | 13.26  |
| Target-Date 2045 Median                        | 0.99  | 0.98  | 1.00   | -1.27 | -1.02 | -1.01  | 93.58     | 94.40  | 95.92  | 99.47       | 99.67  | 101.09 | 14.94              | 13.17 | 12.60  |
| CREF Lifecycle Composite 2045                  |       |       |        |       |       |        |           |        |        |             |        |        | 15.09              | 13.34 | 12.49  |
| TIAA-CREF Lifecycle 2050 Institutional (TFTIX) | 1.05  | 1.05  | 1.05   | -1.01 | -0.94 | -0.76  | 101.72    | 102.61 | 102.87 | 106.28      | 108.47 | 107.03 | 16.15              | 14.19 | 13.33  |
| Target-Date 2050 Median                        | 0.99  | 0.98  | 1.00   | -1.32 | -1.05 | -0.87  | 94.10     | 94.62  | 97.29  | 99.87       | 99.05  | 101.34 | 15.18              | 13.30 | 12.72  |
| CREF Lifecycle Composite 2050                  |       |       |        |       |       |        |           |        |        |             |        |        | 15.30              | 13.50 | 12.58  |
| TIAA-CREF Lifecycle 2055 Institutional (TTRIX) | 1.05  | 1.04  |        | -0.99 | -0.93 |        | 101.17    | 102.41 |        | 105.50      | 108.18 |        | 16.28              | 14.31 |        |
| Target-Date 2055 Median                        | 0.98  | 0.99  |        | -1.42 | -1.16 |        | 94.41     | 94.73  |        | 100.07      | 101.12 |        | 15.32              | 13.52 | 12.99  |
| CREF Lifecycle Composite 2055                  |       |       |        |       |       |        |           |        |        |             |        |        | 15.51              | 13.66 |        |
| TIAA-CREF Lifecycle 2060 Institutional (TLXNX) | 1.04  | 1.04  |        | -0.97 | -0.93 |        | 101.12    | 102.13 |        | 105.31      | 107.77 |        | 16.47              | 14.44 |        |
| Target-Date 2060+ Median                       | 0.97  | 0.97  |        | -1.24 | -0.91 |        | 93.61     | 94.93  |        | 98.16       | 100.50 |        | 15.30              | 13.52 |        |
| CREF Lifecycle Composite 2060                  |       |       |        |       |       |        |           |        |        |             |        |        | 15.72              | 13.81 |        |

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



- AB Small Cap Growth I (QUAIX)
- CREF Equity Index R3 (QCEQIX)
- CREF Social Choice R3 (QCSCIX)
- ◆ Royce Opportunity Instl (ROFIX)
- ◆ TIAA-CREF Large-Cap Value Instl (TRLIX)
- ◇ TIAA-CREF Mid-Cap Value Instl (TIMVX)
- ▼ TIAA-CREF Small-Cap Blend Idx Inst (TISBX)
- ▼ Wells Fargo Growth Inst (SGRNX)
- Amana Growth Institutional (AMIGX)
- CREF Growth R3 (QCGRIX)
- CREF Stock R3 (QCSTIX)
- ◆ TIAA Real Estate Account (QREARX)
- ◆ TIAA-CREF Mid-Cap Growth Instl (TRPWX)
- ◇ TIAA-CREF S&P 500 Index Instl (TISPX)
- ▼ Vanguard Mid Cap Index Adm (VIMAX)

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



- American Funds Europacific Growth R6 (RERGX)
- CREF Global Equities R3 (QCGLIX)
- DFA Emerging Markets I (DFEMX)
- Pear Tree Polaris Foreign Value Small Cap R6 (QUSRX)
- TIAA-CREF International Eq Idx Instl (TCIEX)



**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.<br>Parnassus Core Equity<br>Vanguard Institutional Index  | Amana Growth<br>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<br>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.<br>Vanguard Target Retirement Income,<br>2015, 2020, 2025, 2030, 2035, 2040, 2045,<br>2050, 2055, 2060 | Amana Participation                   |
|                       | Other Sectors   | Absolute Return   | Self-Directed Brokerage               |
|                       |   |   |                                       |

Gold = Passively Managed Index Funds

Navy = Actively Managed Funds

# Plan Activity: Voya

January 1, 2020 - June 30, 2020

| Fund                                     | Beginning Balance 1/1/2020 | Contributions        | Withdrawals            | Exchanges     | Intra Vendor Transfers | Fees        | Investment Earnings    | Misc.           | Ending Balance 6/30/2020 | Difference Between Beginning and Ending Balances |
|--|----------------------------|----------------------|------------------------|---------------|------------------------|-------------|------------------------|-----------------|--------------------------|--|
| Voya Fixed Plus Fund 4020                | \$ 96,037,398              | \$ 1,848,272         | \$ (2,594,514)         | \$ 12,602,035 | \$ 258,030             | \$ -        | \$ 817,947             | \$ -            | \$ 108,969,169           | \$ 12,931,771                                    |
| Vanguard Treasury Money Market Investo   | 5,879,973                  | 141,088              | (133,661)              | 1,127,540     | 13,285                 | -           | 30,816                 | -               | 7,059,041                | 1,179,068  |
| Amana Participation Institutional        | 339,003                    | 10,205               | -                      | 281,770       | -                      | -           | 9,479                  | -               | 640,457                  | 301,454  |
| PIMCO Total Return Instl                 | 20,605,480                 | 435,010              | (534,098)              | 763,128       | 44,347                 | -           | 1,258,231              | (0)             | 22,572,099               | 1,966,619  |
| Fidelity® US Bond Index                  | 4,020,449                  | 97,809               | (210,299)              | 2,015,868     | 7,863                  | -           | 303,035                | -               | 6,234,724                | 2,214,275  |
| American Funds Inflation Linked Bd R6    | 9,884,993                  | 247,284              | (164,562)              | 1,400,675     | 12,597                 | -           | 997,345                | (0)             | 12,378,332               | 2,493,339  |
| Blackrock Equity Dividend Instl          | 16,546,524                 | 430,705              | (131,550)              | 853,822       | 33,325                 | -           | (2,337,959)            | -               | 15,394,869               | (1,151,655)                                      |
| American Funds Fundamental Invs R6       | 68,401,221                 | 1,093,732            | (1,250,637)            | (3,065,116)   | 37,649                 | -           | (3,791,978)            | -               | 61,424,871               | (6,976,350)                                      |
| Vanguard Institutional Index I           | 23,468,425                 | 1,043,995            | (595,580)              | (3,291)       | 44,947                 | -           | (727,369)              | -               | 23,231,127               | (237,298)  |
| Parnassus Core Equity Institutional      | 19,332,854                 | 605,900              | (488,285)              | 456,629       | 88,913                 | -           | (396,976)              | -               | 19,599,035               | 266,181  |
| Amana Growth Institutional               | 3,649,720                  | 189,669              | (116,127)              | 1,615,036     | 17,314                 | -           | 324,069                | -               | 5,679,681                | 2,029,961  |
| Voya Large Cap Growth Port I             | 80,712,636                 | 1,744,874            | (1,448,590)            | (3,604,863)   | 123,984                | -           | 5,096,367              | 364             | 82,624,772               | 1,912,136  |
| American Century Mid Cap Value I         | 22,034,389                 | 434,238              | (214,851)              | (1,422,213)   | 14,554                 | -           | (3,596,419)            | 364             | 17,250,061               | (4,784,328)                                      |
| Vanguard Mid Cap Index Institutional     | 31,459,227                 | 922,953              | (548,552)              | (1,093,260)   | 32,747                 | -           | (2,305,715)            | -               | 28,467,401               | (2,991,827)                                      |
| Champlain Mid Cap Institutional          | 14,826,866                 | 467,118              | (331,162)              | (379,495)     | 43,698                 | -           | 169,090                | -               | 14,796,115               | (30,751)   |
| American Beacon Small Cp Val R5          | 1,635,968                  | 58,673               | (33,138)               | (34,591)      | 5,897                  | -           | (399,460)              | -               | 1,233,348                | (402,620)  |
| Vanguard Small Cap Index I               | 34,267,874                 | 993,490              | (599,458)              | (1,676,575)   | 43,916                 | -           | (4,055,389)            | -               | 28,973,858               | (5,294,017)                                      |
| Voya SmallCap Opportunities Port I       | 19,341,917                 | 457,646              | (221,314)              | (738,427)     | 13,669                 | -           | (997,812)              | 312             | 17,855,990               | (1,485,927)                                      |
| VY® Invesco Oppenheimer Global I         | 23,485,251                 | 620,601              | (328,565)              | (2,355,965)   | 20,638                 | -           | (628,917)              | (0)             | 20,813,043               | (2,672,207)                                      |
| Vanguard Total Intl Stock Index Admiral  | 464,879                    | 36,021               | (2,304)                | 224,705       | 504                    | -           | (42,014)               | -               | 681,791                  | 216,912  |
| American Funds Europacific Growth R6     | 36,734,865                 | 869,138              | (493,258)              | (2,494,781)   | 34,442                 | -           | (1,930,437)            | -               | 32,719,969               | (4,014,896)                                      |
| Invesco Oppenheimer Developing Mkts R6   | 12,242,420                 | 477,064              | (128,200)              | (993,031)     | 29,050                 | -           | (1,083,697)            | -               | 10,543,608               | (1,698,813)                                      |
| Vanguard Real Estate Index Institutional | 21,887,518                 | 484,177              | (458,383)              | (813,349)     | 17,466                 | -           | (3,115,674)            | -               | 18,001,755               | (3,885,763)                                      |
| VY® T. Rowe Price Capital Apprec I       | 74,244,332                 | 2,158,016            | (1,674,845)            | (333,170)     | 240,609                | -           | (127,763)              | -               | 74,507,179               | 262,848  |
| Vanguard Target Retirement Income Inv    | 20,945,109                 | 360,756              | (281,769)              | (855,436)     | 14,329                 | -           | 282,427                | -               | 20,465,416               | (479,693)  |
| Vanguard Target Retirement 2015 Inv      | 3,295,638                  | 54,331               | (70,199)               | (215,314)     | -                      | -           | 81,444                 | -               | 3,145,899                | (149,739)  |
| Vanguard Target Retirement 2020 Inv      | 3,018,577                  | 274,656              | (54,691)               | (533,763)     | -                      | -           | (10,957)               | -               | 2,693,821                | (324,756)  |
| Vanguard Target Retirement 2025 Inv      | 11,755,491                 | 296,791              | (74,629)               | 284,332       | 12,028                 | -           | (310,733)              | -               | 11,963,280               | 207,789  |
| Vanguard Target Retirement 2030 Inv      | 3,625,226                  | 174,232              | -                      | (258,241)     | -                      | -           | (84,683)               | -               | 3,456,533                | (168,692)  |
| Vanguard Target Retirement 2035 Inv      | 12,642,433                 | 547,074              | (140,698)              | (321,436)     | -                      | -           | (422,902)              | -               | 12,304,471               | (337,963)  |
| Vanguard Target Retirement 2040 Inv      | 4,701,780                  | 340,490              | (1,930)                | (278,894)     | 896                    | -           | (171,691)              | -               | 4,590,651                | (111,129)  |
| Vanguard Target Retirement 2045 Inv      | 10,701,265                 | 536,338              | (52,736)               | (251,069)     | 182                    | -           | (479,835)              | -               | 10,454,145               | (247,120)  |
| Vanguard Target Retirement 2050 Inv      | 4,676,830                  | 531,821              | (17,425)               | 105,253       | -                      | -           | (200,700)              | -               | 5,095,779                | 418,949  |
| Vanguard Target Retirement 2055 Inv      | 987,128                    | 279,771              | (31,868)               | 52,263        | -                      | -           | (36,679)               | -               | 1,250,615                | 263,487  |
| Vanguard Target Retirement 2060 Inv      | 917,320                    | 201,180              | (13,422)               | (60,778)      | -                      | -           | (53,986)               | -               | 990,314                  | 72,994   |
| <b>Totals</b>                            | <b>\$ 718,770,979</b>      | <b>\$ 19,465,117</b> | <b>\$ (13,441,299)</b> | <b>\$ (0)</b> | <b>\$ 1,206,879</b>    | <b>\$ -</b> | <b>\$ (17,939,493)</b> | <b>\$ 1,039</b> | <b>\$ 708,063,222</b>    | <b>\$ (10,707,758)</b>                           |

# Performance: Voya

January 1, 2020 - June 30, 2020

| Fund                                     | Beginning Balance: 01/01/2020 | Ending Balance: 06/30/2020 | Six Month Return |
|--|-------------------------------|----------------------------|------------------|
| Voya Fixed Plus Fund 4020                | \$ 96,037,398                 | \$ 108,969,169             | 0.95%            |
| Vanguard Treasury Money Market Investor  | \$ 5,879,973                  | \$ 7,059,041               | 0.44%            |
| Amana Participation Institutional        | \$ 339,003                    | \$ 640,457                 | 1.87%            |
| PIMCO Total Return Instl                 | \$ 20,605,480                 | \$ 22,572,099              | 6.16%            |
| Fidelity® US Bond Index                  | \$ 4,020,449                  | \$ 6,234,724               | 6.53%            |
| American Funds Inflation Linked Bd R6    | \$ 9,884,993                  | \$ 12,378,332              | 9.60%            |
| Blackrock Equity Dividend Instl          | \$ 16,546,524                 | \$ 15,394,869              | -13.71%          |
| American Funds Fundamental Invs R6       | \$ 68,401,221                 | \$ 61,424,871              | -5.55%           |
| Vanguard Institutional Index I           | \$ 23,468,425                 | \$ 23,231,127              | -3.08%           |
| Parnassus Core Equity Institutional      | \$ 19,332,854                 | \$ 19,599,035              | -1.93%           |
| Amana Growth Institutional               | \$ 3,649,720                  | \$ 5,679,681               | 5.98%            |
| Voya Large Cap Growth Port I             | \$ 80,712,636                 | \$ 82,624,772              | 6.56%            |
| American Century Mid Cap Value I         | \$ 22,034,389                 | \$ 17,250,061              | -16.28%          |
| Vanguard Mid Cap Index Institutional     | \$ 31,459,227                 | \$ 28,467,401              | -7.16%           |
| Champlain Mid Cap Institutional          | \$ 14,826,866                 | \$ 14,796,115              | 1.85%            |
| American Beacon Small Cp Val R5          | \$ 1,635,968                  | \$ 1,233,348               | -24.74%          |
| Vanguard Small Cap Index I               | \$ 34,267,874                 | \$ 28,973,858              | -11.42%          |
| Voya SmallCap Opportunities Port I       | \$ 19,341,917                 | \$ 17,855,990              | -5.04%           |
| VY® Invesco Oppenheimer Global I         | \$ 23,485,251                 | \$ 20,813,043              | -1.64%           |
| Vanguard Total Intl Stock Index Admiral  | \$ 464,879                    | \$ 681,791                 | -10.59%          |
| American Funds Europacific Growth R6     | \$ 36,734,865                 | \$ 32,719,969              | -4.77%           |
| Invesco Oppenheimer Developing Mkts R6   | \$ 12,242,420                 | \$ 10,543,608              | -8.71%           |
| Vanguard Real Estate Index Institutional | \$ 21,887,518                 | \$ 18,001,755              | -13.90%          |
| VY® T. Rowe Price Capital Apprec I       | \$ 74,244,332                 | \$ 74,507,179              | 0.10%            |
| Vanguard Target Retirement Income Inv    | \$ 20,945,109                 | \$ 20,465,416              | 1.46%            |
| Vanguard Target Retirement 2015 Inv      | \$ 3,295,638                  | \$ 3,145,899               | 0.79%            |
| Vanguard Target Retirement 2020 Inv      | \$ 3,018,577                  | \$ 2,693,821               | -0.58%           |
| Vanguard Target Retirement 2025 Inv      | \$ 11,755,491                 | \$ 11,963,280              | -1.46%           |
| Vanguard Target Retirement 2030 Inv      | \$ 3,625,226                  | \$ 3,456,533               | -2.33%           |
| Vanguard Target Retirement 2035 Inv      | \$ 12,642,433                 | \$ 12,304,471              | -3.24%           |
| Vanguard Target Retirement 2040 Inv      | \$ 4,701,780                  | \$ 4,590,651               | -4.11%           |
| Vanguard Target Retirement 2045 Inv      | \$ 10,701,265                 | \$ 10,454,145              | -4.90%           |
| Vanguard Target Retirement 2050 Inv      | \$ 4,676,830                  | \$ 5,095,779               | -4.90%           |
| Vanguard Target Retirement 2055 Inv      | \$ 987,128                    | \$ 1,250,615               | -4.95%           |
| Vanguard Target Retirement 2060 Inv      | \$ 917,320                    | \$ 990,314                 | -4.95%           |
| Totals/Weighted Average Return           | \$ 718,770,979                | \$ 708,063,222             | -1.99%           |
| Weighted Average Variable Funds Return   |                               |                            | -2.61%           |
| Weighted Average Fixed Income Return     |                               |                            | 0.95%            |

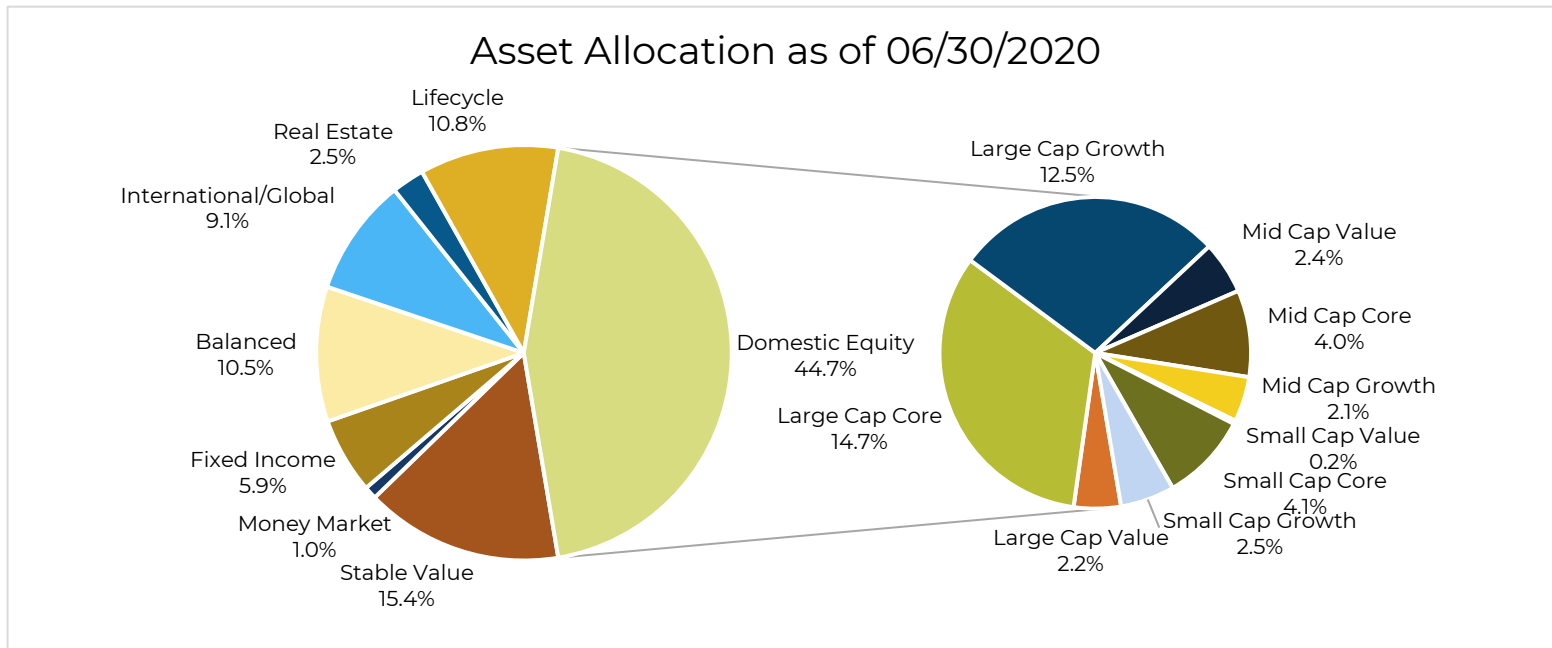
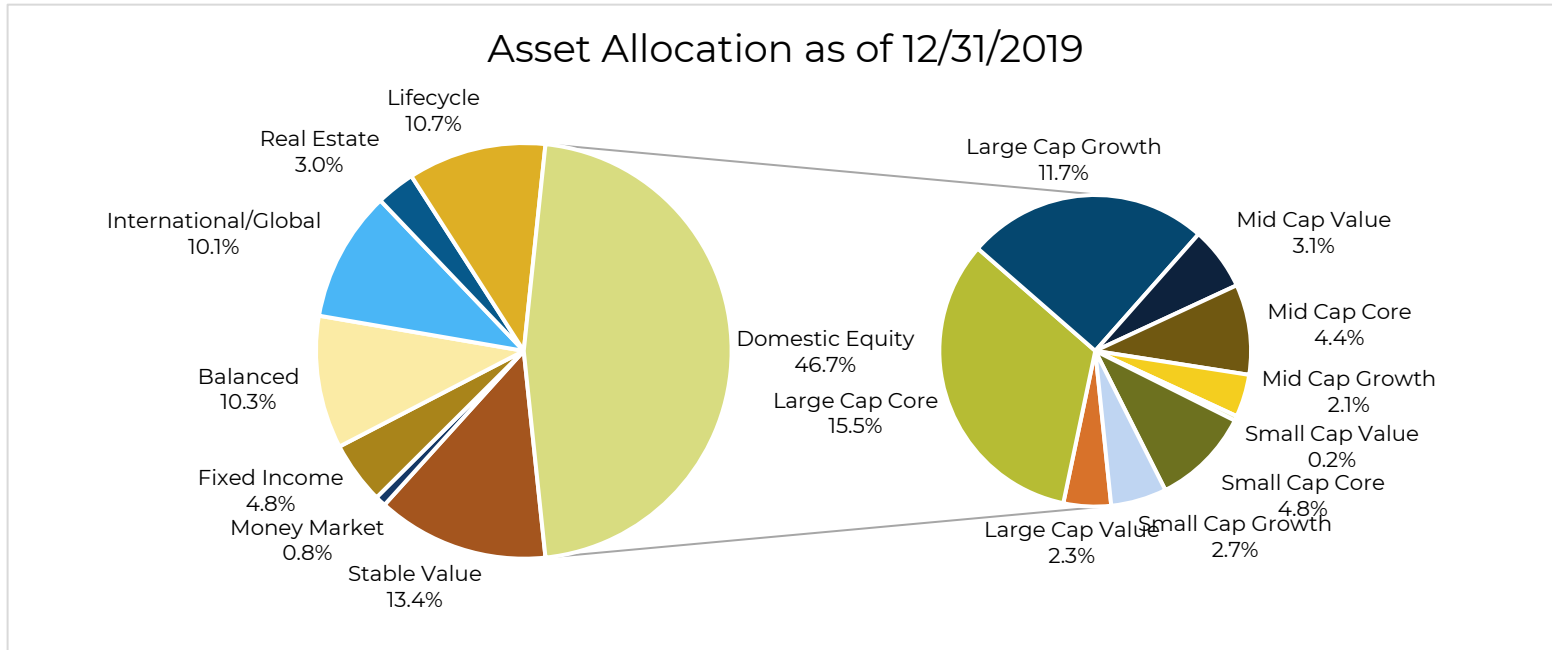


# Fee Analysis: Voya

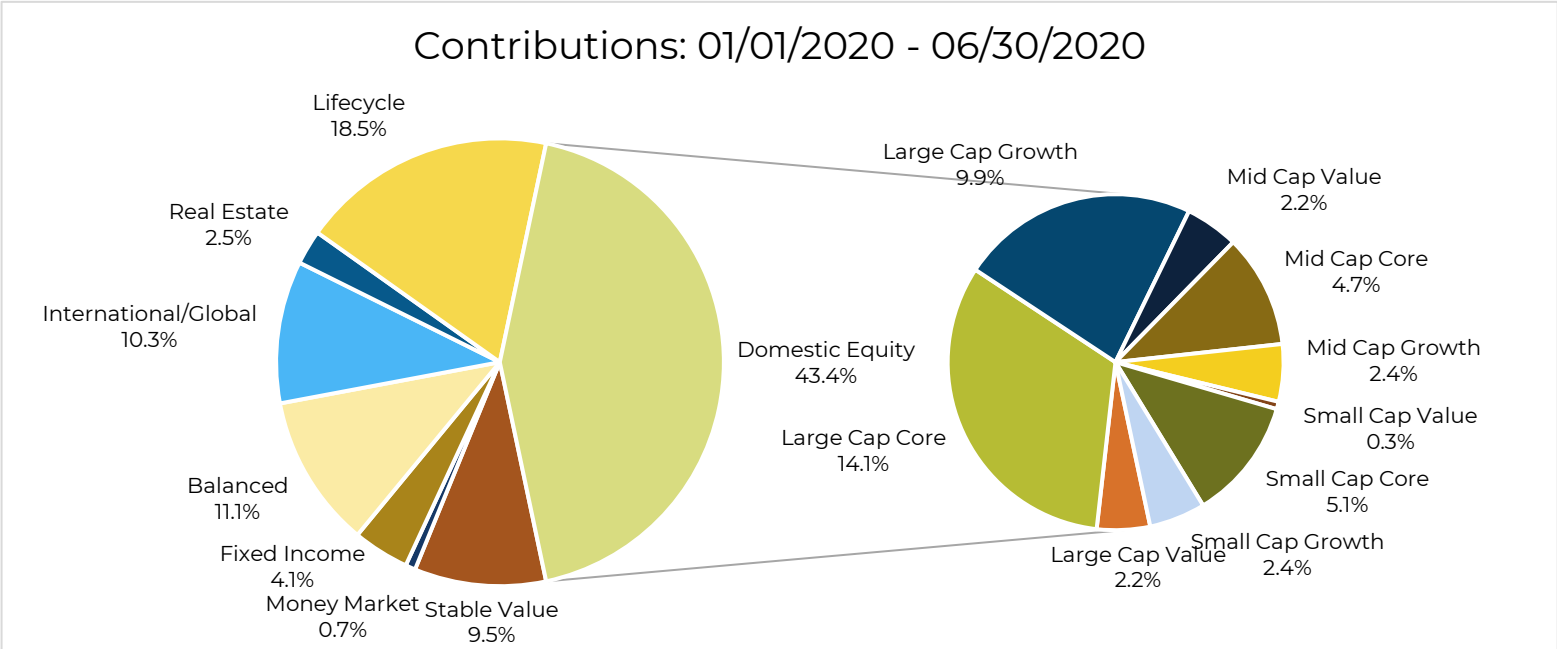
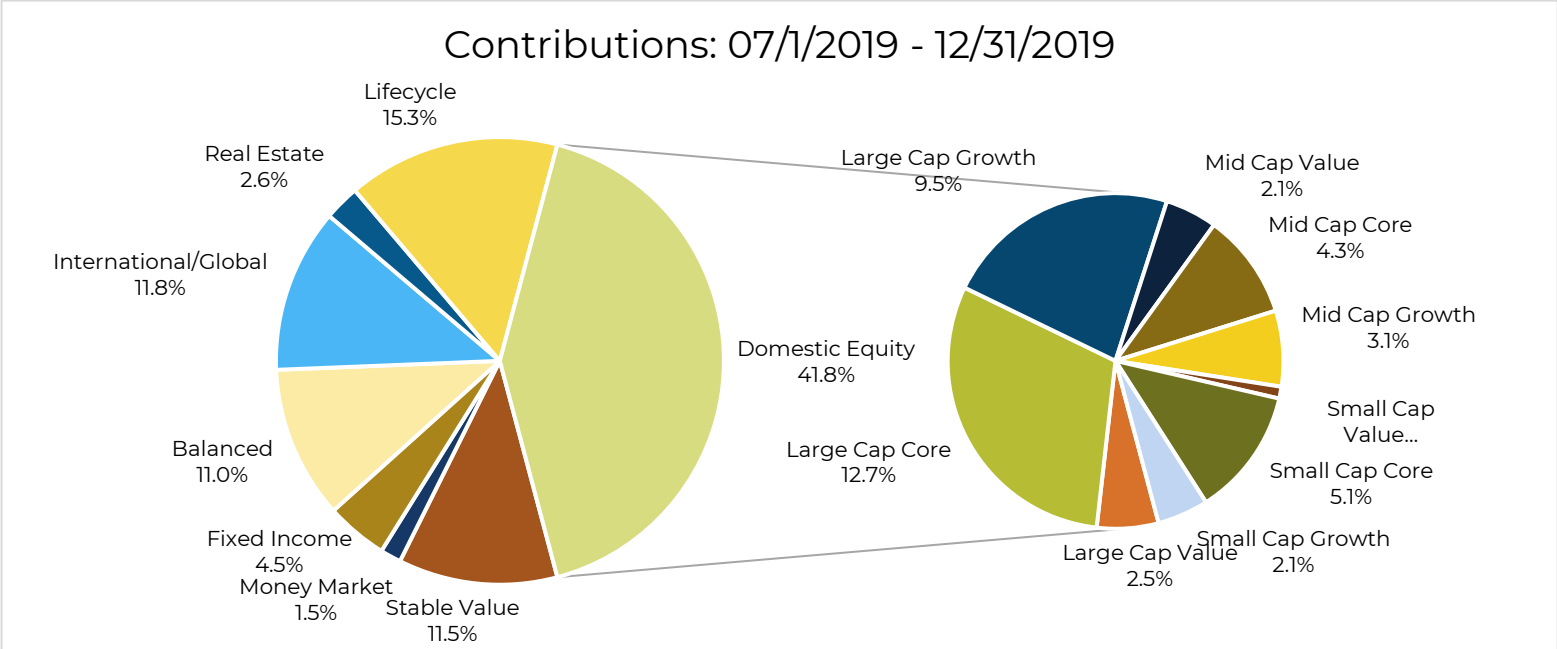
January 1, 2020 - June 30, 2020

| Fund  | Ticker | Percent of Balance | Expense Ratio |
|---|--------|--------------------|---------------|
| Voya Fixed Plus Fund 4020                             | -      | 15.4%              | 0.36%         |
| Vanguard Treasury Money Market Investor               | VUSXX  | 1.0%               | 0.09%         |
| Amana Participation Institutional                     | AMIPX  | 0.1%               | 0.64%         |
| PIMCO Total Return Instl                              | PTTRX  | 3.2%               | 0.71%         |
| Fidelity® US Bond Index                               | FXNAX  | 0.9%               | 0.03%         |
| American Funds Inflation Linked Bd R6                 | RILFX  | 1.7%               | 0.32%         |
| Blackrock Equity Dividend Instl                       | MADVX  | 2.2%               | 0.71%         |
| American Funds Fundamental Invs R6                    | RFNGX  | 8.7%               | 0.28%         |
| Vanguard Institutional Index I                        | VINIX  | 3.3%               | 0.04%         |
| Parnassus Core Equity Institutional                   | PRILX  | 2.8%               | 0.63%         |
| Amana Growth Institutional                            | AMIGX  | 0.8%               | 0.79%         |
| Voya Large Cap Growth Port I                          | IEOHX  | 11.7%              | 0.67%         |
| American Century Mid Cap Value I                      | AVUAX  | 2.4%               | 0.78%         |
| Vanguard Mid Cap Index Institutional                  | VMCIX  | 4.0%               | 0.04%         |
| Champlain Mid Cap Institutional                       | CIPIX  | 2.1%               | 0.87%         |
| American Beacon Small Cp Val R5                       | AVFIX  | 0.2%               | 0.83%         |
| Vanguard Small Cap Index I                            | VSCIX  | 4.1%               | 0.04%         |
| Voya SmallCap Opportunities Port I                    | IVSOX  | 2.5%               | 0.86%         |
| VY® Invesco Oppenheimer Global I                      | IGMIX  | 2.9%               | 0.80%         |
| Vanguard Total Intl Stock Index Admiral               | VTIAX  | 0.1%               | 0.11%         |
| American Funds Europacific Growth R6                  | RERGX  | 4.6%               | 0.46%         |
| Invesco Oppenheimer Developing Mkts R6                | ODVIX  | 1.5%               | 0.83%         |
| Vanguard Real Estate Index Institutional              | VGSNX  | 2.5%               | 0.10%         |
| VY® T. Rowe Price Capital Apprec I                    | ITRIX  | 10.5%              | 0.64%         |
| Vanguard Target Retirement Income Inv                 | VTINX  | 2.9%               | 0.12%         |
| Vanguard Target Retirement 2015 Inv                   | VTXVX  | 0.4%               | 0.13%         |
| Vanguard Target Retirement 2020 Inv                   | VTWNX  | 0.4%               | 0.13%         |
| Vanguard Target Retirement 2025 Inv                   | VTTVX  | 1.7%               | 0.13%         |
| Vanguard Target Retirement 2030 Inv                   | VTHRX  | 0.5%               | 0.14%         |
| Vanguard Target Retirement 2035 Inv                   | VTTHX  | 1.7%               | 0.14%         |
| Vanguard Target Retirement 2040 Inv                   | VFORX  | 0.6%               | 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  | 0.2%               | 0.15%         |
| Vanguard Target Retirement 2060 Inv                   | VTTSX  | 0.1%               | 0.15%         |
| Totals/Weighted Average Expense Ratio                 |        |                    | 0.43%         |
| Weighted Average Expense Ratio ex- Voya Fixed Account |        |                    | 0.45%         |

# Asset Allocation: Voya



# Contributions by Asset Class: Voya



# Number of Participants: Voya

January 1, 2020 - June 30, 2020

| Fund                                     | Number of Participants |
|--|------------------------|
| Voya Fixed Plus Fund 4020                | 1,566                  |
| Vanguard Treasury Money Market Investor  | 200                    |
| Amana Participation Institutional        | 35                     |
| PIMCO Total Return Instl                 | 988                    |
| Fidelity® US Bond Index                  | 194                    |
| American Funds Inflation Linked Bd R6    | 743                    |
| Blackrock Equity Dividend Instl          | 806                    |
| American Funds Fundamental Invs R6       | 1,742                  |
| Vanguard Institutional Index I           | 885                    |
| Parnassus Core Equity Institutional      | 1,186                  |
| Amana Growth Institutional               | 252                    |
| Voya Large Cap Growth Port I             | 2,769                  |
| American Century Mid Cap Value I         | 978                    |
| Vanguard Mid Cap Index Institutional     | 1,825                  |
| Champlain Mid Cap Institutional          | 980                    |
| American Beacon Small Cp Val R5          | 222                    |
| Vanguard Small Cap Index I               | 2,151                  |
| Voya SmallCap Opportunities Port I       | 1,098                  |
| VY® Invesco Oppenheimer Global I         | 1,475                  |
| Vanguard Total Intl Stock Index Admiral  | 68                     |
| American Funds Europacific Growth R6     | 1,920                  |
| Invesco Oppenheimer Developing Mkts R6   | 1,452                  |
| Vanguard Real Estate Index Institutional | 1,687                  |
| VY® T. Rowe Price Capital Apprec I       | 2,372                  |
| Vanguard Target Retirement Income Inv    | 228                    |
| Vanguard Target Retirement 2015 Inv      | 55                     |
| Vanguard Target Retirement 2020 Inv      | 45                     |
| Vanguard Target Retirement 2025 Inv      | 167                    |
| Vanguard Target Retirement 2030 Inv      | 87                     |
| Vanguard Target Retirement 2035 Inv      | 267                    |
| Vanguard Target Retirement 2040 Inv      | 139                    |
| Vanguard Target Retirement 2045 Inv      | 287                    |
| Vanguard Target Retirement 2050 Inv      | 239                    |
| Vanguard Target Retirement 2055 Inv      | 106                    |
| Vanguard Target Retirement 2060 Inv      | 104                    |

**Total Unique Participants**

**5,493**



# 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)                   | Pass  | Pass       | Pass  | ✓                | ✓                | ✓               | ✓                 | ✓                   | ✓                | ✓                        |
| Amana Participation Institutional (AMIPX)          | Pass  | Note       | 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)                 | Note  | 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 [Replaced 7/20] | Pass  | Pass       | Pass  | ✗                | ✗                | ✗               | ✓                 | ✓                   | ✗                | ✗                        |
| American Funds Europacific Growth R6 (RERGX)       | Pass  | Pass       | Note  | ✓                | ✓                | ✓               | ✓                 | ✓                   | ✓                | ✓                        |
| 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  | 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.

**Amana Participation**

The fund's assets increased by 49% over the past year. The fund's assets are \$0.13 billion. *2Q 2020*

**Recommendation: No Action**

**Amana Growth Institutional**

In May 2020, Nick Kaiser stepped down as portfolio manager. Scott Klimo, who has been with the strategy since 2012, will take over as lead manager. Klimo has spent 8 years working alongside Kaiser, gradually taking on new responsibility along the way. In anticipation of the change, Christopher Paul joined the team as a supporting portfolio manager in April 2020. Paul joined Saturna Capital in 2016. Before Saturna, Paul was director of research for Cannell Capital. *2Q 2020*

**Recommendation: No Action**

**American Funds Europacific Growth**

Following a difficult quarter for the fund, performance rebounded during the second quarter. In particular, stock selection in technology and consumer discretionary sectors contributed 1.2% and 2% respectively. The portfolio managers were able to take advantage of the market turmoil to find opportunities to invest both in companies they believed were well-positioned to benefit from the changing environment and in companies they felt were oversold with the potential to turn around. They were able to trim holdings that had appreciated and invest in better opportunities. The portfolio is tilted toward companies that have "the potential to capitalize on long-term secular growth opportunities focused on companies in the next-gen technology ecosystem and those that can benefit from the growth of the middle class in emerging markets. Most sectors are near index weight. The consumer staples sector is underweight relative to the index by almost 10% and industrials is underweighted almost 5%. *2Q 2020*

**Recommendation: No Action**



# Performance Summary

|  | Allocation           |       | Performance (%) as of 06/30/2020 |            |            |            |            | Net Expense Ratio |
|--|----------------------|-------|----------------------------------|------------|------------|------------|------------|-------------------|
|  | Market Value (\$000) | %     | 1 Quarter                        | 1 Year     | 3 Years    | 5 Years    | 10 Years   |                   |
| Total Plan                                       | 701,827              | 100.0 | -                                | -          | -          | -          | -          | -                 |
| Vanguard Treasury Money Market Investor (VUSXX)  | 7,058                | 1.0   | 0.08 (4)                         | 1.40 (3)   | 1.62 (3)   | 1.08 (2)   | 0.55 (3)   | 0.09              |
| +/- Blmbg. Barc. U.S. Treasury Bills: 1-3 Months |                      |       | 0.06                             | -0.07      | -0.06      | -0.04      | -0.04      | -                 |
| Money Market-Taxable Median                      |                      |       | 0.01                             | 1.08       | 1.29       | 0.80       | 0.40       | -                 |
| Voya Fixed Plus Account III                      | 108,976              | 15.5  | 0.44                             | 2.00       | 2.13       | 2.26       | 2.58       | -                 |
| +/- Ryan 3 Yr GIC Master Index                   |                      |       | -0.15                            | -0.43      | -0.25      | 0.10       | 0.46       | -                 |
| American Funds Inflation Linked Bond R6 (RILFX)  | 12,390               | 1.8   | 5.34 (29)                        | 11.05 (2)  | 5.87 (3)   | 4.32 (4)   | -          | 0.32              |
| +/- Bloomberg Barclays U.S. TIPS Index           |                      |       | 1.10                             | 2.77       | 0.82       | 0.57       |            |                   |
| Inflation-Protected Bond Median                  |                      |       | 4.71                             | 6.83       | 4.23       | 3.10       | -          | 0.74              |
| Fidelity US Bond Index (FXNAX)                   | 6,224                | 0.9   | 2.77 (83)                        | 9.01 (20)  | 5.38 (22)  | 4.32 (28)  | 3.79 (44)  | 0.03              |
| +/- Blmbg. Barc. U.S. Aggregate Index            |                      |       | -0.13                            | 0.27       | 0.06       | 0.02       | -0.03      |                   |
| Intermediate Core Bond Median                    |                      |       | 4.06                             | 8.33       | 4.99       | 4.07       | 3.73       | 0.66              |
| PIMCO Total Return Instl (PTTRX)                 | 22,548               | 3.2   | 3.88 (87)                        | 8.34 (27)  | 5.21 (31)  | 4.42 (32)  | 4.22 (48)  | 0.70              |
| +/- Blmbg. Barc. U.S. Aggregate Index            |                      |       | 0.98                             | -0.40      | -0.11      | 0.12       | 0.40       |                   |
| Intermediate Core-Plus Bond Median               |                      |       | 5.84                             | 7.47       | 4.86       | 4.17       | 4.19       | 0.79              |
| Amana Participation Institutional (AMIPX)        | 639                  | 0.1   | 5.50                             | 4.20       | 3.22       | -          | -          | 0.64              |
| +/- Dow Jones Sukuk Index                        |                      |       | -1.43                            | -2.87      | -1.93      |            |            |                   |
| BlackRock Equity Dividend Instl (MADVX)          | 15,249               | 2.2   | 14.03 (69)                       | -4.66 (21) | 3.88 (23)  | 6.93 (10)  | 10.61 (27) | 0.71              |
| +/- Russell 1000 Value Index                     |                      |       | -0.26                            | 4.18       | 2.06       | 2.29       | 0.20       | -                 |
| Large Value Median                               |                      |       | 15.18                            | -8.05      | 1.91       | 4.43       | 9.81       | 0.99              |
| American Funds Fundamental Invs R6 (RFNGX)       | 60,642               | 8.6   | 19.32 (65)                       | 4.90 (56)  | 8.37 (60)  | 9.73 (40)  | 12.97 (46) | 0.28              |
| +/- S&P 500 Index                                |                      |       | -1.22                            | -2.61      | -2.36      | -1.00      | -1.02      | -                 |
| Large Blend Median                               |                      |       | 20.39                            | 5.83       | 9.24       | 9.28       | 12.78      | 0.92              |
| Parnassus Core Equity Institutional (PRILX)      | 19,262               | 2.7   | 17.90 (77)                       | 6.75 (38)  | 11.93 (5)  | 10.84 (6)  | 13.63 (26) | 0.63              |
| +/- S&P 500 Index                                |                      |       | -2.64                            | -0.76      | 1.20       | 0.11       | -0.36      | -                 |
| Large Blend Median                               |                      |       | 20.39                            | 5.83       | 9.24       | 9.28       | 12.78      | 0.92              |
| Vanguard Institutional Index I (VINIX)           | 22,877               | 3.3   | 20.55 (40)                       | 7.49 (21)  | 10.70 (17) | 10.70 (11) | 13.96 (10) | 0.04              |
| +/- S&P 500 Index                                |                      |       | 0.01                             | -0.02      | -0.03      | -0.03      | -0.03      | -                 |
| Large Blend Median                               |                      |       | 20.39                            | 5.83       | 9.24       | 9.28       | 12.78      | 0.92              |





# Performance Summary

|   | Allocation           |      | Performance (%) as of 06/30/2020 |             |            |            |            | Net Expense Ratio |
|---|----------------------|------|----------------------------------|-------------|------------|------------|------------|-------------------|
|   | Market Value (\$000) | %    | 1 Quarter                        | 1 Year      | 3 Years    | 5 Years    | 10 Years   |                   |
| Amana Growth Institutional (AMIGX)              | 5,595                | 0.8  | 22.69 (81)                       | 16.24 (65)  | 17.97 (41) | 15.15 (32) | 14.30 (73) | 0.79              |
| +/- S&P 500 Index                               |                      |      | 2.15                             | 8.73        | 7.24       | 4.42       | 0.31       | -                 |
| Large Growth Median                             |                      |      | 26.85                            | 19.20       | 16.68      | 13.70      | 15.61      | 1.06              |
| Voya Large Cap Growth Port I (IEOHX)            | 81,100               | 11.6 | 24.37 (71)                       | 18.59 (55)  | 16.54 (52) | 13.98 (47) | 16.39 (34) | 0.67              |
| +/- Russell 1000 Growth Index                   |                      |      | -3.47                            | -4.69       | -2.45      | -1.91      | -0.84      | -                 |
| Large Growth Median                             |                      |      | 26.85                            | 19.20       | 16.68      | 13.70      | 15.61      | 1.06              |
| American Century Mid Cap Value I (AVUAX)        | 17,044               | 2.4  | 15.49 (86)                       | -7.81 (11)  | 0.40 (20)  | 4.88 (9)   | 10.58 (9)  | 0.78              |
| +/- Russell Midcap Value Index                  |                      |      | -4.46                            | 4.00        | 0.94       | 1.56       | 0.29       | -                 |
| Mid-Cap Value Median                            |                      |      | 19.53                            | -12.58      | -1.28      | 2.27       | 8.93       | 1.08              |
| Vanguard Mid Cap Index Institutional (VMCIX)    | 28,010               | 4.0  | 24.96 (24)                       | -0.18 (15)  | 6.47 (7)   | 7.00 (8)   | 12.49 (5)  | 0.04              |
| +/- CRSP U.S. Mid Cap TR Index                  |                      |      | -0.01                            | 0.02        | 0.00       | -0.01      | -0.13      | -                 |
| Mid-Cap Blend Median                            |                      |      | 23.83                            | -6.63       | 2.31       | 4.57       | 10.64      | 1.04              |
| Champlain Mid Cap Institutional (CIPIX)         | 14,556               | 2.1  | 26.37 (71)                       | 7.62 (63)   | 13.05 (53) | 12.57 (24) | 15.03 (28) | 0.87              |
| +/- Russell Midcap Growth Index                 |                      |      | -3.89                            | -4.29       | -1.71      | 0.97       | -0.06      | -                 |
| Mid-Cap Growth Median                           |                      |      | 29.84                            | 11.15       | 13.43      | 10.47      | 13.99      | 1.17              |
| American Beacon Small Cp Val Inst (AVFIX)       | 1,217                | 0.2  | 22.23 (38)                       | -18.65 (62) | -5.38 (57) | -0.06 (49) | 7.98 (33)  | 0.83              |
| +/- Russell 2000 Value Index                    |                      |      | 3.32                             | -1.17       | -1.03      | -1.32      | 0.16       | -                 |
| Small Value Median                              |                      |      | 21.09                            | -18.00      | -5.08      | -0.17      | 7.47       | 1.23              |
| Vanguard Small Cap Index I (VSCIX)              | 28,572               | 4.1  | 26.69 (17)                       | -5.59 (13)  | 4.00 (5)   | 5.41 (6)   | 11.61 (5)  | 0.04              |
| +/- CRSP U.S. Small Cap TR Index                |                      |      | 0.03                             | 0.06        | 0.02       | 0.03       | -0.17      | -                 |
| Small Blend Median                              |                      |      | 23.90                            | -10.64      | 0.13       | 3.08       | 9.71       | 1.11              |
| Voya SmallCap Opportunities Port I (IVSOX)      | 17,632               | 2.5  | 28.97 (69)                       | -0.91 (71)  | 2.75 (88)  | 4.47 (86)  | 11.64 (78) | 0.86              |
| +/- Russell 2000 Growth Index                   |                      |      | -1.61                            | -4.39       | -5.11      | -2.39      | -1.28      | -                 |
| Small Growth Median                             |                      |      | 31.49                            | 4.20        | 9.25       | 8.43       | 13.25      | 1.24              |
| American Funds Europacific Growth R6 (RERGX)    | 32,782               | 4.7  | 22.77 (27)                       | 3.17 (62)   | 4.76 (59)  | 4.90 (52)  | 7.48 (52)  | 0.46              |
| +/- MSCI AC World ex USA (Net)                  |                      |      | 6.65                             | 7.97        | 3.63       | 2.64       | 2.51       | -                 |
| Foreign Large Growth Median                     |                      |      | 20.18                            | 5.06        | 5.56       | 4.98       | 7.52       | 1.12              |
| Vanguard Total Intl Stock Index Admiral (VTIAX) | 680                  | 0.1  | 18.11 (25)                       | -4.09 (39)  | 1.09 (38)  | 2.42 (31)  | 5.27 (60)  | 0.11              |
| +/- FTSE Global ex USA All Cap Index (Net)      |                      |      | 1.06                             | 0.33        | -0.01      | 0.00       | -0.04      | -                 |
| Foreign Large Blend Median                      |                      |      | 16.53                            | -4.60       | 0.70       | 1.84       | 5.46       | 0.99              |



# Performance Summary

|  | Allocation           |      | Performance (%) as of 06/30/2020 |            |           |           |            | Net Expense Ratio |
|--|----------------------|------|----------------------------------|------------|-----------|-----------|------------|-------------------|
|  | Market Value (\$000) | %    | 1 Quarter                        | 1 Year     | 3 Years   | 5 Years   | 10 Years   |                   |
| VY® Oppenheimer Global I (IGMIX)                 | 20,563               | 2.9  | 26.25 (12)                       | 6.70 (27)  | 8.60 (26) | 7.70 (29) | 11.35 (20) | 0.80              |
| +/- MSCI World Index                             |                      |      | 6.71                             | 3.30       | 1.31      | 0.20      | 0.78       | -                 |
| World Large Stock Median                         |                      |      | 19.23                            | 1.72       | 5.10      | 5.78      | 9.28       | 1.14              |
| Oppenheimer Developing Markets I (ODVIX)         | 10,574               | 1.5  | 18.27 (69)                       | -1.69 (41) | 4.52 (20) | 4.78 (24) | 5.54 (13)  | 0.83              |
| +/- MSCI Emerging Markets (Net) Index            |                      |      | 0.19                             | 1.70       | 2.62      | 1.92      | 2.27       | -                 |
| Diversified Emerging Mkts Median                 |                      |      | 19.66                            | -3.21      | 1.22      | 2.67      | 3.20       | 1.32              |
| Vanguard Real Estate Index Institutional (VGSNX) | 17,782               | 2.5  | 13.44 (22)                       | -6.93 (34) | 2.24 (42) | 5.38 (33) | 9.72 (29)  | 0.10              |
| +/- Spliced Index                                |                      |      | -0.06                            | -0.11      | -0.08     | -0.09     | -0.07      | -                 |
| Real Estate Median                               |                      |      | 11.81                            | -8.39      | 1.76      | 4.62      | 9.10       | 1.19              |
| VY® T. Rowe Price Capital Apprec I (ITRIX)       | 73,900               | 10.5 | 13.67 (40)                       | 6.30 (19)  | 9.95 (4)  | 9.81 (1)  | 12.15 (1)  | 0.64              |
| +/- 40% BBg US Agg   60% SP500                   |                      |      | 0.35                             | -2.28      | 1.02      | 1.40      | 2.07       | -                 |
| Allocation--50% to 70% Equity Median             |                      |      | 13.16                            | 3.49       | 5.34      | 5.42      | 8.00       | 1.10              |
| Vanguard Target Retirement Income Inv (VTINX)    | 20,408               | 2.9  | 7.84 (65)                        | 5.69 (25)  | 5.39 (19) | 4.93 (21) | 5.84 (25)  | 0.12              |
| +/- Vanguard Target Income Composite Index       |                      |      | -0.11                            | -0.57      | -0.32     | -0.25     | -0.20      | -                 |
| Target-Date Retirement Median                    |                      |      | 8.29                             | 4.77       | 4.74      | 4.40      | 5.16       | 0.74              |
| Vanguard Target Retirement 2015 Inv (VTXVX)      | 3,136                | 0.4  | 8.90 (79)                        | 5.45 (19)  | 5.78 (25) | 5.47 (34) | 7.55 (30)  | 0.13              |
| +/- Vanguard Target 2015 Composite Index         |                      |      | -0.05                            | -0.62      | -0.34     | -0.27     | -0.20      | -                 |
| Target-Date 2015 Median                          |                      |      | 9.72                             | 4.64       | 5.28      | 5.15      | 7.28       | 0.65              |
| Vanguard Target Retirement 2020 Inv (VTWNX)      | 2,680                | 0.4  | 11.40 (29)                       | 5.09 (20)  | 6.09 (17) | 5.96 (16) | 8.31 (14)  | 0.13              |
| +/- Vanguard Target 2020 Composite Index         |                      |      | -0.05                            | -0.67      | -0.39     | -0.31     | -0.27      | -                 |
| Target-Date 2020 Median                          |                      |      | 10.54                            | 4.38       | 5.33      | 5.27      | 7.70       | 0.73              |
| Vanguard Target Retirement 2025 Inv (VTTVX)      | 11,890               | 1.7  | 13.20 (27)                       | 4.82 (27)  | 6.33 (17) | 6.29 (16) | 8.88 (18)  | 0.13              |
| +/- Vanguard Target 2025 Composite Index         |                      |      | -0.02                            | -0.74      | -0.42     | -0.32     | -0.28      | -                 |
| Target-Date 2025 Median                          |                      |      | 12.10                            | 4.29       | 5.64      | 5.63      | 8.37       | 0.72              |
| Vanguard Target Retirement 2030 Inv (VTHR30)     | 3,433                | 0.5  | 14.58 (33)                       | 4.40 (26)  | 6.42 (22) | 6.47 (23) | 9.37 (22)  | 0.14              |
| +/- Vanguard Target 2030 Composite Index         |                      |      | 0.05                             | -0.70      | -0.41     | -0.32     | -0.28      | -                 |
| Target-Date 2030 Median                          |                      |      | 13.86                            | 3.75       | 5.80      | 5.93      | 8.81       | 0.76              |
| Vanguard Target Retirement 2035 Inv (VTTHX)      | 12,214               | 1.7  | 15.90 (45)                       | 3.94 (25)  | 6.45 (22) | 6.62 (24) | 9.84 (19)  | 0.14              |
| +/- Vanguard Target 2035 Composite Index         |                      |      | 0.05                             | -0.65      | -0.42     | -0.32     | -0.28      | -                 |
| Target-Date 2035 Median                          |                      |      | 15.66                            | 3.06       | 5.85      | 6.11      | 9.27       | 0.74              |



# Performance Summary

|   | Allocation           |     | Performance (%) as of 06/30/2020 |           |           |           |            | Net Expense Ratio |
|---|----------------------|-----|----------------------------------|-----------|-----------|-----------|------------|-------------------|
|   | Market Value (\$000) | %   | 1 Quarter                        | 1 Year    | 3 Years   | 5 Years   | 10 Years   |                   |
| Vanguard Target Retirement 2040 Inv (VFORX) | 4,553                | 0.6 | 17.29 (43)                       | 3.46 (26) | 6.50 (21) | 6.76 (21) | 10.08 (17) | 0.14              |
| +/- Vanguard Target 2040 Composite Index    |                      |     | 0.12                             | -0.58     | -0.38     | -0.32     | -0.29      | -                 |
| Target-Date 2040 Median                     |                      |     | 17.12                            | 2.49      | 5.84      | 6.23      | 9.41       | 0.78              |
| Vanguard Target Retirement 2045 Inv (VTIVX) | 10,361               | 1.5 | 18.70 (32)                       | 2.97 (31) | 6.41 (23) | 6.79 (22) | 10.10 (21) | 0.15              |
| +/- Vanguard Target 2045 Composite Index    |                      |     | 0.21                             | -0.55     | -0.38     | -0.31     | -0.28      | -                 |
| Target-Date 2045 Median                     |                      |     | 18.19                            | 1.95      | 5.80      | 6.29      | 9.52       | 0.75              |
| Vanguard Target Retirement 2050 Inv (VFIFX) | 5,049                | 0.7 | 18.67 (43)                       | 3.02 (31) | 6.42 (23) | 6.79 (23) | 10.10 (31) | 0.15              |
| +/- Vanguard Target 2050 Composite Index    |                      |     | 0.18                             | -0.50     | -0.37     | -0.31     | -0.28      | -                 |
| Target-Date 2050 Median                     |                      |     | 18.34                            | 1.89      | 5.78      | 6.33      | 9.67       | 0.79              |
| Vanguard Target Retirement 2055 Inv (VFFVX) | 1,239                | 0.2 | 18.64 (56)                       | 2.95 (30) | 6.40 (22) | 6.77 (25) | -          | 0.15              |
| +/- Vanguard Target 2055 Composite Index    |                      |     | 0.15                             | -0.57     | -0.39     | -0.33     | -          | -                 |
| Target-Date 2055 Median                     |                      |     | 18.85                            | 1.42      | 5.78      | 6.32      | -          | 0.75              |
| Vanguard Target Retirement 2060 Inv (VTTSX) | 995                  | 0.1 | 18.61 (62)                       | 2.95 (31) | 6.39 (28) | 6.76 (38) | -          | 0.15              |
| +/- Vanguard Target 2060 Composite Index    |                      |     | 0.12                             | -0.57     | -0.40     | -0.34     | -          | -                 |
| Target-Date 2060+ Median                    |                      |     | 18.81                            | 1.81      | 5.89      | 6.59      | -          | 0.74              |



# Performance Summary - Calendar Year

|  | Performance (%) |            |            |            |            |            |            |            |  |  |
|--|-----------------|------------|------------|------------|------------|------------|------------|------------|--|--|
|  | 2019            | 2018       | 2017       | 2016       | 2015       | 2014       | 2013       | 2012       |  |  |
| Vanguard Treasury Money Market Investor (VUSXX)  | 2.14 (4)        | 1.80 (2)   | 0.79 (4)   | 0.25 (8)   | 0.02 (20)  | 0.01 (52)  | 0.01 (26)  | 0.02 (23)  |  |  |
| +/- Blmbg. Barc. U.S. Treasury Bills: 1-3 Months | -0.07           | -0.02      | -0.03      | -0.01      | -0.01      | -0.01      | -0.04      | -0.06      |  |  |
| Money Market-Taxable Median                      | 1.83            | 1.47       | 0.46       | 0.03       | 0.01       | 0.01       | 0.01       | 0.01       |  |  |
| Voya Fixed Plus Account III                      | 2.04            | 1.75       | 1.75       | 2.06       | 2.12       | 2.12       | 2.24       | 2.50       |  |  |
| +/- Ryan 3 Yr GIC Master Index                   | -0.34           | -0.21      | 0.15       | 0.67       | 0.96       | 1.09       | 1.18       | 1.02       |  |  |
| American Funds Inflation Linked Bond R6 (RILFX)  | 7.06 (64)       | -0.57 (19) | 2.88 (44)  | 4.88 (25)  | -0.96 (16) | 4.94 (6)   | -7.75 (27) | -          |  |  |
| +/- Bloomberg Barclays U.S. TIPS Index           | -1.37           | 0.69       | -0.13      | 0.20       | 0.48       | 1.30       | 0.86       | -          |  |  |
| Inflation-Protected Bond Median                  | 7.85            | -1.51      | 2.74       | 4.41       | -1.90      | 2.68       | -8.67      | -          |  |  |
| Fidelity US Bond Index (FXNAX)                   | 8.48 (54)       | 0.01 (28)  | 3.50 (45)  | 2.52 (58)  | 0.63 (20)  | 5.99 (28)  | -2.19 (57) | 4.23 (69)  |  |  |
| +/- Blmbg. Barc. U.S. Aggregate Index            | -0.24           | 0.00       | -0.04      | -0.13      | 0.08       | 0.02       | -0.17      | 0.02       |  |  |
| Intermediate Core Bond Median                    | 8.57            | -0.32      | 3.43       | 2.61       | 0.26       | 5.62       | -2.08      | 5.37       |  |  |
| PIMCO Total Return Instl (PTTRX)                 | 8.26 (79)       | -0.26 (27) | 5.13 (23)  | 2.60 (83)  | 0.73 (11)  | 4.69 (77)  | -1.92 (82) | 10.36 (14) |  |  |
| +/- Blmbg. Barc. U.S. Aggregate Index            | -0.46           | -0.27      | 1.59       | -0.05      | 0.18       | -1.28      | 0.10       | 6.15       |  |  |
| Intermediate Core-Plus Bond Median               | 9.30            | -0.78      | 4.31       | 3.92       | -0.25      | 5.60       | -1.07      | 7.99       |  |  |
| Amana Participation Institutional (AMIPX)        | 6.95            | 0.11       | 2.68       | 2.56       | -          | -          | -          | -          |  |  |
| +/- Dow Jones Sukuk Index                        | -3.85           | -0.16      | -1.63      | -1.45      | -          | -          | -          | -          |  |  |
| BlackRock Equity Dividend Instl (MADVX)          | 27.52 (25)      | -7.17 (27) | 16.76 (41) | 16.21 (33) | -0.10 (11) | 9.35 (76)  | 24.67 (95) | 12.18 (81) |  |  |
| +/- Russell 1000 Value Index                     | 0.98            | 1.10       | 3.10       | -1.13      | 3.73       | -4.10      | -7.86      | -5.33      |  |  |
| Large Value Median                               | 25.47           | -8.87      | 16.18      | 14.57      | -3.51      | 11.00      | 31.85      | 15.49      |  |  |
| American Funds Fundamental Invs R6 (RFNGX)       | 28.02 (72)      | -6.33 (61) | 23.72 (11) | 12.88 (17) | 3.71 (6)   | 9.27 (84)  | 31.94 (57) | 17.53 (14) |  |  |
| +/- S&P 500 Index                                | -3.47           | -1.95      | 1.89       | 0.92       | 2.33       | -4.42      | -0.45      | 1.53       |  |  |
| Large Blend Median                               | 30.19           | -5.53      | 21.16      | 11.16      | 0.29       | 12.29      | 32.19      | 15.71      |  |  |
| Parnassus Core Equity Institutional (PRILX)      | 30.96 (39)      | 0.05 (2)   | 16.81 (88) | 10.60 (57) | -0.33 (60) | 14.70 (9)  | 34.15 (24) | 15.64 (53) |  |  |
| +/- S&P 500 Index                                | -0.53           | 4.43       | -5.02      | -1.36      | -1.71      | 1.01       | 1.76       | -0.36      |  |  |
| Large Blend Median                               | 30.19           | -5.53      | 21.16      | 11.16      | 0.29       | 12.29      | 32.19      | 15.71      |  |  |
| Vanguard Institutional Index I (VINIX)           | 31.46 (23)      | -4.42 (24) | 21.79 (30) | 11.93 (30) | 1.37 (22)  | 13.65 (19) | 32.35 (45) | 15.98 (40) |  |  |
| +/- S&P 500 Index                                | -0.03           | -0.04      | -0.04      | -0.03      | -0.01      | -0.04      | -0.04      | -0.02      |  |  |
| Large Blend Median                               | 30.19           | -5.53      | 21.16      | 11.16      | 0.29       | 12.29      | 32.19      | 15.71      |  |  |



# Performance Summary - Calendar Year

|   | Performance (%) |             |            |            |            |            |             |            |  |  |
|---|-----------------|-------------|------------|------------|------------|------------|-------------|------------|--|--|
|   | 2019            | 2018        | 2017       | 2016       | 2015       | 2014       | 2013        | 2012       |  |  |
| Amana Growth Institutional (AMIGX)              | 33.41 (41)      | 2.67 (11)   | 29.29 (46) | 7.85 (17)  | -0.21 (86) | 14.29 (10) | 22.95 (100) | 11.21 (93) |  |  |
| +/- S&P 500 Index                               | 1.92            | 7.05        | 7.46       | -4.11      | -1.59      | 0.60       | -9.44       | -4.79      |  |  |
| Large Growth Median                             | 32.39           | -1.82       | 28.77      | 2.92       | 4.47       | 10.52      | 34.49       | 15.59      |  |  |
| Voya Large Cap Growth Port I (IEOHX)            | 32.76 (47)      | -1.48 (46)  | 29.74 (43) | 3.96 (44)  | 6.38 (32)  | 13.62 (17) | 30.95 (80)  | 18.10 (24) |  |  |
| +/- Russell 1000 Growth Index                   | -3.63           | 0.03        | -0.47      | -3.12      | 0.71       | 0.57       | -2.53       | 2.84       |  |  |
| Large Growth Median                             | 32.39           | -1.82       | 28.77      | 2.92       | 4.47       | 10.52      | 34.49       | 15.59      |  |  |
| American Century Mid Cap Value I (AVUAX)        | 29.12 (29)      | -12.84 (40) | 11.79 (71) | 23.07 (14) | -1.36 (15) | 16.55 (4)  | 30.26 (90)  | 16.66 (45) |  |  |
| +/- Russell Midcap Value Index                  | 2.06            | -0.55       | -1.55      | 3.07       | 3.42       | 1.80       | -3.20       | -1.85      |  |  |
| Mid-Cap Value Median                            | 26.69           | -13.46      | 13.37      | 17.57      | -4.30      | 10.15      | 34.16       | 16.46      |  |  |
| Vanguard Mid Cap Index Institutional (VMCIX)    | 31.04 (16)      | -9.24 (22)  | 19.29 (17) | 11.23 (78) | -1.33 (15) | 13.78 (8)  | 35.17 (41)  | 16.01 (69) |  |  |
| +/- CRSP U.S. Mid Cap TR Index                  | -0.05           | -0.02       | -0.01      | -0.02      | -0.05      | -0.05      | -0.10       | -0.69      |  |  |
| Mid-Cap Blend Median                            | 26.23           | -11.28      | 16.17      | 15.99      | -3.00      | 9.25       | 33.68       | 17.37      |  |  |
| Champlain Mid Cap Institutional (CIPIX)         | 26.55 (94)      | 3.76 (6)    | 19.50 (89) | 18.68 (3)  | 1.41 (34)  | 7.98 (44)  | 37.56 (32)  | 11.88 (77) |  |  |
| +/- Russell Midcap Growth Index                 | -8.92           | 8.51        | -5.77      | 11.35      | 1.61       | -3.92      | 1.82        | -3.93      |  |  |
| Mid-Cap Growth Median                           | 33.75           | -5.46       | 24.76      | 5.64       | -0.13      | 7.53       | 35.88       | 14.82      |  |  |
| American Beacon Small Cp Val Inst (AVFIX)       | 23.51 (30)      | -15.63 (54) | 8.67 (52)  | 26.77 (40) | -5.04 (38) | 4.70 (45)  | 40.06 (19)  | 16.52 (50) |  |  |
| +/- Russell 2000 Value Index                    | 1.12            | -2.77       | 0.83       | -4.97      | 2.43       | 0.48       | 5.54        | -1.53      |  |  |
| Small Value Median                              | 21.82           | -15.23      | 8.74       | 25.84      | -6.21      | 4.34       | 36.10       | 16.27      |  |  |
| Vanguard Small Cap Index I (VSCIX)              | 27.40 (17)      | -9.32 (20)  | 16.25 (13) | 18.32 (74) | -3.63 (38) | 7.53 (18)  | 37.80 (55)  | 18.26 (18) |  |  |
| +/- CRSP U.S. Small Cap TR Index                | 0.05            | 0.01        | 0.01       | 0.06       | 0.05       | -0.01      | -0.68       | -0.33      |  |  |
| Small Blend Median                              | 24.69           | -11.76      | 13.31      | 20.86      | -4.37      | 4.99       | 38.19       | 15.90      |  |  |
| Voya SmallCap Opportunities Port I (IVSOX)      | 25.70 (65)      | -15.87 (96) | 18.73 (69) | 13.40 (31) | -0.91 (32) | 5.62 (27)  | 39.07 (69)  | 15.18 (39) |  |  |
| +/- Russell 2000 Growth Index                   | -2.78           | -6.56       | -3.44      | 2.08       | 0.47       | 0.02       | -4.23       | 0.59       |  |  |
| Small Growth Median                             | 28.13           | -5.81       | 21.93      | 10.76      | -2.27      | 3.16       | 41.76       | 14.38      |  |  |
| American Funds Europacific Growth R6 (RERGX)    | 27.40 (61)      | -14.91 (57) | 31.17 (46) | 1.01 (27)  | -0.48 (63) | -2.29 (30) | 20.58 (48)  | 19.64 (43) |  |  |
| +/- MSCI AC World ex USA (Net)                  | 5.89            | -0.71       | 3.98       | -3.49      | 5.18       | 1.58       | 5.29        | 2.81       |  |  |
| Foreign Large Growth Median                     | 27.86           | -14.28      | 30.73      | -1.50      | 0.38       | -4.15      | 20.15       | 19.09      |  |  |
| Vanguard Total Intl Stock Index Admiral (VTIAX) | 21.51 (61)      | -14.43 (47) | 27.55 (25) | 4.67 (15)  | -4.26 (78) | -4.17 (31) | 15.14 (84)  | 18.21 (45) |  |  |
| +/- FTSE Global ex USA All Cap Index (Net)      | -0.29           | 0.18        | 0.14       | -0.05      | 0.03       | -0.78      | -0.45       | 0.61       |  |  |
| Foreign Large Blend Median                      | 21.84           | -14.63      | 25.36      | 1.13       | -1.23      | -5.33      | 20.35       | 17.98      |  |  |



# Performance Summary - Calendar Year

|  | Performance (%) |             |            |           |             |            |            |            |  |  |  |
|--|-----------------|-------------|------------|-----------|-------------|------------|------------|------------|--|--|--|
|  | 2019            | 2018        | 2017       | 2016      | 2015        | 2014       | 2013       | 2012       |  |  |  |
| VY® Oppenheimer Global I (IGMIX)                 | 31.80 (13)      | -13.19 (82) | 36.49 (4)  | 0.22 (87) | 4.13 (13)   | 2.32 (62)  | 27.12 (39) | 21.70 (9)  |  |  |  |
| +/- MSCI World Index                             | 3.40            | -4.99       | 13.42      | -7.93     | 4.45        | -3.18      | -0.25      | 5.16       |  |  |  |
| World Large Stock Median                         | 26.50           | -9.66       | 23.74      | 5.52      | -1.35       | 3.24       | 25.79      | 16.22      |  |  |  |
| Oppenheimer Developing Markets I (ODVIX)         | 24.53 (24)      | -11.79 (8)  | 35.33 (54) | 7.38 (60) | -13.67 (47) | -4.39 (69) | 8.85 (14)  | 21.43 (25) |  |  |  |
| +/- MSCI Emerging Markets (Net) Index            | 6.09            | 2.79        | -1.95      | -3.81     | 1.25        | -2.20      | 11.45      | 3.20       |  |  |  |
| Diversified Emerging Mkts Median                 | 19.78           | -16.23      | 35.89      | 8.88      | -14.01      | -2.84      | -1.34      | 18.98      |  |  |  |
| Vanguard Real Estate Index Institutional (VGSNX) | 29.02 (31)      | -5.93 (58)  | 4.93 (62)  | 8.51 (18) | 2.45 (63)   | 30.28 (37) | 2.48 (31)  | 17.65 (31) |  |  |  |
| +/- Spliced Index                                | -0.01           | -0.05       | -0.14      | -0.09     | -0.07       | -0.10      | 0.01       | -0.12      |  |  |  |
| Real Estate Median                               | 27.11           | -5.40       | 5.46       | 6.46      | 3.03        | 29.75      | 1.79       | 16.94      |  |  |  |
| VY® T. Rowe Price Capital Apprec I (ITRIX)       | 24.71 (2)       | 0.74 (1)    | 15.39 (27) | 8.31 (26) | 5.47 (1)    | 12.47 (2)  | 22.49 (7)  | 14.78 (8)  |  |  |  |
| +/- 40% BBg US Agg   60% SP500                   | 2.53            | 3.09        | 1.18       | 0.00      | 4.19        | 1.85       | 4.93       | 3.47       |  |  |  |
| Allocation--50% to 70% Equity Median             | 19.30           | -5.68       | 14.21      | 6.85      | -1.15       | 5.99       | 17.23      | 12.25      |  |  |  |
| Vanguard Target Retirement Income Inv (VTINX)    | 13.16 (52)      | -1.99 (17)  | 8.47 (55)  | 5.25 (48) | -0.17 (10)  | 5.54 (10)  | 5.87 (41)  | 8.23 (57)  |  |  |  |
| +/- Vanguard Target Income Composite Index       | -0.25           | -0.02       | -0.21      | -0.10     | -0.30       | -0.22      | -0.16      | -0.19      |  |  |  |
| Target-Date Retirement Median                    | 13.20           | -3.29       | 8.68       | 5.23      | -1.10       | 4.41       | 5.43       | 8.55       |  |  |  |
| Vanguard Target Retirement 2015 Inv (VTXVX)      | 14.81 (63)      | -2.97 (17)  | 11.50 (51) | 6.16 (64) | -0.46 (25)  | 6.56 (6)   | 13.00 (42) | 11.37 (58) |  |  |  |
| +/- Vanguard Target 2015 Composite Index         | -0.28           | -0.10       | -0.11      | -0.24     | -0.24       | -0.21      | -0.27      | -0.09      |  |  |  |
| Target-Date 2015 Median                          | 15.06           | -3.86       | 11.53      | 6.47      | -0.92       | 5.32       | 12.51      | 11.71      |  |  |  |
| Vanguard Target Retirement 2020 Inv (VTWVX)      | 17.63 (25)      | -4.24 (44)  | 14.08 (18) | 6.95 (37) | -0.68 (37)  | 7.11 (4)   | 15.85 (28) | 12.35 (46) |  |  |  |
| +/- Vanguard Target 2020 Composite Index         | -0.24           | -0.11       | -0.14      | -0.22     | -0.28       | -0.26      | -0.36      | -0.12      |  |  |  |
| Target-Date 2020 Median                          | 16.24           | -4.45       | 12.76      | 6.58      | -1.04       | 5.54       | 13.43      | 12.13      |  |  |  |
| Vanguard Target Retirement 2025 Inv (VTTVX)      | 19.63 (24)      | -5.15 (44)  | 15.94 (21) | 7.48 (35) | -0.85 (39)  | 7.17 (7)   | 18.14 (29) | 13.29 (57) |  |  |  |
| +/- Vanguard Target 2025 Composite Index         | -0.30           | -0.15       | -0.14      | -0.19     | -0.27       | -0.28      | -0.38      | -0.10      |  |  |  |
| Target-Date 2025 Median                          | 18.48           | -5.37       | 14.90      | 7.15      | -1.11       | 5.78       | 16.82      | 13.59      |  |  |  |
| Vanguard Target Retirement 2030 Inv (VTHR30)     | 21.07 (33)      | -5.86 (37)  | 17.52 (32) | 7.85 (43) | -1.03 (44)  | 7.17 (11)  | 20.49 (29) | 14.24 (44) |  |  |  |
| +/- Vanguard Target 2030 Composite Index         | -0.27           | -0.14       | -0.14      | -0.26     | -0.24       | -0.34      | -0.39      | -0.07      |  |  |  |
| Target-Date 2030 Median                          | 20.52           | -6.28       | 16.73      | 7.66      | -1.27       | 5.89       | 18.78      | 14.07      |  |  |  |
| Vanguard Target Retirement 2035 Inv (VTTH35)     | 22.44 (48)      | -6.58 (32)  | 19.12 (34) | 8.26 (45) | -1.26 (49)  | 7.24 (11)  | 22.82 (27) | 15.16 (44) |  |  |  |
| +/- Vanguard Target 2035 Composite Index         | -0.32           | -0.12       | -0.13      | -0.29     | -0.24       | -0.33      | -0.45      | -0.07      |  |  |  |
| Target-Date 2035 Median                          | 22.37           | -7.17       | 18.41      | 8.13      | -1.35       | 6.04       | 20.89      | 14.92      |  |  |  |



# Performance Summary - Calendar Year

|   | Performance (%) |      |       |      |       |      |       |      |       |      |       |      |       |      |       |      |
|---|-----------------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|
|   | 2019            |      | 2018  |      | 2017  |      | 2016  |      | 2015  |      | 2014  |      | 2013  |      | 2012  |      |
| Vanguard Target Retirement 2040 Inv (VFORX) | 23.86           | (43) | -7.32 | (38) | 20.71 | (25) | 8.73  | (39) | -1.59 | (54) | 7.15  | (18) | 24.37 | (24) | 15.56 | (39) |
| +/- Vanguard Target 2040 Composite Index    | -0.33           |      | -0.10 |      | -0.15 |      | -0.25 |      | -0.34 |      | -0.46 |      | -0.42 |      | -0.02 |      |
| Target-Date 2040 Median                     | 23.66           |      | -7.89 |      | 19.49 |      | 8.37  |      | -1.49 |      | 6.10  |      | 21.97 |      | 15.22 |      |
| Vanguard Target Retirement 2045 Inv (VTIVX) | 24.94           | (39) | -7.90 | (40) | 21.42 | (20) | 8.87  | (42) | -1.57 | (53) | 7.16  | (18) | 24.37 | (29) | 15.58 | (58) |
| +/- Vanguard Target 2045 Composite Index    | -0.43           |      | -0.13 |      | -0.13 |      | -0.26 |      | -0.32 |      | -0.45 |      | -0.42 |      | 0.00  |      |
| Target-Date 2045 Median                     | 24.64           |      | -8.22 |      | 20.36 |      | 8.57  |      | -1.48 |      | 6.18  |      | 23.04 |      | 15.67 |      |
| Vanguard Target Retirement 2050 Inv (VFIFX) | 24.98           | (45) | -7.90 | (34) | 21.39 | (26) | 8.85  | (45) | -1.58 | (54) | 7.18  | (20) | 24.34 | (32) | 15.58 | (59) |
| +/- Vanguard Target 2050 Composite Index    | -0.39           |      | -0.13 |      | -0.16 |      | -0.28 |      | -0.33 |      | -0.43 |      | -0.45 |      | 0.00  |      |
| Target-Date 2050 Median                     | 24.79           |      | -8.41 |      | 20.60 |      | 8.65  |      | -1.50 |      | 6.22  |      | 23.19 |      | 15.77 |      |
| Vanguard Target Retirement 2055 Inv (VFFVX) | 24.98           | (56) | -7.89 | (28) | 21.38 | (30) | 8.88  | (43) | -1.72 | (60) | 7.19  | (22) | 24.33 | (31) | 15.58 | (69) |
| +/- Vanguard Target 2055 Composite Index    | -0.39           |      | -0.12 |      | -0.17 |      | -0.25 |      | -0.47 |      | -0.42 |      | -0.46 |      | 0.00  |      |
| Target-Date 2055 Median                     | 25.13           |      | -8.48 |      | 20.83 |      | 8.59  |      | -1.50 |      | 6.37  |      | 23.57 |      | 15.94 |      |
| Vanguard Target Retirement 2060 Inv (VTTSX) | 24.96           | (62) | -7.87 | (28) | 21.36 | (33) | 8.84  | (53) | -1.68 | (70) | 7.16  | (40) | 24.35 | (-)  | 10.68 | (-)  |
| +/- Vanguard Target 2060 Composite Index    | -0.41           |      | -0.10 |      | -0.19 |      | -0.29 |      | -0.43 |      | -0.45 |      | -0.44 |      | -4.90 |      |
| Target-Date 2060+ Median                    | 25.32           |      | -8.58 |      | 21.00 |      | 8.96  |      | -1.08 |      | 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) | 0.82  | 0.91  | 0.95   | 0.24  | 0.07  | -0.01  | 96.67     | 96.59  | 92.50  |             |        |        | 0.17               | 0.23  | 0.23   |
| Money Market-Taxable Median                     | 0.81  | 0.83  | 0.79   | -0.07 | -0.13 | -0.06  | 76.82     | 70.98  | 67.58  |             |        |        | 0.18               | 0.22  | 0.19   |
| Blmbg. Barc. U.S. Treasury Bills: 1-3 Months    |       |       |        |       |       |        |           |        |        |             |        |        | 0.20               | 0.25  | 0.23   |
| Voya Fixed Plus Account III                     | 0.36  | -0.05 | 0.21   | 1.11  | 2.01  | 1.81   | 88.41     | 105.31 | 126.17 |             |        |        | 0.04               | 0.05  | 0.11   |
| Stable Value Median                             | 0.60  | 0.65  | 0.61   | 0.68  | 0.58  | 0.68   | 90.48     | 93.29  | 98.46  |             |        |        | 0.06               | 0.09  | 0.13   |
| American Funds Inflation Linked Bond R6 (RILFX) | 0.77  | 0.85  |        | 1.93  | 1.10  |        | 97.34     | 100.22 |        | 65.87       | 82.90  |        | 3.22               | 3.28  |        |
| Inflation-Protected Bond Median                 | 1.00  | 0.99  | 0.98   | -0.41 | -0.27 | -0.34  | 93.31     | 93.22  | 92.27  | 101.01      | 99.77  | 100.44 | 3.70               | 3.50  | 4.36   |
| Bloomberg Barclays U.S. TIPS Index              |       |       |        |       |       |        |           |        |        |             |        |        | 3.61               | 3.47  | 4.40   |
| Fidelity US Bond Index (FXNAX)                  | 1.00  | 1.02  | 1.03   | 0.07  | -0.04 | -0.13  | 99.91     | 100.95 | 101.47 | 97.10       | 101.92 | 105.16 | 3.23               | 3.11  | 3.02   |
| Intermediate Core Bond Median                   | 1.01  | 1.00  | 1.00   | -0.26 | -0.15 | -0.02  | 100.03    | 99.68  | 99.87  | 110.99      | 107.69 | 103.03 | 3.41               | 3.17  | 3.02   |
| Blmbg. Barc. U.S. Aggregate Index               |       |       |        |       |       |        |           |        |        |             |        |        | 3.23               | 3.05  | 2.93   |
| PIMCO Total Return Instl (PTTRX)                | 0.97  | 0.95  | 0.99   | 0.03  | 0.33  | 0.42   | 99.87     | 101.83 | 110.62 | 104.25      | 100.11 | 110.78 | 3.35               | 3.24  | 3.47   |
| Intermediate Core-Plus Bond Median              | 1.02  | 0.98  | 0.96   | -0.58 | -0.04 | 0.57   | 103.96    | 103.59 | 106.71 | 133.55      | 119.99 | 104.37 | 4.18               | 3.75  | 3.39   |
| Blmbg. Barc. U.S. Aggregate Index               |       |       |        |       |       |        |           |        |        |             |        |        | 3.23               | 3.05  | 2.93   |
| Amana Participation Institutional (AMIPX)       | 0.77  |       |        | -0.72 |       |        | 67.49     |        |        | 75.21       |        |        | 3.60               |       |        |
| Dow Jones Sukuk Index                           |       |       |        |       |       |        |           |        |        |             |        |        | 4.59               | 3.84  | 3.30   |
| BlackRock Equity Dividend Instl (MADVX)         | 0.91  | 0.91  | 0.89   | 2.06  | 2.51  | 1.23   | 99.43     | 100.13 | 92.36  | 90.93       | 87.87  | 86.12  | 16.34              | 14.38 | 12.74  |
| Large Value Median                              | 0.99  | 0.99  | 1.00   | 0.12  | -0.11 | -0.53  | 100.14    | 98.82  | 98.06  | 99.65       | 99.34  | 100.57 | 17.82              | 15.58 | 14.24  |
| Russell 1000 Value Index                        |       |       |        |       |       |        |           |        |        |             |        |        | 17.84              | 15.52 | 14.09  |
| American Funds Fundamental Invs R6 (RFNGX)      | 0.98  | 0.98  | 1.00   | -1.88 | -0.69 | -0.91  | 93.81     | 97.66  | 98.68  | 102.49      | 102.47 | 104.61 | 16.54              | 14.58 | 13.62  |
| Large Blend Median                              | 1.00  | 1.00  | 1.01   | -1.14 | -1.11 | -0.98  | 97.36     | 96.87  | 98.75  | 100.95      | 102.32 | 103.10 | 16.76              | 14.70 | 13.61  |
| S&P 500 Index                                   |       |       |        |       |       |        |           |        |        |             |        |        | 16.71              | 14.63 | 13.36  |
| Parnassus Core Equity Institutional (PRILX)     | 0.85  | 0.84  | 0.86   | 2.55  | 1.62  | 1.51   | 90.79     | 89.13  | 90.67  | 80.10       | 81.31  | 83.66  | 14.50              | 12.69 | 11.88  |
| Large Blend Median                              | 1.00  | 1.00  | 1.01   | -1.14 | -1.11 | -0.98  | 97.36     | 96.87  | 98.75  | 100.95      | 102.32 | 103.10 | 16.76              | 14.70 | 13.61  |
| S&P 500 Index                                   |       |       |        |       |       |        |           |        |        |             |        |        | 16.71              | 14.63 | 13.36  |
| Vanguard Institutional Index I (VINIX)          | 1.00  | 1.00  | 1.00   | -0.02 | -0.02 | -0.02  | 99.93     | 99.93  | 99.93  | 100.03      | 100.05 | 100.05 | 16.71              | 14.63 | 13.36  |
| Large Blend Median                              | 1.00  | 1.00  | 1.01   | -1.14 | -1.11 | -0.98  | 97.36     | 96.87  | 98.75  | 100.95      | 102.32 | 103.10 | 16.76              | 14.70 | 13.61  |
| S&P 500 Index                                   |       |       |        |       |       |        |           |        |        |             |        |        | 16.71              | 14.63 | 13.36  |
| Amana Growth Institutional (AMIGX)              | 0.87  | 0.89  | 0.90   | 7.93  | 5.21  | 1.55   | 107.95    | 106.08 | 96.34  | 77.09       | 83.13  | 90.36  | 15.13              | 13.57 | 12.65  |
| Large Growth Median                             | 1.01  | 1.02  | 1.04   | 5.48  | 2.62  | 1.06   | 112.52    | 109.93 | 105.87 | 88.30       | 98.55  | 98.93  | 17.55              | 15.77 | 14.80  |
| S&P 500 Index                                   |       |       |        |       |       |        |           |        |        |             |        |        | 16.71              | 14.63 | 13.36  |

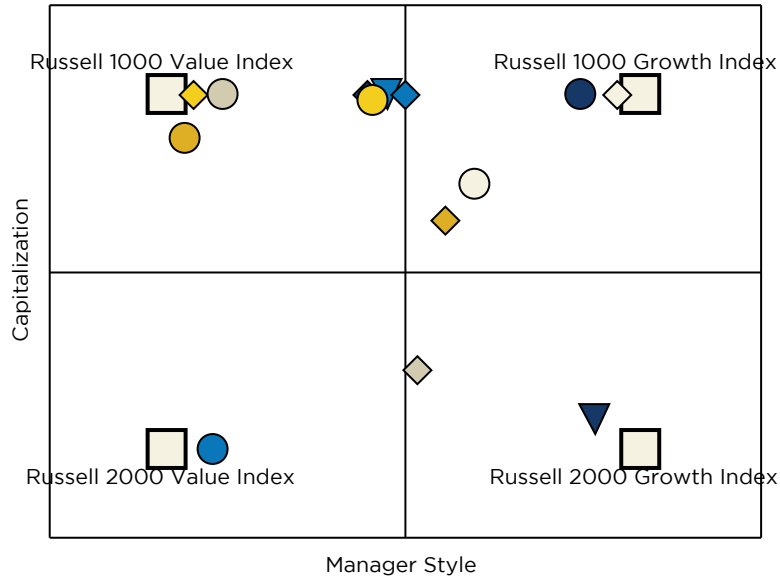


|   | Beta  |       |        | Alpha |       |        | 3 Yrs  | Up Market<br>5 Yrs | 10 Yrs | 3 Yrs  | Down Market<br>5 Yrs | 10 Yrs | 3 Yrs | Standard Deviation |        |
|---|-------|-------|--------|-------|-------|--------|--------|--------------------|--------|--------|----------------------|--------|-------|--------------------|--------|
|   | 3 Yrs | 5 Yrs | 10 Yrs | 3 Yrs | 5 Yrs | 10 Yrs |        |                    |        |        |                      |        |       | 5 Yrs              | 10 Yrs |
| Voya Large Cap Growth Port I (IEOHX)            | 0.94  | 0.96  | 0.98   | -1.09 | -1.06 | -0.40  | 90.67  | 94.31              | 97.66  | 93.89  | 100.65               | 100.78 | 16.41 | 14.83              | 13.80  |
| Large Growth Median                             | 1.00  | 1.00  | 1.03   | -1.65 | -2.02 | -1.65  | 94.70  | 96.16              | 98.05  | 100.98 | 105.98               | 107.62 | 17.55 | 15.77              | 14.80  |
| Russell 1000 Growth Index                       |       |       |        |       |       |        |        |                    |        |        |                      |        | 17.40 | 15.36              | 13.94  |
| American Century Mid Cap Value I (AVUAX)        | 0.89  | 0.89  | 0.86   | 0.67  | 1.73  | 1.49   | 96.94  | 97.28              | 92.46  | 94.68  | 90.01                | 86.84  | 18.90 | 16.18              | 13.90  |
| Mid-Cap Value Median                            | 1.00  | 1.00  | 1.02   | -0.65 | -1.00 | -1.43  | 100.25 | 98.69              | 99.04  | 102.28 | 104.00               | 106.87 | 21.17 | 18.23              | 16.50  |
| Russell Midcap Value Index                      |       |       |        |       |       |        |        |                    |        |        |                      |        | 20.92 | 17.82              | 15.78  |
| Vanguard Mid Cap Index Institutional (VMCIX)    | 1.00  | 1.00  | 1.01   | 0.00  | -0.01 | -0.19  | 99.99  | 99.90              | 100.07 | 99.99  | 99.95                | 100.85 | 19.75 | 16.98              | 15.53  |
| Mid-Cap Blend Median                            | 1.06  | 1.05  | 1.05   | -4.10 | -2.42 | -2.19  | 99.10  | 99.94              | 98.30  | 112.18 | 113.49               | 112.55 | 21.35 | 18.38              | 16.57  |
| CRSP U.S. Mid Cap TR Index                      |       |       |        |       |       |        |        |                    |        |        |                      |        | 19.76 | 16.99              | 15.41  |
| Champlain Mid Cap Institutional (CIPIX)         | 0.89  | 0.89  | 0.87   | -0.09 | 2.11  | 1.72   | 83.76  | 86.90              | 88.74  | 79.57  | 72.10                | 77.85  | 18.34 | 16.03              | 14.52  |
| Mid-Cap Growth Median                           | 1.00  | 1.00  | 1.01   | -1.02 | -0.74 | -0.79  | 96.17  | 95.87              | 97.45  | 98.18  | 100.82               | 103.31 | 20.16 | 17.75              | 16.47  |
| Russell Midcap Growth Index                     |       |       |        |       |       |        |        |                    |        |        |                      |        | 19.86 | 17.19              | 15.85  |
| American Beacon Small Cp Val Inst (AVFIX)       | 1.11  | 1.08  | 1.07   | -0.17 | -1.15 | -0.17  | 111.93 | 102.76             | 104.98 | 112.45 | 106.87               | 105.09 | 25.97 | 22.34              | 19.94  |
| Small Value Median                              | 1.03  | 1.00  | 0.99   | -0.38 | -1.28 | -0.23  | 101.23 | 96.27              | 97.91  | 101.37 | 100.20               | 98.52  | 24.19 | 21.10              | 18.73  |
| Russell 2000 Value Index                        |       |       |        |       |       |        |        |                    |        |        |                      |        | 23.25 | 20.57              | 18.54  |
| Vanguard Small Cap Index I (VSCIX)              | 1.00  | 1.00  | 1.01   | 0.03  | 0.03  | -0.22  | 100.11 | 100.11             | 100.23 | 100.02 | 100.00               | 101.18 | 22.31 | 19.30              | 17.69  |
| Small Blend Median                              | 1.01  | 1.02  | 1.03   | -3.54 | -2.12 | -1.96  | 97.02  | 98.76              | 99.43  | 109.48 | 110.65               | 109.02 | 22.68 | 20.07              | 18.41  |
| CRSP U.S. Small Cap TR Index                    |       |       |        |       |       |        |        |                    |        |        |                      |        | 22.30 | 19.29              | 17.56  |
| Voya SmallCap Opportunities Port I (IVSOX)      | 1.02  | 1.00  | 0.96   | -4.84 | -2.23 | -0.64  | 91.66  | 95.14              | 92.87  | 108.04 | 103.35               | 94.29  | 23.32 | 20.67              | 18.46  |
| Small Growth Median                             | 0.98  | 0.96  | 0.95   | 1.71  | 1.78  | 1.07   | 100.00 | 97.58              | 95.43  | 91.57  | 90.91                | 90.95  | 22.67 | 20.21              | 18.67  |
| Russell 2000 Growth Index                       |       |       |        |       |       |        |        |                    |        |        |                      |        | 22.65 | 20.38              | 19.06  |
| American Funds Europacific Growth R6 (RERGX)    | 1.10  | 1.03  | 0.99   | -1.65 | -0.76 | 0.53   | 106.74 | 101.78             | 100.40 | 115.21 | 105.87               | 97.74  | 16.66 | 15.01              | 14.86  |
| Foreign Large Growth Median                     | 1.04  | 1.01  | 0.99   | -0.46 | -0.39 | 0.61   | 99.20  | 97.81              | 100.14 | 102.81 | 100.85               | 96.62  | 15.87 | 14.70              | 15.07  |
| MSCI AC World ex USA (Net)                      |       |       |        |       |       |        |        |                    |        |        |                      |        | 14.86 | 14.13              | 14.68  |
| Vanguard Total Intl Stock Index Admiral (VTIAX) | 1.02  | 0.99  | 1.00   | 0.01  | 0.04  | -0.02  | 100.83 | 98.95              | 100.05 | 100.69 | 98.75                | 100.15 | 16.29 | 14.78              | 15.39  |
| Foreign Large Blend Median                      | 0.98  | 0.96  | 0.97   | -0.35 | -0.43 | 0.39   | 95.75  | 94.63              | 98.15  | 97.95  | 96.92                | 96.83  | 15.77 | 14.54              | 15.13  |
| FTSE Global ex USA All Cap Index (Net)          |       |       |        |       |       |        |        |                    |        |        |                      |        | 15.96 | 14.83              | 15.27  |
| VY® Oppenheimer Global I (IGMIX)                | 1.17  | 1.18  | 1.14   | 0.36  | -0.79 | -0.50  | 118.08 | 119.58             | 114.35 | 116.60 | 126.09               | 118.18 | 19.15 | 17.39              | 16.23  |
| World Large Stock Median                        | 0.99  | 0.99  | 1.00   | -1.73 | -1.28 | -1.11  | 95.03  | 95.24              | 97.61  | 100.20 | 99.43                | 101.53 | 16.34 | 14.63              | 14.32  |
| MSCI World Index                                |       |       |        |       |       |        |        |                    |        |        |                      |        | 16.02 | 14.32              | 13.79  |
| Oppenheimer Developing Markets I (ODVIX)        | 0.94  | 0.92  | 0.92   | 2.68  | 2.07  | 2.46   | 96.79  | 95.13              | 96.18  | 85.71  | 86.31                | 85.79  | 17.45 | 16.78              | 16.95  |
| Diversified Emerging Mkts Median                | 1.00  | 0.97  | 0.98   | -0.53 | 0.01  | 0.06   | 98.26  | 97.57              | 98.59  | 100.30 | 95.85                | 96.40  | 18.85 | 17.82              | 17.90  |
| MSCI Emerging Markets (Net) Index               |       |       |        |       |       |        |        |                    |        |        |                      |        | 18.26 | 17.71              | 17.81  |

|  | Beta  |       |        | Alpha |       |        | 3 Yrs  | Up Market<br>5 Yrs | 10 Yrs | 3 Yrs  | Down Market<br>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   | -0.08 | -0.09 | -0.06  | 99.75  | 99.86              | 99.90  | 100.13 | 100.32               | 100.22 | 17.58 | 16.27              | 16.07  |
| Real Estate Median                               | 0.95  | 0.96  | 0.97   | -0.41 | -0.49 | -0.31  | 92.97  | 94.06              | 95.62  | 95.39  | 97.06                | 97.68  | 16.93 | 15.71              | 15.70  |
| Spliced Index                                    |       |       |        |       |       |        |        |                    |        |        |                      |        | 17.58 | 16.27              | 16.07  |
| VY® T. Rowe Price Capital Apprec I (ITRIX)       | 1.09  | 1.09  | 1.12   | 0.22  | 0.65  | 0.80   | 105.04 | 108.83             | 113.42 | 98.54  | 100.51               | 103.10 | 11.27 | 9.81               | 9.20   |
| Allocation--50% to 70% Equity Median             | 1.06  | 1.06  | 1.12   | -3.46 | -2.94 | -2.77  | 88.74  | 91.63              | 99.23  | 111.68 | 115.26               | 123.81 | 10.95 | 9.62               | 9.20   |
| 40% BBg US Agg   60% SP500                       |       |       |        |       |       |        |        |                    |        |        |                      |        | 10.09 | 8.83               | 7.98   |
| Vanguard Target Retirement Income Inv (VTINX)    | 1.01  | 1.01  | 1.00   | -0.37 | -0.26 | -0.21  | 98.21  | 97.80              | 98.59  | 102.61 | 100.86               | 101.54 | 5.48  | 4.86               | 4.52   |
| Target-Date Retirement Median                    | 1.11  | 1.08  | 1.05   | -1.49 | -1.19 | -1.17  | 100.09 | 99.29              | 99.17  | 117.26 | 117.04               | 117.31 | 6.07  | 5.34               | 4.88   |
| Vanguard Target Income Composite Index           |       |       |        |       |       |        |        |                    |        |        |                      |        | 5.39  | 4.82               | 4.49   |
| Vanguard Target Retirement 2015 Inv (VTXVX)      | 1.02  | 1.00  | 1.00   | -0.43 | -0.28 | -0.19  | 98.28  | 97.90              | 98.74  | 101.96 | 100.42               | 100.28 | 6.67  | 6.21               | 6.75   |
| Target-Date 2015 Median                          | 1.15  | 1.08  | 1.06   | -1.61 | -1.04 | -0.82  | 103.61 | 100.70             | 101.88 | 121.71 | 112.53               | 109.67 | 7.51  | 6.77               | 7.18   |
| Vanguard Target 2015 Composite Index             |       |       |        |       |       |        |        |                    |        |        |                      |        | 6.53  | 6.18               | 6.73   |
| Vanguard Target Retirement 2020 Inv (VTWNX)      | 1.02  | 1.00  | 1.00   | -0.46 | -0.30 | -0.28  | 98.14  | 97.82              | 98.67  | 101.00 | 99.79                | 100.61 | 8.76  | 7.95               | 8.14   |
| Target-Date 2020 Median                          | 0.94  | 0.94  | 0.98   | -0.86 | -0.61 | -0.59  | 88.92  | 89.38              | 94.60  | 96.14  | 96.44                | 99.48  | 8.21  | 7.55               | 7.97   |
| Vanguard Target 2020 Composite Index             |       |       |        |       |       |        |        |                    |        |        |                      |        | 8.61  | 7.91               | 8.09   |
| Vanguard Target Retirement 2025 Inv (VTTVX)      | 1.02  | 1.00  | 1.01   | -0.49 | -0.31 | -0.30  | 98.44  | 98.04              | 98.90  | 101.19 | 99.90                | 100.79 | 10.27 | 9.21               | 9.28   |
| Target-Date 2025 Median                          | 0.97  | 0.97  | 1.00   | -0.97 | -0.64 | -0.69  | 90.89  | 92.35              | 96.84  | 97.98  | 97.77                | 101.40 | 9.87  | 8.95               | 9.27   |
| Vanguard Target 2025 Composite Index             |       |       |        |       |       |        |        |                    |        |        |                      |        | 10.09 | 9.17               | 9.22   |
| Vanguard Target Retirement 2030 Inv (VTHRX)      | 1.02  | 1.00  | 1.00   | -0.47 | -0.31 | -0.29  | 98.83  | 98.72              | 99.14  | 101.28 | 100.77               | 100.93 | 11.49 | 10.28              | 10.31  |
| Target-Date 2030 Median                          | 1.00  | 1.00  | 0.99   | -1.02 | -0.66 | -0.64  | 95.04  | 96.03              | 97.37  | 101.31 | 100.79               | 100.64 | 11.40 | 10.26              | 10.17  |
| Vanguard Target 2030 Composite Index             |       |       |        |       |       |        |        |                    |        |        |                      |        | 11.29 | 10.23              | 10.25  |
| Vanguard Target Retirement 2035 Inv (VTTHX)      | 1.01  | 1.00  | 1.00   | -0.47 | -0.31 | -0.29  | 98.84  | 98.87              | 99.22  | 101.05 | 100.80               | 100.86 | 12.69 | 11.36              | 11.35  |
| Target-Date 2035 Median                          | 1.03  | 1.01  | 1.01   | -1.14 | -0.79 | -0.85  | 97.77  | 97.23              | 98.08  | 103.75 | 102.58               | 102.36 | 12.90 | 11.46              | 11.52  |
| Vanguard Target 2035 Composite Index             |       |       |        |       |       |        |        |                    |        |        |                      |        | 12.50 | 11.31              | 11.29  |
| Vanguard Target Retirement 2040 Inv (VFORX)      | 1.01  | 1.00  | 1.00   | -0.42 | -0.30 | -0.29  | 99.01  | 98.68              | 99.08  | 100.82 | 100.24               | 100.53 | 13.90 | 12.42              | 12.06  |
| Target-Date 2040 Median                          | 1.02  | 1.00  | 0.99   | -1.07 | -0.77 | -0.76  | 97.02  | 96.27              | 96.05  | 102.41 | 100.97               | 100.55 | 14.10 | 12.52              | 12.02  |
| Vanguard Target 2040 Composite Index             |       |       |        |       |       |        |        |                    |        |        |                      |        | 13.72 | 12.39              | 12.01  |
| Vanguard Target Retirement 2045 Inv (VTIVX)      | 1.01  | 1.00  | 1.00   | -0.41 | -0.29 | -0.28  | 99.08  | 98.78              | 99.18  | 100.73 | 100.24               | 100.58 | 14.94 | 13.15              | 12.44  |
| Target-Date 2045 Median                          | 1.01  | 1.00  | 1.01   | -0.96 | -0.74 | -0.84  | 96.36  | 96.62              | 97.31  | 100.72 | 100.23               | 101.76 | 14.94 | 13.18              | 12.60  |
| Vanguard Target 2045 Composite Index             |       |       |        |       |       |        |        |                    |        |        |                      |        | 14.76 | 13.12              | 12.39  |
| Vanguard Target Retirement 2050 Inv (VFIFX)      | 1.01  | 1.00  | 1.00   | -0.41 | -0.29 | -0.28  | 99.18  | 98.77              | 99.14  | 100.84 | 100.22               | 100.54 | 14.94 | 13.15              | 12.44  |
| Target-Date 2050 Median                          | 1.03  | 1.01  | 1.01   | -1.08 | -0.77 | -0.72  | 98.10  | 97.98              | 99.24  | 102.71 | 100.79               | 102.53 | 15.18 | 13.30              | 12.75  |
| Vanguard Target 2050 Composite Index             |       |       |        |       |       |        |        |                    |        |        |                      |        | 14.76 | 13.12              | 12.39  |

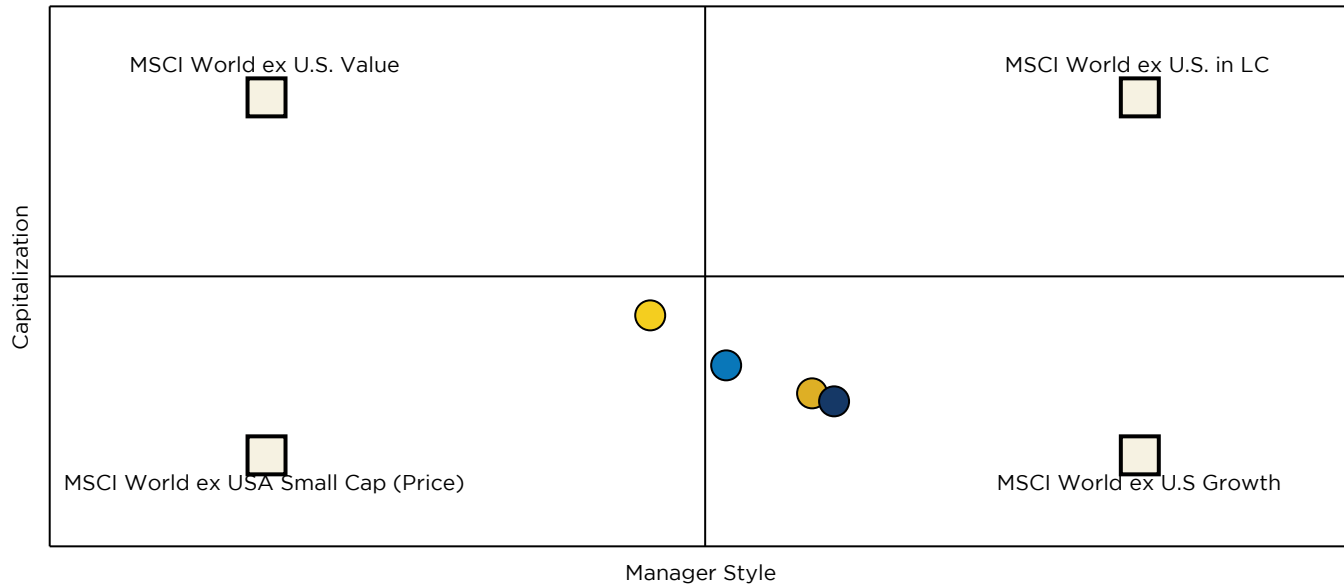
|   | Beta  |       |        | Alpha |       |        | Up Market |        |        | Down Market |        |        | Standard Deviation |       |        |
|---|-------|-------|--------|-------|-------|--------|-----------|--------|--------|-------------|--------|--------|--------------------|-------|--------|
|   | 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) | 1.01  | 1.00  |        | -0.42 | -0.31 |        | 99.01     | 98.60  |        | 100.69      | 100.15 |        | 14.93              | 13.14 |        |
| Target-Date 2055 Median                     | 1.04  | 1.03  | 1.04   | -1.23 | -0.91 | -0.91  | 99.62     | 99.21  | 100.72 | 104.48      | 104.24 | 103.15 | 15.32              | 13.52 | 12.99  |
| Vanguard Target 2055 Composite Index        |       |       |        |       |       |        |           |        |        |             |        |        | 14.76              | 13.12 | 12.39  |
| Vanguard Target Retirement 2060 Inv (VTTSX) | 1.01  | 1.00  |        | -0.43 | -0.32 |        | 98.99     | 98.64  |        | 100.73      | 100.22 |        | 14.92              | 13.15 |        |
| Target-Date 2060+ Median                    | 1.03  | 1.03  |        | -1.13 | -0.66 |        | 99.97     | 100.52 |        | 104.21      | 104.84 |        | 15.30              | 13.53 |        |
| Vanguard Target 2060 Composite Index        |       |       |        |       |       |        |           |        |        |             |        |        | 14.76              | 13.12 |        |

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



- Amana Growth Institutional (AMIGX)
- American Century Mid Cap Value I (AVUAX)
- BlackRock Equity Dividend Instl (MADVX)
- ◆ Parnassus Core Equity Institutional (PRILX)
- ◆ Vanguard Mid Cap Index Institutional (VMCIX)
- ◆ Vanguard Small Cap Index I (VSCIX)
- ▼ Voya SmallCap Opportunities Port I (IVSOX)
- American Beacon Small Cp Val Inst (AVFIX)
- American Funds Fundamental Invs R6 (RFNGX)
- Champlain Mid Cap Institutional (CIPIX)
- ◆ Vanguard Institutional Index I (VINIX)
- ◆ Vanguard Real Estate Index Institutional (VGSNX)
- ◇ Voya Large Cap Growth Port I (IEOHX)
- ▼ VY® T. Rowe Price Capital Apprec I (ITRIX)

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



- American Funds Europacific Growth R6 (RERGX)
- Oppenheimer Developing Markets I (ODVIX)
- VY® Oppenheimer Global I (IGMIX)
- Vanguard Total Intl Stock Index Admiral (VTIAX)



## 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: 06/30/2020

## Trailing Performance

|            | 1 Quarter | Year to Date | 1 Year    | 3 Years   | 5 Years   | 10 Years  | 2019      | 2018      | 2017      | 2016      |
|------------|-----------|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Manager    | 0.06 (7)  | 0.38 (6)     | 1.30 (11) | 1.39 (37) | 0.90 (35) | 0.45 (36) | 2.02 (24) | 1.46 (53) | 0.50 (44) | 0.13 (29) |
| Benchmark  | 0.02      | 0.49         | 1.47      | 1.68      | 1.12      | 0.59      | 2.21      | 1.82      | 0.82      | 0.26      |
| Peer Group | 0.01      | 0.27         | 1.08      | 1.29      | 0.80      | 0.40      | 1.83      | 1.47      | 0.46      | 0.03      |
| Population | 614       | 613          | 598       | 551       | 483       | 442       | 586       | 603       | 607       | 603       |

## Fund Information

|                  |                   |
|------------------|-------------------|
| Fund Inception   | 04/24/2015        |
| Fund Assets      | 12,134 Million    |
| Portfolio Assets | 6,297 Million     |
| # of Holdings    | 161               |
| % in Top 10      | 22.51 %           |
| PM               | Rolston, J        |
| PM Tenure        | 8 Years 10 Months |
| Turnover         | -                 |
| Gross Exp. (%)   | 0.23 %            |
| Net Exp. (%)     | 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 Bills 0% | 4.00 |
| United States Treasury Bills 0% | 2.39 |
| United States Treasury Bills 0% | 2.20 |
| United States Treasury Bills 0% | 2.19 |
| United States Treasury Bills 0% | 2.04 |
| United States Treasury Bills 0% | 2.04 |
| Federal Home Loan Banks 0%      | 2.02 |
| United States Treasury Bills 0% | 1.95 |
| United States Treasury Bills 0% | 1.85 |
| Federal Home Loan Banks 0%      | 1.83 |

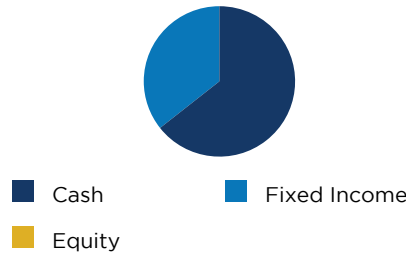
## Fund Statistics

|   | 3 Years | 10 Years |
|---|---------|----------|
| Standard Deviation                                      | 0.19    | 0.21     |
| <b>vs. Blmbg. Barc. U.S. Treasury Bills: 1-3 Months</b> |         |          |
| Beta  | 0.88    | 0.86     |
| Alpha   | -0.08   | -0.06    |
| Information Ratio                                       | -3.38   | -2.49    |
| Tracking Error  | 0.08    | 0.06     |
| R-Squared   | 0.83    | 0.95     |
| Up Market Capture                                       | 83.15   | 75.76    |
| Down Market Capture                                     | -       | -3.90    |
| Consistency   | 8.33    | 10.00    |

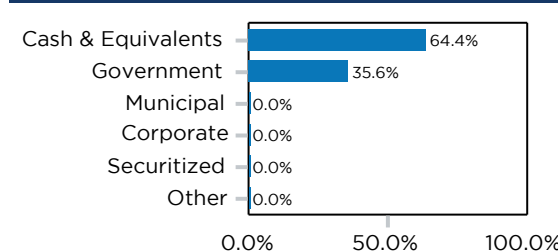
## vs. Risk Free

|              |       |       |
|--------------|-------|-------|
| Sharpe Ratio | -2.97 | -2.05 |
|--------------|-------|-------|

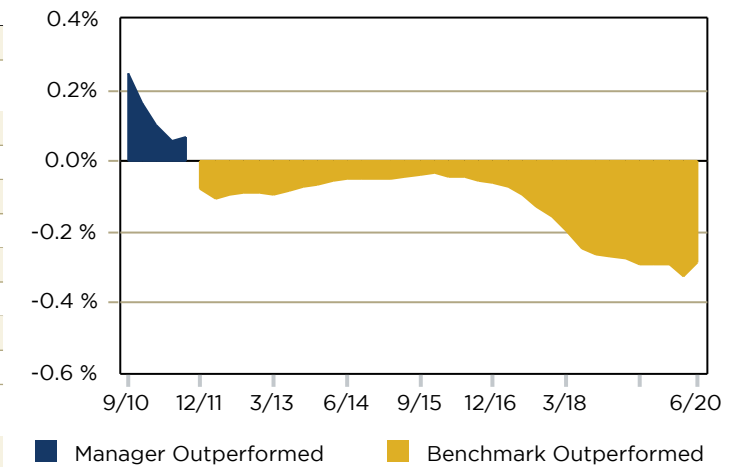
## Asset Allocation



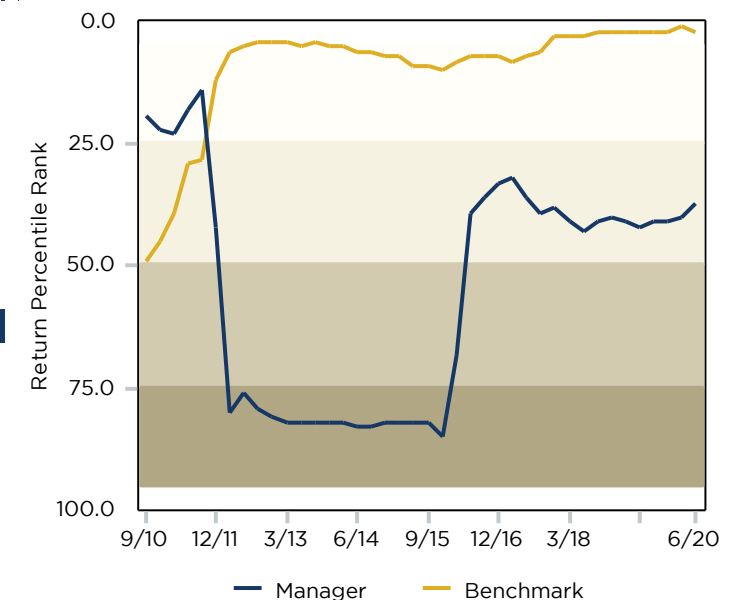
## Sector Allocation



## 3 Years Rolling Excess Performance

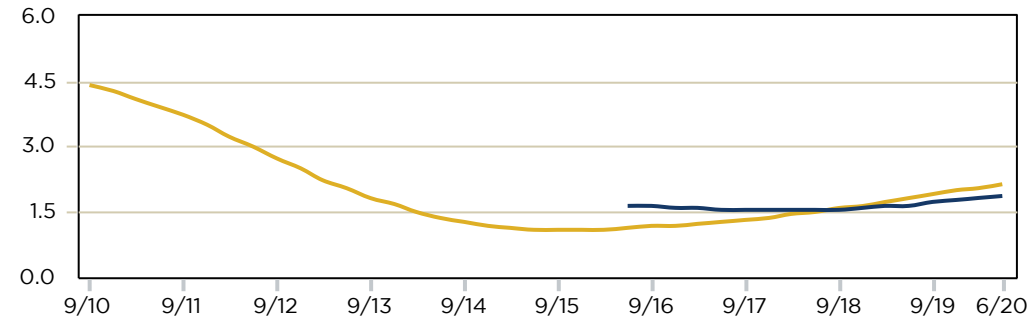
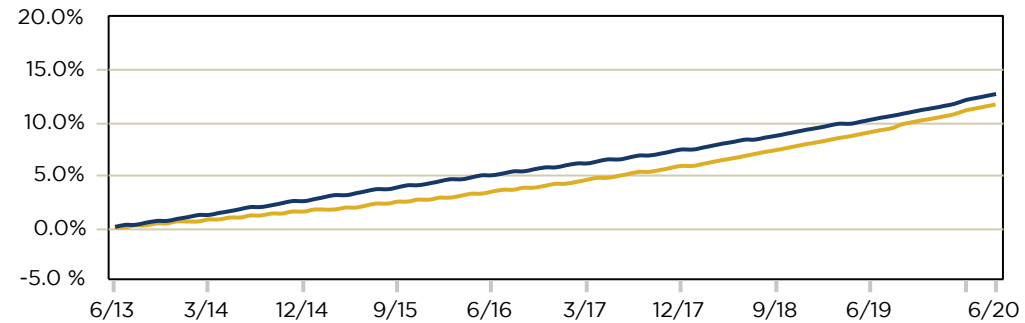
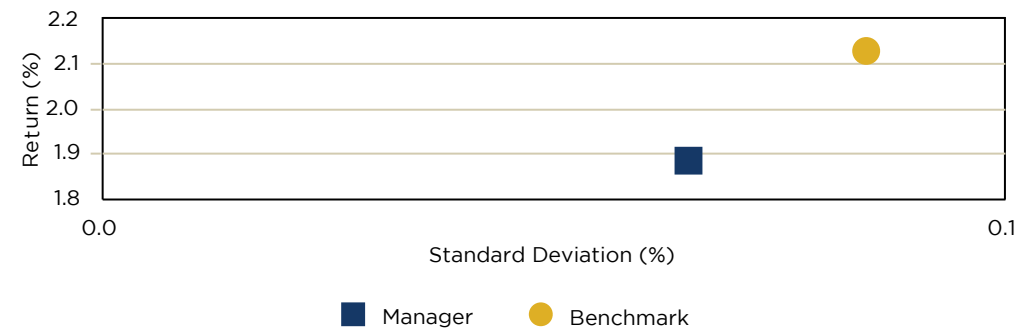


## 3 Years Rolling Percentile Ranking



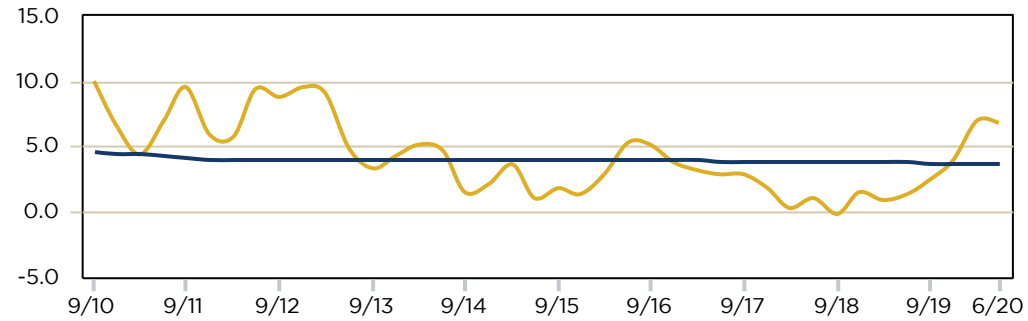
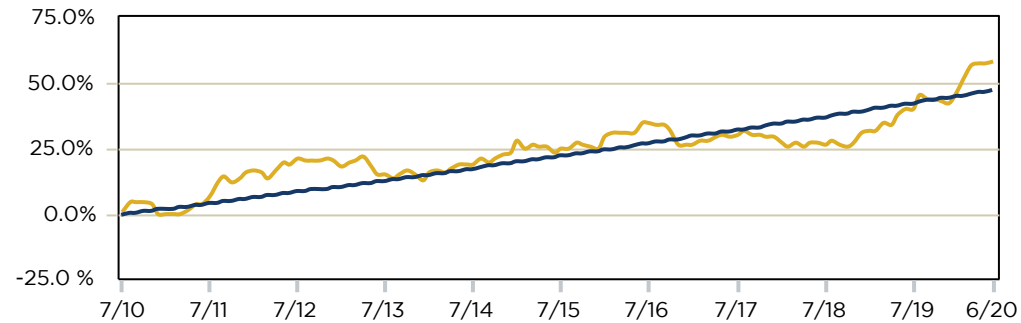
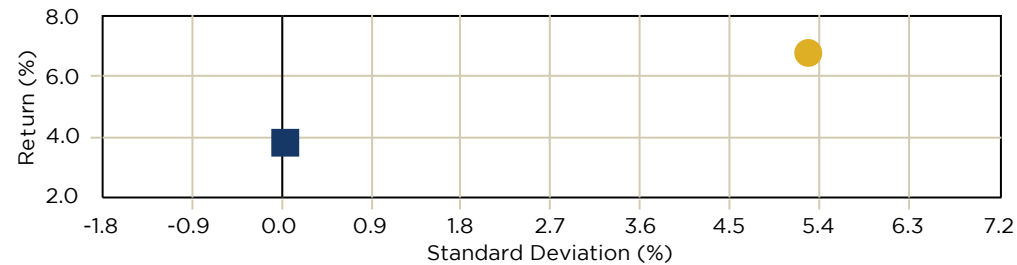
**Trailing Performance**

|           | 1 Quarter | Year to Date | 1 Year | 3 Years | 5 Years | 10 Years | 2019 | 2018 | 2017 | 2016 |
|-----------|-----------|--------------|--------|---------|---------|----------|------|------|------|------|
| Manager   | 0.54      | 1.07         | 2.14   | 1.88    | 1.72    | -        | 1.99 | 1.81 | 1.51 | 1.46 |
| Benchmark | 0.60      | 1.21         | 2.44   | 2.13    | 1.83    | -        | 2.38 | 1.96 | 1.60 | 1.39 |

**Return (Rolling 36 Months)**

**Growth of a Dollar**

**Risk-Reward**


**Trailing Performance**

|           | 1 Quarter | Year to Date | 1 Year | 3 Years | 5 Years | 10 Years | 2019 | 2018 | 2017 | 2016 |
|-----------|-----------|--------------|--------|---------|---------|----------|------|------|------|------|
| Manager   | 0.93      | 1.85         | 3.74   | 3.79    | 3.87    | 3.97     | 3.75 | 3.86 | 3.80 | 4.11 |
| Benchmark | 0.89      | 11.13        | 12.76  | 6.82    | 5.08    | 4.68     | 8.50 | 0.90 | 2.55 | 1.05 |

**Return (Rolling 36 Months)**

**Growth of a Dollar**

**Risk-Reward**


■ Manager    ● Benchmark





# CREF Inflation-Linked Bond R3 (QCILIX)

Index: Blmbg. Barc. U.S. TIPS 1-10 Year

Category: Inflation-Protected Bond

Report Date: 06/30/2020

## Trailing Performance

|            | 1 Quarter | Year to Date | 1 Year    | 3 Years   | 5 Years   | 10 Years  | 2019      | 2018       | 2017      | 2016      |
|------------|-----------|--------------|-----------|-----------|-----------|-----------|-----------|------------|-----------|-----------|
| Manager    | 3.59 (88) | 4.14 (59)    | 5.68 (65) | 3.77 (66) | 2.86 (61) | 2.85 (51) | 6.53 (74) | -0.49 (17) | 1.85 (77) | 4.23 (56) |
| Benchmark  | 3.76      | 4.08         | 5.75      | 3.94      | 2.97      | 2.66      | 6.85      | -0.25      | 1.90      | 4.01      |
| Peer Group | 4.72      | 4.98         | 6.82      | 4.22      | 3.09      | 2.87      | 7.85      | -1.51      | 2.74      | 4.41      |
| Population | 305       | 304          | 304       | 289       | 274       | 203       | 319       | 330        | 337       | 341       |

## Fund Information

|                  |                      |
|------------------|----------------------|
| Fund Inception   | 04/24/2015           |
| Fund Assets      | 6,903 Million        |
| Portfolio Assets | 3,619 Million        |
| # of Holdings    | 53                   |
| % in Top 10      | 43.35 %              |
| PM               | Cerra,J/Travaglino,N |
| PM Tenure        | 16 Years 6 Months    |
| Turnover         | 26.00 %              |
| Gross Exp. (%)   | 0.22 %               |
| Net Exp. (%)     | 0.22 %               |
| New Investors    | Open                 |

## Fixed Income Characteristics

|                         |            |
|-------------------------|------------|
| Avg. Effective Duration | 4.84 Years |
| Avg. Effective Maturity | 5.14 Years |
| Avg. Credit Quality     | AA         |
| Avg. Weighted Coupon    | 0.96 %     |

## Top Holdings (%)

|                                    |      |
|------------------------------------|------|
| United States Treasury Notes 0.12% | 4.96 |
| United States Treasury Notes 0.12% | 4.86 |
| United States Treasury Notes 0.12% | 4.79 |
| United States Treasury Bonds 2.38% | 4.49 |
| United States Treasury Notes 0.25% | 4.40 |
| United States Treasury Notes 0.62% | 4.30 |
| United States Treasury Bonds 3.88% | 4.15 |
| United States Treasury Notes 0.12% | 4.13 |
| United States Treasury Bonds 1.75% | 3.66 |
| United States Treasury Bonds 2%    | 3.61 |

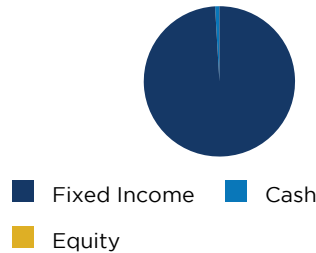
## Fund Statistics

|   | 3 Years | 10 Years |
|---|---------|----------|
| Standard Deviation                          | 2.51    | 4.08     |
| <b>vs. Blmbg. Barc. U.S. TIPS 1-10 Year</b> |         |          |
| Beta  | 0.94    | 1.21     |
| Alpha                                       | 0.04    | -0.35    |
| Information Ratio                           | -0.46   | 0.15     |
| Tracking Error                              | 0.38    | 1.48     |
| R-Squared                                   | 0.98    | 0.90     |
| Up Market Capture                           | 95.46   | 115.74   |
| Down Market Capture                         | 95.31   | 122.41   |
| Consistency                                 | 44.44   | 52.50    |

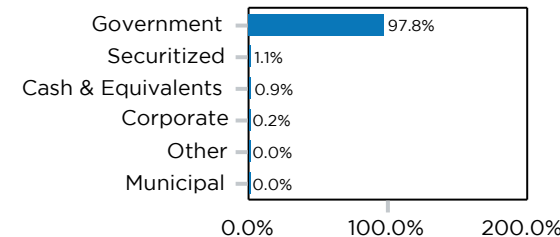
## vs. Risk Free

|              |      |      |
|--------------|------|------|
| Sharpe Ratio | 0.77 | 0.56 |
|--------------|------|------|

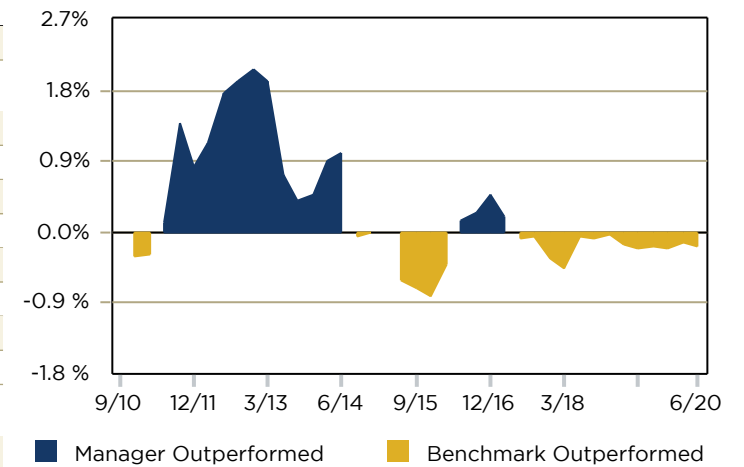
## Asset Allocation



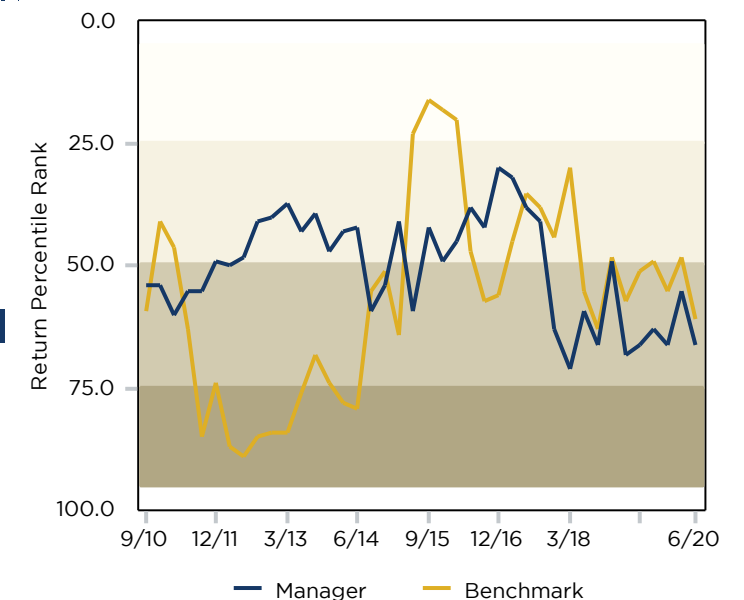
## Sector Allocation



## 3 Years Rolling Excess Performance



## 3 Years Rolling Percentile Ranking





# CREF Bond Market R3 (QCBMIX)

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

Category: Intermediate Core Bond

Report Date: 06/30/2020

## Trailing Performance

|            | 1 Quarter | Year to Date | 1 Year    | 3 Years   | 5 Years   | 10 Years  | 2019      | 2018       | 2017      | 2016      |
|------------|-----------|--------------|-----------|-----------|-----------|-----------|-----------|------------|-----------|-----------|
| Manager    | 4.90 (31) | 5.10 (75)    | 7.69 (68) | 5.09 (44) | 4.38 (23) | 3.88 (36) | 9.03 (29) | -0.19 (42) | 4.12 (18) | 3.47 (18) |
| Benchmark  | 2.90      | 6.14         | 8.74      | 5.32      | 4.30      | 3.82      | 8.72      | 0.01       | 3.54      | 2.65      |
| Peer Group | 4.09      | 5.91         | 8.33      | 4.99      | 4.07      | 3.73      | 8.57      | -0.32      | 3.43      | 2.61      |
| Population | 774       | 768          | 752       | 683       | 627       | 548       | 774       | 848        | 813       | 853       |

## Fund Information

|                  |                   |
|------------------|-------------------|
| Fund Inception   | 04/24/2015        |
| Fund Assets      | 14,832 Million    |
| Portfolio Assets | 7,421 Million     |
| # of Holdings    | 2049              |
| % in Top 10      | 7.65 %            |
| PM               | Cerra,J/Higgins,J |
| PM Tenure        | 8 Years 10 Months |
| Turnover         | 85.00 %           |
| Gross Exp. (%)   | 0.27 %            |
| Net Exp. (%)     | 0.27 %            |
| New Investors    | Open              |

## Fixed Income Characteristics

|                         |            |
|-------------------------|------------|
| Avg. Effective Duration | 5.62 Years |
| Avg. Effective Maturity | 7.76 Years |
| Avg. Credit Quality     | A          |
| Avg. Weighted Coupon    | 3.35 %     |

## Top Holdings (%)

|                                    |      |
|------------------------------------|------|
| Federal National Mortgage Asso     | 1.23 |
| Federal National Mortgage Asso     | 0.80 |
| Federal National Mortgage Asso     | 0.76 |
| Federal Home Loan Mortgage Cor     | 0.76 |
| United States Treasury Bonds 2.5%  | 0.75 |
| United States Treasury Bonds 2.88% | 0.74 |
| Federal National Mortgage Asso     | 0.71 |
| Federal National Mortgage Asso     | 0.69 |
| Federal National Mortgage Asso     | 0.61 |
| United States Treasury Bonds 4.5%  | 0.60 |

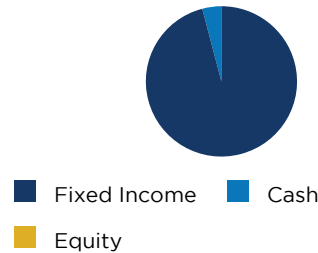
## Fund Statistics

|  | 3 Years | 10 Years |
|--|---------|----------|
| Standard Deviation                           | 3.75    | 3.10     |
| <b>vs. Blmbg. Barc. U.S. Aggregate Index</b> |         |          |
| Beta   | 1.04    | 1.00     |
| Alpha  | -0.40   | 0.06     |
| Information Ratio                            | -0.12   | 0.06     |
| Tracking Error                               | 1.70    | 1.02     |
| R-Squared                                    | 0.80    | 0.89     |
| Up Market Capture                            | 104.33  | 103.43   |
| Down Market Capture                          | 124.77  | 106.58   |
| Consistency                                  | 61.11   | 58.33    |

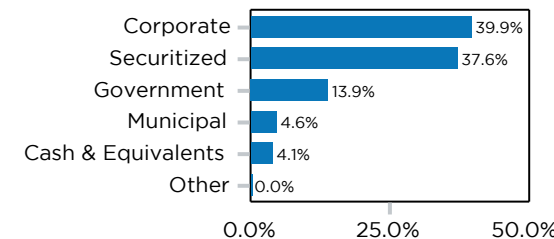
## vs. Risk Free

|              |      |      |
|--------------|------|------|
| Sharpe Ratio | 0.87 | 1.04 |
|--------------|------|------|

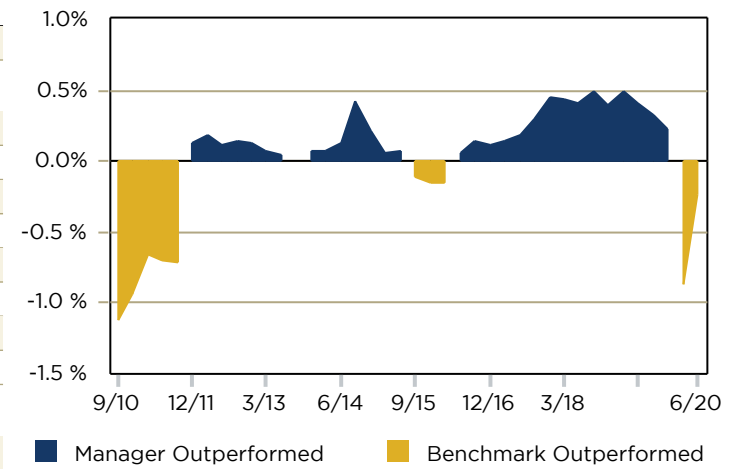
## Asset Allocation



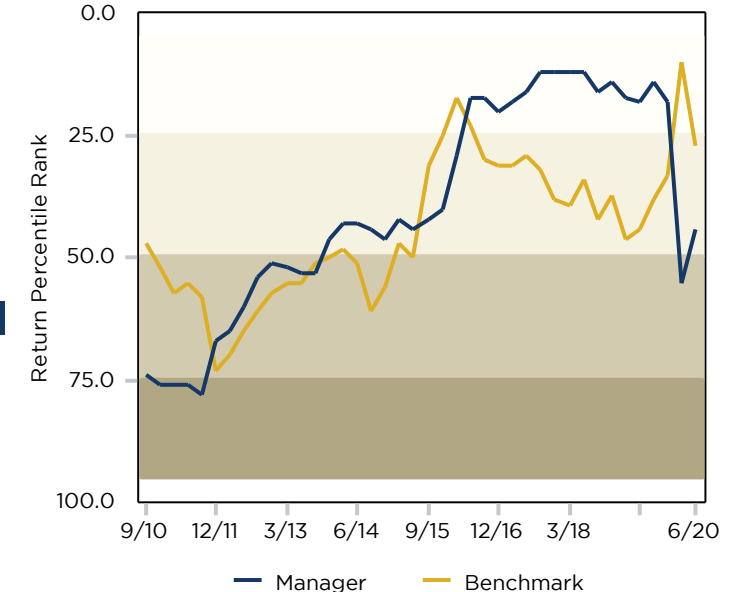
## Sector Allocation



## 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: 06/30/2020

## Trailing Performance

|            | 1 Quarter | Year to Date | 1 Year    | 3 Years   | 5 Years  | 10 Years | 2019       | 2018       | 2017     | 2016      |
|------------|-----------|--------------|-----------|-----------|----------|----------|------------|------------|----------|-----------|
| Manager    | 6.78 (26) | 3.75 (70)    | 6.90 (62) | 5.50 (16) | 5.08 (8) | 5.32 (7) | 11.13 (12) | -0.63 (45) | 6.71 (3) | 4.83 (26) |
| Benchmark  | 2.90      | 6.14         | 8.74      | 5.32      | 4.30     | 3.82     | 8.72       | 0.01       | 3.54     | 2.65      |
| Peer Group | 5.85      | 4.73         | 7.47      | 4.86      | 4.17     | 4.19     | 9.30       | -0.78      | 4.31     | 3.92      |
| Population | 786       | 785          | 780       | 726       | 667      | 568      | 790        | 792        | 747      | 713       |

## Fund Information

|                  |                   |
|------------------|-------------------|
| Fund Inception   | 12/27/2010        |
| Fund Assets      | 57,026 Million    |
| Portfolio Assets | 20,528 Million    |
| # of Holdings    | 3597              |
| % in Top 10      | 7.63 %            |
| PM               | Team Managed      |
| PM Tenure        | 17 Years 8 Months |
| Turnover         | 45.00 %           |
| Gross Exp. (%)   | 0.41 %            |
| Net Exp. (%)     | 0.39 %            |
| New Investors    | Open              |

## Fixed Income Characteristics

|                         |            |
|-------------------------|------------|
| Avg. Effective Duration | 6.76 Years |
| Avg. Effective Maturity | -          |
| Avg. Credit Quality     | BB         |
| Avg. Weighted Coupon    | 3.83 %     |

## Top Holdings (%)

|                                 |       |      |
|---------------------------------|-------|------|
| United States Treasury Bonds    | 3.38% | 1.60 |
| Portugal (Republic Of)          | 5.12% | 1.38 |
| PGIM Core Short-Term Bond       |       | 0.98 |
| Park Ave Fdg Tr 2020-2          | 2.18% | 0.63 |
| Bvrt_19-1f                      |       | 0.62 |
| Greece (Republic Of)            | 5.2%  | 0.53 |
| Republika Slovenija             | 5.25% | 0.53 |
| Wells Fargo & Company           | 4.48% | 0.48 |
| Serbia (Republic Of)            | 7.25% | 0.47 |
| HPS LOAN MANAGEMENT 11-2017 LTD |       | 0.41 |

## Fund Statistics

|                    | 3 Years | 10 Years |
|--------------------|---------|----------|
| Standard Deviation | 5.46    | 4.22     |

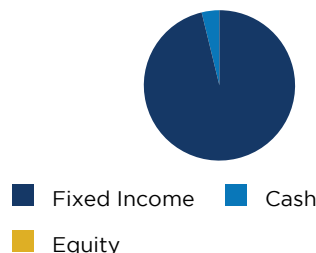
## vs. Blmbg. Barc. U.S. Aggregate Index

|                     |        |        |
|---------------------|--------|--------|
| Beta                | 1.26   | 1.17   |
| Alpha               | -1.08  | 0.86   |
| Information Ratio   | 0.07   | 0.59   |
| Tracking Error      | 3.75   | 2.53   |
| R-Squared           | 0.55   | 0.65   |
| Up Market Capture   | 126.51 | 135.12 |
| Down Market Capture | 179.66 | 128.66 |
| Consistency         | 72.22  | 69.17  |

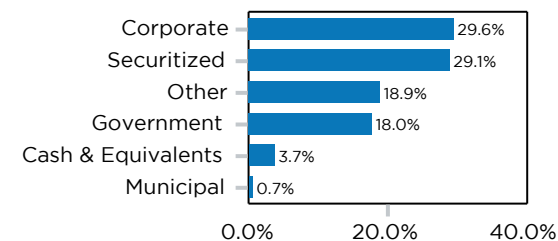
## vs. Risk Free

|              |      |      |
|--------------|------|------|
| Sharpe Ratio | 0.68 | 1.10 |
|--------------|------|------|

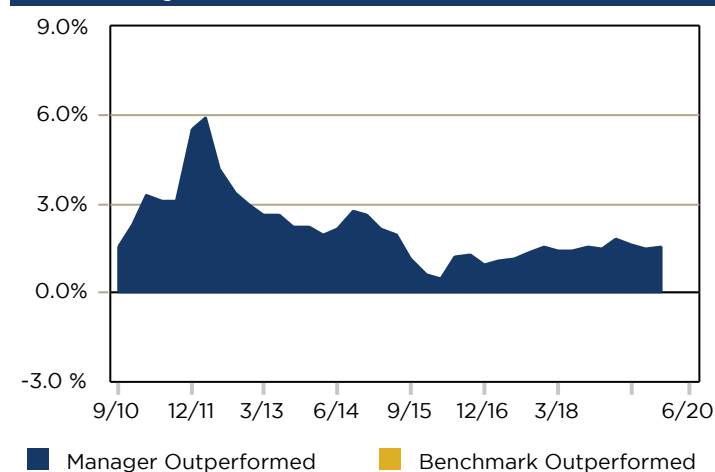
## Asset Allocation



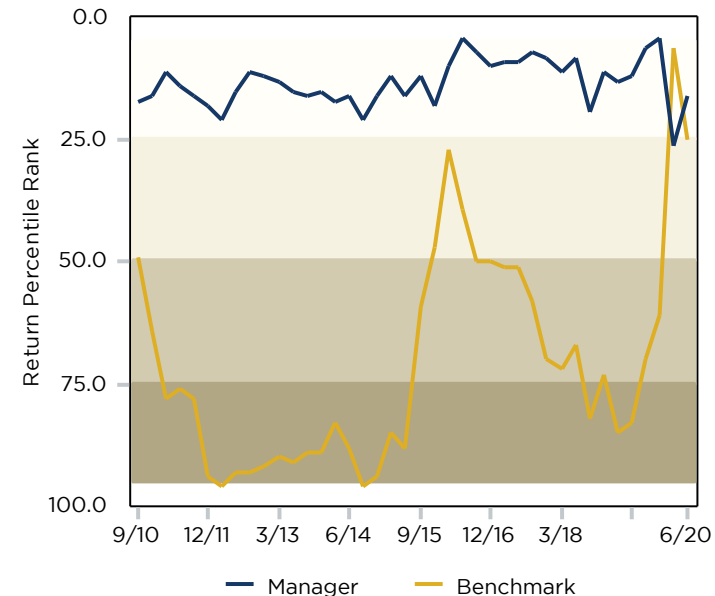
## Sector Allocation



## 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 | 2019  | 2018 | 2017 | 2016 |
|-----------|-----------|--------------|--------|---------|---------|----------|-------|------|------|------|
| Manager   | 5.50      | 1.87         | 4.20   | 3.22    | -       | -        | 6.95  | 0.11 | 2.68 | 2.56 |
| Benchmark | 6.93      | 3.38         | 7.07   | 5.15    | -       | -        | 10.80 | 0.27 | 4.31 | 4.01 |

## Fund Information

|                  |                  |
|------------------|------------------|
| Fund Inception   | 09/28/2015       |
| Fund Assets      | 126 Million      |
| Portfolio Assets | 107 Million      |
| # of Holdings    | 32               |
| % in Top 10      | 43.99 %          |
| PM               | Alm,E/Drum,P     |
| PM Tenure        | 4 Years 9 Months |
| Turnover         | 23.00 %          |
| Gross Exp. (%)   | 0.64 %           |
| Net Exp. (%)     | 0.64 %           |
| New Investors    | Open             |

## Fixed Income Characteristics

|                         |            |
|-------------------------|------------|
| Avg. Effective Duration | 3.14 Years |
| Avg. Effective Maturity | 3.19 Years |
| Avg. Credit Quality     | BB         |
| Avg. Weighted Coupon    | 4.00 %     |

## Top Holdings (%)

|                                    |      |
|------------------------------------|------|
| Perusahaan Penerbit SBSN Indonesia | 4.85 |
| Soq Sukuk A Q.S.C 3.24%            | 4.78 |
| Perusahaan Penerbit SBSN Indonesia | 4.70 |
| Icd Sukuk Co 5%                    | 4.58 |
| Almarai Co 4.31%                   | 4.43 |
| Tnb Global Venture 3.24%           | 4.32 |
| Ei Sukuk Co.Ltd                    | 4.30 |
| Equate Sukuk 3.94%                 | 4.13 |
| Qib Sukuk Ltd. 2.75%               | 3.97 |
| KSA Sukuk Limited 3.63%            | 3.93 |

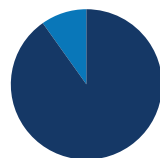
## Fund Statistics

|                             | 3 Years | 10 Years |
|-----------------------------|---------|----------|
| Standard Deviation          | 3.60    | -        |
| <b>vs. FTSE Sukuk Index</b> |         |          |
| Beta                        | 0.77    | -        |
| Alpha                       | -0.72   | -        |
| Information Ratio           | -1.55   | -        |
| Tracking Error              | 1.22    | -        |
| R-Squared                   | 0.97    | -        |
| Up Market Capture           | 67.49   | -        |
| Down Market Capture         | 75.21   | -        |
| Consistency                 | 30.56   | -        |

## vs. Risk Free

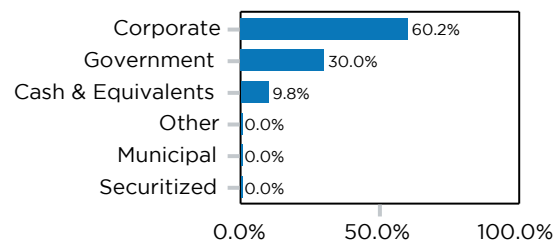
|              |      |   |
|--------------|------|---|
| Sharpe Ratio | 0.40 | - |
|--------------|------|---|

## Asset Allocation

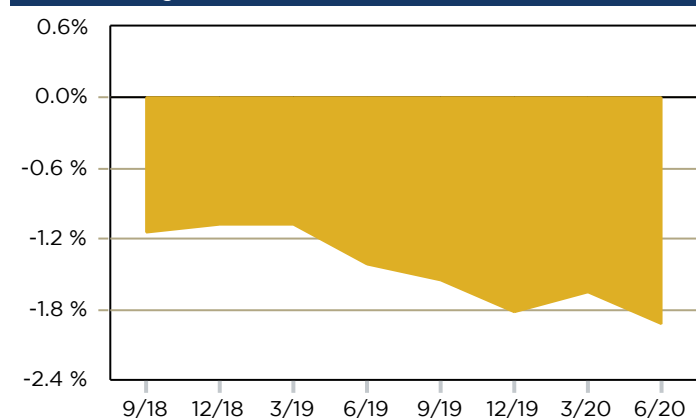


■ Fixed Income ■ Cash ■ Equity

## 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: 06/30/2020

## Trailing Performance

|            | 1 Quarter  | Year to Date | 1 Year     | 3 Years   | 5 Years   | 10 Years  | 2019       | 2018        | 2017       | 2016       |
|------------|------------|--------------|------------|-----------|-----------|-----------|------------|-------------|------------|------------|
| Manager    | 13.94 (69) | -16.47 (64)  | -8.04 (51) | 0.04 (80) | 3.06 (75) | 9.30 (65) | 28.81 (15) | -14.10 (94) | 12.52 (87) | 18.60 (16) |
| Benchmark  | 14.29      | -16.26       | -8.84      | 1.82      | 4.64      | 10.41     | 26.54      | -8.27       | 13.66      | 17.34      |
| Peer Group | 15.11      | -15.44       | -8.04      | 1.92      | 4.43      | 9.81      | 25.47      | -8.87       | 16.18      | 14.57      |
| Population | 1,562      | 1,560        | 1,538      | 1,470     | 1,388     | 1,195     | 1,575      | 1,811       | 1,692      | 1,752      |

## Fund Information

|                     |                 |
|---------------------|-----------------|
| Fund Inception      | 10/01/2002      |
| Fund Assets         | 4,757 Million   |
| Portfolio Assets    | 1,471 Million   |
| Total # of Holdings | 84              |
| % in Top 10         | 28.53 %         |
| PM                  | Carr,C          |
| PM Tenure           | 1 Year 7 Months |
| Turnover            | 79.00 %         |
| Gross Expense (%)   | 0.41 %          |
| Net Expense (%)     | 0.41 %          |
| New Investors       | Open            |

## Portfolio Characteristics

|                           | Portfolio | Benchmark |
|---------------------------|-----------|-----------|
| Wtd. Avg. Mkt. Cap (\$M)  | 170,035   | 113,862   |
| Median Mkt. Cap (\$M)     | 69,086    | 8,979     |
| Price/Earnings ratio      | 17.0      | 17.4      |
| Price/Book ratio          | 2.6       | 2.3       |
| 5 Yr. EPS Growth Rate (%) | 5.4       | 6.1       |
| Current Yield (%)         | 2.6       | 2.6       |
| Beta (5 Years, Monthly)   | 1.04      | 1.00      |
| Number of Stocks          | 82        | 839       |
| Debt to Equity (%)        | 77.4      | 38.4      |
| Forecast P/E              | 17.6      | 18.3      |
| Forecast EPS Growth       | 7.9       | 7.7       |
| Return on Equity (%)      | 0.5       | -16.9     |

## Country/Region Allocation

|                  |              |              |
|------------------|--------------|--------------|
| United States    | 91.2         | 95.7         |
| Non-US Developed | 8.8          | 4.2          |
| Emerging Markets | 0.0          | 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                  | 18.34   | 15.14    |
| <b>vs. Russell 1000 Value Index</b> |         |          |
| Beta                                | 1.02    | 1.06     |
| Alpha                               | -1.73   | -1.53    |
| Information Ratio                   | -0.69   | -0.34    |
| Tracking Error                      | 2.43    | 2.50     |
| R-Squared                           | 0.98    | 0.98     |
| Up Market Capture                   | 99.59   | 102.51   |
| Down Market Capture                 | 107.73  | 111.04   |
| Consistency                         | 47.22   | 50.00    |

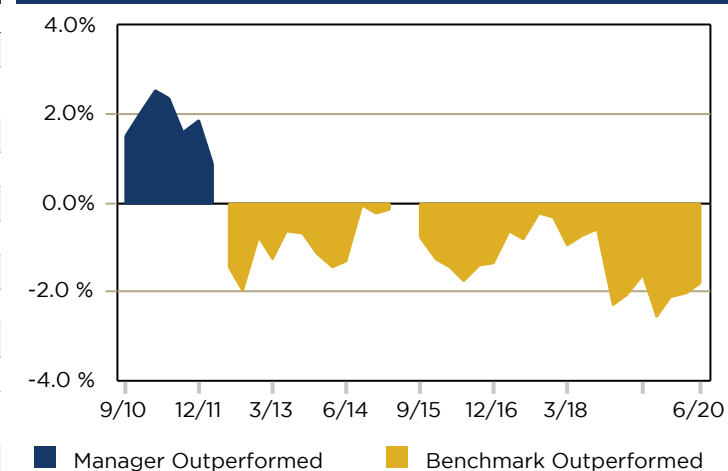
## vs. Risk Free

|              |      |      |
|--------------|------|------|
| Sharpe Ratio | 0.00 | 0.62 |
|--------------|------|------|

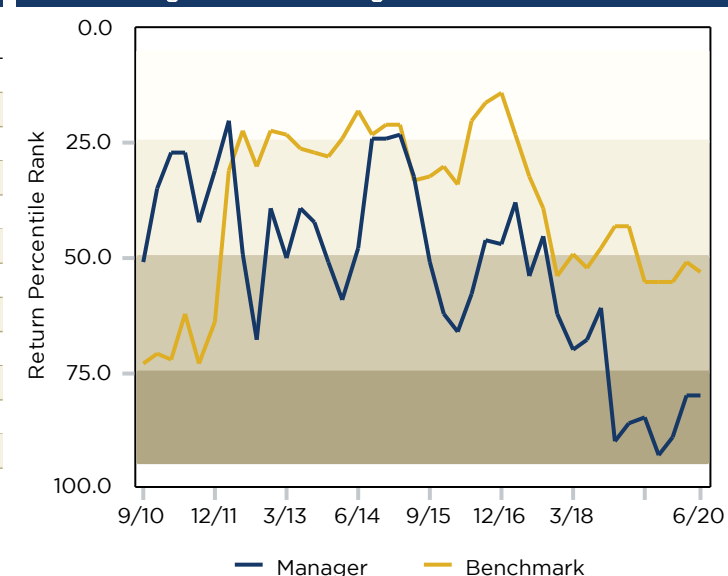
## Sector Allocation

| Sector                 | Portfolio Weight (%) | Benchmark Weight (%) |
|------------------------|----------------------|----------------------|
| Communication Services | 8.5                  | 9.3                  |
| Consumer Discretionary | 4.0                  | 7.0                  |
| Consumer Staples       | 7.0                  | 8.1                  |
| Energy                 | 4.7                  | 5.3                  |
| Financials             | 23.0                 | 18.5                 |
| Health Care            | 17.3                 | 14.1                 |
| Industrials            | 13.2                 | 12.3                 |
| Information Technology | 13.3                 | 10.2                 |
| Materials              | 3.7                  | 4.5                  |
| Real Estate            | 1.4                  | 4.7                  |
| Utilities              | 4.0                  | 5.9                  |
| <b>Total</b>           | <b>100.0</b>         | <b>100.0</b>         |

## 3 Years Rolling Excess Performance



## 3 Years Rolling Percentile Ranking



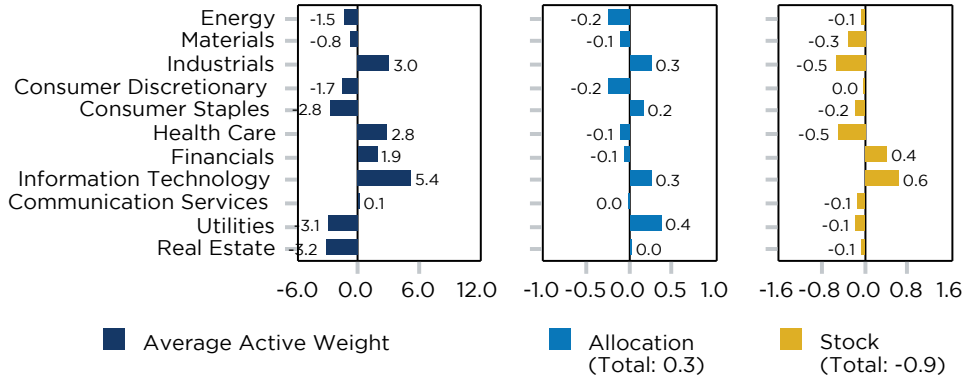


# TIAA-CREF Large-Cap Value Instl (TRLIX)

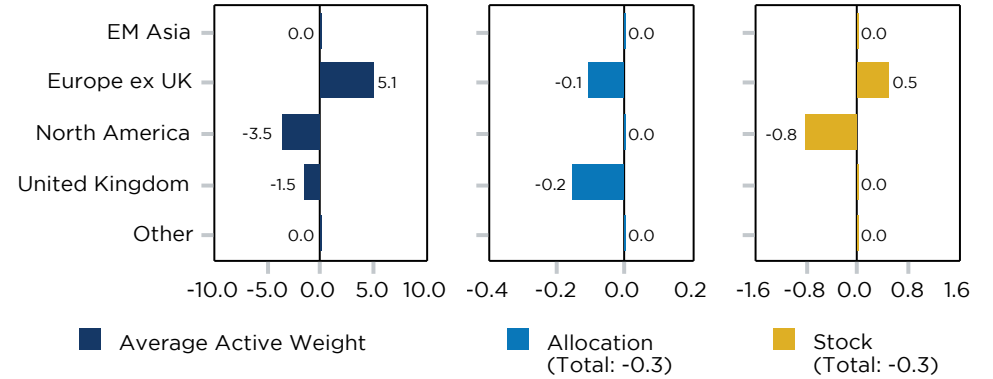
Index: Russell 1000 Value Index

Report Date: 06/30/2020

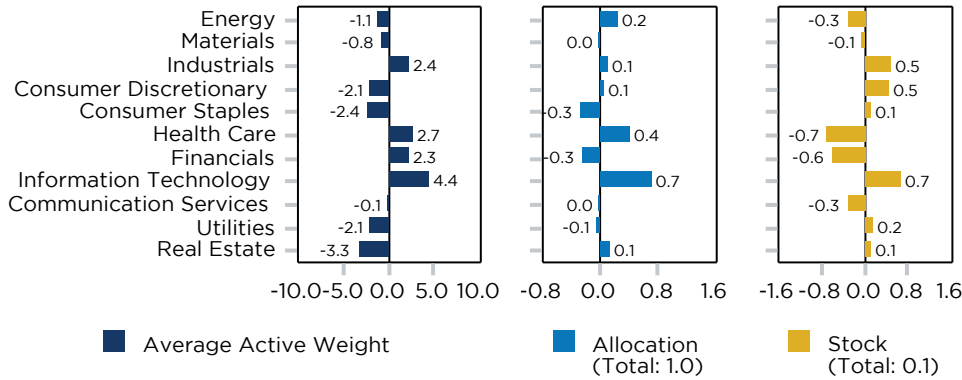
## 1 Quarter Sector Attribution



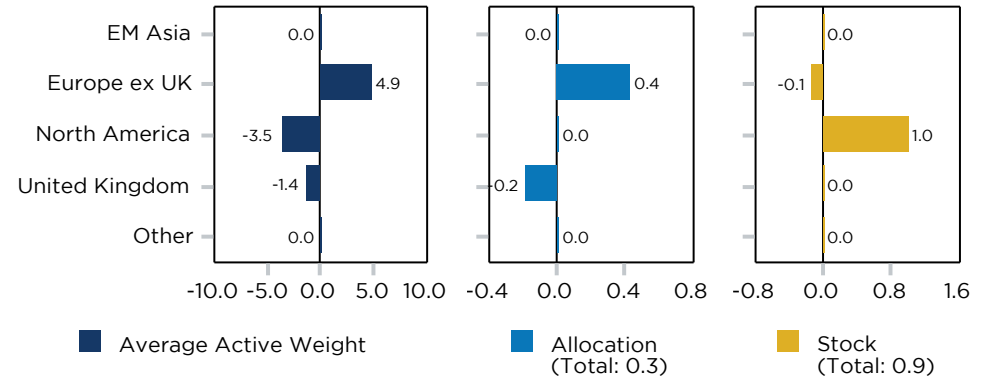
## 1 Quarter Region Attribution



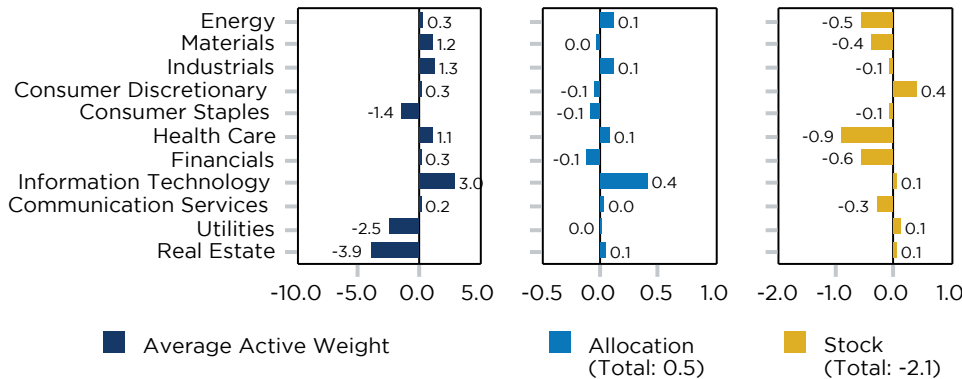
## 1 Year Sector Attribution



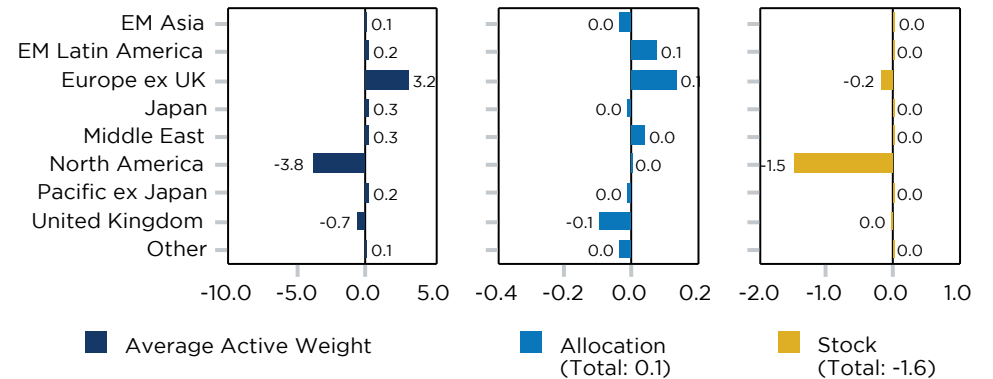
## 1 Year Region Attribution



## 3 Years Sector Attribution



## 3 Years Region Attribution





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

Index: Russell 1000 Value Index

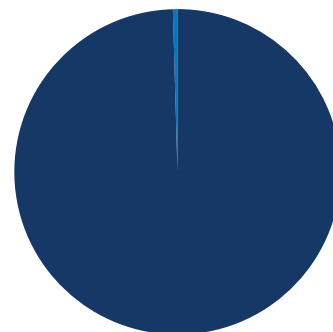
Report Date: 06/30/2020

## Top Ten Securities

|                      |               |
|----------------------|---------------|
| JPMorgan Chase & Co  | 4.2 %         |
| Johnson & Johnson    | 3.8 %         |
| Bank of America Corp | 3.3 %         |
| Pfizer Inc           | 2.7 %         |
| Citigroup Inc        | 2.6 %         |
| Intel Corp           | 2.6 %         |
| Procter & Gamble Co  | 2.6 %         |
| The Walt Disney Co   | 2.4 %         |
| The Home Depot Inc   | 2.3 %         |
| Chevron Corp         | 2.2 %         |
| <b>Total</b>         | <b>28.5 %</b> |

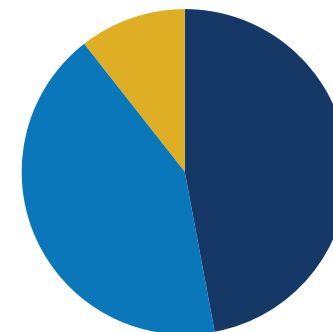
## Asset Allocation

- 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 (%) |
|-------------------------|----------------------|----------------------|---------------------------|----------------------|
| Masco Corp              | 1.08                 | 0.09                 | 0.31                      | 45.73                |
| Microsoft Corp          | 1.69                 | 0.00                 | 0.26                      | 29.40                |
| Parker-Hannifin Corp    | 1.03                 | 0.16                 | 0.24                      | 42.07                |
| Home Depot Inc. (The)   | 2.00                 | 0.84                 | 0.24                      | 34.97                |
| Accenture PLC           | 1.32                 | 0.00                 | 0.24                      | 32.14                |
| Applied Materials Inc.  | 1.20                 | 0.19                 | 0.18                      | 32.44                |
| Goldman Sachs Group Inc | 1.47                 | 0.47                 | 0.14                      | 28.65                |
| Citigroup Inc           | 2.50                 | 0.85                 | 0.14                      | 22.68                |
| Chevron Corp            | 1.95                 | 1.32                 | 0.07                      | 24.86                |
| Bank of America Corp    | 3.24                 | 1.63                 | -0.03                     | 12.62                |

## Top Ten Contributors | 3 Years

|                            | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|----------------------------|----------------------|----------------------|---------------------------|----------------------|
| Advanced Micro Devices Inc | 0.58                 | 0.00                 | 0.35                      | 61.54                |
| Abbott Laboratories        | 1.88                 | 0.69                 | 0.28                      | 25.46                |
| IAC/InterActiveCorp        | 0.53                 | 0.00                 | 0.24                      | 46.32                |
| NextEra Energy Inc         | 1.14                 | 0.55                 | 0.12                      | 22.68                |
| Ciena Corp                 | 0.42                 | 0.00                 | 0.12                      | 29.36                |
| Agilent Technologies Inc   | 0.92                 | 0.12                 | 0.11                      | 15.23                |
| eBay Inc.                  | 0.81                 | 0.30                 | 0.07                      | 15.41                |
| Cisco Systems Inc          | 1.14                 | 1.32                 | -0.03                     | 17.77                |
| Procter & Gamble Co (The)  | 1.19                 | 1.79                 | -0.08                     | 14.53                |
| Intel Corp                 | 0.63                 | 1.34                 | -0.16                     | 24.02                |

## Top Ten Detractors | 1 Quarter

|                                 | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|---------------------------------|----------------------|----------------------|---------------------------|----------------------|
| FirstEnergy Corp.               | 1.37                 | 0.21                 | -0.19                     | -2.28                |
| Merck & Co Inc.                 | 1.17                 | 0.10                 | -0.14                     | 1.31                 |
| American Electric Power Co Inc  | 1.23                 | 0.38                 | -0.12                     | 0.46                 |
| Entergy Corp.                   | 1.05                 | 0.18                 | -0.12                     | 0.83                 |
| Wells Fargo & Co                | 1.38                 | 1.02                 | -0.08                     | -9.00                |
| Boston Properties Inc           | 0.51                 | 0.14                 | -0.06                     | -0.94                |
| Philip Morris International Inc | 1.33                 | 1.09                 | -0.04                     | -2.42                |
| HP Inc                          | 0.43                 | 0.23                 | -0.03                     | 1.41                 |
| NextEra Energy Inc              | 1.03                 | 1.13                 | 0.01                      | 0.36                 |
| Berkshire Hathaway Inc          | 2.23                 | 3.42                 | 0.20                      | -2.36                |

## Top Ten Detractors | 3 Years

|                             | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|-----------------------------|----------------------|----------------------|---------------------------|----------------------|
| The Kraft Heinz Co          | 1.45                 | 0.43                 | -0.27                     | -24.48               |
| Triumph Group Inc.          | 0.74                 | 0.00                 | -0.26                     | -33.75               |
| EOG Resources Inc.          | 1.64                 | 0.40                 | -0.23                     | -16.64               |
| ViacomCBS Inc               | 0.77                 | 0.00                 | -0.22                     | -27.00               |
| Matador Resources Co        | 0.75                 | 0.00                 | -0.21                     | -26.46               |
| J.C. Penney Company Inc.    | 0.34                 | 0.00                 | -0.20                     | -58.40               |
| American Int'l Group Inc    | 1.26                 | 0.43                 | -0.17                     | -18.47               |
| American Airlines Group Inc | 0.55                 | 0.11                 | -0.16                     | -35.56               |
| Wells Fargo & Co            | 2.60                 | 2.10                 | -0.11                     | -19.74               |
| General Electric Co         | 1.32                 | 1.64                 | 0.12                      | -34.86               |

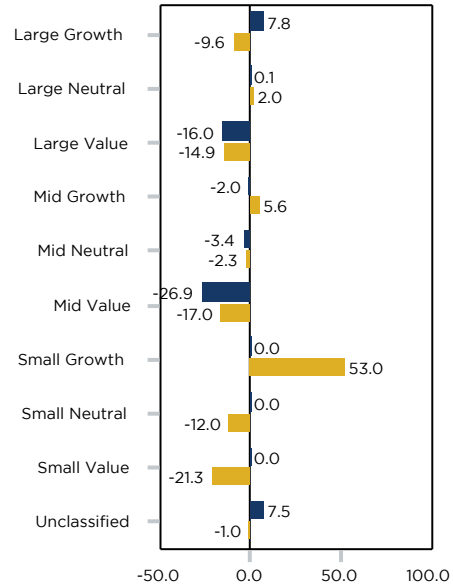


# TIAA-CREF Large-Cap Value Instl (TRLIX)

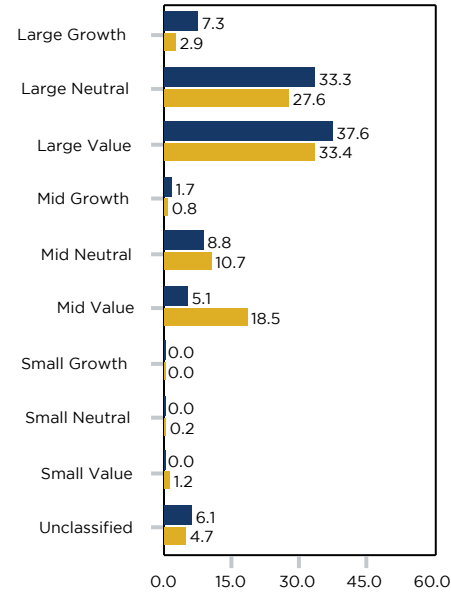
Index: Russell 1000 Value Index

Report Date: 06/30/2020

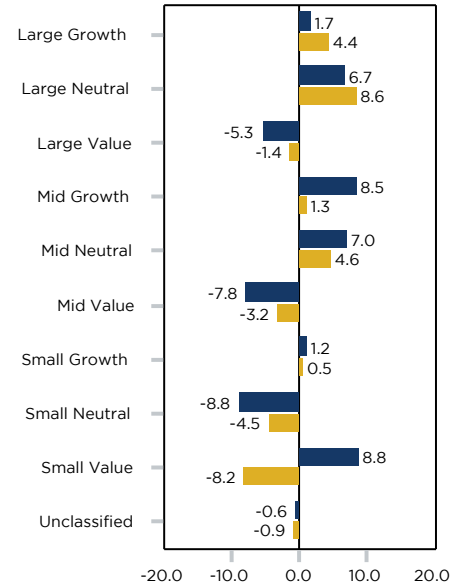
## Performance | 1 Year



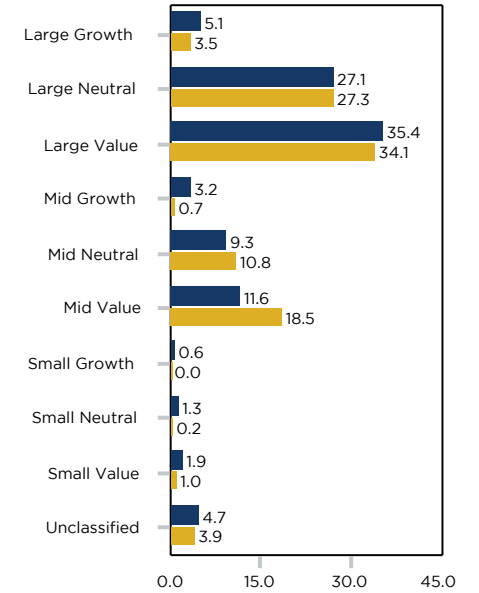
## Allocation | 1 Year



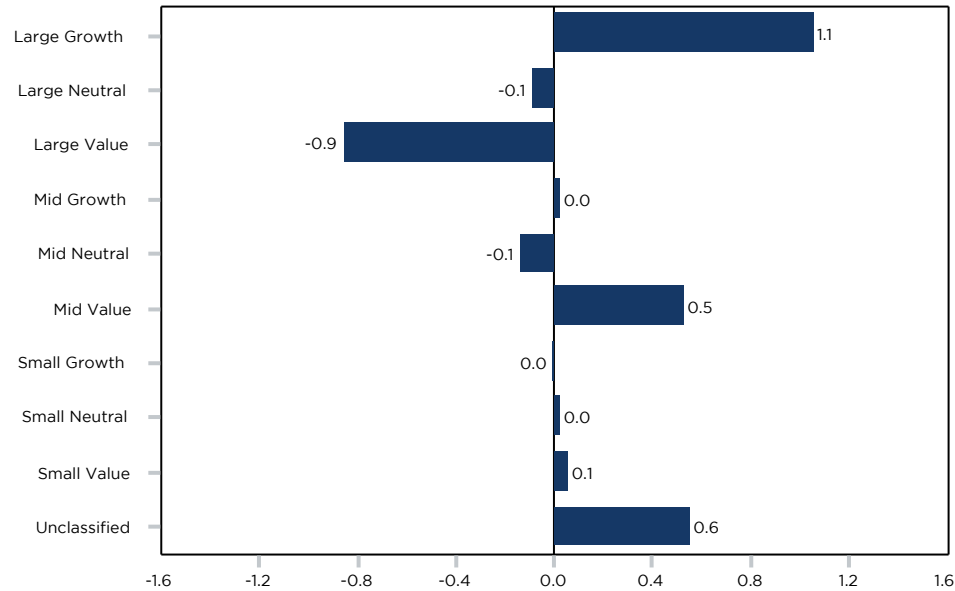
## Performance | 3 Years



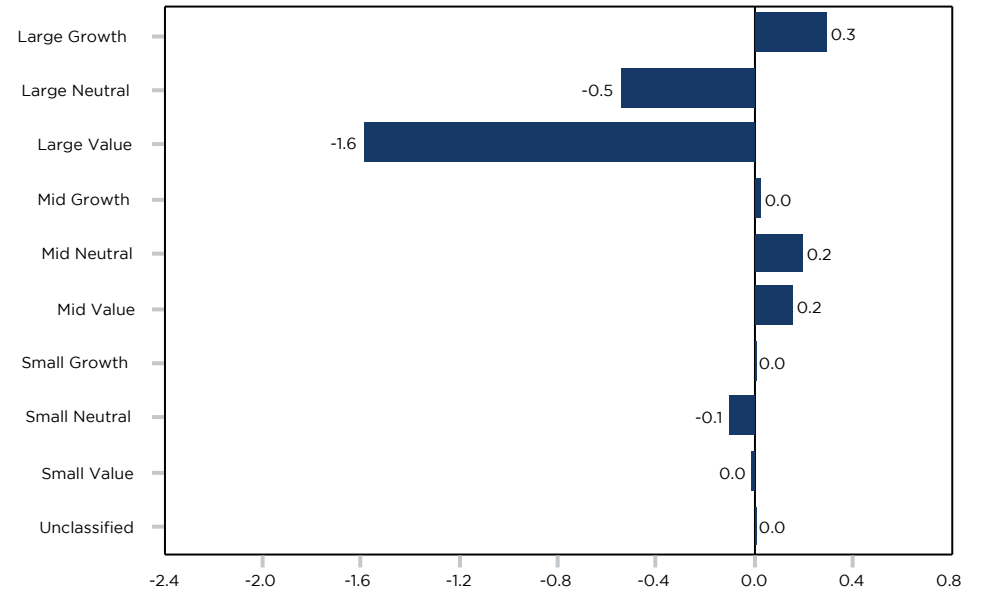
## Allocation | 3 Years



## Total Attribution | 1 Year



## Total Attribution | 3 Years





## Trailing Performance

|            | 1 Quarter  | Year to Date | 1 Year    | 3 Years   | 5 Years   | 10 Years   | 2019       | 2018       | 2017       | 2016       |
|------------|------------|--------------|-----------|-----------|-----------|------------|------------|------------|------------|------------|
| Manager    | 21.88 (22) | -3.55 (47)   | 6.35 (45) | 9.84 (42) | 9.81 (38) | 13.40 (35) | 30.73 (44) | -5.37 (48) | 20.84 (58) | 12.49 (22) |
| Benchmark  | 22.03      | -3.48        | 6.53      | 10.04     | 10.03     | 13.72      | 31.02      | -5.24      | 21.13      | 12.74      |
| Peer Group | 20.44      | -3.73        | 5.80      | 9.23      | 9.27      | 12.78      | 30.19      | -5.53      | 21.16      | 11.16      |
| Population | 1,977      | 1,952        | 1,915     | 1,775     | 1,616     | 1,390      | 1,941      | 2,155      | 2,012      | 2,063      |

## Fund Information

|                             |                          |
|-----------------------------|--------------------------|
| Fund Inception              | 04-2015                  |
| Fund Assets                 | 18,370 Million           |
| Portfolio Assets            | 8,513 Million            |
| Total # of Holdings         | 2709                     |
| % Assets in Top 10 Holdings | 22.1 %                   |
| PM                          | Campagna,P/Liao,L/Tran,D |
| PM Tenure                   | 14 Years 6 Months        |
| Turnover                    | 2.0 %                    |
| Gross Expense (%)           | 0.22 %                   |
| Net Expense (%)             | 0.22 %                   |
| New Investors               | Open                     |

## Equity Characteristics

|                 |                  |
|-----------------|------------------|
| Avg. Market Cap | 77,547 (Million) |
| Price/Earnings  | 21               |
| Price/Book      | 3                |
| Dividend Yield  | 2.2 %            |

## Top Holdings (%)

|                                |     |
|--------------------------------|-----|
| Microsoft Corp                 | 4.8 |
| Apple Inc                      | 4.3 |
| Amazon.com Inc                 | 3.7 |
| Facebook Inc A                 | 1.7 |
| Alphabet Inc Class C           | 1.4 |
| Alphabet Inc A                 | 1.4 |
| Johnson & Johnson              | 1.4 |
| Berkshire Hathaway Inc Class B | 1.3 |
| Visa Inc Class A               | 1.1 |
| JPMorgan Chase & Co            | 1.1 |

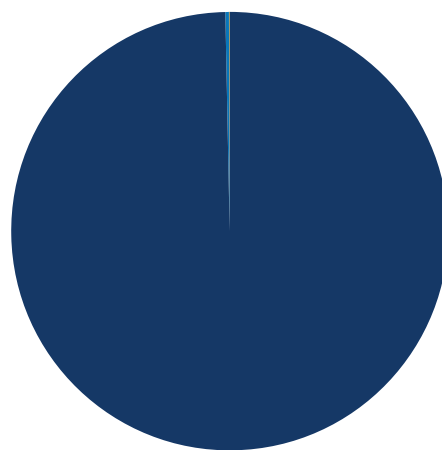
## Fund Statistics

|                               | 3 Years | 10 Years |
|-------------------------------|---------|----------|
| Standard Deviation            | 17.39   | 13.87    |
| <b>vs. Russell 3000 Index</b> |         |          |
| Beta                          | 1.00    | 1.00     |
| Alpha                         | -0.16   | -0.26    |
| Information Ratio             | -3.03   | -5.56    |
| Tracking Error                | 0.07    | 0.05     |
| R-Squared                     | 1.00    | 1.00     |
| Up Market Capture             | 99.28   | 99.04    |
| Down Market Capture           | 99.96   | 100.38   |
| Consistency                   | 8.33    | 3.33     |

## vs. Risk Free

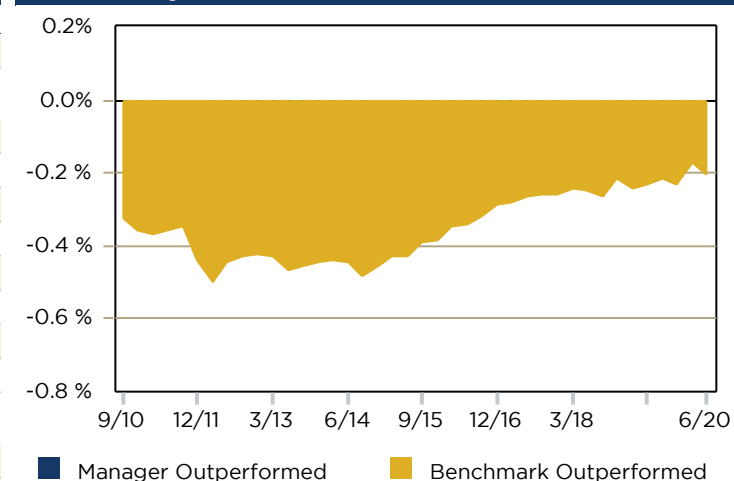
|              |      |      |
|--------------|------|------|
| Sharpe Ratio | 0.53 | 0.93 |
|--------------|------|------|

## Asset Allocation

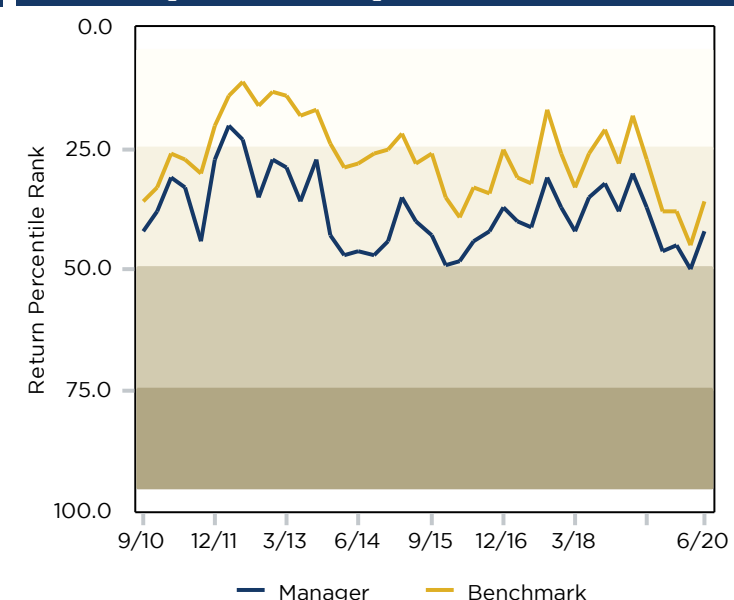


■ Equity      ■ Fixed Income  
■ Cash

## 3 Years Rolling Excess Performance



## 3 Years Rolling Percentile Ranking





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

Index: S&P 500 Index  
 Category: Large Blend  
 Report Date: 06/30/2020

## Trailing Performance

|            | 1 Quarter  | Year to Date | 1 Year    | 3 Years    | 5 Years    | 10 Years   | 2019       | 2018       | 2017       | 2016       |
|------------|------------|--------------|-----------|------------|------------|------------|------------|------------|------------|------------|
| Manager    | 20.53 (44) | -3.08 (30)   | 7.49 (21) | 10.68 (18) | 10.67 (12) | 13.91 (12) | 31.42 (25) | -4.45 (25) | 21.77 (31) | 11.87 (32) |
| Benchmark  | 20.54      | -3.08        | 7.51      | 10.73      | 10.73      | 13.99      | 31.49      | -4.38      | 21.83      | 11.96      |
| Peer Group | 20.44      | -3.73        | 5.80      | 9.23       | 9.27       | 12.78      | 30.19      | -5.53      | 21.16      | 11.16      |
| Population | 1,977      | 1,952        | 1,915     | 1,775      | 1,616      | 1,390      | 1,941      | 2,155      | 2,012      | 2,063      |

## Fund Information

|                     |                          |
|---------------------|--------------------------|
| Fund Inception      | 10/01/2002               |
| Fund Assets         | 5,853 Million            |
| Portfolio Assets    | 4,269 Million            |
| Total # of Holdings | 509                      |
| % in Top 10         | 25.65 %                  |
| PM                  | Campagna,P/Liao,L/Tran,D |
| PM Tenure           | 14 Years 6 Months        |
| Turnover            | 5.00 %                   |
| Gross Expense (%)   | 0.05 %                   |
| Net Expense (%)     | 0.05 %                   |
| New Investors       | Open                     |

## Portfolio Characteristics

|                           | Portfolio | Benchmark |
|---------------------------|-----------|-----------|
| Wtd. Avg. Mkt. Cap (\$M)  | 385,051   | 383,282   |
| Median Mkt. Cap (\$M)     | 21,806    | 21,806    |
| Price/Earnings ratio      | 23.1      | 23.2      |
| Price/Book ratio          | 4.0       | 4.0       |
| 5 Yr. EPS Growth Rate (%) | 12.1      | 12.2      |
| Current Yield (%)         | 1.9       | 1.8       |
| Beta (5 Years, Monthly)   | 1.00      | 1.00      |
| Number of Stocks          | 505       | 505       |
| Debt to Equity (%)        | 32.5      | 29.7      |
| Forecast P/E              | 22.9      | 23.0      |
| Forecast EPS Growth       | 12.0      | 12.0      |
| Return on Equity (%)      | 2.5       | 2.5       |

## Country/Region Allocation

|                  |              |              |
|------------------|--------------|--------------|
| United States    | 97.1         | 97.1         |
| Non-US Developed | 2.9          | 2.9          |
| <b>Total</b>     | <b>100.0</b> | <b>100.0</b> |

## Fund Statistics

|                              | 3 Years | 10 Years |
|------------------------------|---------|----------|
| Standard Deviation           | 16.71   | 13.35    |
| <b>vs. S&amp;P 500 Index</b> |         |          |
| Beta                         | 1.00    | 1.00     |
| Alpha                        | -0.04   | -0.06    |
| Information Ratio            | -0.90   | -1.03    |
| Tracking Error               | 0.05    | 0.07     |
| R-Squared                    | 1.00    | 1.00     |
| Up Market Capture            | 99.84   | 99.75    |
| Down Market Capture          | 100.01  | 100.06   |
| Consistency                  | 38.89   | 37.50    |

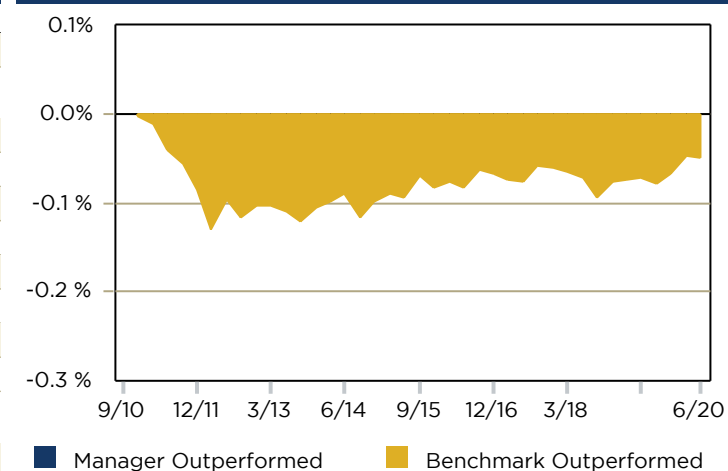
## vs. Risk Free

|              |      |      |
|--------------|------|------|
| Sharpe Ratio | 0.59 | 1.00 |
|--------------|------|------|

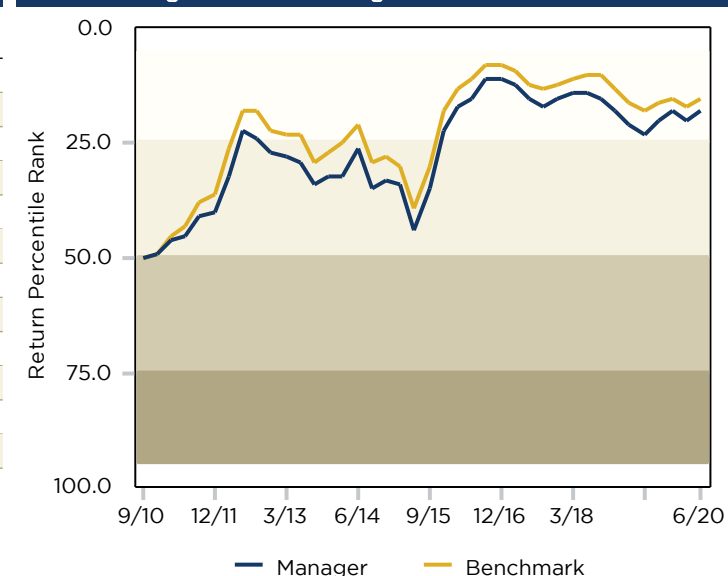
## Sector Allocation

| Sector                 | Portfolio Weight (%) | Benchmark Weight (%) |
|------------------------|----------------------|----------------------|
| Communication Services | 10.7                 | 10.8                 |
| Consumer Discretionary | 10.9                 | 10.8                 |
| Consumer Staples       | 7.0                  | 7.0                  |
| Energy                 | 2.8                  | 2.8                  |
| Financials             | 10.2                 | 10.1                 |
| Health Care            | 14.5                 | 14.6                 |
| Industrials            | 8.0                  | 8.0                  |
| Information Technology | 27.6                 | 27.5                 |
| Materials              | 2.5                  | 2.5                  |
| Real Estate            | 2.8                  | 2.8                  |
| Utilities              | 3.0                  | 3.1                  |
| <b>Total</b>           | <b>100.0</b>         | <b>100.0</b>         |

## 3 Years Rolling Excess Performance

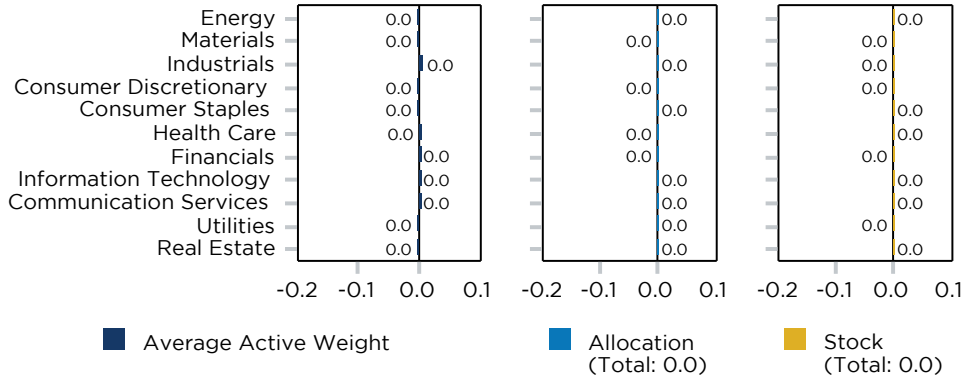


## 3 Years Rolling Percentile Ranking

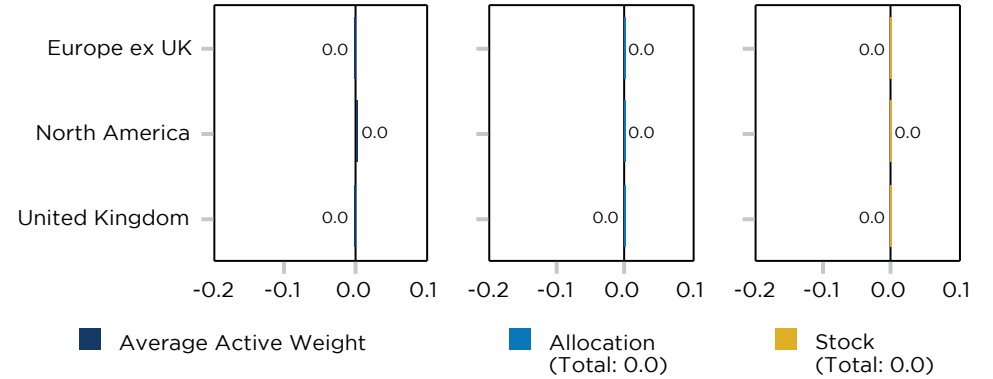




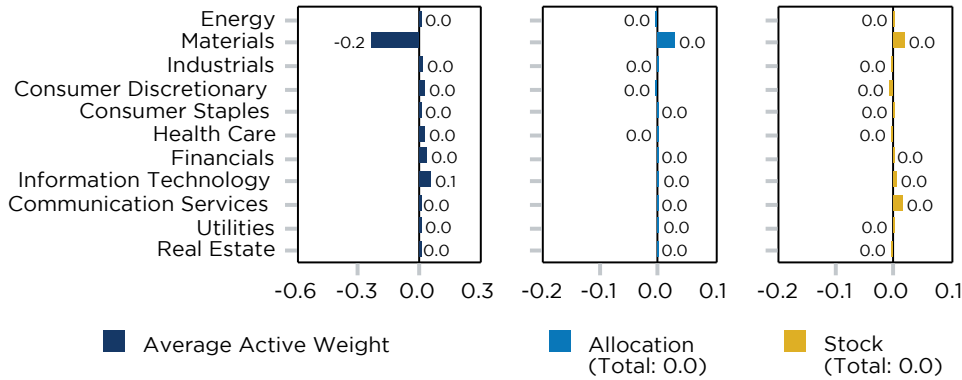
## 1 Quarter Sector Attribution



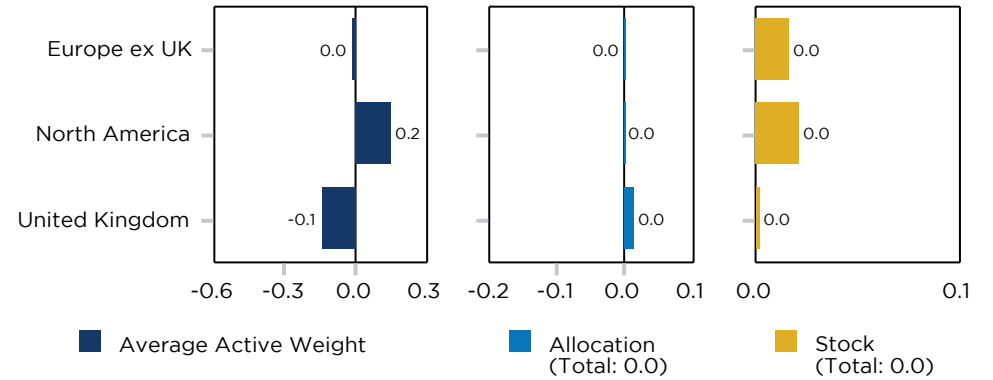
## 1 Quarter Region Attribution



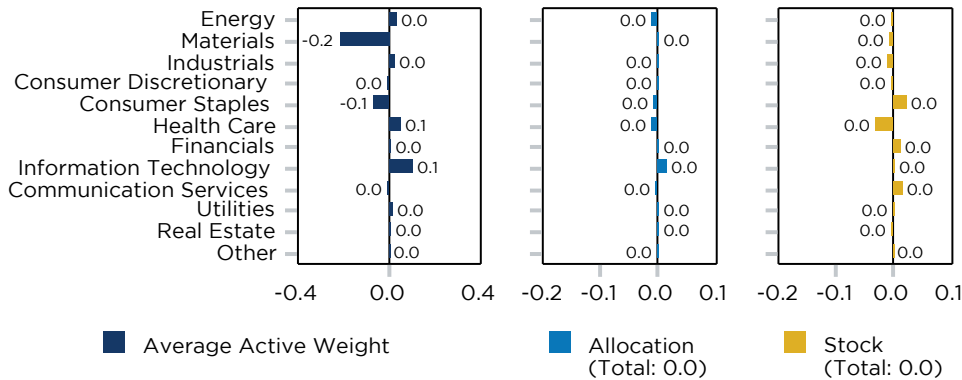
## 1 Year Sector Attribution



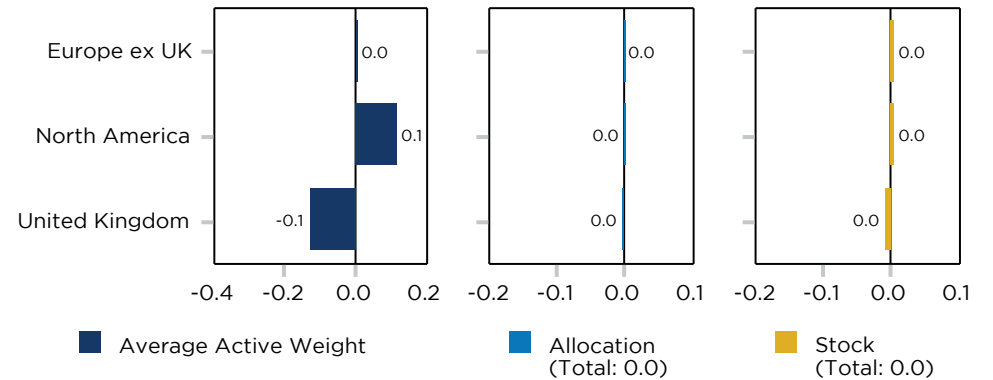
## 1 Year Region Attribution



## 3 Years Sector Attribution



## 3 Years Region Attribution





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

Index: S&P 500 Index

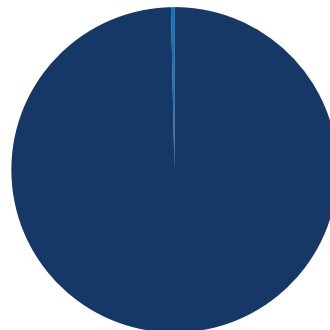
Report Date: 06/30/2020

## Top Ten Securities

|                                |               |
|--------------------------------|---------------|
| Microsoft Corp                 | 5.5 %         |
| Apple Inc                      | 5.2 %         |
| Amazon.com Inc                 | 4.0 %         |
| Facebook Inc A                 | 2.1 %         |
| Alphabet Inc A                 | 1.7 %         |
| Alphabet Inc Class C           | 1.7 %         |
| Johnson & Johnson              | 1.5 %         |
| Berkshire Hathaway Inc Class B | 1.4 %         |
| Visa Inc Class A               | 1.3 %         |
| JPMorgan Chase & Co            | 1.2 %         |
| <b>Total</b>                   | <b>25.7 %</b> |

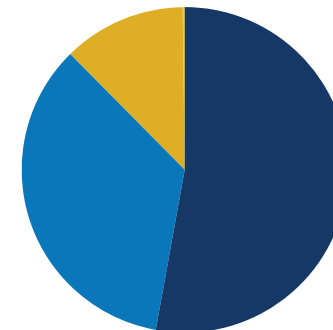
## Asset Allocation

- 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 (%) |
|----------------------------|----------------------|----------------------|---------------------------|----------------------|
| PayPal Holdings Inc        | 0.53                 | 0.52                 | 0.01                      | 81.98                |
| Apple Inc                  | 4.96                 | 4.96                 | 0.00                      | 43.84                |
| Microsoft Corp             | 5.62                 | 5.62                 | 0.00                      | 29.40                |
| Amazon.com Inc             | 3.79                 | 3.79                 | 0.00                      | 41.50                |
| Facebook Inc               | 1.87                 | 1.87                 | 0.00                      | 36.13                |
| Alphabet Inc               | 1.63                 | 1.63                 | 0.00                      | 22.04                |
| Alphabet Inc               | 1.62                 | 1.62                 | 0.00                      | 21.57                |
| NVIDIA Corporation         | 0.75                 | 0.75                 | 0.00                      | 44.19                |
| Home Depot Inc. (The)      | 0.95                 | 0.95                 | 0.00                      | 34.97                |
| Raytheon Technologies Corp | 0.36                 | 0.36                 | 0.00                      | 91.45                |

## Top Ten Contributors | 3 Years

|                        | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|------------------------|----------------------|----------------------|---------------------------|----------------------|
| Alphabet Inc           | 2.69                 | 1.33                 | 0.06                      | 15.11                |
| Microsoft Corp         | 2.58                 | 2.56                 | 0.01                      | 45.76                |
| Apple Inc              | 3.64                 | 3.62                 | 0.01                      | 38.26                |
| Amazon.com Inc         | 1.86                 | 1.85                 | 0.00                      | 41.78                |
| Visa Inc               | 0.84                 | 0.83                 | 0.00                      | 28.06                |
| Home Depot Inc. (The)  | 0.89                 | 0.88                 | 0.00                      | 20.65                |
| Unitedhealth Group Inc | 0.87                 | 0.86                 | 0.00                      | 18.51                |
| Facebook Inc           | 1.73                 | 1.72                 | 0.00                      | 14.57                |
| Mastercard Inc         | 0.55                 | 0.55                 | 0.00                      | 35.30                |
| Intel Corp             | 0.77                 | 0.77                 | 0.00                      | 24.02                |

## Top Ten Detractors | 1 Quarter

|                                 | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|---------------------------------|----------------------|----------------------|---------------------------|----------------------|
| Wells Fargo & Co                | 0.52                 | 0.52                 | 0.00                      | -9.00                |
| General Electric Co             | 0.32                 | 0.32                 | 0.00                      | -13.85               |
| Berkshire Hathaway Inc          | 1.67                 | 1.67                 | 0.00                      | -2.36                |
| CME Group Inc                   | 0.29                 | 0.29                 | 0.00                      | -5.58                |
| Philip Morris International Inc | 0.53                 | 0.53                 | 0.00                      | -2.42                |
| Walgreens Boots Alliance Inc    | 0.16                 | 0.16                 | 0.00                      | -6.28                |
| L3Harris Technologies Inc       | 0.19                 | 0.19                 | 0.00                      | -5.39                |
| Consolidated Edison Inc.        | 0.12                 | 0.12                 | 0.00                      | -6.80                |
| Southern Co (The)               | 0.26                 | 0.27                 | 0.00                      | -3.06                |
| Biogen Inc                      | 0.26                 | 0.27                 | 0.00                      | -15.43               |

## Top Ten Detractors | 3 Years

|                                 | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|---------------------------------|----------------------|----------------------|---------------------------|----------------------|
| General Electric Co             | 1.14                 | 1.13                 | 0.00                      | -34.86               |
| Wells Fargo & Co                | 1.21                 | 1.20                 | 0.00                      | -19.74               |
| Altria Group Inc                | 0.70                 | 0.69                 | 0.00                      | -14.08               |
| Exxon Mobil Corp                | 1.66                 | 1.65                 | 0.00                      | -13.94               |
| Schlumberger Ltd                | 0.44                 | 0.44                 | 0.00                      | -31.84               |
| Philip Morris International Inc | 0.88                 | 0.88                 | 0.00                      | -11.00               |
| PG&E Corp                       | 0.16                 | 0.16                 | 0.00                      | -48.74               |
| Occidental Petroleum Corp       | 0.22                 | 0.22                 | 0.00                      | -28.10               |
| The Kraft Heinz Co              | 0.25                 | 0.25                 | 0.00                      | -24.48               |
| Halliburton Co                  | 0.18                 | 0.18                 | 0.00                      | -31.09               |

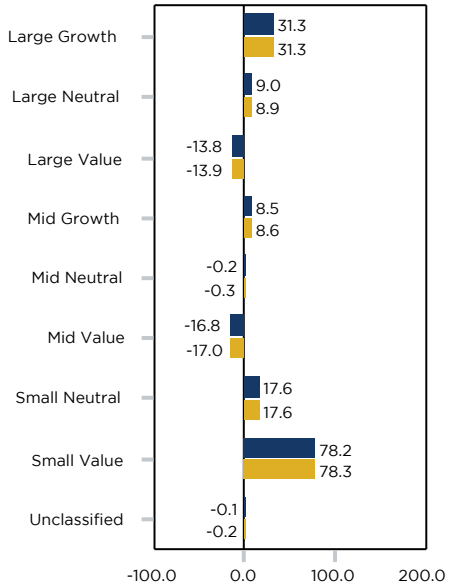


# TIAA-CREF S&P 500 Index Instl (TISPX)

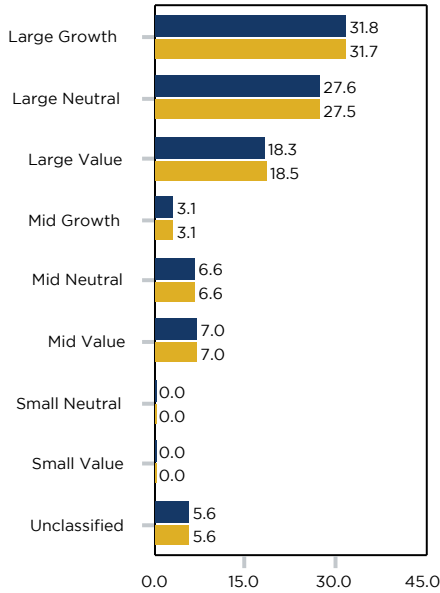
Index: S&P 500 Index

Report Date: 06/30/2020

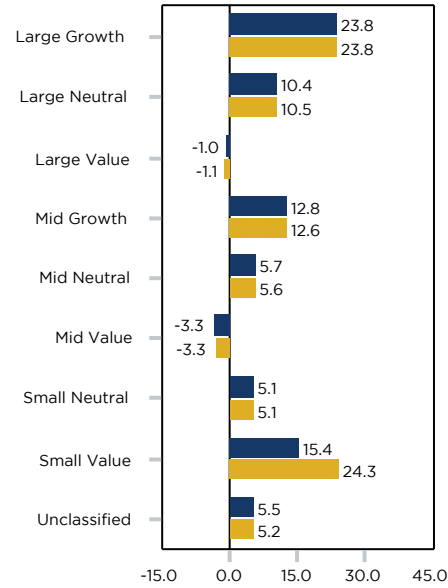
## Performance | 1 Year



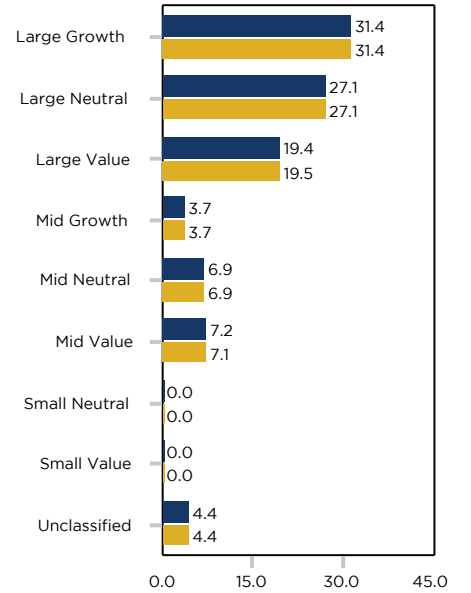
## Allocation | 1 Year



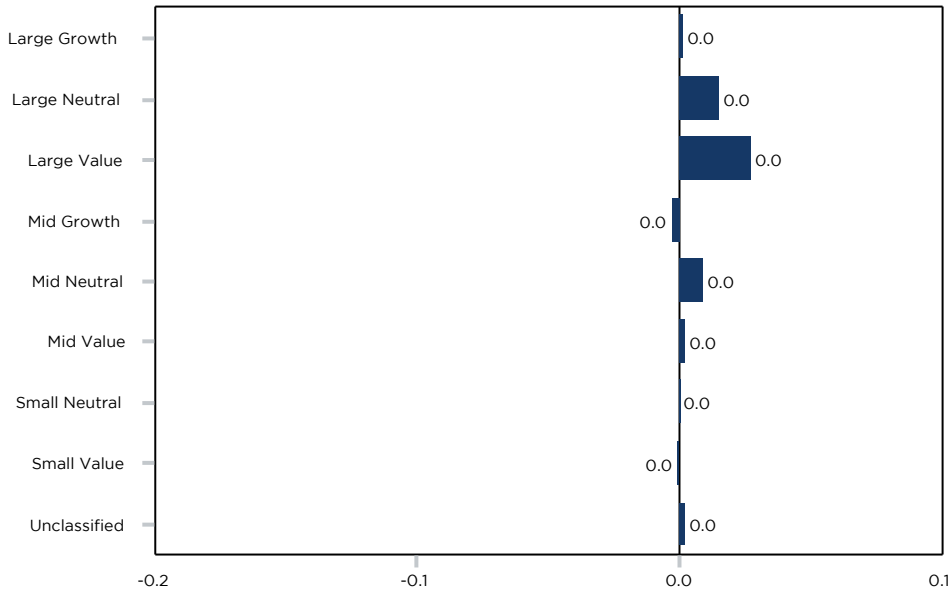
## Performance | 3 Years



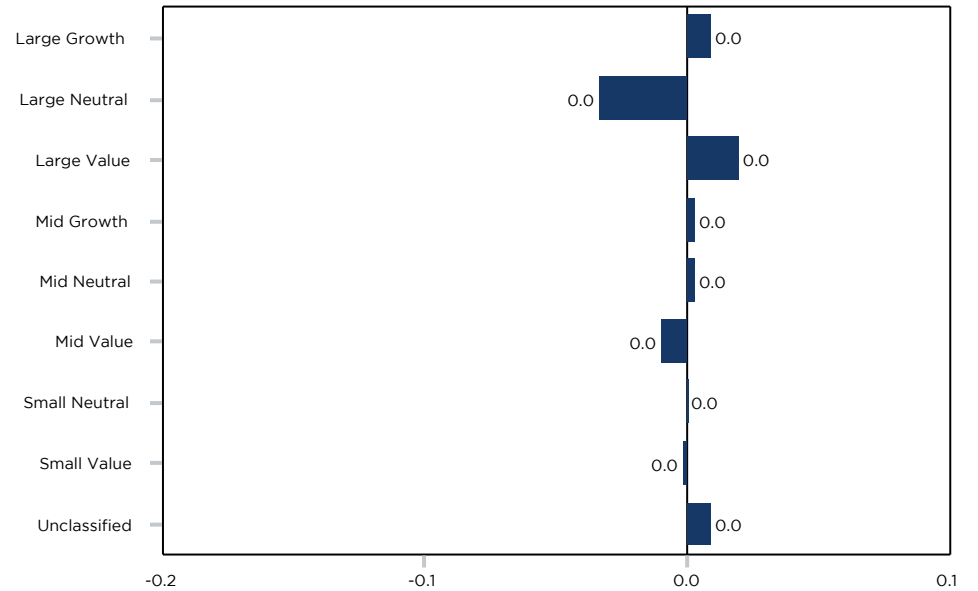
## Allocation | 3 Years



## Total Attribution | 1 Year



## Total Attribution | 3 Years



## Trailing Performance

|            | 1 Quarter  | Year to Date | 1 Year     | 3 Years    | 5 Years    | 10 Years   | 2019       | 2018      | 2017       | 2016      |
|------------|------------|--------------|------------|------------|------------|------------|------------|-----------|------------|-----------|
| Manager    | 22.69 (84) | 5.98 (70)    | 16.24 (65) | 17.97 (41) | 15.15 (32) | 14.30 (73) | 33.41 (41) | 2.67 (11) | 29.29 (46) | 7.85 (17) |
| Benchmark  | 20.54      | -3.08        | 7.51       | 10.73      | 10.73      | 13.99      | 31.49      | -4.38     | 21.83      | 11.96     |
| Peer Group | 27.21      | 9.12         | 19.20      | 16.68      | 13.70      | 15.60      | 32.39      | -1.82     | 28.77      | 2.93      |
| Population | 1,809      | 1,806        | 1,782      | 1,688      | 1,598      | 1,387      | 1,799      | 2,033     | 1,905      | 2,005     |

## Fund Information

|                     |                        |
|---------------------|------------------------|
| Fund Inception      | 09/25/2013             |
| Fund Assets         | 2,239 Million          |
| Portfolio Assets    | 906 Million            |
| Total # of Holdings | 34                     |
| % in Top 10         | 48.54 %                |
| PM                  | Klimo,S/Paul,C/Salam,M |
| PM Tenure           | 7 Years 9 Months       |
| Turnover            | 0.00 %                 |
| Gross Expense (%)   | 0.79 %                 |
| Net Expense (%)     | 0.79 %                 |
| New Investors       | Open                   |

## Portfolio Characteristics

|                           | Portfolio | Benchmark |
|---------------------------|-----------|-----------|
| Wtd. Avg. Mkt. Cap (\$M)  | 244,317   | 383,282   |
| Median Mkt. Cap (\$M)     | 102,016   | 21,806    |
| Price/Earnings ratio      | 29.3      | 23.2      |
| Price/Book ratio          | 9.0       | 4.0       |
| 5 Yr. EPS Growth Rate (%) | 15.3      | 12.2      |
| Current Yield (%)         | 1.3       | 1.8       |
| Beta (5 Years, Monthly)   | 0.89      | 1.00      |
| Number of Stocks          | 31        | 505       |
| Debt to Equity (%)        | 185.1     | 29.7      |
| Forecast P/E              | 22.3      | 23.0      |
| Forecast EPS Growth       | 11.5      | 12.0      |
| Return on Equity (%)      | 12.4      | 2.5       |

## Country/Region Allocation

|                  |              |              |
|------------------|--------------|--------------|
| United States    | 85.7         | 97.1         |
| Non-US Developed | 10.9         | 2.9          |
| 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           | 15.13   | 12.65    |
| <b>vs. S&amp;P 500 Index</b> |         |          |
| Beta                         | 0.87    | 0.90     |
| Alpha                        | 7.93    | 1.55     |
| Information Ratio            | 1.30    | 0.04     |
| Tracking Error               | 4.72    | 4.02     |
| R-Squared                    | 0.92    | 0.91     |
| Up Market Capture            | 107.95  | 96.34    |
| Down Market Capture          | 77.09   | 90.36    |
| Consistency                  | 50.00   | 44.17    |

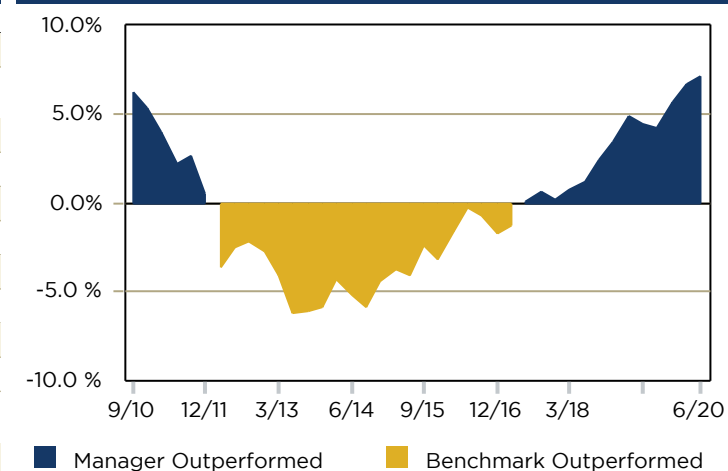
## vs. Risk Free

|              |      |      |
|--------------|------|------|
| Sharpe Ratio | 1.05 | 1.07 |
|--------------|------|------|

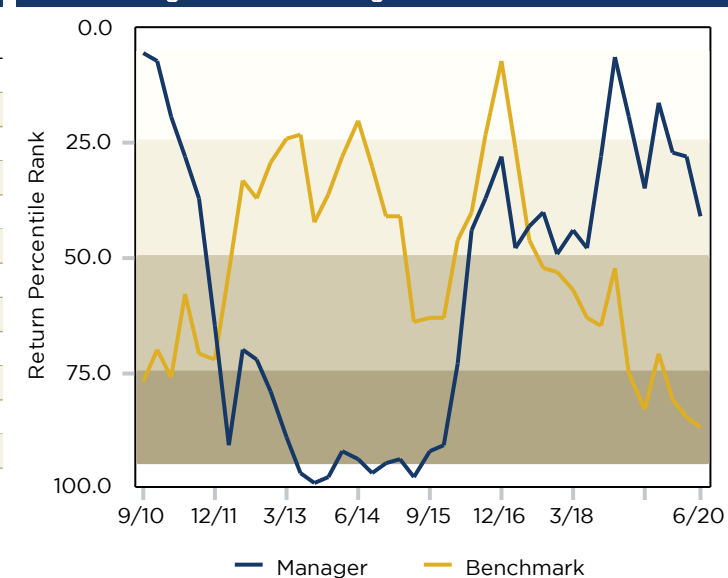
## Sector Allocation

| Sector                 | Portfolio Weight (%) | Benchmark Weight (%) |
|------------------------|----------------------|----------------------|
| Communication Services | 0.0                  | 10.8                 |
| Consumer Discretionary | 5.5                  | 10.8                 |
| Consumer Staples       | 12.4                 | 7.0                  |
| Energy                 | 0.0                  | 2.8                  |
| Financials             | 0.0                  | 10.1                 |
| Health Care            | 19.9                 | 14.6                 |
| Industrials            | 8.8                  | 8.0                  |
| Information Technology | 53.4                 | 27.5                 |
| Materials              | 0.0                  | 2.5                  |
| Real Estate            | 0.0                  | 2.8                  |
| Utilities              | 0.0                  | 3.1                  |
| <b>Total</b>           | <b>100.0</b>         | <b>100.0</b>         |

## 3 Years Rolling Excess Performance

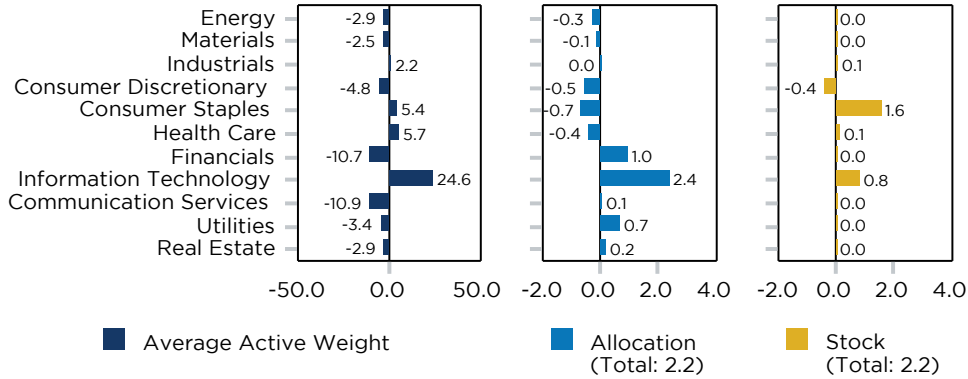


## 3 Years Rolling Percentile Ranking

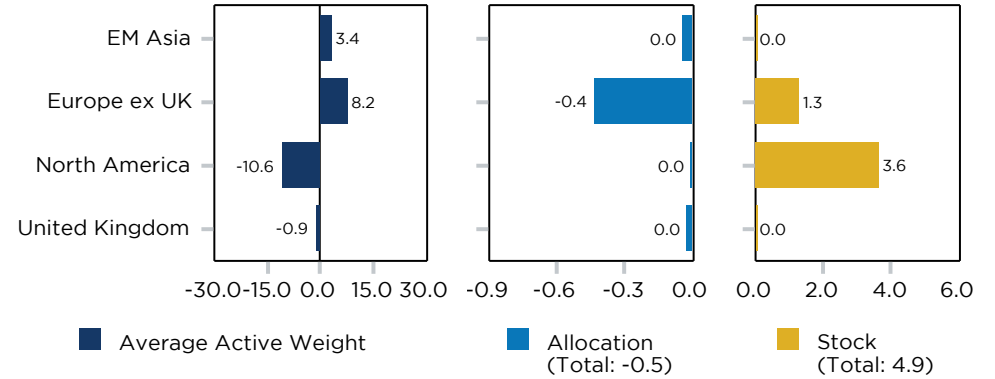




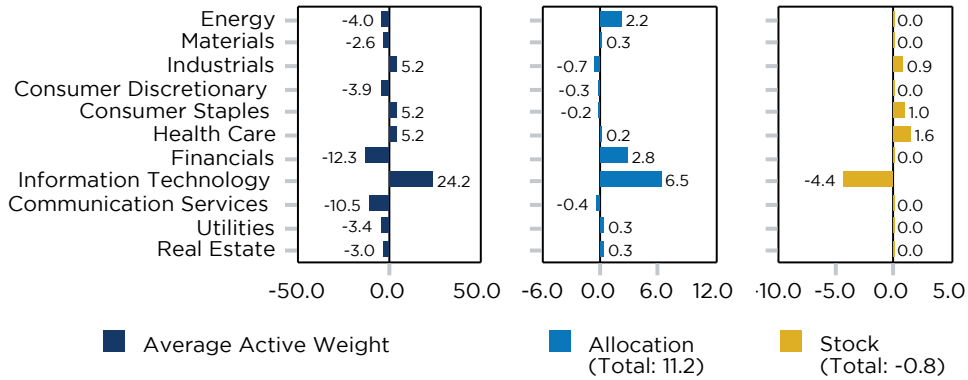
## 1 Quarter Sector Attribution



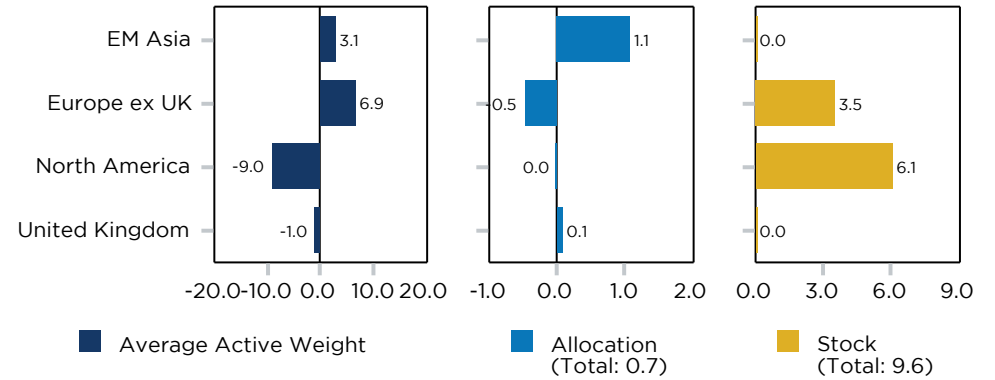
## 1 Quarter Region Attribution



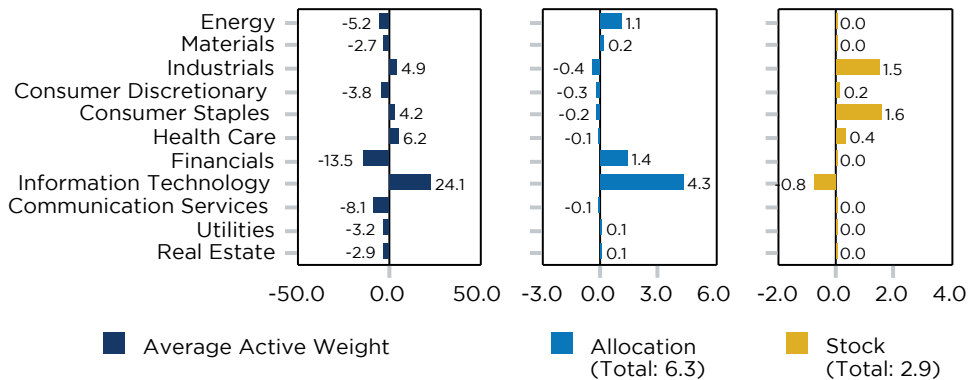
## 1 Year Sector Attribution



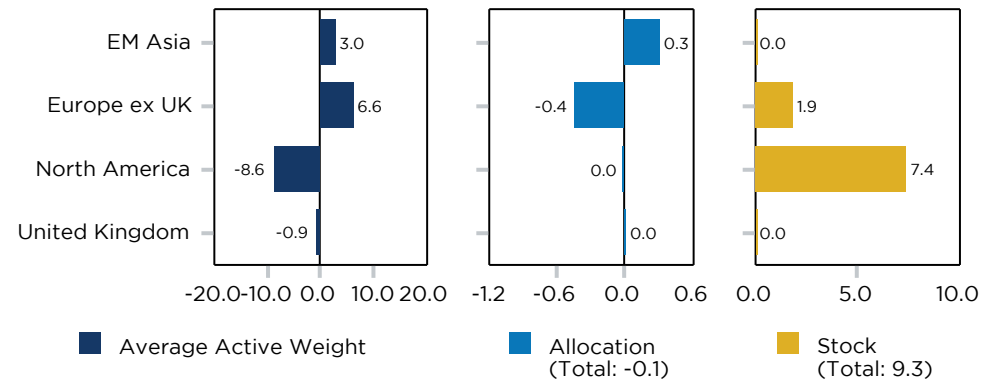
## 1 Year Region Attribution



## 3 Years Sector Attribution



## 3 Years Region Attribution

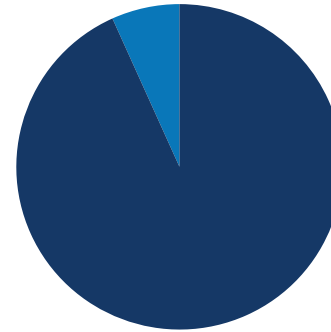


## Top Ten Securities

|                                |               |
|--------------------------------|---------------|
| Apple Inc                      | 8.2 %         |
| Adobe Inc                      | 7.8 %         |
| Intuit Inc                     | 5.9 %         |
| ASML Holding NV ADR            | 5.0 %         |
| Church & Dwight Co Inc         | 4.1 %         |
| The Estee Lauder Companies Inc | 3.9 %         |
| Amgen Inc                      | 3.7 %         |
| Agilent Technologies Inc       | 3.5 %         |
| Qualcomm Inc                   | 3.2 %         |
| Cisco Systems Inc              | 3.1 %         |
| <b>Total</b>                   | <b>48.5 %</b> |

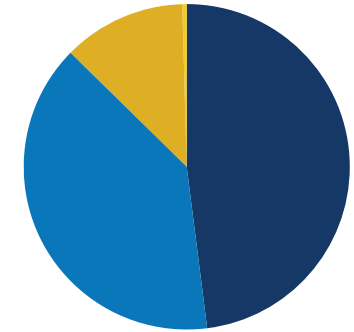
## Asset Allocation

■ 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 (%) |
|--------------------------|----------------------|----------------------|---------------------------|----------------------|
| Adobe Inc                | 7.50                 | 0.72                 | 1.10                      | 36.79                |
| ASML Holding NV          | 4.75                 | 0.00                 | 0.99                      | 41.37                |
| Lowe's Cos Inc           | 2.03                 | 0.31                 | 0.64                      | 57.96                |
| Apple Inc                | 7.55                 | 4.96                 | 0.60                      | 43.84                |
| Intuit Inc.              | 6.09                 | 0.28                 | 0.49                      | 29.05                |
| QUALCOMM Inc.            | 3.19                 | 0.36                 | 0.43                      | 35.87                |
| Trimble Inc              | 2.81                 | 0.00                 | 0.43                      | 35.69                |
| Fastenal Co              | 2.21                 | 0.08                 | 0.37                      | 38.02                |
| Agilent Technologies Inc | 3.80                 | 0.10                 | 0.11                      | 23.64                |
| Church & Dwight Co. Inc. | 4.54                 | 0.07                 | 0.01                      | 20.84                |

## Top Ten Contributors | 3 Years

|                            | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|----------------------------|----------------------|----------------------|---------------------------|----------------------|
| Adobe Inc                  | 4.66                 | 0.34                 | 1.50                      | 45.46                |
| ASML Holding NV            | 3.31                 | 0.00                 | 1.06                      | 42.74                |
| Intuit Inc.                | 3.94                 | 0.16                 | 0.80                      | 31.78                |
| Eli Lilly and Co           | 3.31                 | 0.38                 | 0.53                      | 28.84                |
| Estee Lauder Companies Inc | 2.90                 | 0.10                 | 0.44                      | 26.52                |
| Lowe's Cos Inc             | 3.06                 | 0.32                 | 0.33                      | 22.74                |
| Apple Inc                  | 4.78                 | 3.62                 | 0.32                      | 38.26                |
| Taiwan Semiconductor       | 2.86                 | 0.00                 | 0.31                      | 21.47                |
| QUALCOMM Inc.              | 2.91                 | 0.39                 | 0.30                      | 22.58                |
| Church & Dwight Co. Inc.   | 4.63                 | 0.06                 | 0.24                      | 15.89                |

## Top Ten Detractors | 1 Quarter

|                         | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|-------------------------|----------------------|----------------------|---------------------------|----------------------|
| TJX Companies Inc (The) | 3.38                 | 0.27                 | -0.46                     | 5.75                 |
| Novo Nordisk A/S        | 3.55                 | 0.00                 | -0.42                     | 8.77                 |
| Stryker Corp            | 2.94                 | 0.25                 | -0.32                     | 8.58                 |
| EMCOR Group Inc.        | 2.47                 | 0.00                 | -0.31                     | 8.01                 |
| Johnson & Johnson       | 2.93                 | 1.61                 | -0.17                     | 8.00                 |
| PepsiCo Inc             | 1.66                 | 0.78                 | -0.08                     | 10.99                |
| Oracle Corp             | 1.85                 | 0.49                 | -0.08                     | 14.89                |
| Bristol-Myers Squibb Co | 0.74                 | 0.61                 | -0.02                     | 6.35                 |
| Gartner Inc             | 1.06                 | 0.04                 | 0.01                      | 21.85                |
| SYNNEX Corp             | 0.30                 | 0.00                 | 0.13                      | 63.84                |

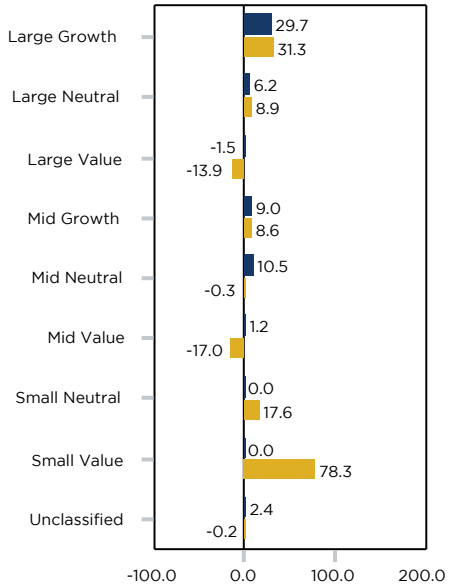
## Top Ten Detractors | 3 Years

|                               | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|-------------------------------|----------------------|----------------------|---------------------------|----------------------|
| EMCOR Group Inc.              | 2.94                 | 0.00                 | -0.29                     | 0.82                 |
| Lincoln Electric Holdings Inc | 2.18                 | 0.00                 | -0.25                     | -0.90                |
| DENTSPLY SIRONA Inc           | 0.92                 | 0.07                 | -0.19                     | -11.41               |
| Gartner Inc                   | 1.46                 | 0.05                 | -0.16                     | -0.59                |
| Trimble Inc                   | 3.76                 | 0.00                 | -0.16                     | 6.58                 |
| Johnson & Johnson             | 3.66                 | 1.72                 | -0.11                     | 4.83                 |
| Oracle Corp                   | 2.15                 | 0.73                 | -0.08                     | 5.02                 |
| PepsiCo Inc                   | 1.79                 | 0.79                 | -0.03                     | 7.82                 |
| TripAdvisor Inc               | 0.06                 | 0.02                 | -0.01                     | -17.62               |
| Novartis AG                   | 0.96                 | 0.00                 | -0.01                     | 9.74                 |

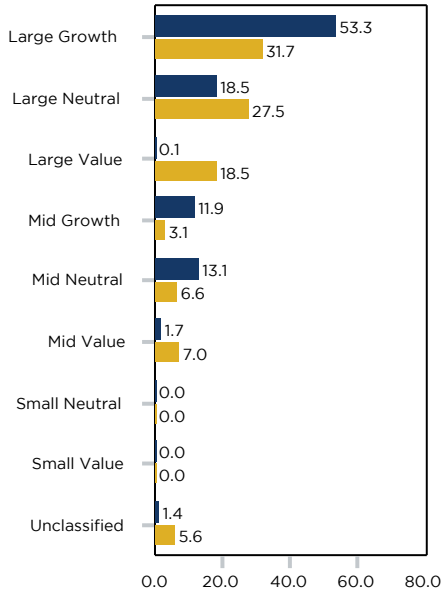




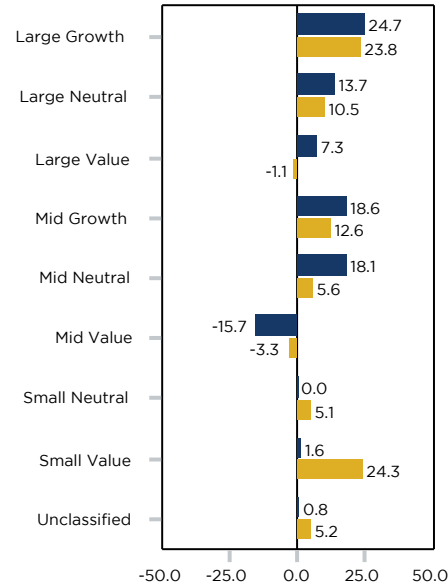
## Performance | 1 Year



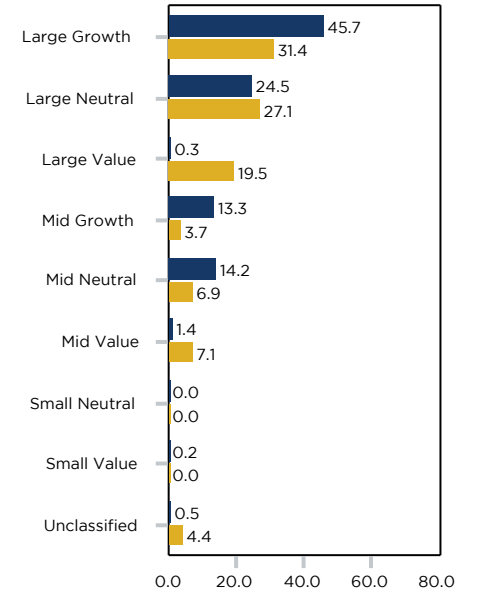
## Allocation | 1 Year



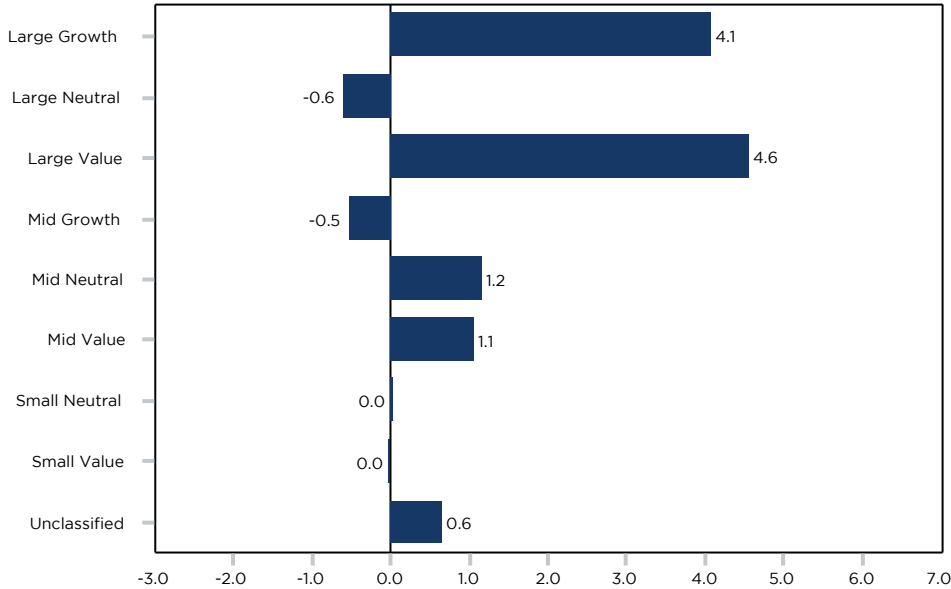
## Performance | 3 Years



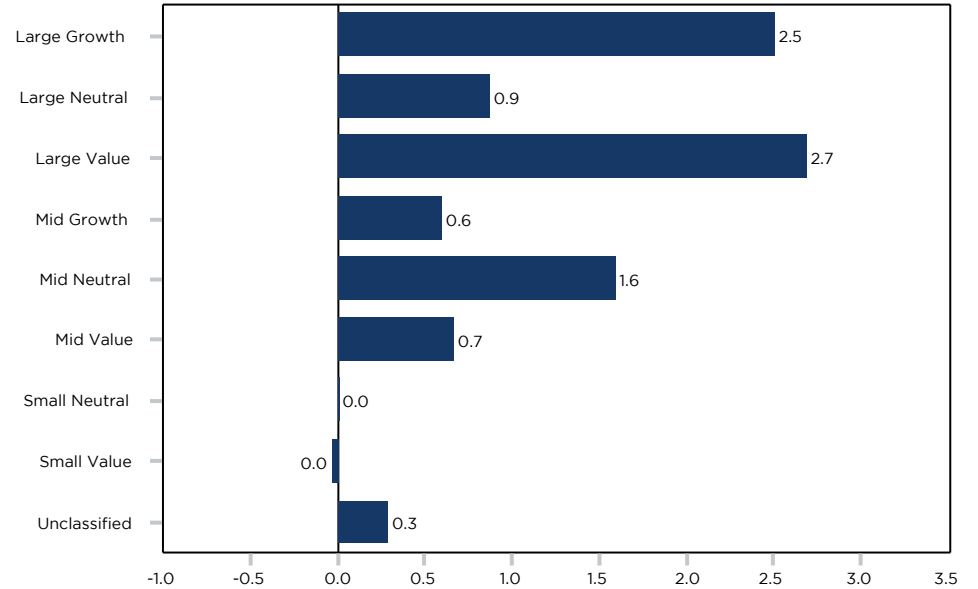
## Allocation | 3 Years



## Total Attribution | 1 Year



## Total Attribution | 3 Years



**Trailing Performance**

|            | 1 Quarter  | Year to Date | 1 Year     | 3 Years    | 5 Years    | 10 Years   | 2019       | 2018       | 2017       | 2016      |
|------------|------------|--------------|------------|------------|------------|------------|------------|------------|------------|-----------|
| Manager    | 29.32 (28) | 11.56 (30)   | 20.48 (43) | 17.99 (40) | 14.47 (41) | 16.66 (29) | 31.66 (59) | -2.46 (55) | 31.83 (28) | 2.92 (51) |
| Benchmark  | 27.84      | 9.81         | 23.28      | 18.99      | 15.89      | 17.23      | 36.39      | -1.51      | 30.21      | 7.08      |
| Peer Group | 27.21      | 9.12         | 19.20      | 16.68      | 13.70      | 15.60      | 32.39      | -1.82      | 28.77      | 2.93      |
| Population | 1,809      | 1,806        | 1,782      | 1,688      | 1,598      | 1,387      | 1,799      | 2,033      | 1,905      | 2,005     |

**Fund Information**

|                             |                            |
|-----------------------------|----------------------------|
| Fund Inception              | 04-2015                    |
| Fund Assets                 | 29,418 Million             |
| Portfolio Assets            | 14,102 Million             |
| Total # of Holdings         | 581                        |
| % Assets in Top 10 Holdings | 40.5 %                     |
| PM                          | Franks,T/Hirsch,S/Kontos,T |
| PM Tenure                   | 14 Years 6 Months          |
| Turnover                    | 85.0 %                     |
| Gross Expense (%)           | 0.24 %                     |
| Net Expense (%)             | 0.24 %                     |
| New Investors               | Open                       |

**Equity Characteristics**

|                 |                   |
|-----------------|-------------------|
| Avg. Market Cap | 149,679 (Million) |
| Price/Earnings  | 30                |
| Price/Book      | 5                 |
| Dividend Yield  | 1.0 %             |

**Top Holdings (%)**

|                      |     |
|----------------------|-----|
| Amazon.com Inc       | 8.5 |
| Microsoft Corp       | 7.1 |
| Facebook Inc A       | 5.0 |
| Apple Inc            | 4.2 |
| Alphabet Inc Class C | 3.9 |
| Visa Inc Class A     | 3.2 |
| Salesforce.com Inc   | 2.9 |
| PayPal Holdings Inc  | 2.4 |
| S&P Global Inc       | 1.8 |
| AstraZeneca PLC      | 1.7 |

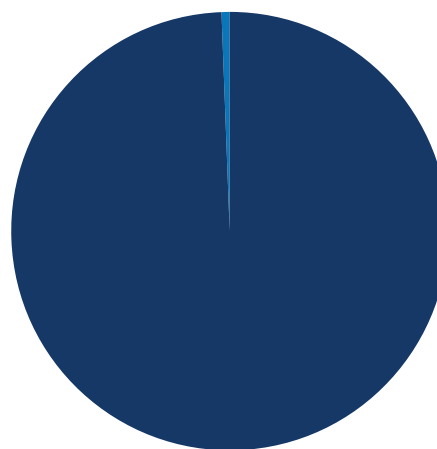
**Fund Statistics**

|                                      | 3 Years | 10 Years |
|--------------------------------------|---------|----------|
| Standard Deviation                   | 17.84   | 14.47    |
| <b>vs. Russell 1000 Growth Index</b> |         |          |
| Beta                                 | 1.02    | 1.03     |
| Alpha                                | -1.17   | -0.97    |
| Information Ratio                    | -0.46   | -0.27    |
| Tracking Error                       | 1.68    | 1.53     |
| R-Squared                            | 0.99    | 0.99     |
| Up Market Capture                    | 98.76   | 101.35   |
| Down Market Capture                  | 102.24  | 107.08   |
| Consistency                          | 41.67   | 48.33    |

**vs. Risk Free**

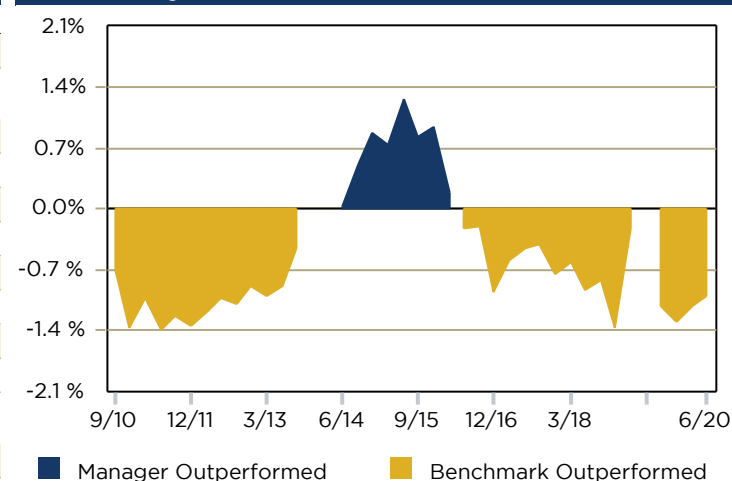
|              |      |      |
|--------------|------|------|
| Sharpe Ratio | 0.92 | 1.10 |
|--------------|------|------|

**Asset Allocation**

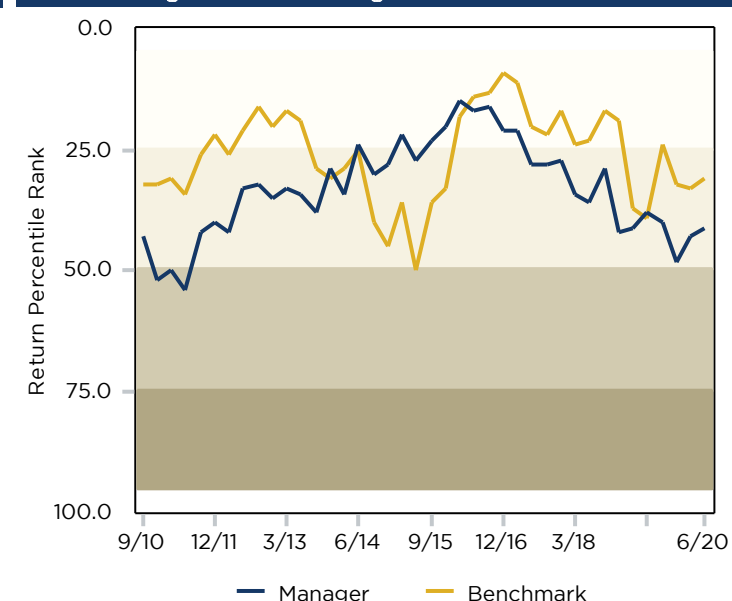


■ Equity    ■ Cash  
■ Fixed Income

**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   | 2019       | 2018      | 2017       | 2016       |
|------------|------------|--------------|------------|------------|------------|------------|------------|-----------|------------|------------|
| Manager    | 34.70 (11) | 12.89 (23)   | 20.79 (40) | 21.32 (13) | 15.43 (28) | 17.38 (18) | 37.65 (11) | 0.55 (25) | 35.14 (10) | -0.56 (82) |
| Benchmark  | 27.99      | 8.98         | 21.94      | 18.21      | 15.23      | 16.92      | 35.85      | -2.12     | 29.59      | 7.39       |
| Peer Group | 27.21      | 9.12         | 19.20      | 16.68      | 13.70      | 15.60      | 32.39      | -1.82     | 28.77      | 2.93       |
| Population | 1,809      | 1,806        | 1,782      | 1,688      | 1,598      | 1,387      | 1,799      | 2,033     | 1,905      | 2,005      |

## Fund Information

|                     |                     |
|---------------------|---------------------|
| Fund Inception      | 02/24/2000          |
| Fund Assets         | 4,805 Million       |
| Portfolio Assets    | 1,506 Million       |
| Total # of Holdings | 94                  |
| % in Top 10         | 40.30 %             |
| PM                  | Eberhardy,J/Ognar,T |
| PM Tenure           | 18 Years 1 Month    |
| Turnover            | 39.00 %             |
| Gross Expense (%)   | 0.85 %              |
| Net Expense (%)     | 0.75 %              |
| New Investors       | Open                |

## Portfolio Characteristics

|                           | Portfolio | Benchmark |
|---------------------------|-----------|-----------|
| Wtd. Avg. Mkt. Cap (\$M)  | 393,914   | 533,716   |
| Median Mkt. Cap (\$M)     | 16,340    | 1,597     |
| Price/Earnings ratio      | 39.4      | 33.8      |
| Price/Book ratio          | 7.8       | 9.6       |
| 5 Yr. EPS Growth Rate (%) | 18.3      | 18.8      |
| Current Yield (%)         | 0.5       | 0.9       |
| Beta (5 Years, Monthly)   | 1.13      | 1.00      |
| Number of Stocks          | 92        | 1,516     |
| Debt to Equity (%)        | 126.6     | 281.8     |
| Forecast P/E              | 40.8      | 31.3      |
| Forecast EPS Growth       | 21.5      | 17.4      |
| Return on Equity (%)      | 0.3       | -3.6      |

## Country/Region Allocation

|                  |              |              |
|------------------|--------------|--------------|
| United States    | 96.0         | 97.7         |
| Non-US Developed | 3.1          | 1.9          |
| Emerging Markets | 0.0          | 0.1          |
| Other            | 0.8          | 0.3          |
| <b>Total</b>     | <b>100.0</b> | <b>100.0</b> |

## Fund Statistics

|                                      | 3 Years | 10 Years |
|--------------------------------------|---------|----------|
| Standard Deviation                   | 20.53   | 16.64    |
| <b>vs. Russell 3000 Growth Index</b> |         |          |
| Beta                                 | 1.14    | 1.12     |
| Alpha                                | 0.64    | -1.20    |
| Information Ratio                    | 0.65    | 0.14     |
| Tracking Error                       | 4.89    | 5.31     |
| R-Squared                            | 0.96    | 0.91     |
| Up Market Capture                    | 111.46  | 108.80   |
| Down Market Capture                  | 104.80  | 114.89   |
| Consistency                          | 50.00   | 50.83    |

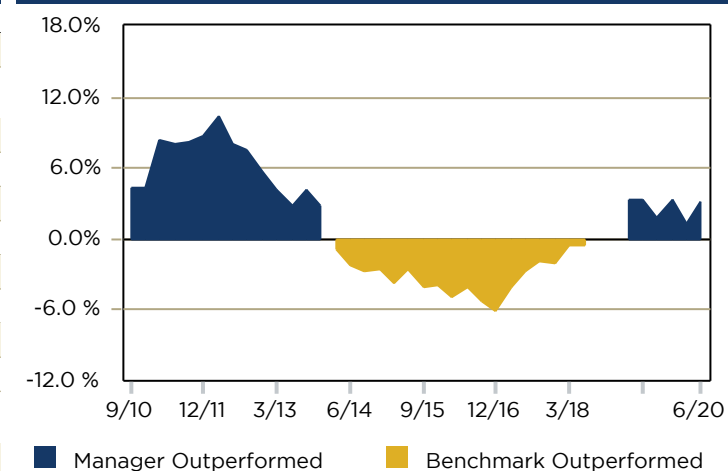
## vs. Risk Free

|              |      |      |
|--------------|------|------|
| Sharpe Ratio | 0.96 | 1.01 |
|--------------|------|------|

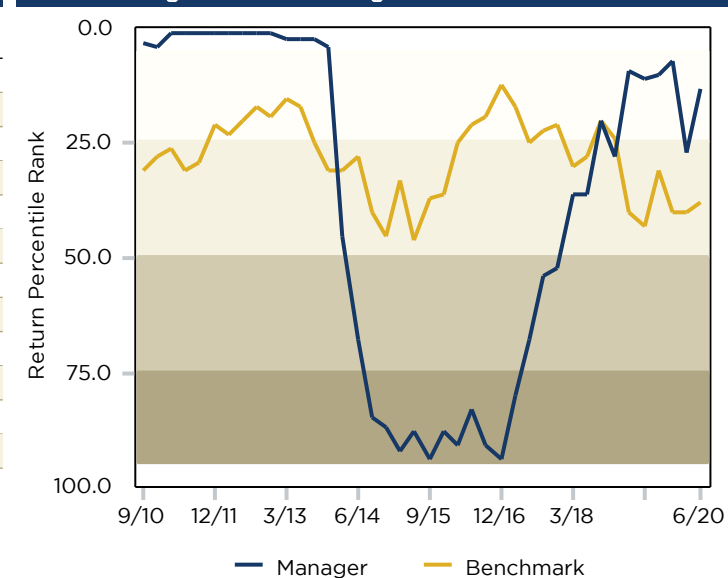
## Sector Allocation

| Sector                 | Portfolio Weight (%) | Benchmark Weight (%) |
|------------------------|----------------------|----------------------|
| Communication Services | 10.3                 | 10.7                 |
| Consumer Discretionary | 16.9                 | 15.3                 |
| Consumer Staples       | 1.4                  | 4.7                  |
| Energy                 | 0.0                  | 0.1                  |
| Financials             | 5.2                  | 2.2                  |
| Health Care            | 11.7                 | 16.1                 |
| Industrials            | 9.8                  | 5.1                  |
| Information Technology | 43.3                 | 42.6                 |
| Materials              | 1.4                  | 0.9                  |
| Real Estate            | 0.0                  | 2.2                  |
| Utilities              | 0.0                  | 0.1                  |
| <b>Total</b>           | <b>100.0</b>         | <b>100.0</b>         |

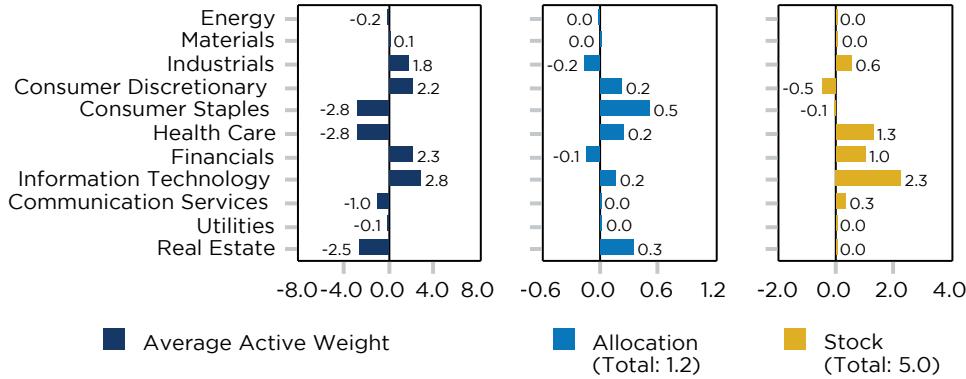
## 3 Years Rolling Excess Performance



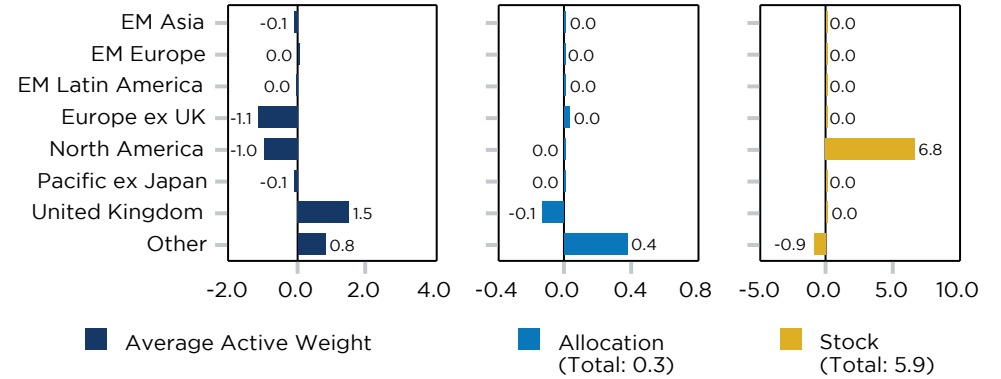
## 3 Years Rolling Percentile Ranking



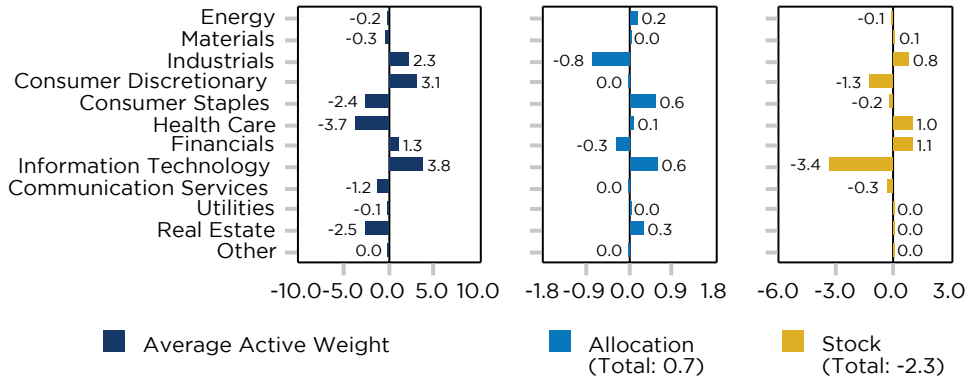
**1 Quarter Sector Attribution**



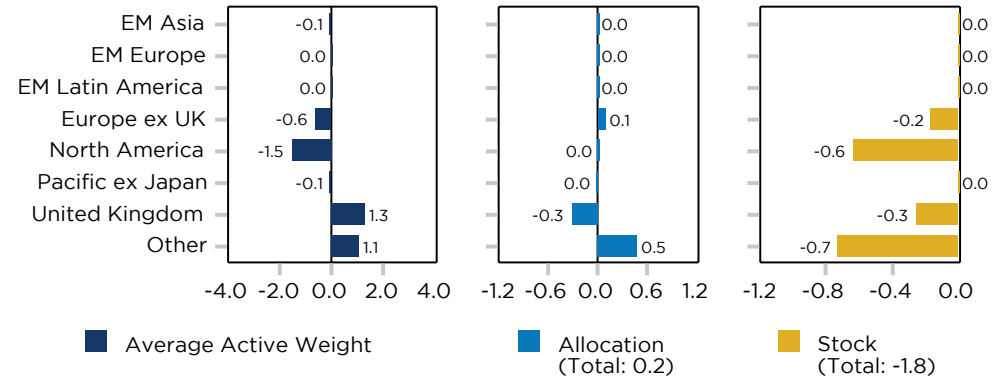
**1 Quarter Region Attribution**



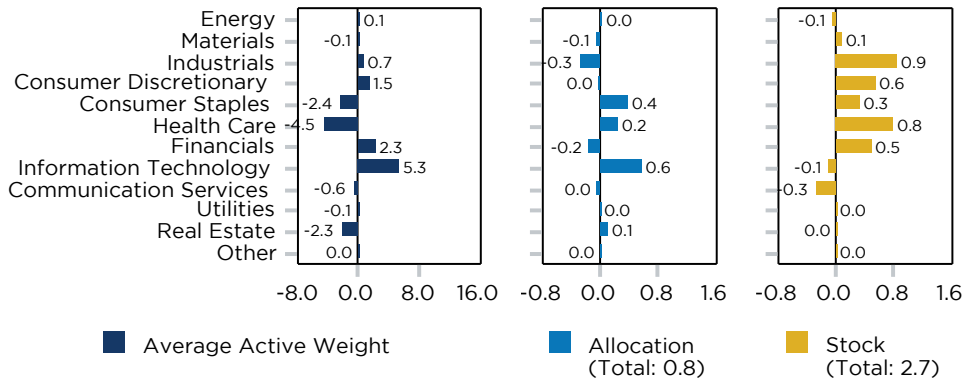
**1 Year Sector Attribution**



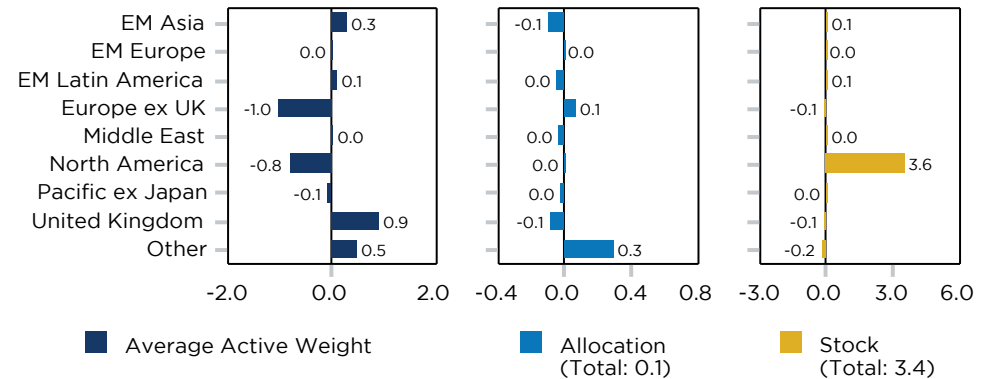
**1 Year Region Attribution**



**3 Years Sector Attribution**



**3 Years Region Attribution**

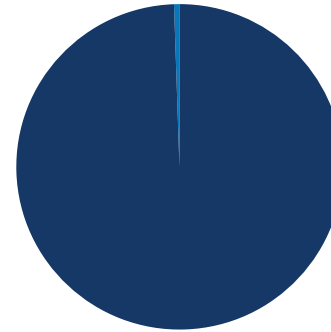


### Top Ten Securities

|                          |               |
|--------------------------|---------------|
| Amazon.com Inc           | 8.3 %         |
| Microsoft Corp           | 6.0 %         |
| Alphabet Inc A           | 5.2 %         |
| Mastercard Inc A         | 3.5 %         |
| Microchip Technology Inc | 3.1 %         |
| Visa Inc Class A         | 3.1 %         |
| Apple Inc                | 3.1 %         |
| Facebook Inc A           | 2.8 %         |
| Envestnet Inc            | 2.7 %         |
| MarketAxess Holdings Inc | 2.4 %         |
| <b>Total</b>             | <b>40.3 %</b> |

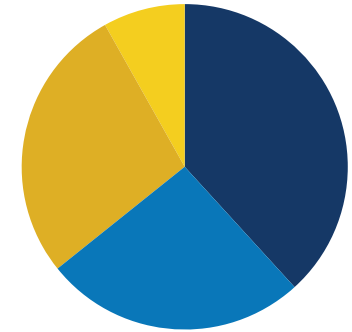
### Asset Allocation

■ 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 (%) |
|------------------------------|----------------------|----------------------|---------------------------|----------------------|
| Microchip Technology Inc     | 2.84                 | 0.03                 | 0.79                      | 55.95                |
| Twilio Inc                   | 0.73                 | 0.08                 | 0.76                      | 145.19               |
| MarketAxess Holdings Inc     | 2.33                 | 0.09                 | 0.51                      | 50.80                |
| PayPal Holdings Inc          | 1.53                 | 0.82                 | 0.38                      | 81.98                |
| Amazon.com Inc               | 8.50                 | 5.91                 | 0.35                      | 41.50                |
| Monolithic Power Systems Inc | 2.40                 | 0.05                 | 0.33                      | 41.83                |
| Facebook Inc                 | 2.64                 | 2.89                 | -0.02                     | 36.13                |
| Microsoft Corp               | 7.07                 | 8.65                 | -0.02                     | 29.40                |
| Alphabet Inc                 | 5.37                 | 2.52                 | -0.17                     | 22.04                |
| Apple Inc                    | 3.14                 | 7.60                 | -0.71                     | 43.84                |

### Top Ten Contributors | 3 Years

|                          | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|--------------------------|----------------------|----------------------|---------------------------|----------------------|
| Veeva Systems Inc        | 2.25                 | 0.05                 | 0.84                      | 56.37                |
| Amazon.com Inc           | 5.51                 | 3.12                 | 0.56                      | 41.78                |
| MarketAxess Holdings Inc | 2.53                 | 0.06                 | 0.45                      | 36.55                |
| Burlington Stores Inc    | 2.78                 | 0.03                 | 0.29                      | 28.88                |
| Mastercard Inc           | 2.46                 | 0.93                 | 0.26                      | 35.30                |
| Visa Inc                 | 3.17                 | 1.41                 | 0.17                      | 28.06                |
| Facebook Inc             | 6.25                 | 2.86                 | -0.12                     | 14.57                |
| Alphabet Inc             | 6.28                 | 2.25                 | -0.12                     | 15.11                |
| Microsoft Corp           | 2.26                 | 4.19                 | -0.53                     | 45.76                |
| Apple Inc                | 2.67                 | 6.10                 | -0.69                     | 38.26                |

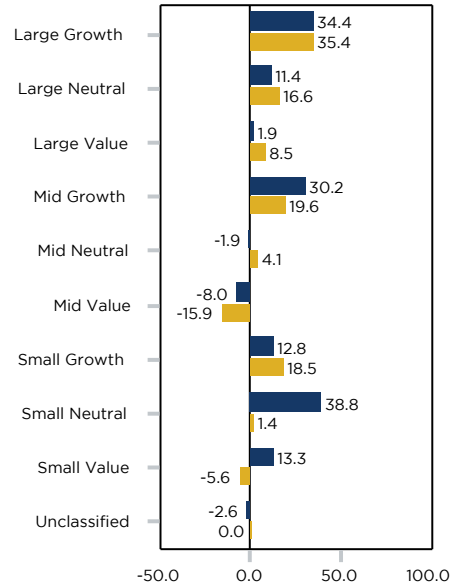
### Top Ten Detractors | 1 Quarter

|                                 | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|---------------------------------|----------------------|----------------------|---------------------------|----------------------|
| NovoCure Ltd                    | 1.10                 | 0.04                 | -0.42                     | -11.94               |
| CME Group Inc                   | 0.46                 | 0.00                 | -0.15                     | -5.58                |
| Coca-Cola Co (The)              | 1.25                 | 0.84                 | -0.11                     | 1.88                 |
| Bright Horizons Family          | 0.33                 | 0.04                 | -0.04                     | 14.90                |
| Grocery Outlet Inc              | 0.09                 | 0.00                 | -0.01                     | 18.81                |
| Air Products and Chemicals Inc. | 0.12                 | 0.05                 | 0.00                      | 21.64                |
| Stryker Corp                    | 0.43                 | 0.41                 | 0.00                      | 8.58                 |
| RingCentral Inc                 | 0.14                 | 0.11                 | 0.00                      | 34.50                |
| Talend SA                       | 0.05                 | 0.00                 | 0.01                      | 54.53                |
| Starbucks Corp                  | 0.31                 | 0.56                 | 0.04                      | 12.54                |

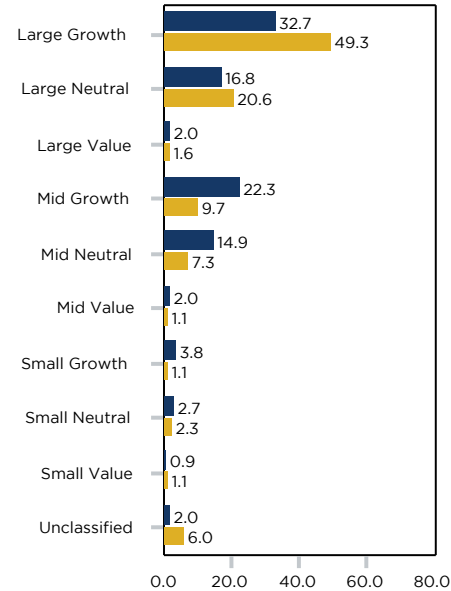
### Top Ten Detractors | 3 Years

|                           | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|---------------------------|----------------------|----------------------|---------------------------|----------------------|
| Acadia Healthcare Co Inc  | 1.51                 | 0.00                 | -0.58                     | -20.17               |
| Concho Resources Inc      | 1.15                 | 0.00                 | -0.49                     | -24.58               |
| KAR Auction Services      | 1.64                 | 0.05                 | -0.34                     | -3.26                |
| NuVasive Inc              | 1.06                 | 0.03                 | -0.29                     | -10.22               |
| PolyOne Corp              | 0.72                 | 0.03                 | -0.19                     | -10.04               |
| Incyte Corp               | 0.83                 | 0.17                 | -0.16                     | -6.18                |
| Pioneer Natural Resources | 0.41                 | 0.00                 | -0.13                     | -14.39               |
| REV Group                 | 0.21                 | 0.00                 | -0.12                     | -38.64               |
| Ulta Salon Cosmetics      | 0.49                 | 0.14                 | -0.10                     | -10.87               |
| JELD-WEN Holding Inc      | 0.26                 | 0.01                 | -0.10                     | -20.83               |

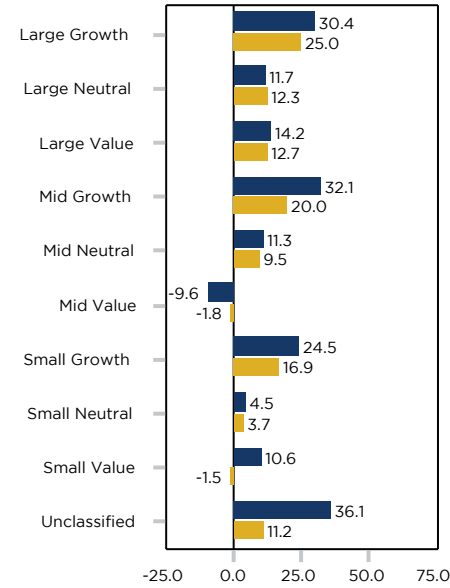
### Performance | 1 Year



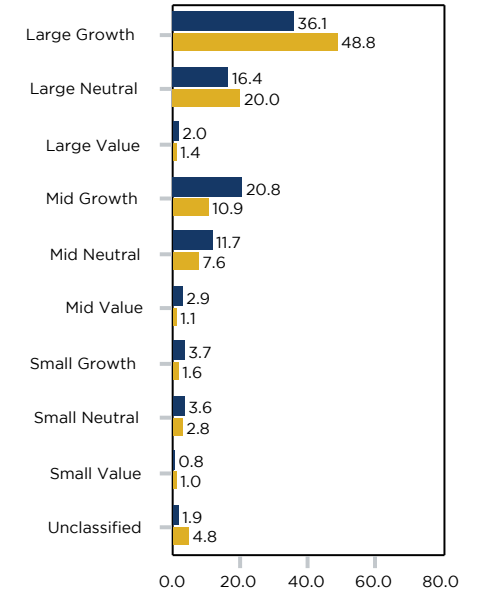
### Allocation | 1 Year



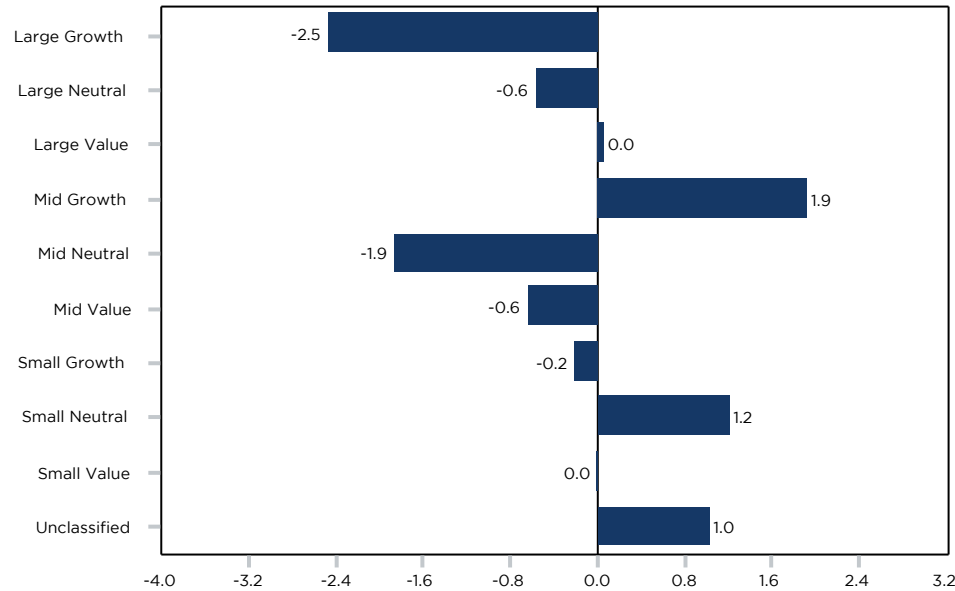
### Performance | 3 Years



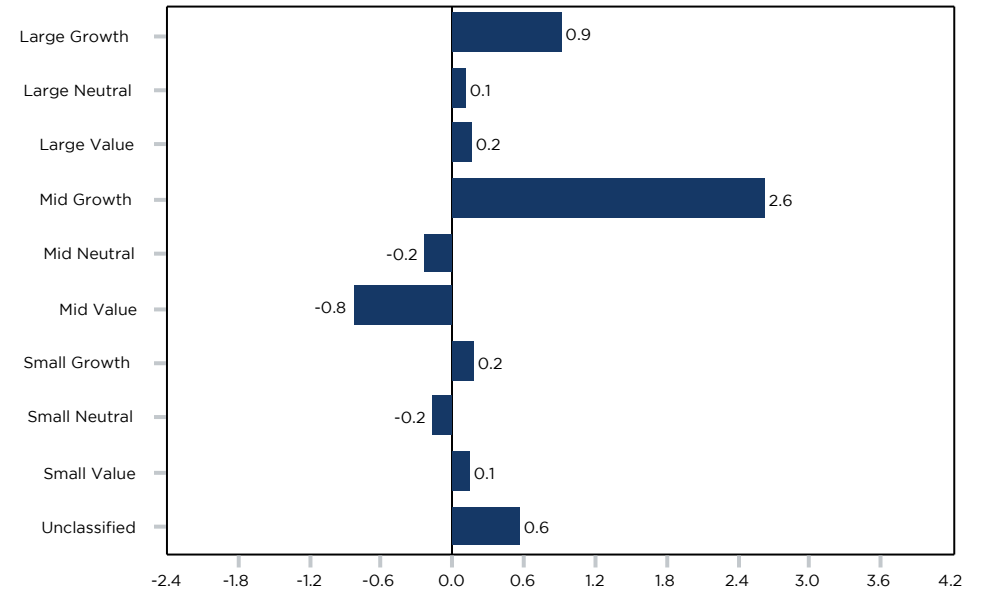
### Allocation | 3 Years



### Total Attribution | 1 Year



### Total Attribution | 3 Years





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

Index: Russell Midcap Value Index

Category: Mid-Cap Value

Report Date: 06/30/2020

## Trailing Performance

|            | 1 Quarter  | Year to Date | 1 Year      | 3 Years    | 5 Years   | 10 Years  | 2019       | 2018        | 2017       | 2016       |
|------------|------------|--------------|-------------|------------|-----------|-----------|------------|-------------|------------|------------|
| Manager    | 16.41 (81) | -23.60 (86)  | -17.95 (85) | -3.84 (84) | 0.33 (80) | 8.41 (62) | 27.05 (45) | -14.15 (58) | 11.13 (79) | 17.40 (52) |
| Benchmark  | 19.95      | -18.09       | -11.81      | -0.54      | 3.32      | 10.29     | 27.06      | -12.29      | 13.34      | 20.00      |
| Peer Group | 19.49      | -19.48       | -12.59      | -1.28      | 2.27      | 8.93      | 26.69      | -13.46      | 13.37      | 17.57      |
| Population | 540        | 536          | 531         | 505        | 483       | 399       | 542        | 619         | 579        | 579        |

## Fund Information

|                     |                       |
|---------------------|-----------------------|
| Fund Inception      | 10/01/2002            |
| Fund Assets         | 1,718 Million         |
| Portfolio Assets    | 1,063 Million         |
| Total # of Holdings | 85                    |
| % in Top 10         | 20.25 %               |
| PM                  | Chalupnik,D/Staples,E |
| PM Tenure           | 5 Months              |
| Turnover            | 81.00 %               |
| Gross Expense (%)   | 0.44 %                |
| Net Expense (%)     | 0.44 %                |
| New Investors       | Open                  |

## Portfolio Characteristics

|                           | Portfolio | Benchmark |
|---------------------------|-----------|-----------|
| Wtd. Avg. Mkt. Cap (\$M)  | 16,566    | 14,071    |
| Median Mkt. Cap (\$M)     | 10,865    | 6,997     |
| Price/Earnings ratio      | 15.1      | 16.6      |
| Price/Book ratio          | 2.2       | 2.3       |
| 5 Yr. EPS Growth Rate (%) | 8.0       | 7.8       |
| Current Yield (%)         | 2.7       | 2.3       |
| Beta (5 Years, Monthly)   | 1.03      | 1.00      |
| Number of Stocks          | 83        | 687       |
| Debt to Equity (%)        | 114.8     | 453.3     |
| Forecast P/E              | 15.3      | 18.5      |
| Forecast EPS Growth       | 8.5       | 7.2       |
| Return on Equity (%)      | -3.5      | -38.7     |

## Country/Region Allocation

|                  |              |              |
|------------------|--------------|--------------|
| United States    | 91.9         | 94.1         |
| Non-US Developed | 8.1          | 5.5          |
| Emerging Markets | 0.0          | 0.3          |
| Other            | 0.0          | 0.0          |
| <b>Total</b>     | <b>100.0</b> | <b>100.0</b> |

## Fund Statistics

|                                       | 3 Years | 10 Years |
|---------------------------------------|---------|----------|
| Standard Deviation                    | 21.84   | 16.18    |
| <b>vs. Russell Midcap Value Index</b> |         |          |
| Beta                                  | 1.04    | 1.02     |
| Alpha                                 | -3.15   | -1.83    |
| Information Ratio                     | -1.24   | -0.78    |
| Tracking Error                        | 2.52    | 2.11     |
| R-Squared                             | 0.99    | 0.98     |
| Up Market Capture                     | 95.85   | 95.48    |
| Down Market Capture                   | 108.99  | 103.52   |
| Consistency                           | 38.89   | 44.17    |

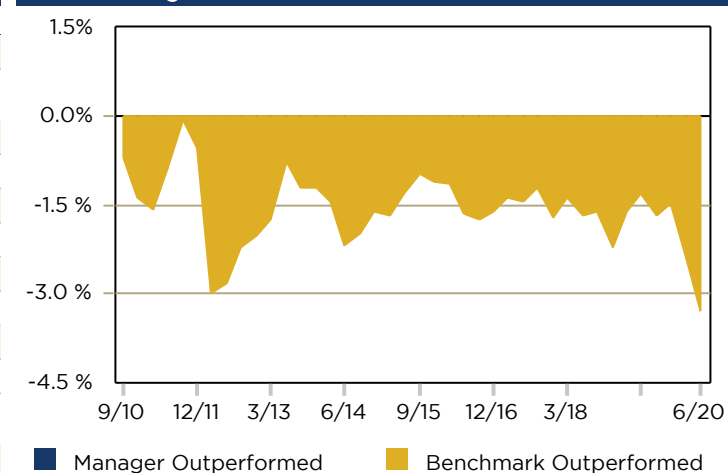
## vs. Risk Free

|              |       |      |
|--------------|-------|------|
| Sharpe Ratio | -0.14 | 0.54 |
|--------------|-------|------|

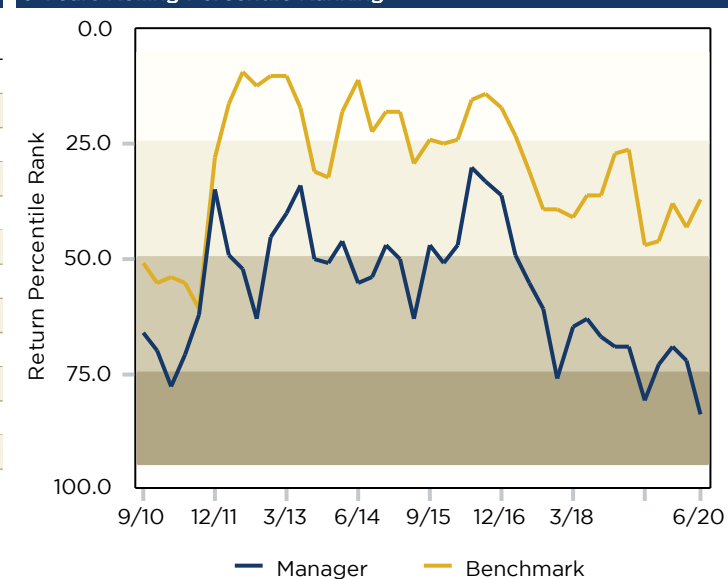
## Sector Allocation

| Sector                 | Portfolio Weight (%) | Benchmark Weight (%) |
|------------------------|----------------------|----------------------|
| Communication Services | 1.5                  | 3.7                  |
| Consumer Discretionary | 7.4                  | 11.2                 |
| Consumer Staples       | 6.8                  | 4.5                  |
| Energy                 | 0.0                  | 4.4                  |
| Financials             | 20.6                 | 15.5                 |
| Health Care            | 11.8                 | 7.7                  |
| Industrials            | 7.3                  | 16.5                 |
| Information Technology | 10.0                 | 9.7                  |
| Materials              | 5.1                  | 6.7                  |
| Real Estate            | 11.7                 | 11.1                 |
| Utilities              | 16.2                 | 9.1                  |
| <b>Total</b>           | <b>98.6</b>          | <b>100.0</b>         |

## 3 Years Rolling Excess Performance



## 3 Years Rolling Percentile Ranking



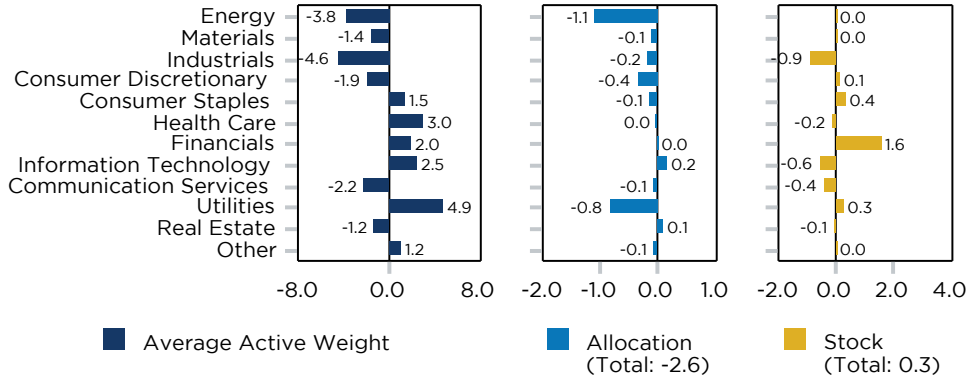


# TIAA-CREF Mid-Cap Value Instl (TIMVX)

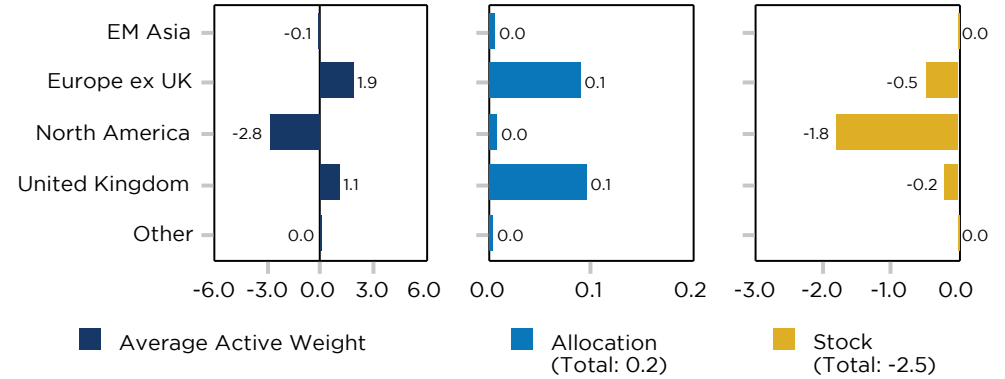
Index: Russell Midcap Value Index

Report Date: 06/30/2020

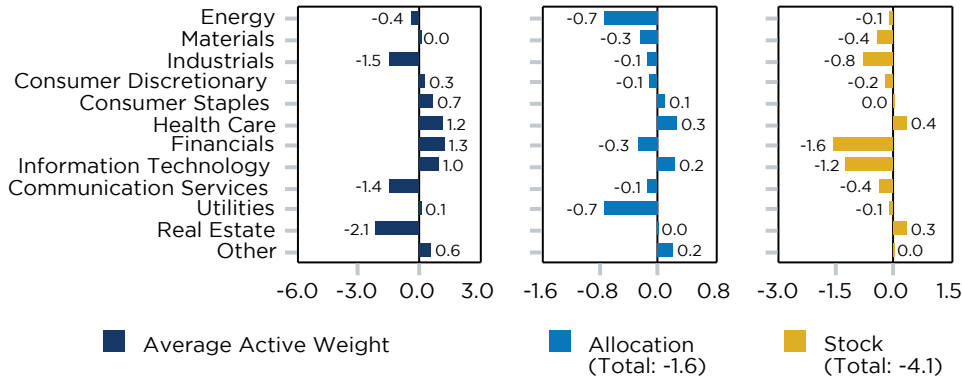
## 1 Quarter Sector Attribution



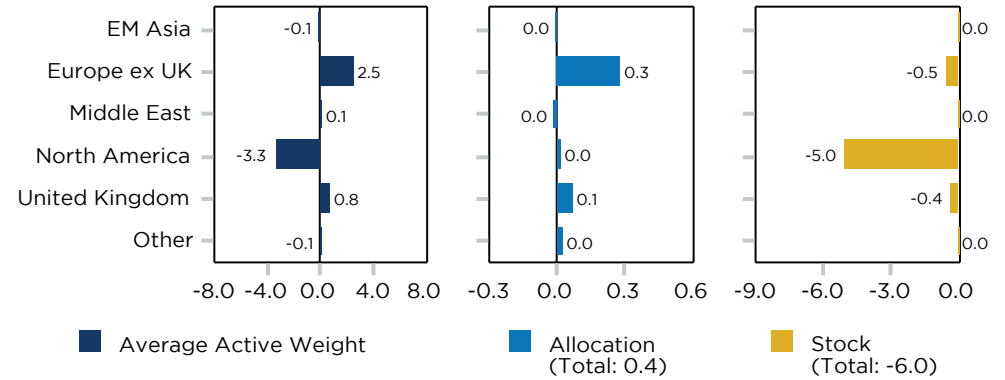
## 1 Quarter Region Attribution



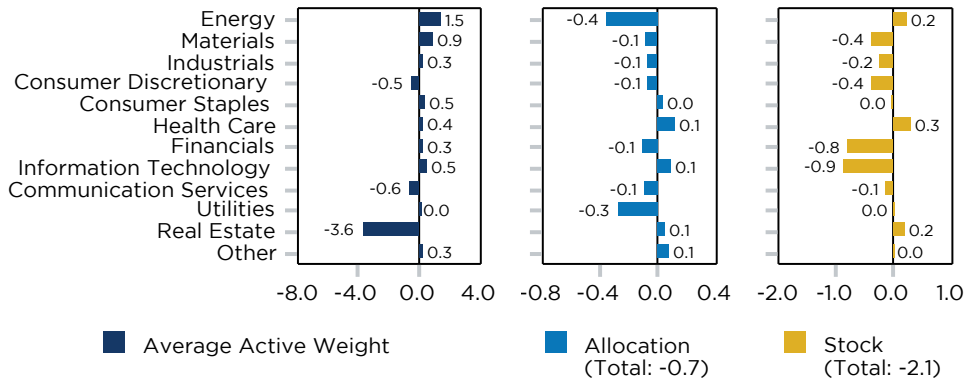
## 1 Year Sector Attribution



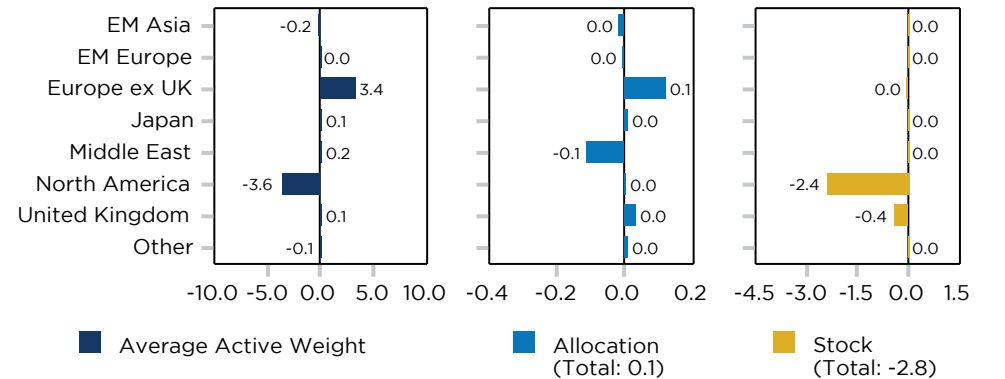
## 1 Year Region Attribution



## 3 Years Sector Attribution



## 3 Years Region Attribution



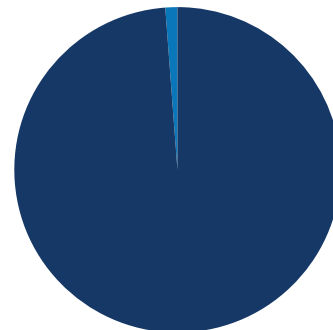


### Top Ten Securities

|                                    |               |
|------------------------------------|---------------|
| Willis Towers Watson PLC           | 2.4 %         |
| Zimmer Biomet Holdings Inc         | 2.2 %         |
| Centene Corp                       | 2.2 %         |
| Newmont Corp                       | 2.1 %         |
| PPL Corp                           | 2.1 %         |
| L3Harris Technologies Inc          | 1.9 %         |
| FirstEnergy Corp                   | 1.9 %         |
| International Flavors & Fragrances | 1.8 %         |
| Entergy Corp                       | 1.8 %         |
| Eversource Energy Inc              | 1.8 %         |
| <b>Total</b>                       | <b>20.2 %</b> |

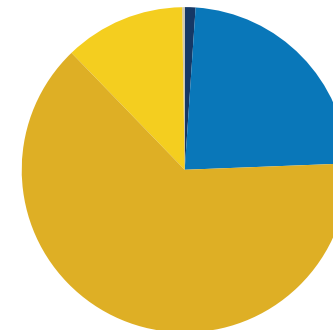
### Asset Allocation

■ 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 (%) |
|-----------------------------|----------------------|----------------------|---------------------------|----------------------|
| Brunswick Corp              | 0.88                 | 0.09                 | 0.49                      | 81.78                |
| Meritage Homes Corp         | 0.42                 | 0.00                 | 0.37                      | 108.49               |
| Cree Inc.                   | 0.83                 | 0.11                 | 0.34                      | 66.92                |
| Hologic Inc                 | 0.80                 | 0.05                 | 0.32                      | 62.39                |
| Energizer Holdings Inc      | 0.83                 | 0.06                 | 0.29                      | 58.08                |
| Ameriprise Financial Inc    | 1.34                 | 0.34                 | 0.28                      | 47.66                |
| Starwood Property Trust Inc | 0.92                 | 0.09                 | 0.25                      | 50.65                |
| Ciena Corp                  | 1.15                 | 0.19                 | 0.15                      | 36.05                |
| Newmont Corporation         | 1.96                 | 1.13                 | 0.14                      | 36.96                |
| Willis Towers Watson plc    | 2.40                 | 0.67                 | -0.06                     | 16.36                |

### Top Ten Contributors | 3 Years

|                          | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|--------------------------|----------------------|----------------------|---------------------------|----------------------|
| Ciena Corp               | 0.80                 | 0.00                 | 0.24                      | 29.36                |
| IAC/InterActiveCorp      | 0.40                 | 0.00                 | 0.19                      | 46.32                |
| Lonza Group AG, Zuerich  | 0.46                 | 0.00                 | 0.17                      | 35.80                |
| Humana Inc.              | 0.71                 | 0.00                 | 0.13                      | 18.08                |
| NextEra Energy Inc       | 0.54                 | 0.00                 | 0.13                      | 22.68                |
| Ameriprise Financial Inc | 1.16                 | 0.05                 | 0.10                      | 8.39                 |
| Agilent Technologies Inc | 1.00                 | 0.38                 | 0.10                      | 15.23                |
| Republic Services Inc.   | 0.85                 | 0.38                 | 0.05                      | 10.96                |
| American Water Works Co  | 0.55                 | 0.36                 | 0.04                      | 20.44                |
| Prologis Inc             | 0.62                 | 0.81                 | -0.04                     | 20.04                |

### Top Ten Detractors | 1 Quarter

|                                | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|--------------------------------|----------------------|----------------------|---------------------------|----------------------|
| L3Harris Technologies Inc      | 2.06                 | 0.60                 | -0.37                     | -5.39                |
| FirstEnergy Corp.              | 2.16                 | 0.66                 | -0.33                     | -2.28                |
| Alliant Energy Corp            | 1.94                 | 0.35                 | -0.32                     | -0.17                |
| Atmos Energy Corp              | 1.95                 | 0.37                 | -0.30                     | 0.94                 |
| Exelon Corp                    | 1.44                 | 0.00                 | -0.29                     | -0.37                |
| Entergy Corp.                  | 1.94                 | 0.57                 | -0.26                     | 0.83                 |
| American Electric Power Co Inc | 1.14                 | 0.00                 | -0.22                     | 0.46                 |
| j2 Global Inc                  | 0.61                 | 0.00                 | -0.22                     | -15.55               |
| HP Inc                         | 1.13                 | 0.00                 | -0.21                     | 1.41                 |
| Argo Group Int.                | 0.63                 | 0.00                 | -0.16                     | -5.16                |

### Top Ten Detractors | 3 Years

|                                  | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|----------------------------------|----------------------|----------------------|---------------------------|----------------------|
| PG&E Corp                        | 0.52                 | 0.00                 | -0.25                     | -48.74               |
| American Airlines Group Inc      | 0.97                 | 0.33                 | -0.22                     | -35.56               |
| Babcock & Wilcox Enterprises Inc | 0.29                 | 0.00                 | -0.19                     | -65.96               |
| Callon Petroleum Co/DE           | 0.32                 | 0.00                 | -0.17                     | -52.32               |
| Cimarex Energy Co.               | 0.50                 | 0.02                 | -0.15                     | -32.80               |
| Bunge Ltd                        | 1.29                 | 0.27                 | -0.15                     | -15.16               |
| Mylan NV                         | 1.06                 | 0.54                 | -0.13                     | -25.46               |
| Western Digital Corp             | 1.05                 | 0.58                 | -0.08                     | -18.11               |
| United Airlines Holdings Inc     | 0.89                 | 0.55                 | -0.08                     | -22.81               |
| Newell Brands Inc                | 0.68                 | 0.67                 | 0.00                      | -30.19               |

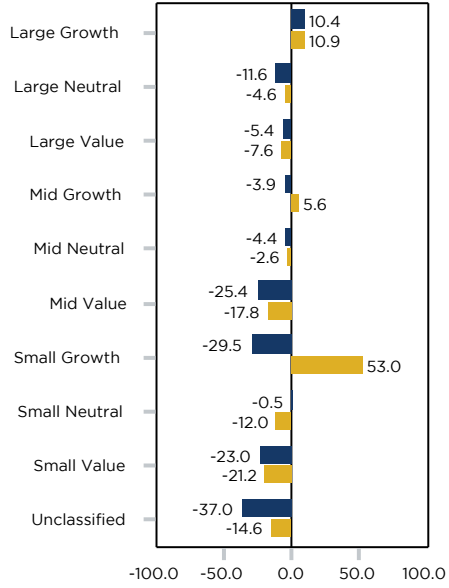


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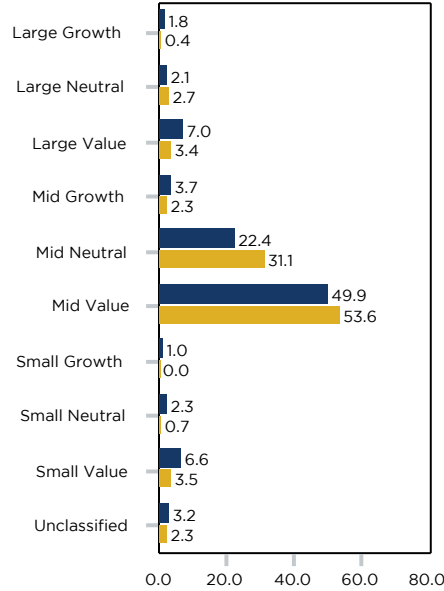
Index: Russell Midcap Value Index

Report Date: 06/30/2020

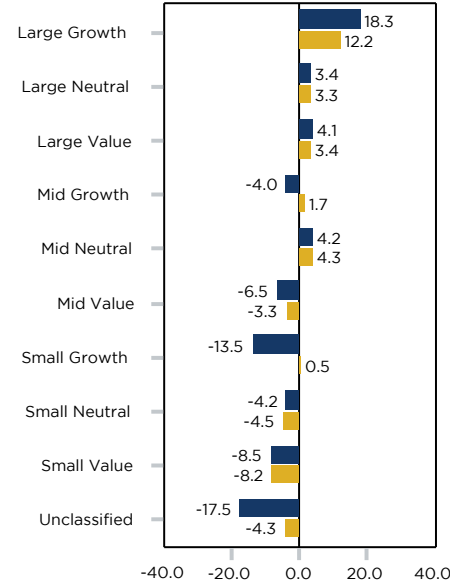
## Performance | 1 Year



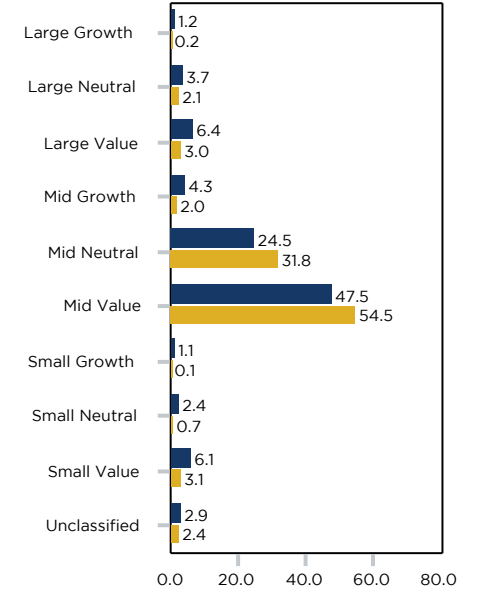
## Allocation | 1 Year



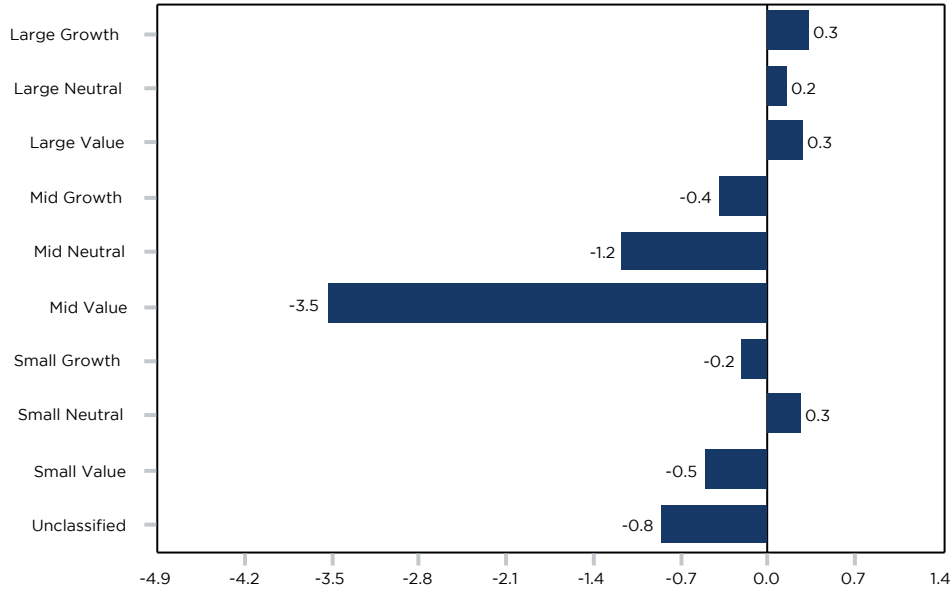
## Performance | 3 Years



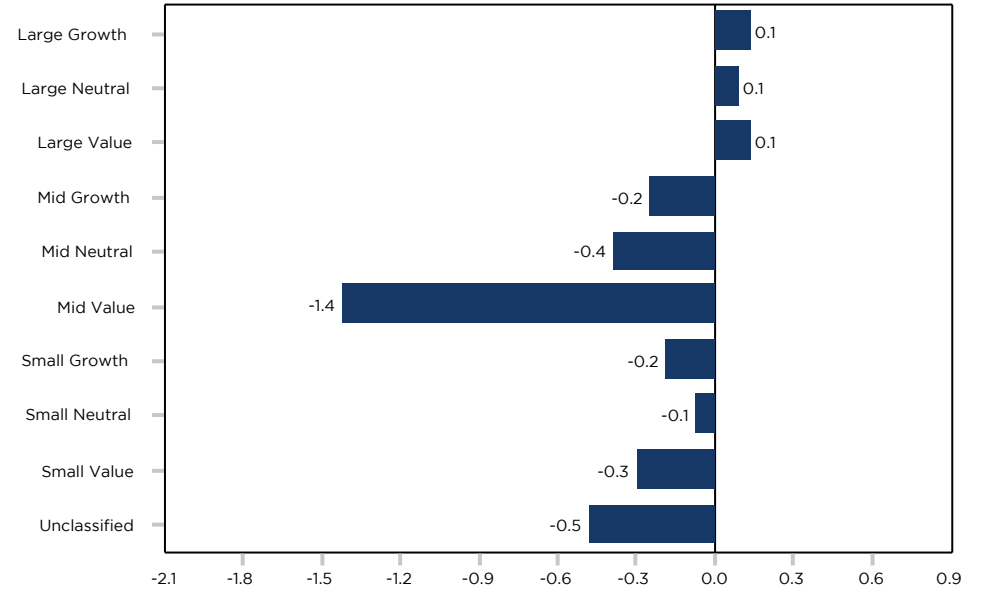
## Allocation | 3 Years



## 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: 06/30/2020

## Trailing Performance

|            | 1 Quarter  | Year to Date | 1 Year     | 3 Years  | 5 Years  | 10 Years  | 2019       | 2018       | 2017       | 2016       |
|------------|------------|--------------|------------|----------|----------|-----------|------------|------------|------------|------------|
| Manager    | 24.96 (25) | -7.18 (13)   | -0.20 (15) | 6.45 (8) | 6.99 (8) | 12.47 (5) | 31.03 (16) | -9.23 (21) | 19.25 (17) | 11.22 (78) |
| Benchmark  | 24.97      | -7.20        | -0.20      | 6.47     | 7.01     | 12.62     | 31.09      | -9.22      | 19.30      | 11.25      |
| Peer Group | 23.86      | -12.72       | -6.65      | 2.27     | 4.54     | 10.62     | 26.23      | -11.28     | 16.17      | 15.99      |
| Population | 609        | 602          | 589        | 544      | 486      | 410       | 609        | 668        | 622        | 628        |

## Fund Information

|                     |                    |
|---------------------|--------------------|
| Fund Inception      | 11/12/2001         |
| Fund Assets         | 106,848 Million    |
| Portfolio Assets    | 43,430 Million     |
| Total # of Holdings | 362                |
| % in Top 10         | 7.81 %             |
| PM                  | Butler,D/Johnson,M |
| PM Tenure           | 22 Years 1 Month   |
| Turnover            | 15.00 %            |
| Gross Expense (%)   | 0.05 %             |
| Net Expense (%)     | 0.05 %             |
| New Investors       | Open               |

## Portfolio Characteristics

|                           | Portfolio | Benchmark |
|---------------------------|-----------|-----------|
| Wtd. Avg. Mkt. Cap (\$M)  | 18,676    | 18,726    |
| Median Mkt. Cap (\$M)     | 12,523    | 12,523    |
| Price/Earnings ratio      | 21.0      | 21.2      |
| Price/Book ratio          | 3.4       | 3.4       |
| 5 Yr. EPS Growth Rate (%) | 12.5      | 12.3      |
| Current Yield (%)         | 1.5       | 1.5       |
| Beta (5 Years, Monthly)   | 1.00      | 1.00      |
| Number of Stocks          | 354       | 354       |
| Debt to Equity (%)        | 254.7     | 253.9     |
| Forecast P/E              | 23.0      | 23.0      |
| Forecast EPS Growth       | 11.3      | 11.6      |
| Return on Equity (%)      | 5.0       | 4.9       |

## Country/Region Allocation

|                  |              |              |
|------------------|--------------|--------------|
| United States    | 94.8         | 94.9         |
| Non-US Developed | 5.2          | 5.1          |
| <b>Total</b>     | <b>100.0</b> | <b>100.0</b> |

## Fund Statistics

|                                       | 3 Years | 10 Years |
|---------------------------------------|---------|----------|
| Standard Deviation                    | 19.76   | 15.53    |
| <b>vs. CRSP U.S. Mid Cap TR Index</b> |         |          |
| Beta                                  | 1.00    | 1.01     |
| Alpha                                 | -0.01   | -0.21    |
| Information Ratio                     | -0.57   | -0.22    |
| Tracking Error                        | 0.03    | 0.49     |
| R-Squared                             | 1.00    | 1.00     |
| Up Market Capture                     | 99.97   | 100.07   |
| Down Market Capture                   | 100.04  | 100.94   |
| Consistency                           | 38.89   | 36.67    |

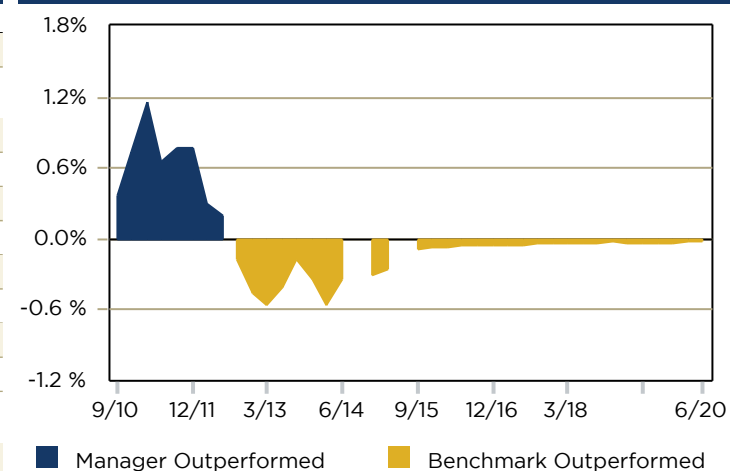
## vs. Risk Free

|              |      |      |
|--------------|------|------|
| Sharpe Ratio | 0.33 | 0.80 |
|--------------|------|------|

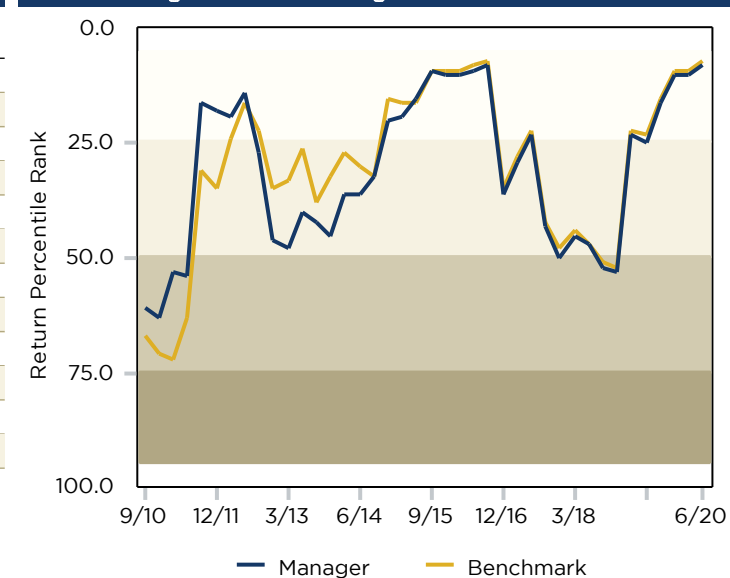
## Sector Allocation

| Sector                 | Portfolio Weight (%) | Benchmark Weight (%) |
|------------------------|----------------------|----------------------|
| Communication Services | 4.8                  | 5.4                  |
| Consumer Discretionary | 10.9                 | 10.8                 |
| Consumer Staples       | 3.5                  | 3.6                  |
| Energy                 | 2.8                  | 2.8                  |
| Financials             | 11.1                 | 11.0                 |
| Health Care            | 13.2                 | 13.1                 |
| Industrials            | 13.2                 | 13.0                 |
| Information Technology | 20.7                 | 20.6                 |
| Materials              | 5.3                  | 5.3                  |
| Real Estate            | 8.3                  | 8.2                  |
| Utilities              | 6.1                  | 6.1                  |
| <b>Total</b>           | <b>100.0</b>         | <b>100.0</b>         |

## 3 Years Rolling Excess Performance



## 3 Years Rolling Percentile Ranking



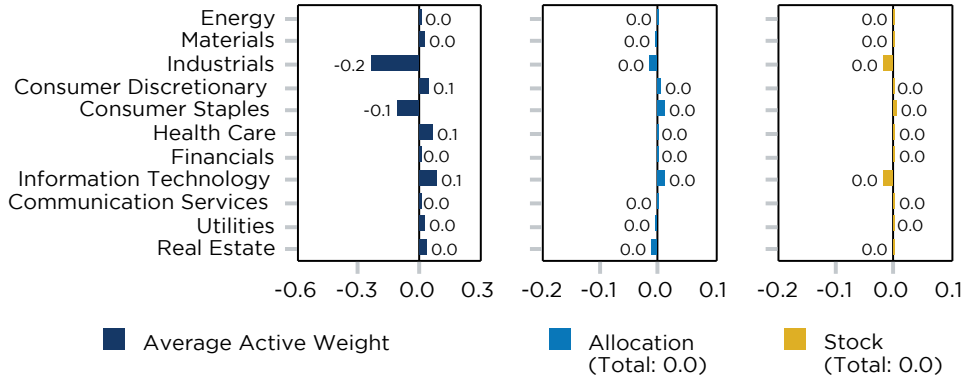


# Vanguard Mid Cap Index Adm (VIMAX)

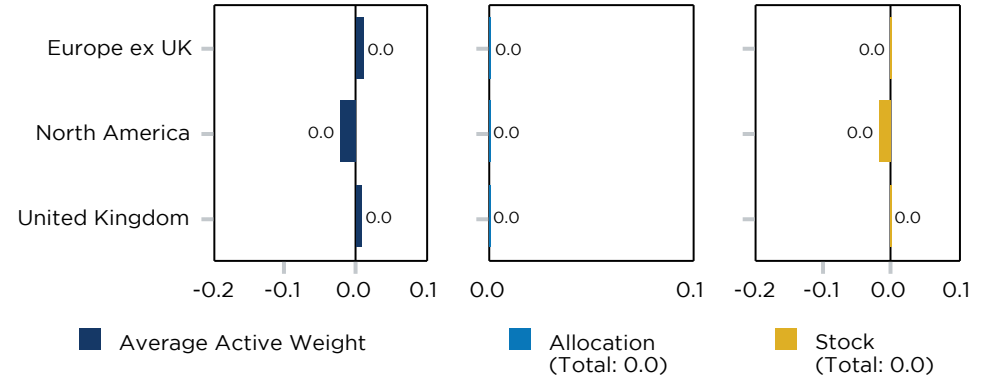
Index: CRSP U.S. Mid Cap TR Index

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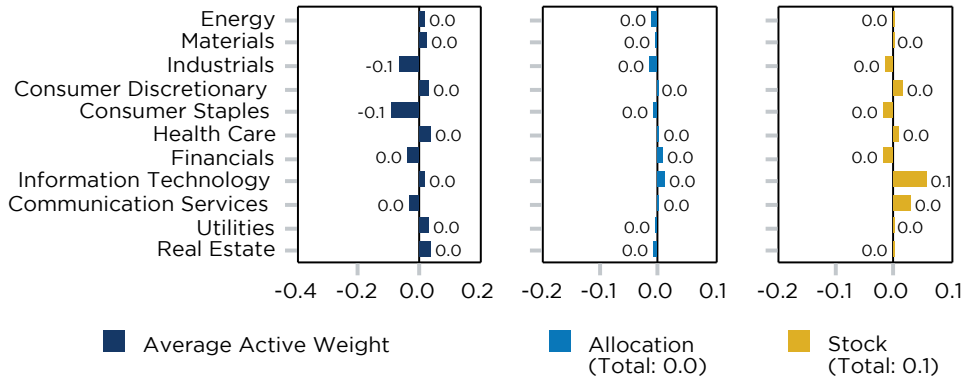
## 1 Quarter Sector Attribution



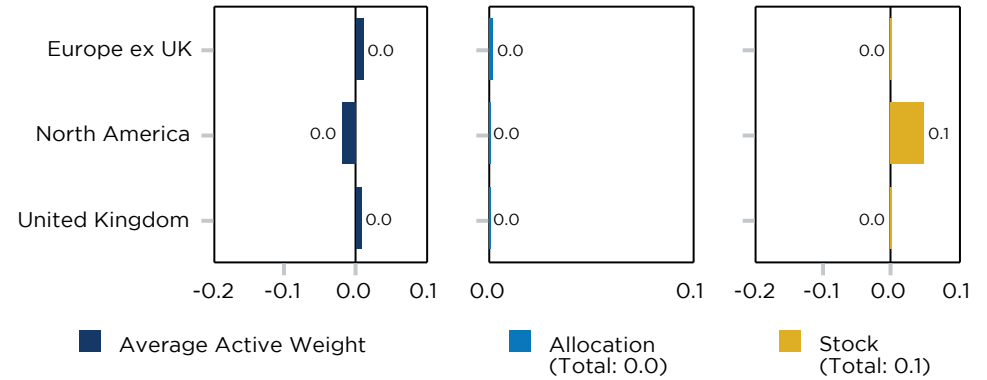
## 1 Quarter Region Attribution



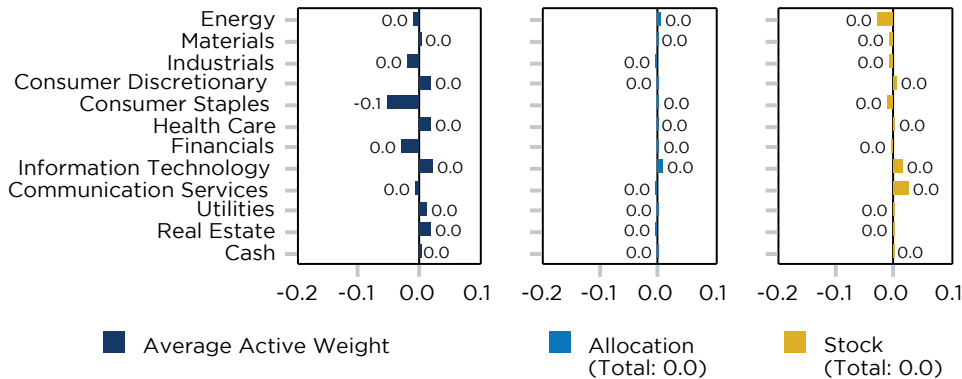
## 1 Year Sector Attribution



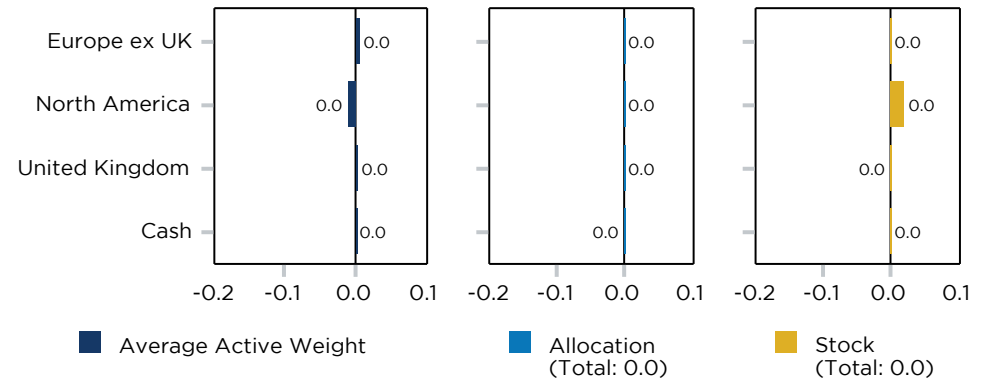
## 1 Year Region Attribution



## 3 Years Sector Attribution



## 3 Years Region Attribution





# Vanguard Mid Cap Index Adm (VIMAX)

Index: CRSP U.S. Mid Cap TR Index

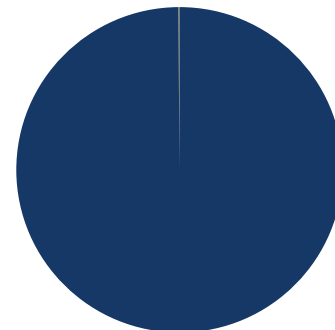
Report Date: 06/30/2020

## Top Ten Securities

|                           |              |
|---------------------------|--------------|
| Digital Realty Trust Inc  | 0.9 %        |
| DexCom Inc                | 0.9 %        |
| Lululemon Athletica Inc   | 0.9 %        |
| Centene Corp              | 0.9 %        |
| SBA Communications Corp   | 0.8 %        |
| Veeva Systems Inc Class A | 0.7 %        |
| Splunk Inc                | 0.7 %        |
| KLA Corp                  | 0.7 %        |
| DocuSign Inc              | 0.7 %        |
| Synopsys Inc              | 0.7 %        |
| <b>Total</b>              | <b>7.8 %</b> |

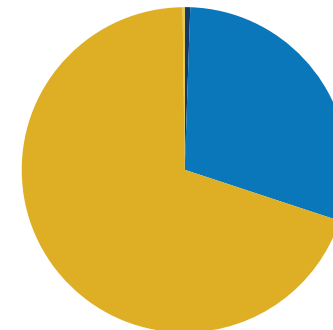
## Asset Allocation

- Equity
- Fixed Income
- Cash



## Market Capitalization

- Giant
- Large
- Medium
- Small
- Micro



## Top Ten Contributors | 1 Quarter

|                            | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|----------------------------|----------------------|----------------------|---------------------------|----------------------|
| DexCom Inc                 | 0.76                 | 0.75                 | 0.00                      | 50.56                |
| Twilio Inc                 | 0.34                 | 0.34                 | 0.00                      | 145.19               |
| lululemon athletica inc    | 0.68                 | 0.68                 | 0.00                      | 64.60                |
| Newmont Corporation        | 1.14                 | 1.14                 | 0.00                      | 36.96                |
| IAC/InterActiveCorp        | 0.43                 | 0.43                 | 0.00                      | 80.44                |
| SNAP INC                   | 0.35                 | 0.35                 | 0.00                      | 97.56                |
| Splunk Inc                 | 0.60                 | 0.60                 | 0.00                      | 57.41                |
| Chipotle Mexican Grill Inc | 0.56                 | 0.56                 | 0.00                      | 60.81                |
| Veeva Systems Inc          | 0.63                 | 0.63                 | 0.00                      | 49.91                |
| Synopsys Inc               | 0.59                 | 0.59                 | 0.00                      | 51.41                |

## Top Ten Contributors | 3 Years

|                            | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|----------------------------|----------------------|----------------------|---------------------------|----------------------|
| ServiceNow Inc             | 0.51                 | 0.51                 | 0.00                      | 56.34                |
| Lam Research Corp          | 0.65                 | 0.65                 | 0.00                      | 34.30                |
| Autodesk Inc.              | 0.60                 | 0.60                 | 0.00                      | 33.37                |
| Advanced Micro Devices Inc | 0.30                 | 0.30                 | 0.00                      | 61.54                |
| Moody's Corp.              | 0.57                 | 0.57                 | 0.00                      | 32.53                |
| Edwards Lifesciences Corp  | 0.71                 | 0.71                 | 0.00                      | 20.59                |
| SBA Communications Corp    | 0.47                 | 0.47                 | 0.00                      | 30.50                |
| Newmont Corporation        | 0.49                 | 0.49                 | 0.00                      | 26.82                |
| MSCI Inc                   | 0.27                 | 0.27                 | 0.00                      | 49.69                |
| Roper Technologies Inc     | 0.68                 | 0.68                 | 0.00                      | 19.50                |

## Top Ten Detractors | 1 Quarter

|                                | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|--------------------------------|----------------------|----------------------|---------------------------|----------------------|
| Cincinnati Financial Corp      | 0.38                 | 0.38                 | 0.00                      | -14.33               |
| Alleghany Corp                 | 0.23                 | 0.23                 | 0.00                      | -11.44               |
| Molson Coors Beverage Co       | 0.21                 | 0.21                 | 0.00                      | -11.92               |
| Tiffany & Co.                  | 0.45                 | 0.45                 | 0.00                      | -5.39                |
| NiSource Inc                   | 0.29                 | 0.29                 | 0.00                      | -8.19                |
| Xerox Holdings Corp            | 0.11                 | 0.11                 | 0.00                      | -17.95               |
| FirstEnergy Corp.              | 0.66                 | 0.66                 | 0.00                      | -2.28                |
| J.M. Smucker Co (The)          | 0.37                 | 0.37                 | 0.00                      | -3.94                |
| Universal Health Services Inc. | 0.23                 | 0.23                 | 0.00                      | -6.25                |
| Ameren Corp                    | 0.54                 | 0.55                 | 0.00                      | -2.76                |

## Top Ten Detractors | 3 Years

|                             | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|-----------------------------|----------------------|----------------------|---------------------------|----------------------|
| Newell Brands Inc           | 0.74                 | 0.74                 | 0.00                      | -30.19               |
| Alliance Data Systems Corp  | 0.39                 | 0.39                 | 0.00                      | -43.12               |
| Western Digital Corp        | 0.74                 | 0.74                 | 0.00                      | -18.11               |
| Concho Resources Inc        | 0.52                 | 0.52                 | 0.00                      | -24.58               |
| Tapestry Inc                | 0.38                 | 0.38                 | 0.00                      | -32.10               |
| Invesco Ltd                 | 0.41                 | 0.41                 | 0.00                      | -28.78               |
| Royal Caribbean Cruises Ltd | 0.54                 | 0.54                 | 0.00                      | -20.98               |
| Mohawk Industries Inc.      | 0.44                 | 0.44                 | 0.00                      | -25.05               |
| Molson Coors Beverage Co    | 0.43                 | 0.43                 | 0.00                      | -24.40               |
| National Oilwell Varco Inc  | 0.36                 | 0.36                 | 0.00                      | -27.54               |

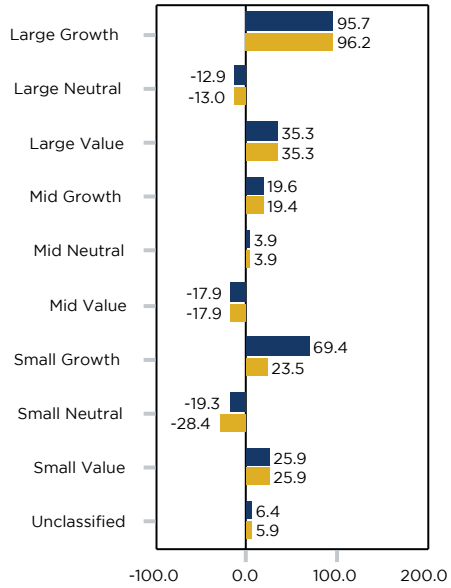


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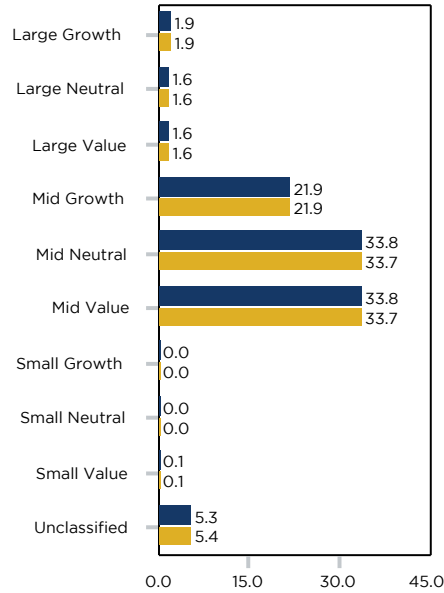
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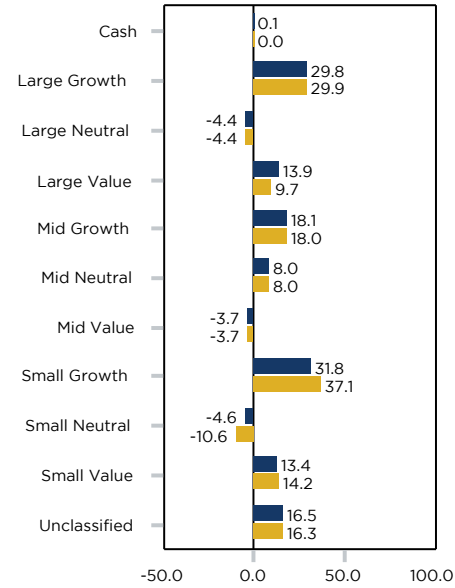
## Performance | 1 Year



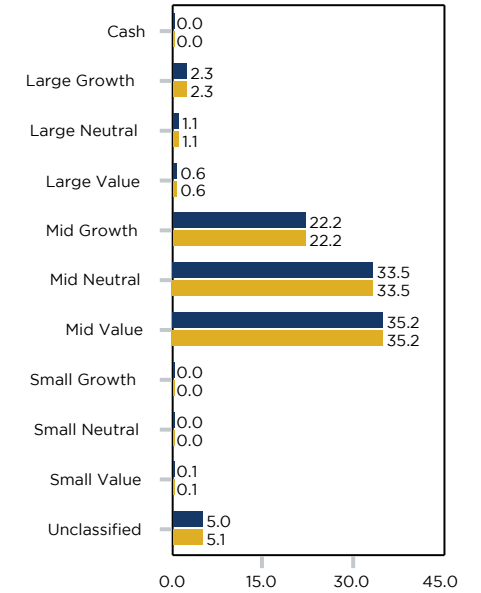
## Allocation | 1 Year



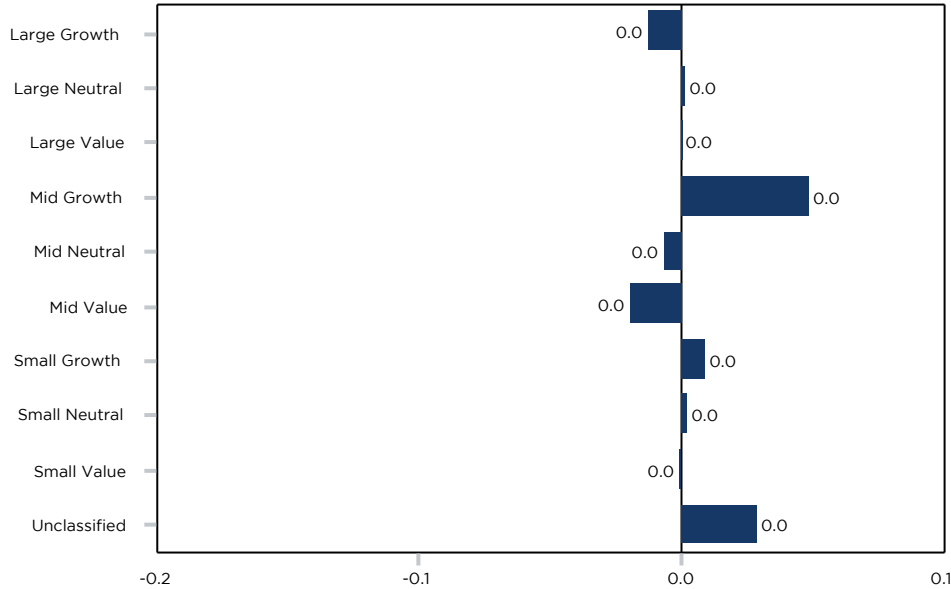
## Performance | 3 Years



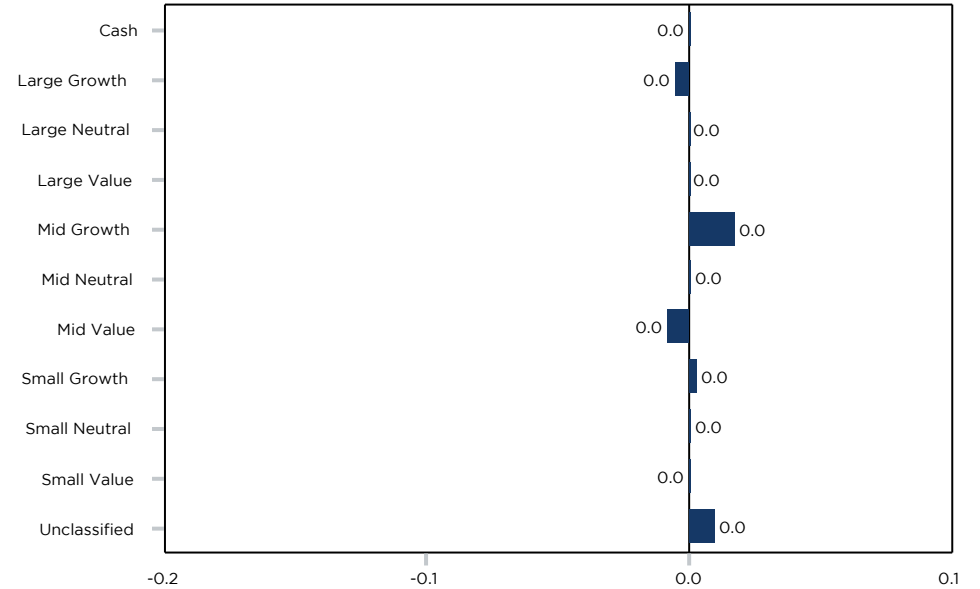
## Allocation | 3 Years



## 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: 06/30/2020

## Trailing Performance

|            | 1 Quarter  | Year to Date | 1 Year    | 3 Years    | 5 Years   | 10 Years   | 2019       | 2018       | 2017       | 2016      |
|------------|------------|--------------|-----------|------------|-----------|------------|------------|------------|------------|-----------|
| Manager    | 32.24 (36) | 4.60 (46)    | 8.35 (59) | 12.68 (57) | 9.31 (71) | 13.48 (63) | 33.39 (52) | -8.17 (78) | 26.21 (37) | 1.95 (79) |
| Benchmark  | 30.26      | 4.16         | 11.91     | 14.76      | 11.60     | 15.09      | 35.47      | -4.75      | 25.27      | 7.33      |
| Peer Group | 30.03      | 4.27         | 11.15     | 13.43      | 10.47     | 13.99      | 33.75      | -5.45      | 24.77      | 5.64      |
| Population | 792        | 788          | 779       | 731        | 699       | 621        | 795        | 873        | 811        | 842       |

## Fund Information

|                     |                    |
|---------------------|--------------------|
| Fund Inception      | 10/01/2002         |
| Fund Assets         | 1,288 Million      |
| Portfolio Assets    | 702 Million        |
| Total # of Holdings | 113                |
| % in Top 10         | 20.73 %            |
| PM                  | Almazan,A/Kontos,T |
| PM Tenure           | 1 Year 3 Months    |
| Turnover            | 81.00 %            |
| Gross Expense (%)   | 0.48 %             |
| Net Expense (%)     | 0.48 %             |
| New Investors       | Open               |

## Portfolio Characteristics

|                           | Portfolio | Benchmark |
|---------------------------|-----------|-----------|
| Wtd. Avg. Mkt. Cap (\$M)  | 20,407    | 18,297    |
| Median Mkt. Cap (\$M)     | 13,234    | 9,679     |
| Price/Earnings ratio      | 32.1      | 34.8      |
| Price/Book ratio          | 5.7       | 9.8       |
| 5 Yr. EPS Growth Rate (%) | 14.2      | 19.0      |
| Current Yield (%)         | 0.4       | 0.5       |
| Beta (5 Years, Monthly)   | 1.05      | 1.00      |
| Number of Stocks          | 109       | 330       |
| Debt to Equity (%)        | 110.6     | 1,151.8   |
| Forecast P/E              | 33.8      | 32.9      |
| Forecast EPS Growth       | 20.0      | 17.7      |
| Return on Equity (%)      | -3.8      | -55.1     |

## Country/Region Allocation

|                  |              |              |
|------------------|--------------|--------------|
| United States    | 82.0         | 94.9         |
| Non-US Developed | 17.2         | 3.2          |
| Emerging Markets | 0.8          | 0.3          |
| Other            | 0.0          | 1.5          |
| <b>Total</b>     | <b>100.0</b> | <b>100.0</b> |

## Fund Statistics

|  | 3 Years | 10 Years |
|--|---------|----------|
| Standard Deviation                     | 21.01   | 16.84    |
| <b>vs. Russell Midcap Growth Index</b> |         |          |
| Beta                                   | 1.05    | 1.05     |
| Alpha                                  | -2.36   | -2.03    |
| Information Ratio                      | -0.58   | -0.49    |
| Tracking Error                         | 2.77    | 2.58     |
| R-Squared                              | 0.98    | 0.98     |
| Up Market Capture                      | 99.22   | 101.10   |
| Down Market Capture                    | 107.39  | 111.62   |
| Consistency                            | 41.67   | 42.50    |

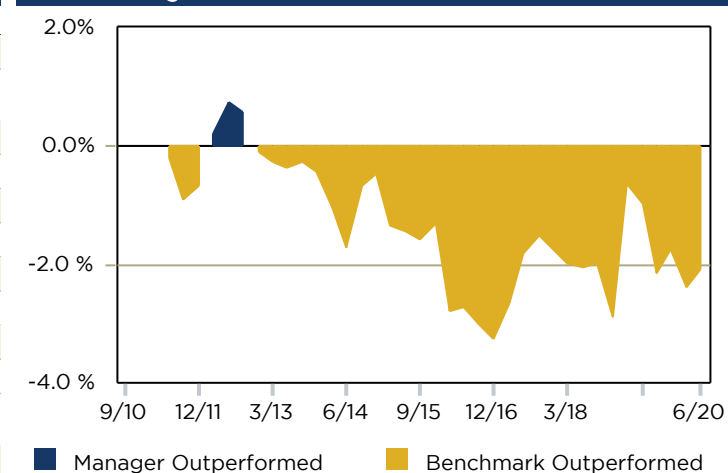
## vs. Risk Free

|              |      |      |
|--------------|------|------|
| Sharpe Ratio | 0.59 | 0.80 |
|--------------|------|------|

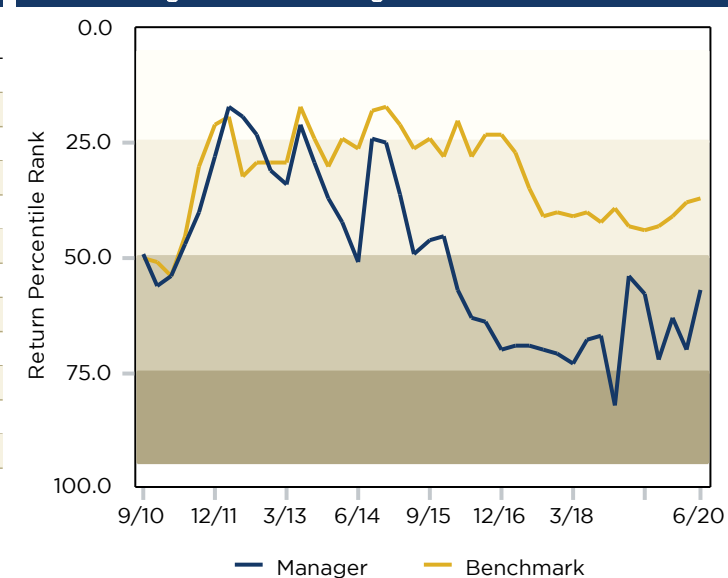
## Sector Allocation

| Sector                 | Portfolio Weight (%) | Benchmark Weight (%) |
|------------------------|----------------------|----------------------|
| Communication Services | 5.4                  | 5.4                  |
| Consumer Discretionary | 24.2                 | 10.8                 |
| Consumer Staples       | 4.5                  | 4.2                  |
| Energy                 | 0.0                  | 0.4                  |
| Financials             | 3.2                  | 3.8                  |
| Health Care            | 15.2                 | 22.8                 |
| Industrials            | 13.0                 | 11.9                 |
| Information Technology | 31.0                 | 36.9                 |
| Materials              | 1.5                  | 2.2                  |
| Real Estate            | 2.1                  | 1.5                  |
| Utilities              | 0.0                  | 0.1                  |
| <b>Total</b>           | <b>100.0</b>         | <b>100.0</b>         |

## 3 Years Rolling Excess Performance



## 3 Years Rolling Percentile Ranking



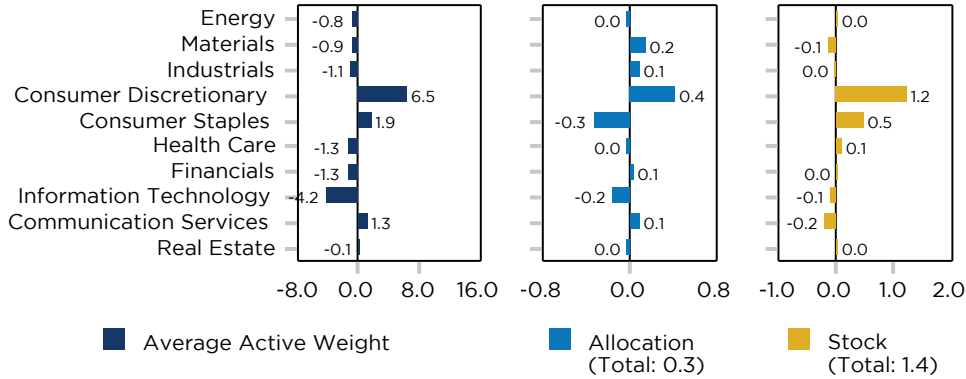


# TIAA-CREF Mid-Cap Growth Instl (TRPWX)

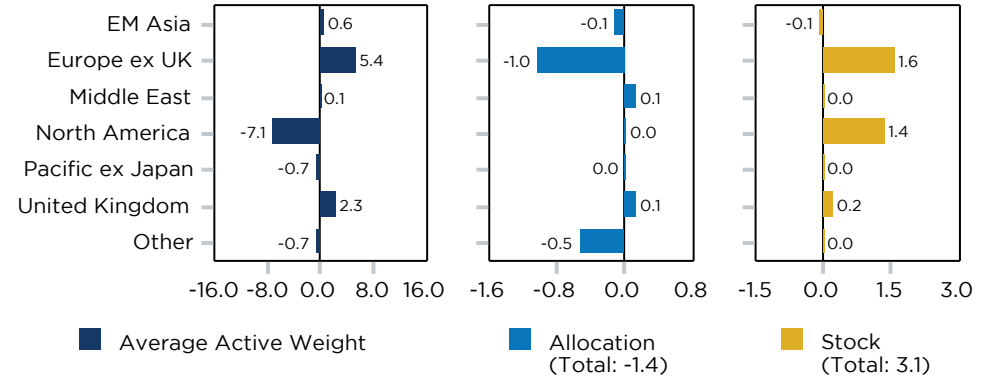
Index: Russell Midcap Growth Index

Report Date: 06/30/2020

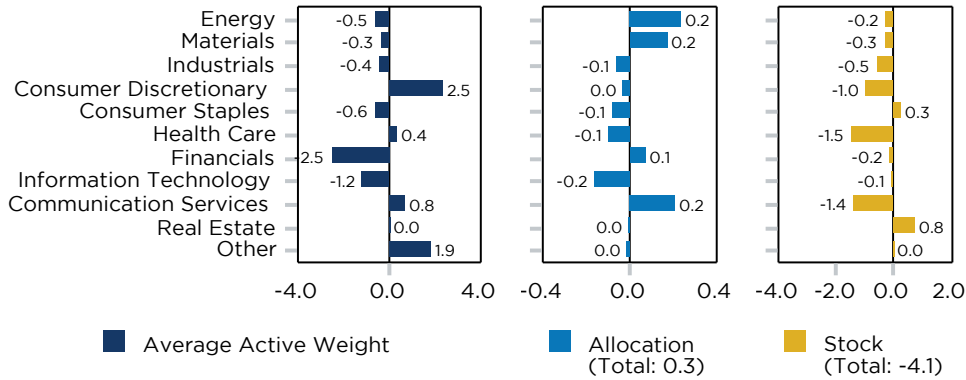
## 1 Quarter Sector Attribution



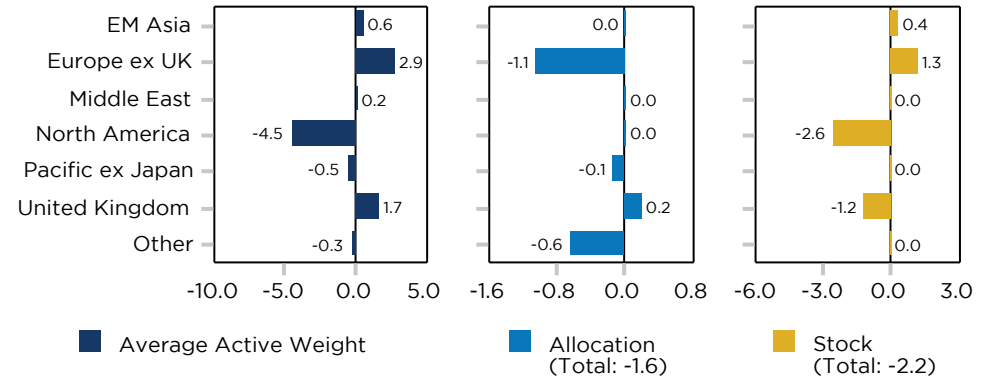
## 1 Quarter Region Attribution



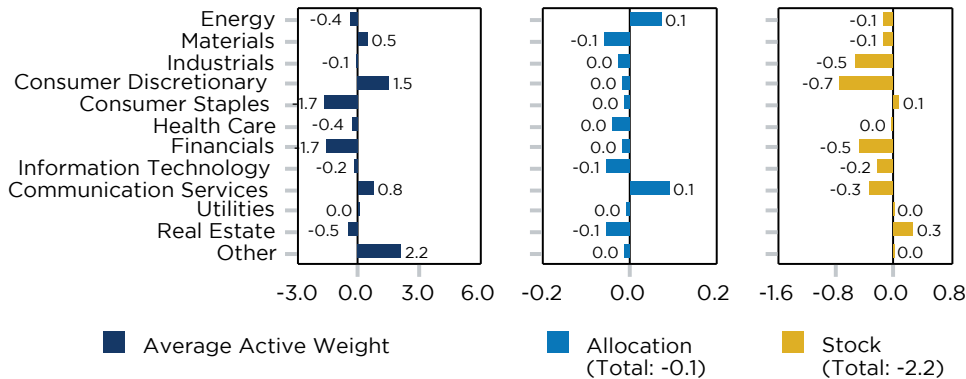
## 1 Year Sector Attribution



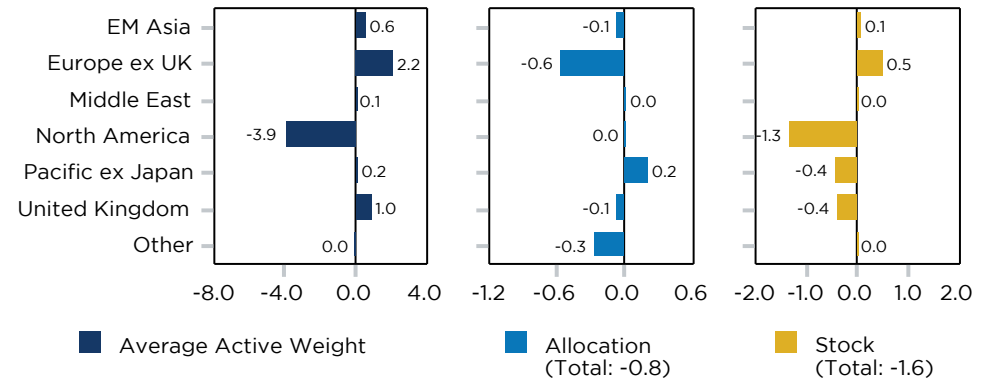
## 1 Year Region Attribution



## 3 Years Sector Attribution



## 3 Years Region Attribution







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

Index: Russell Midcap Growth Index

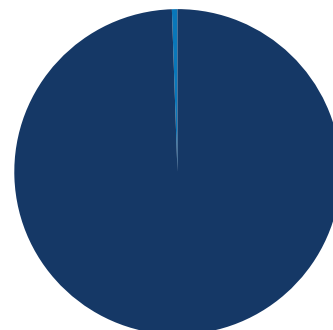
Report Date: 06/30/2020

## Top Ten Securities

|                                  |               |
|----------------------------------|---------------|
| Lululemon Athletica Inc          | 2.8 %         |
| Advanced Micro Devices Inc       | 2.5 %         |
| Synopsys Inc                     | 2.1 %         |
| Waste Connections Inc            | 2.0 %         |
| Lam Research Corp                | 2.0 %         |
| Global Payments Inc              | 2.0 %         |
| AutoZone Inc                     | 1.9 %         |
| Chipotle Mexican Grill Inc Class | 1.9 %         |
| RingCentral Inc Class A          | 1.7 %         |
| Amphenol Corp Class A            | 1.7 %         |
| <b>Total</b>                     | <b>20.7 %</b> |

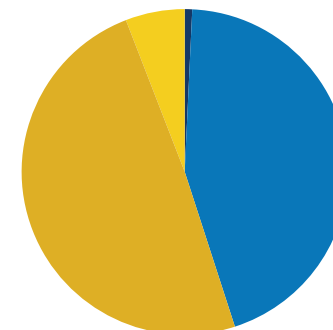
## Asset Allocation

- 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 (%) |
|----------------------------|----------------------|----------------------|---------------------------|----------------------|
| lululemon athletica inc    | 2.51                 | 0.88                 | 0.56                      | 64.60                |
| Adyen N.V                  | 1.24                 | 0.00                 | 0.52                      | 72.18                |
| IAC/InterActiveCorp        | 1.27                 | 0.31                 | 0.48                      | 80.44                |
| Chipotle Mexican Grill Inc | 1.96                 | 0.66                 | 0.40                      | 60.81                |
| HubSpot Inc                | 1.04                 | 0.21                 | 0.32                      | 68.44                |
| Align Technology Inc       | 1.53                 | 0.53                 | 0.28                      | 57.77                |
| Synopsys Inc               | 2.01                 | 0.76                 | 0.26                      | 51.41                |
| DexCom Inc                 | 2.15                 | 0.96                 | 0.24                      | 50.56                |
| Okta Inc                   | 1.11                 | 0.50                 | 0.20                      | 63.77                |
| Lam Research Corp          | 2.22                 | 1.20                 | 0.05                      | 35.28                |

## Top Ten Contributors | 3 Years

|                            | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|----------------------------|----------------------|----------------------|---------------------------|----------------------|
| RingCentral Inc            | 0.52                 | 0.00                 | 0.43                      | 98.30                |
| IAC/InterActiveCorp        | 1.15                 | 0.26                 | 0.28                      | 46.32                |
| ServiceNow Inc             | 1.28                 | 0.63                 | 0.27                      | 56.34                |
| Insulet Corp               | 0.60                 | 0.00                 | 0.25                      | 55.86                |
| Tractor Supply Co          | 1.02                 | 0.25                 | 0.17                      | 36.49                |
| Zoetis Inc                 | 1.92                 | 1.10                 | 0.13                      | 30.73                |
| Illumina Inc               | 1.67                 | 0.91                 | 0.11                      | 28.75                |
| Advanced Micro Devices Inc | 0.56                 | 0.37                 | 0.09                      | 61.54                |
| Lam Research Corp          | 1.11                 | 0.82                 | 0.06                      | 34.30                |
| Edwards Lifesciences Corp  | 1.64                 | 0.88                 | 0.04                      | 20.59                |

## Top Ten Detractors | 1 Quarter

|                           | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|---------------------------|----------------------|----------------------|---------------------------|----------------------|
| L3Harris Technologies Inc | 1.95                 | 0.79                 | -0.41                     | -5.39                |
| Tiffany & Co.             | 0.52                 | 0.00                 | -0.19                     | -5.39                |
| Elanco Animal Health Inc  | 0.44                 | 0.00                 | -0.15                     | -4.20                |
| Teledyne Technologies     | 0.58                 | 0.00                 | -0.15                     | 4.60                 |
| Groupon Inc               | 0.19                 | 0.00                 | -0.07                     | -7.57                |
| Aramark                   | 0.40                 | 0.00                 | -0.07                     | 13.51                |
| Trip com Group Ltd        | 0.24                 | 0.00                 | -0.05                     | 10.53                |
| Coherus BioSciences Inc   | 0.16                 | 0.00                 | -0.03                     | 10.11                |
| Arista Networks Inc       | 0.49                 | 0.47                 | -0.01                     | 3.69                 |
| Fiserv Inc.               | 1.94                 | 2.11                 | 0.05                      | 2.77                 |

## Top Ten Detractors | 3 Years

|                            | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|----------------------------|----------------------|----------------------|---------------------------|----------------------|
| Newell Brands Inc          | 1.19                 | 0.00                 | -0.53                     | -30.19               |
| DXC Technology Co          | 1.63                 | 0.78                 | -0.43                     | -36.26               |
| Mohawk Industries Inc.     | 1.08                 | 0.03                 | -0.42                     | -25.05               |
| Alliance Data Systems Corp | 1.16                 | 0.45                 | -0.41                     | -43.12               |
| Olin Corp                  | 0.87                 | 0.00                 | -0.35                     | -24.94               |
| Summit Materials Inc       | 1.05                 | 0.00                 | -0.34                     | -17.40               |
| CommScope Holding Co Inc   | 0.71                 | 0.13                 | -0.32                     | -39.72               |
| Acadia Healthcare Co Inc   | 0.90                 | 0.00                 | -0.31                     | -20.17               |
| Tapestry Inc               | 0.63                 | 0.08                 | -0.26                     | -32.10               |
| Wynn Resorts Ltd           | 0.97                 | 0.38                 | -0.18                     | -15.92               |

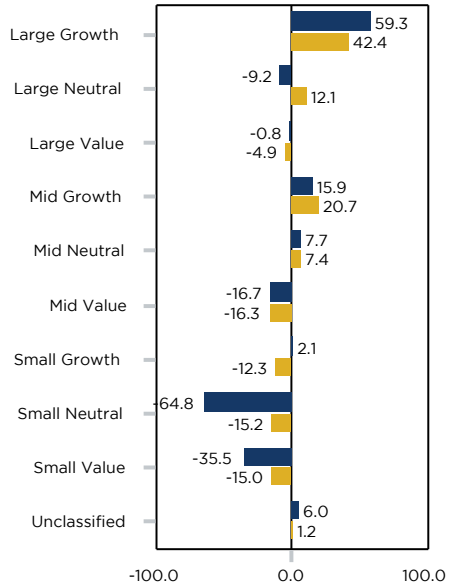


# TIAA-CREF Mid-Cap Growth Instl (TRPWX)

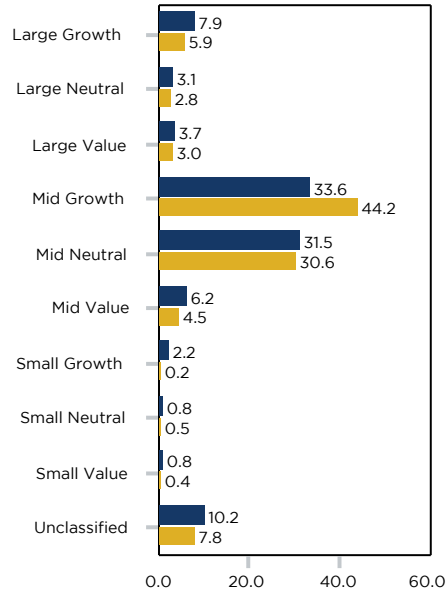
Index: Russell Midcap Growth Index

Report Date: 06/30/2020

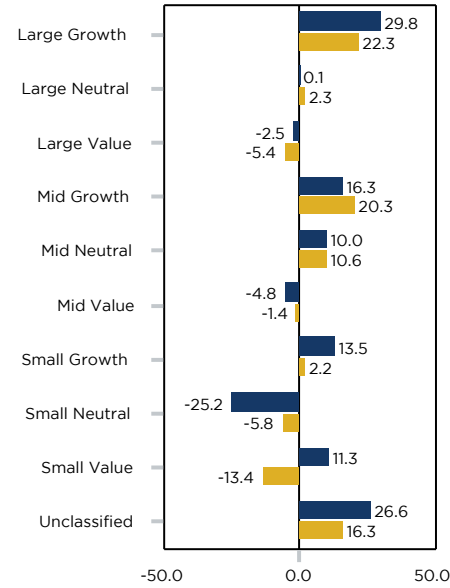
## Performance | 1 Year



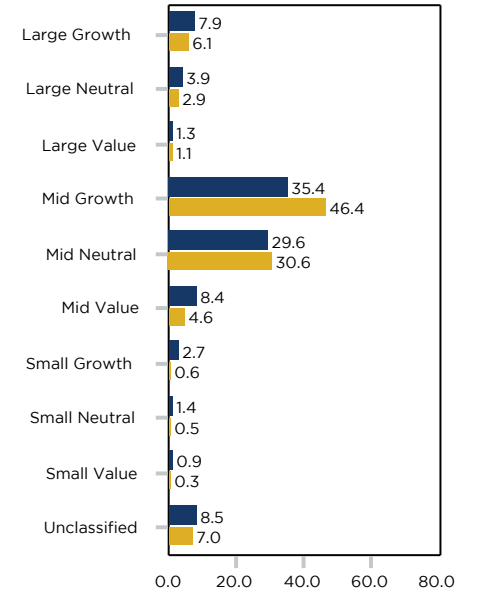
## Allocation | 1 Year



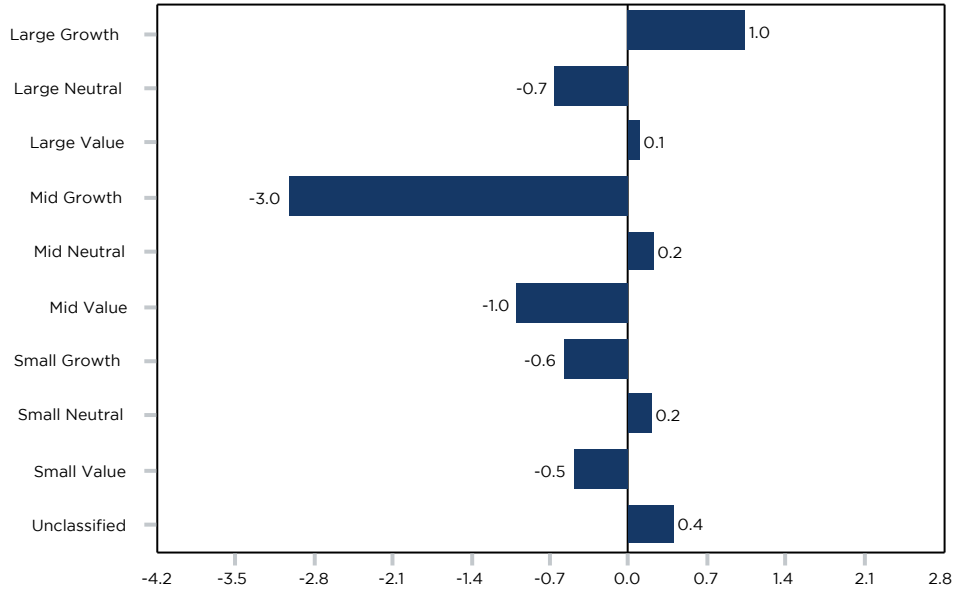
## Performance | 3 Years



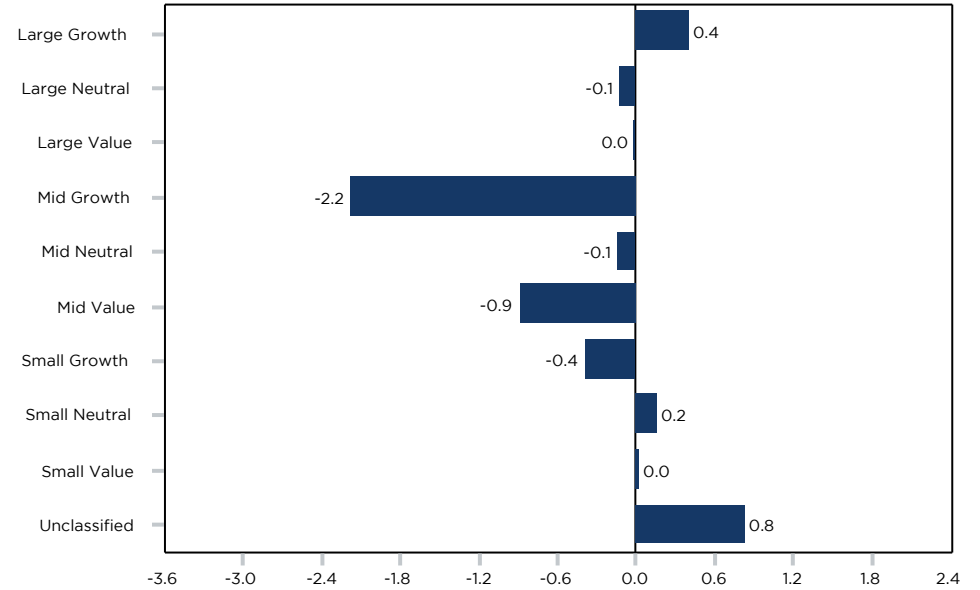
## Allocation | 3 Years



## Total Attribution | 1 Year



## Total Attribution | 3 Years



## Trailing Performance

|            | 1 Quarter | Year to Date | 1 Year    | 3 Years    | 5 Years  | 10 Years | 2019      | 2018        | 2017      | 2016       |
|------------|-----------|--------------|-----------|------------|----------|----------|-----------|-------------|-----------|------------|
| Manager    | 30.60 (6) | -17.97 (8)   | -8.99 (7) | -1.64 (10) | 2.83 (9) | 9.10 (8) | 28.36 (9) | -19.83 (91) | 22.02 (1) | 29.94 (24) |
| Benchmark  | 18.91     | -23.50       | -17.48    | -4.35      | 1.26     | 7.82     | 22.39     | -12.86      | 7.84      | 31.74      |
| Peer Group | 21.03     | -23.39       | -18.00    | -5.08      | -0.17    | 7.47     | 21.82     | -15.23      | 8.74      | 25.84      |
| Population | 554       | 550          | 533       | 508        | 496      | 441      | 541       | 607         | 556       | 569        |

## Fund Information

|                     |                             |
|---------------------|-----------------------------|
| Fund Inception      | 12/12/2001                  |
| Fund Assets         | 738 Million                 |
| Portfolio Assets    | 200 Million                 |
| Total # of Holdings | 256                         |
| % in Top 10         | 9.72 %                      |
| PM                  | Franks,S/Hench,W/Kosowsky,R |
| PM Tenure           | 16 Years 1 Month            |
| Turnover            | 47.00 %                     |
| Gross Expense (%)   | 1.08 %                      |
| Net Expense (%)     | 1.08 %                      |
| New Investors       | Open                        |

## Portfolio Characteristics

|                           | Portfolio | Benchmark |
|---------------------------|-----------|-----------|
| Wtd. Avg. Mkt. Cap (\$M)  | 1,244     | 1,688     |
| Median Mkt. Cap (\$M)     | 592       | 548       |
| Price/Earnings ratio      | 13.6      | 12.5      |
| Price/Book ratio          | 2.1       | 1.6       |
| 5 Yr. EPS Growth Rate (%) | 12.0      | 6.1       |
| Current Yield (%)         | 0.8       | 2.3       |
| Beta (5 Years, Monthly)   | 1.15      | 1.00      |
| Number of Stocks          | 254       | 1,439     |
| Debt to Equity (%)        | 168.6     | 68.5      |
| Forecast P/E              | 17.5      | 14.7      |
| Forecast EPS Growth       | 13.1      | 6.5       |
| Return on Equity (%)      | -5.4      | -5.5      |

## Country/Region Allocation

|                  |              |              |
|------------------|--------------|--------------|
| United States    | 96.3         | 96.6         |
| Non-US Developed | 3.3          | 2.8          |
| Emerging Markets | 0.4          | 0.4          |
| Other            | 0.0          | 0.2          |
| <b>Total</b>     | <b>100.0</b> | <b>100.0</b> |

## Fund Statistics

|                                     | 3 Years | 10 Years |
|-------------------------------------|---------|----------|
| Standard Deviation                  | 27.62   | 22.08    |
| <b>vs. Russell 2000 Value Index</b> |         |          |
| Beta                                | 1.17    | 1.16     |
| Alpha                               | 4.29    | 0.40     |
| Information Ratio                   | 0.63    | 0.34     |
| Tracking Error                      | 6.27    | 5.60     |
| R-Squared                           | 0.97    | 0.95     |
| Up Market Capture                   | 122.63  | 115.48   |
| Down Market Capture                 | 108.05  | 113.04   |
| Consistency                         | 63.89   | 56.67    |

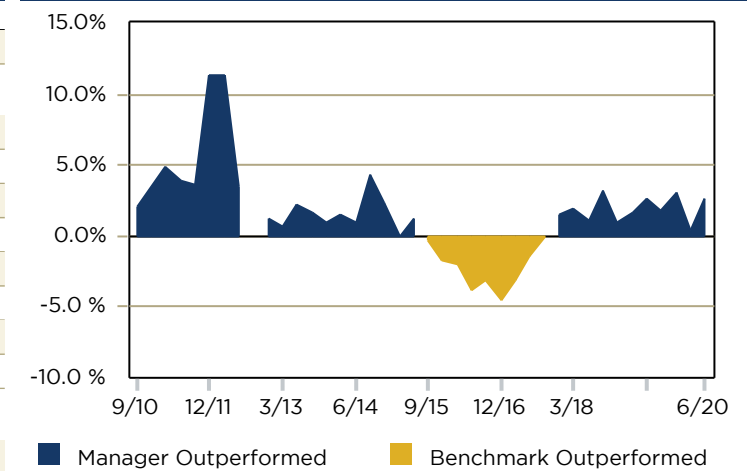
## vs. Risk Free

|              |      |      |
|--------------|------|------|
| Sharpe Ratio | 0.02 | 0.48 |
|--------------|------|------|

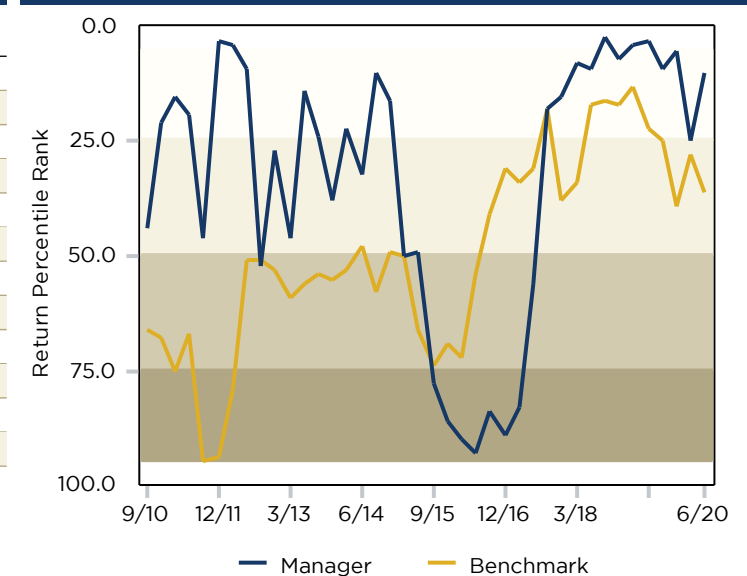
## Sector Allocation

| Sector                 | Portfolio Weight (%) | Benchmark Weight (%) |
|------------------------|----------------------|----------------------|
| Communication Services | 1.4                  | 2.4                  |
| Consumer Discretionary | 13.0                 | 10.9                 |
| Consumer Staples       | 1.8                  | 3.5                  |
| Energy                 | 3.6                  | 4.4                  |
| Financials             | 8.8                  | 29.0                 |
| Health Care            | 14.2                 | 6.2                  |
| Industrials            | 23.0                 | 16.1                 |
| Information Technology | 23.2                 | 6.2                  |
| Materials              | 9.1                  | 5.5                  |
| Real Estate            | 1.7                  | 10.4                 |
| Utilities              | 0.2                  | 5.4                  |
| <b>Total</b>           | <b>100.0</b>         | <b>100.0</b>         |

## 3 Years Rolling Excess Performance

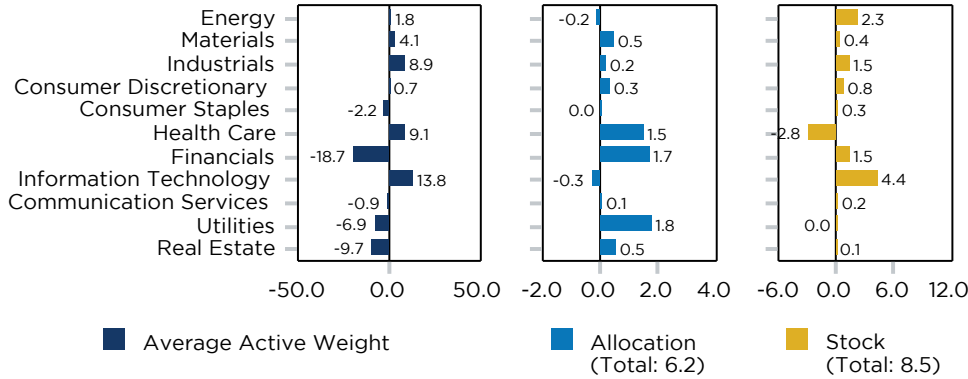


## 3 Years Rolling Percentile Ranking

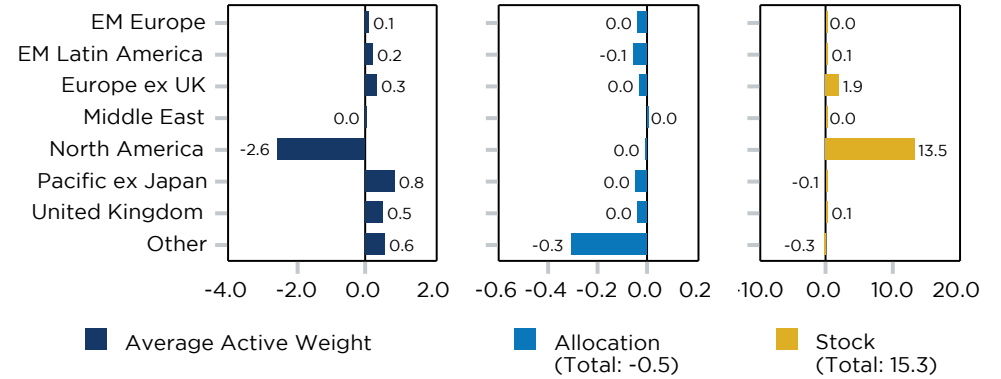




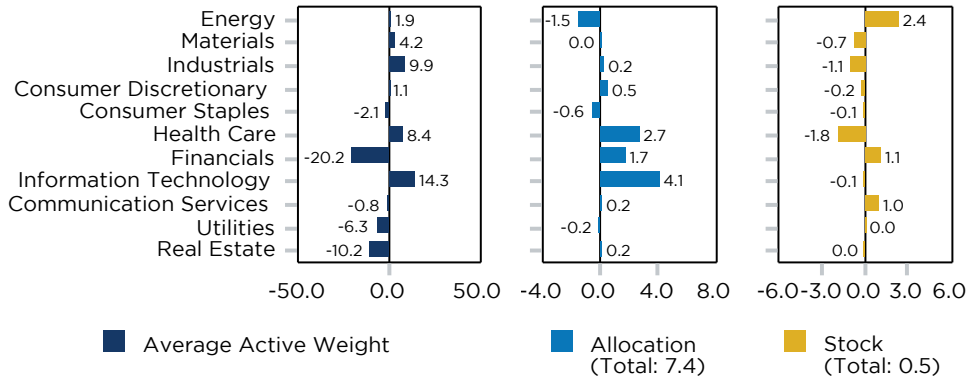
## 1 Quarter Sector Attribution



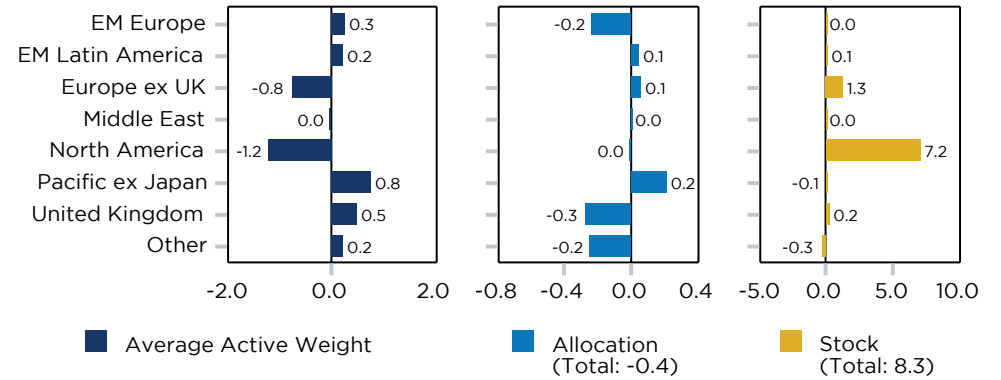
## 1 Quarter Region Attribution



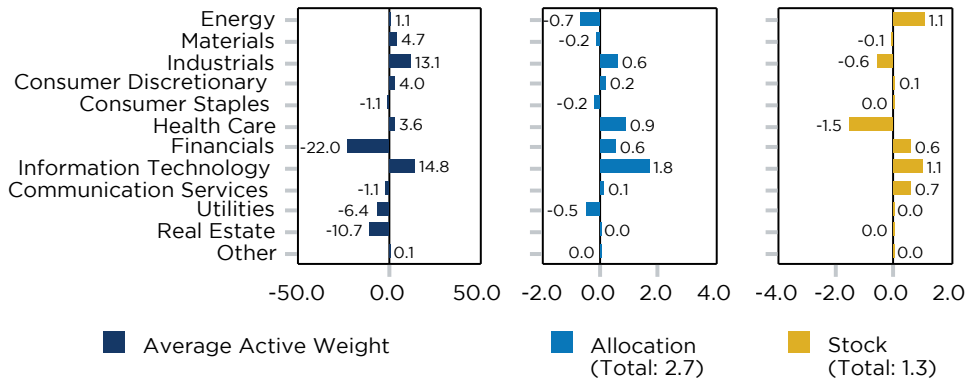
## 1 Year Sector Attribution



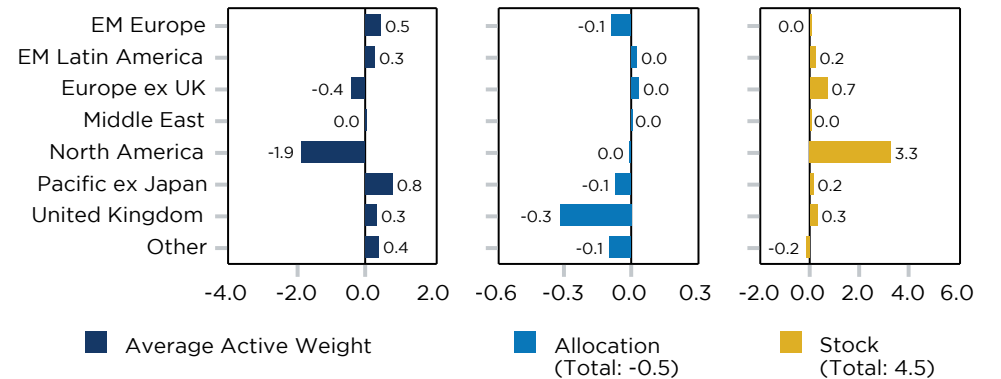
## 1 Year Region Attribution



## 3 Years Sector Attribution



## 3 Years Region Attribution

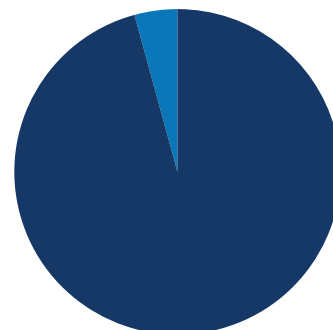


## Top Ten Securities

|                                     |              |
|-------------------------------------|--------------|
| Ameresco Inc Class A                | 1.2 %        |
| Alpha & Omega Semiconductor Ltd     | 1.0 %        |
| Forterra Inc                        | 1.0 %        |
| Limelight Networks Inc              | 1.0 %        |
| Air Lease Corp Class A              | 1.0 %        |
| II-VI Inc                           | 0.9 %        |
| Owens & Minor Inc                   | 0.9 %        |
| Emergent BioSolutions Inc           | 0.9 %        |
| R1 RCM Inc                          | 0.9 %        |
| MACOM Technology Solutions Holdings | 0.9 %        |
| <b>Total</b>                        | <b>9.7 %</b> |

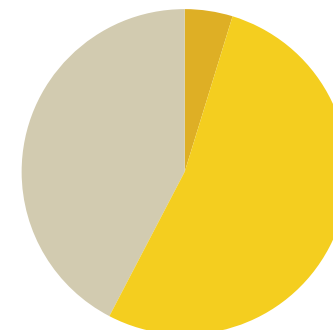
## Asset Allocation

■ 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 (%) |
|-----------------------------------|----------------------|----------------------|---------------------------|----------------------|
| Lumber Liquidators Holdings Inc   | 0.49                 | 0.02                 | 0.83                      | 195.52               |
| Maco Tech Solutions               | 1.17                 | 0.13                 | 0.65                      | 81.46                |
| Forterra Inc                      | 0.86                 | 0.00                 | 0.58                      | 86.62                |
| II VI Inc                         | 1.32                 | 0.14                 | 0.55                      | 65.68                |
| Carrols Restaurant Group Inc      | 0.36                 | 0.01                 | 0.51                      | 165.93               |
| Kraton Corp                       | 0.57                 | 0.03                 | 0.51                      | 113.33               |
| Ameresco Inc                      | 1.11                 | 0.06                 | 0.46                      | 63.12                |
| Alpha and Omega Semiconductor Ltd | 0.92                 | 0.02                 | 0.46                      | 69.74                |
| LGI Homes Inc                     | 0.60                 | 0.00                 | 0.46                      | 94.97                |
| CareDx Inc                        | 0.87                 | 0.01                 | 0.37                      | 62.30                |

## Top Ten Contributors | 3 Years

|                                 | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|---------------------------------|----------------------|----------------------|---------------------------|----------------------|
| KEMET Corp                      | 0.91                 | 0.00                 | 0.30                      | 29.04                |
| Ciena Corp                      | 0.79                 | 0.00                 | 0.27                      | 29.36                |
| Cree Inc.                       | 0.78                 | 0.25                 | 0.20                      | 33.91                |
| Winnebago Industries Inc.       | 0.65                 | 0.01                 | 0.19                      | 25.39                |
| Aerojet Rocketdyne Holdings Inc | 0.67                 | 0.00                 | 0.19                      | 23.98                |
| Brooks Automation Inc           | 0.54                 | 0.00                 | 0.18                      | 28.39                |
| Novanta Inc                     | 0.34                 | 0.00                 | 0.16                      | 43.68                |
| FormFactor Inc                  | 0.40                 | 0.00                 | 0.15                      | 33.24                |
| Mercury Systems Inc             | 0.55                 | 0.02                 | 0.15                      | 23.18                |
| Iridium Communications Inc      | 0.48                 | 0.10                 | 0.14                      | 32.04                |

## Top Ten Detractors | 1 Quarter

|                              | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|------------------------------|----------------------|----------------------|---------------------------|----------------------|
| Owens & Minor Inc.           | 1.70                 | 0.09                 | -0.57                     | -16.69               |
| Hertz Global Holdings Inc    | 0.46                 | 0.10                 | -0.35                     | -77.18               |
| Invacare Corp                | 0.99                 | 0.04                 | -0.31                     | -14.10               |
| Varex Imaging Corp           | 0.59                 | 0.07                 | -0.27                     | -33.29               |
| Community Health Systems Inc | 0.93                 | 0.04                 | -0.26                     | -9.88                |
| Dorian LPG Ltd               | 0.88                 | 0.03                 | -0.26                     | -11.14               |
| Cross Country Healthcare Inc | 0.87                 | 0.03                 | -0.23                     | -8.61                |
| Synalloy Corp                | 0.63                 | 0.01                 | -0.21                     | -14.32               |
| Ardmore Shipping Corp        | 0.37                 | 0.02                 | -0.13                     | -17.33               |
| Scorpio Tankers Inc          | 0.18                 | 0.13                 | -0.03                     | -32.62               |

## Top Ten Detractors | 3 Years

|                                 | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|---------------------------------|----------------------|----------------------|---------------------------|----------------------|
| Basic Energy Services Inc       | 0.54                 | 0.05                 | -0.37                     | -80.31               |
| FreightCar America Inc          | 0.60                 | 0.02                 | -0.31                     | -58.46               |
| NN Inc                          | 0.73                 | 0.00                 | -0.29                     | -43.39               |
| Houghton Mifflin Harcourt Co    | 0.67                 | 0.04                 | -0.27                     | -47.21               |
| Cornerstone Building Brands Inc | 0.96                 | 0.00                 | -0.23                     | -28.67               |
| Brookdale Senior Living         | 0.56                 | 0.00                 | -0.21                     | -41.47               |
| TimkenSteel Corp                | 0.66                 | 0.06                 | -0.19                     | -36.75               |
| Interface Inc                   | 0.93                 | 0.01                 | -0.18                     | -24.30               |
| Newpark Resources Inc.          | 0.67                 | 0.07                 | -0.17                     | -32.80               |
| Hertz Global Holdings Inc       | 0.45                 | 0.07                 | -0.17                     | -48.39               |

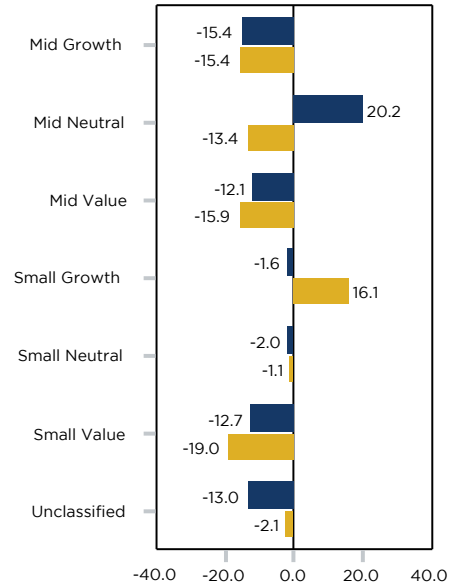


# Royce Opportunity Instl (ROFIX)

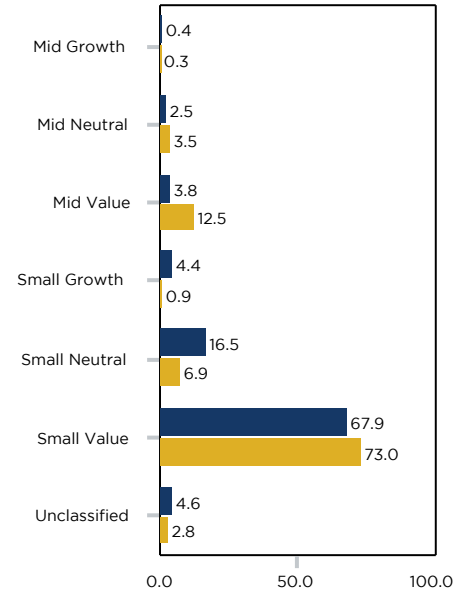
Index: Russell 2000 Value Index

Report Date: 06/30/2020

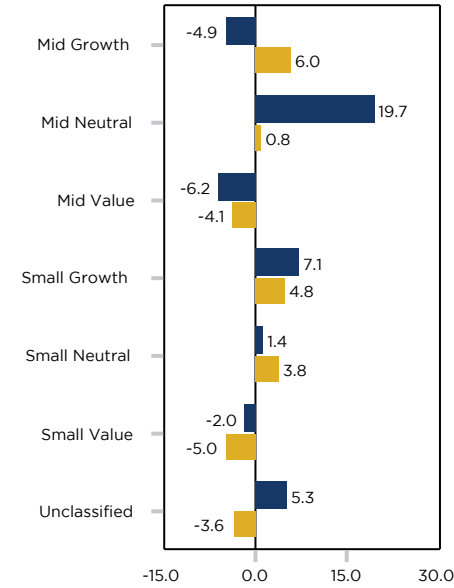
## Performance | 1 Year



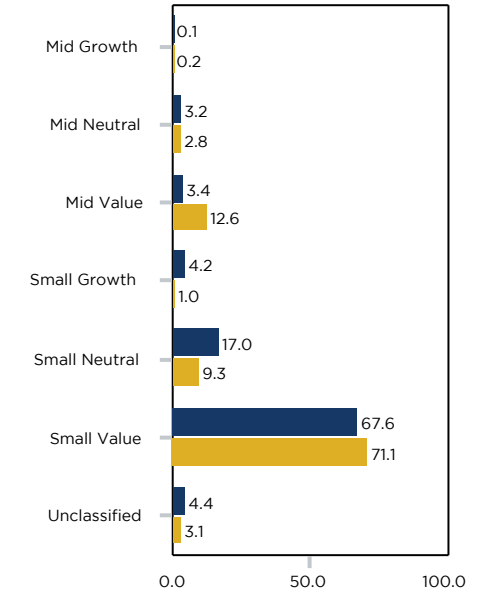
## Allocation | 1 Year



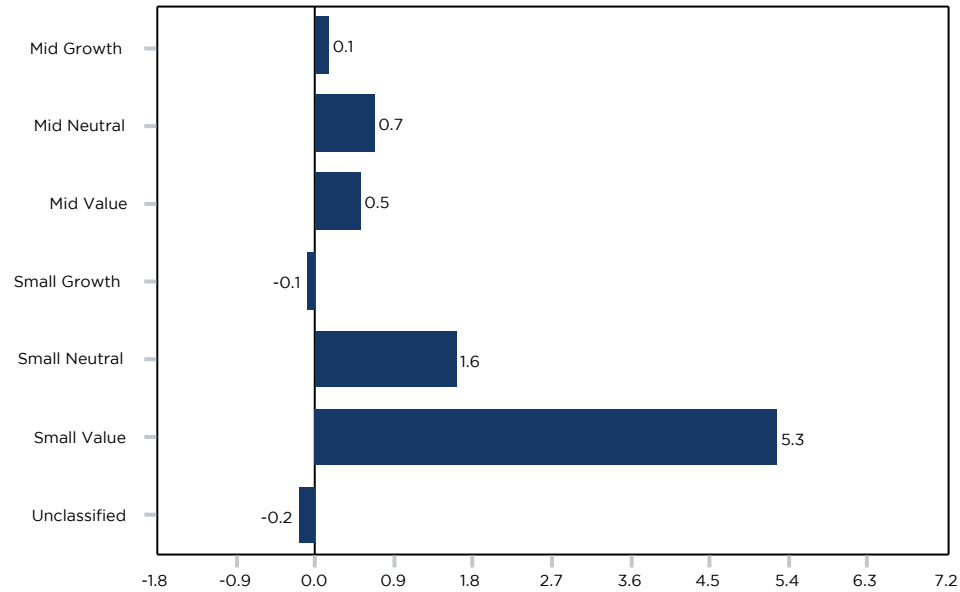
## Performance | 3 Years



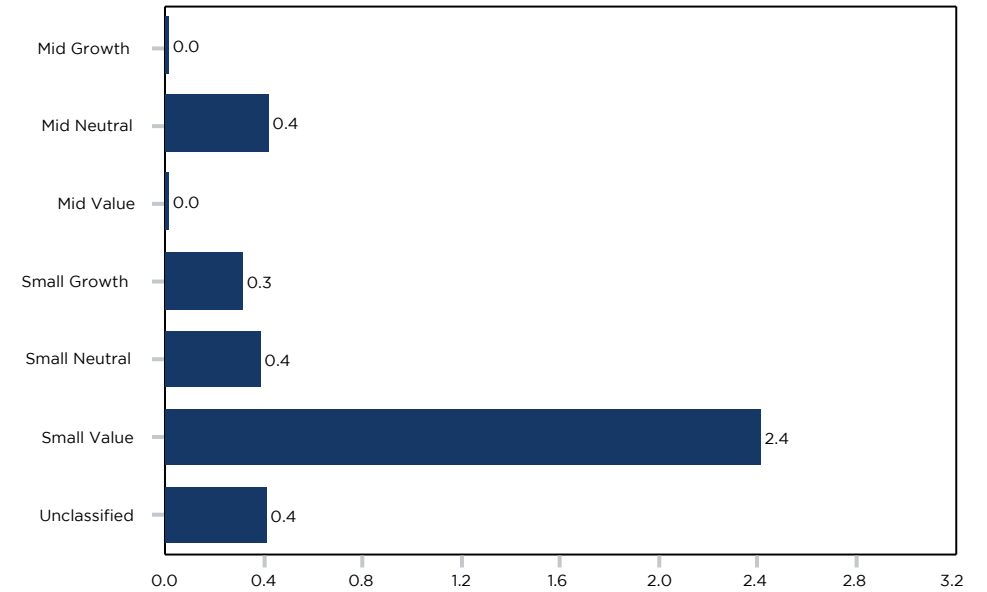
## Allocation | 3 Years



## 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: 06/30/2020

## Trailing Performance

|            | 1 Quarter  | Year to Date | 1 Year     | 3 Years   | 5 Years   | 10 Years   | 2019       | 2018        | 2017       | 2016       |
|------------|------------|--------------|------------|-----------|-----------|------------|------------|-------------|------------|------------|
| Manager    | 25.45 (28) | -12.87 (19)  | -6.48 (18) | 2.14 (18) | 4.46 (18) | 10.67 (18) | 25.53 (36) | -10.84 (32) | 14.83 (25) | 21.58 (40) |
| Benchmark  | 25.42      | -12.98       | -6.63      | 2.01      | 4.29      | 10.50      | 25.53      | -11.01      | 14.65      | 21.31      |
| Peer Group | 24.06      | -16.48       | -10.65     | 0.11      | 3.06      | 9.70       | 24.69      | -11.76      | 13.31      | 20.86      |
| Population | 957        | 952          | 937        | 895       | 804       | 669        | 967        | 1,081       | 1,070      | 1,064      |

## Fund Information

|                     |                          |
|---------------------|--------------------------|
| Fund Inception      | 10/01/2002               |
| Fund Assets         | 2,869 Million            |
| Portfolio Assets    | 2,115 Million            |
| Total # of Holdings | 1938                     |
| % in Top 10         | 4.17 %                   |
| PM                  | Campagna,P/Liao,L/Tran,D |
| PM Tenure           | 14 Years 10 Months       |
| Turnover            | 32.00 %                  |
| Gross Expense (%)   | 0.06 %                   |
| Net Expense (%)     | 0.06 %                   |
| New Investors       | Open                     |

## Portfolio Characteristics

|                           | Portfolio | Benchmark |
|---------------------------|-----------|-----------|
| Wtd. Avg. Mkt. Cap (\$M)  | 2,731     | 2,099     |
| Median Mkt. Cap (\$M)     | 640       | 631       |
| Price/Earnings ratio      | 17.6      | 16.6      |
| Price/Book ratio          | 2.9       | 2.7       |
| 5 Yr. EPS Growth Rate (%) | 11.5      | 9.1       |
| Current Yield (%)         | 1.3       | 1.4       |
| Beta (5 Years, Monthly)   | 1.00      | 1.00      |
| Number of Stocks          | 1,926     | 2,005     |
| Debt to Equity (%)        | 132.7     | 111.1     |
| Forecast P/E              | 19.6      | 18.5      |
| Forecast EPS Growth       | 11.5      | 9.9       |
| Return on Equity (%)      | -3.3      | -2.9      |

## Country/Region Allocation

|                  |              |              |
|------------------|--------------|--------------|
| United States    | 97.6         | 97.3         |
| Non-US Developed | 1.8          | 2.2          |
| Emerging Markets | 0.3          | 0.4          |
| Other            | 0.4          | 0.1          |
| <b>Total</b>     | <b>100.0</b> | <b>100.0</b> |

## Fund Statistics

|                               | 3 Years | 10 Years |
|-------------------------------|---------|----------|
| Standard Deviation            | 22.57   | 18.48    |
| <b>vs. Russell 2000 Index</b> |         |          |
| Beta                          | 1.00    | 1.00     |
| Alpha                         | 0.13    | 0.17     |
| Information Ratio             | 1.22    | 1.31     |
| Tracking Error                | 0.10    | 0.11     |
| R-Squared                     | 1.00    | 1.00     |
| Up Market Capture             | 100.10  | 100.20   |
| Down Market Capture           | 99.66   | 99.54    |
| Consistency                   | 66.67   | 67.50    |

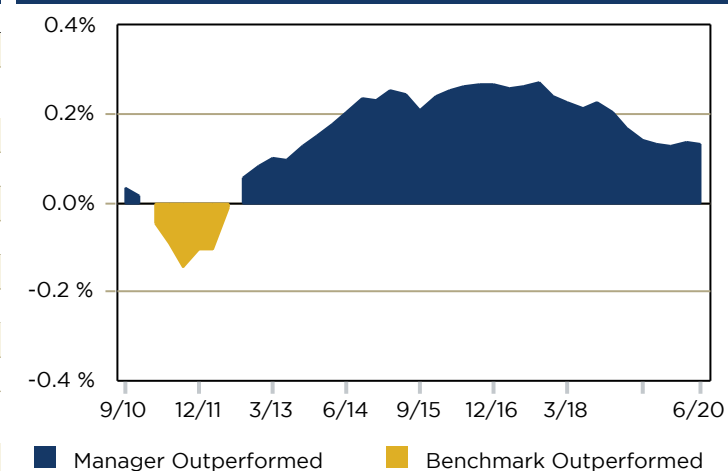
## vs. Risk Free

|              |      |      |
|--------------|------|------|
| Sharpe Ratio | 0.13 | 0.61 |
|--------------|------|------|

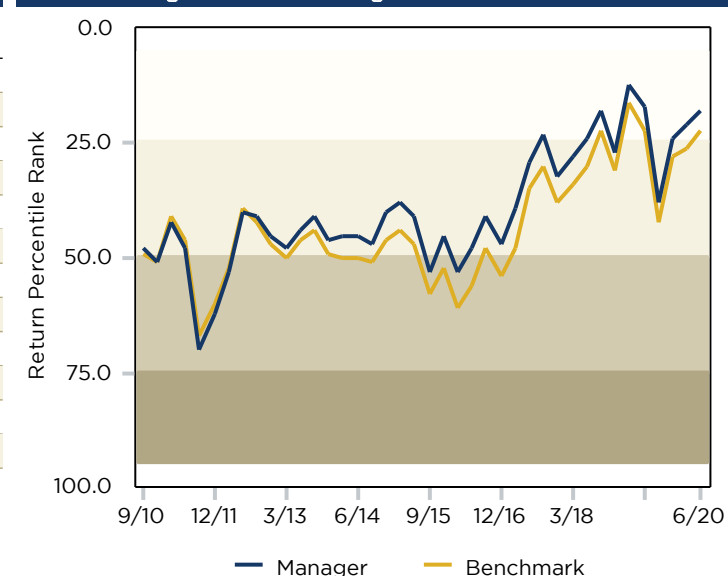
## Sector Allocation

| Sector                 | Portfolio Weight (%) | Benchmark Weight (%) |
|------------------------|----------------------|----------------------|
| Communication Services | 2.1                  | 2.5                  |
| Consumer Discretionary | 11.4                 | 11.8                 |
| Consumer Staples       | 3.3                  | 3.3                  |
| Energy                 | 1.9                  | 2.3                  |
| Financials             | 14.7                 | 16.3                 |
| Health Care            | 22.3                 | 20.6                 |
| Industrials            | 15.3                 | 14.5                 |
| Information Technology | 14.9                 | 13.9                 |
| Materials              | 3.4                  | 4.0                  |
| Real Estate            | 6.8                  | 7.1                  |
| Utilities              | 3.4                  | 3.6                  |
| <b>Total</b>           | <b>99.6</b>          | <b>100.0</b>         |

## 3 Years Rolling Excess Performance



## 3 Years Rolling Percentile Ranking



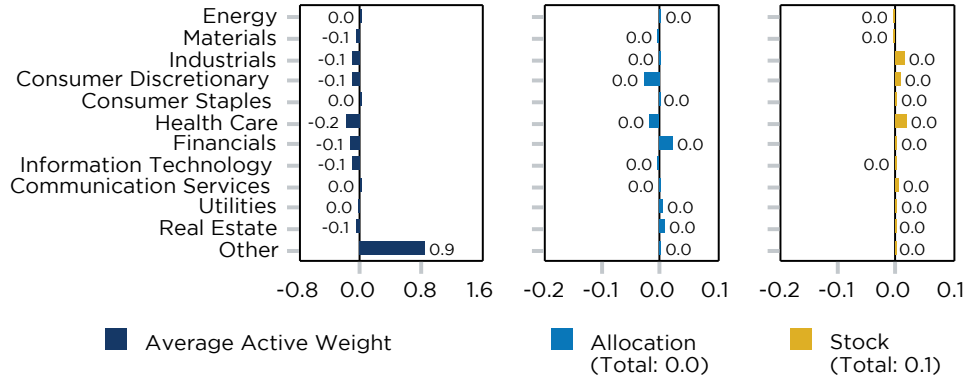


# TIAA-CREF Small-Cap Blend Idx Inst (TISBX)

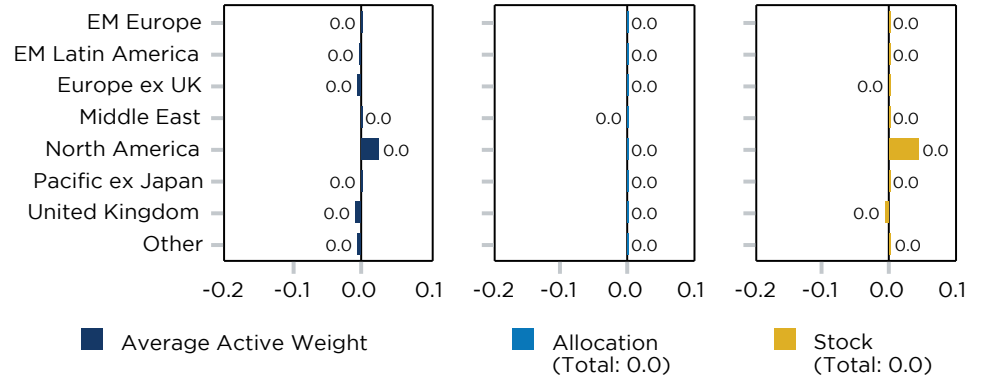
Index: Russell 2000 Index

Report Date: 06/30/2020

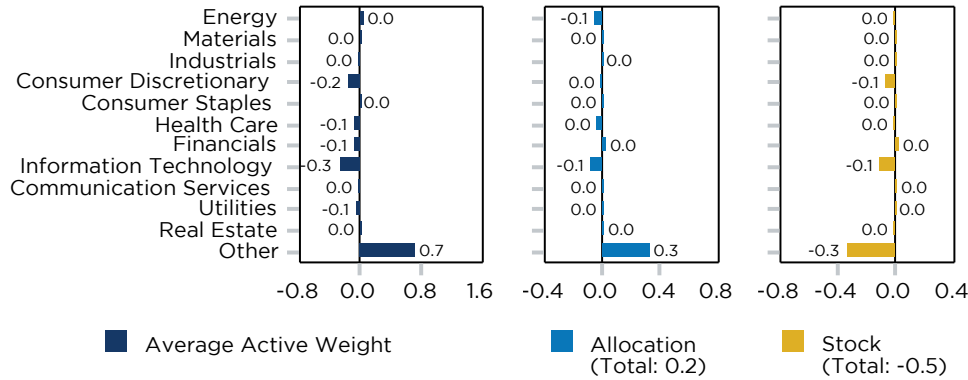
## 1 Quarter Sector Attribution



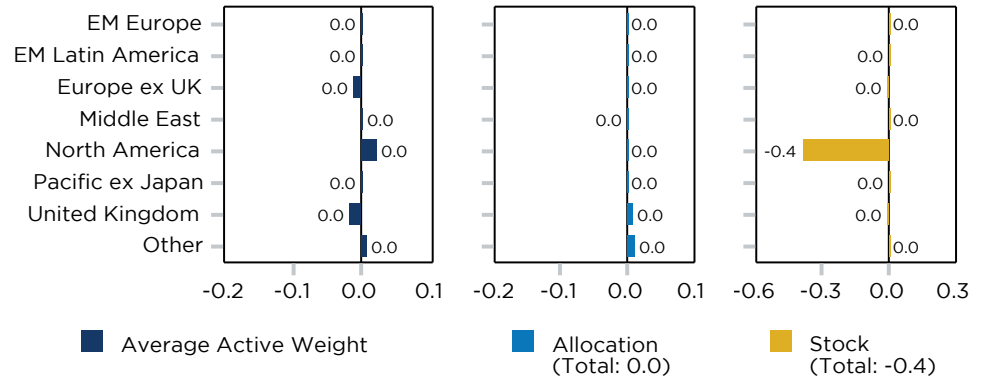
## 1 Quarter Region Attribution



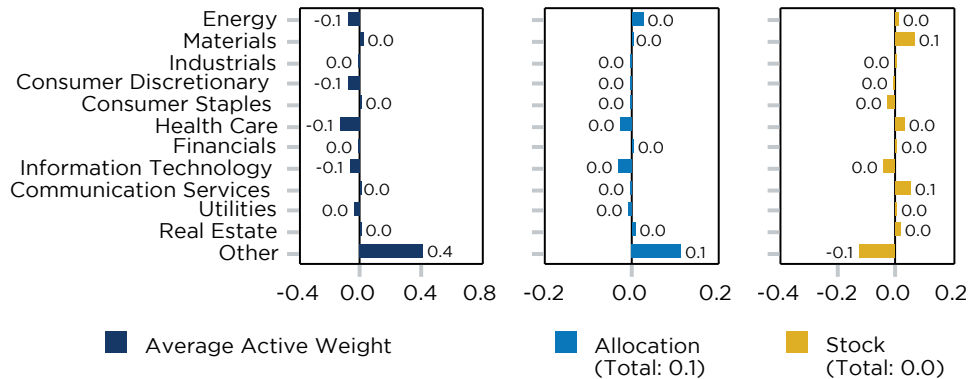
## 1 Year Sector Attribution



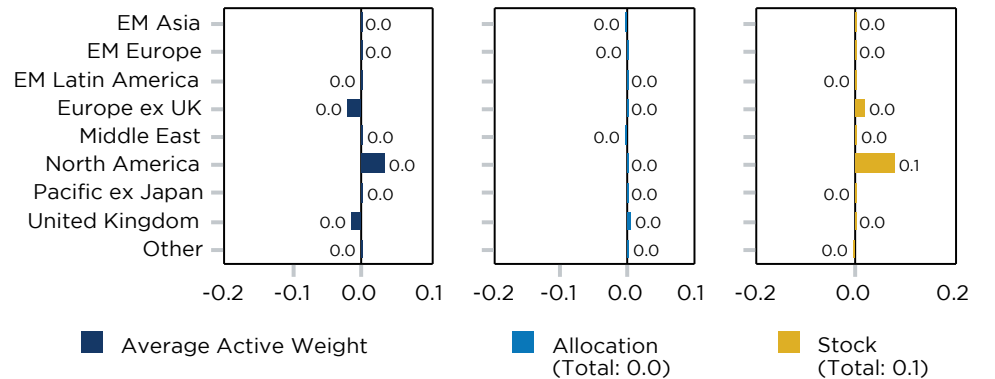
## 1 Year Region Attribution



## 3 Years Sector Attribution



## 3 Years Region Attribution







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

Index: Russell 2000 Index

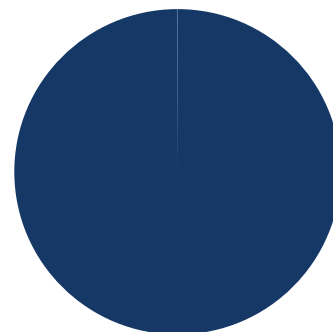
Report Date: 06/30/2020

## Top Ten Securities

|                          |              |
|--------------------------|--------------|
| Teladoc Health Inc       | 0.7 %        |
| iShares Russell 2000 ETF | 0.4 %        |
| Chegg Inc                | 0.4 %        |
| Trex Co Inc              | 0.4 %        |
| Immunomedics Inc         | 0.4 %        |
| Repligen Corp            | 0.4 %        |
| Generac Holdings Inc     | 0.4 %        |
| Quidel Corp              | 0.4 %        |
| Five9 Inc                | 0.4 %        |
| Amedisys Inc             | 0.3 %        |
| <b>Total</b>             | <b>4.2 %</b> |

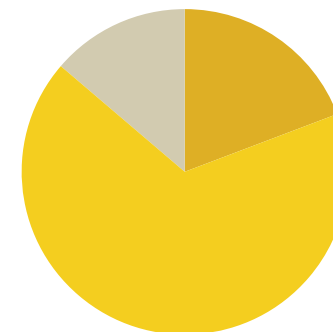
## Asset Allocation

- 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 (%) |
|--------------------|----------------------|----------------------|---------------------------|----------------------|
| Quidel Corp        | 0.24                 | 0.24                 | 0.00                      | 128.75               |
| Chegg Inc          | 0.29                 | 0.29                 | 0.00                      | 87.98                |
| Trex Co Inc        | 0.32                 | 0.32                 | 0.00                      | 62.30                |
| Teladoc Health Inc | 0.77                 | 0.77                 | 0.00                      | 23.11                |
| RH                 | 0.12                 | 0.12                 | 0.00                      | 147.74               |
| Redfin Corp        | 0.10                 | 0.10                 | 0.00                      | 171.79               |
| Livongo Health Inc | 0.10                 | 0.10                 | 0.00                      | 163.55               |
| Novavax Inc        | 0.03                 | 0.03                 | 0.00                      | 513.77               |
| MyoKardia Inc      | 0.14                 | 0.14                 | 0.00                      | 106.10               |
| Immunomedics Inc   | 0.17                 | 0.18                 | -0.01                     | 162.91               |

## Top Ten Contributors | 3 Years

|                            | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|----------------------------|----------------------|----------------------|---------------------------|----------------------|
| Advanced Micro Devices Inc | 0.49                 | 0.00                 | 0.29                      | 61.54                |
| Arena Pharmaceuticals Inc  | 0.22                 | 0.03                 | 0.10                      | 55.11                |
| Take-Two Interactive       | 0.37                 | 0.00                 | 0.08                      | 23.90                |
| Teledyne Technologies      | 0.23                 | 0.00                 | 0.07                      | 34.55                |
| Fair Isaac Corp            | 0.23                 | 0.22                 | 0.00                      | 44.20                |
| EPAM Systems Inc           | 0.21                 | 0.21                 | 0.00                      | 44.18                |
| Insulet Corp               | 0.15                 | 0.15                 | 0.00                      | 55.86                |
| Paycom Software Inc        | 0.16                 | 0.17                 | -0.01                     | 65.43                |
| Etsy Inc                   | 0.08                 | 0.09                 | -0.01                     | 92.04                |
| RingCentral Inc            | 0.11                 | 0.12                 | -0.01                     | 98.30                |

## Top Ten Detractors | 1 Quarter

|                              | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|------------------------------|----------------------|----------------------|---------------------------|----------------------|
| eHealth Inc                  | 0.22                 | 0.22                 | 0.00                      | -30.24               |
| NovoCure Ltd                 | 0.40                 | 0.40                 | 0.00                      | -11.94               |
| AMN Healthcare Services Inc. | 0.18                 | 0.18                 | 0.00                      | -21.74               |
| ProAssurance Corp            | 0.09                 | 0.09                 | 0.00                      | -41.93               |
| j2 Global Inc                | 0.24                 | 0.24                 | 0.00                      | -15.55               |
| Hertz Global Holdings Inc    | 0.04                 | 0.04                 | 0.00                      | -77.18               |
| ForeScout Technologies Inc   | 0.09                 | 0.09                 | 0.00                      | -32.89               |
| Haemonetics Corp             | 0.34                 | 0.35                 | 0.00                      | -10.13               |
| Portland Gen. Elec. Co.      | 0.29                 | 0.30                 | 0.00                      | -11.98               |
| Genworth Financial Inc       | 0.11                 | 0.12                 | 0.01                      | -30.42               |

## Top Ten Detractors | 3 Years

|                                   | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|-----------------------------------|----------------------|----------------------|---------------------------|----------------------|
| Chemours Co (The)                 | 0.36                 | 0.00                 | -0.09                     | -23.26               |
| Olin Corp                         | 0.26                 | 0.00                 | -0.07                     | -24.94               |
| Tenneco Inc                       | 0.16                 | 0.16                 | 0.00                      | -48.58               |
| Dean Foods Co                     | 0.08                 | 0.08                 | 0.00                      | -82.96               |
| Puma Biotechnology Inc            | 0.13                 | 0.13                 | 0.00                      | -50.77               |
| Dave & Buster's Entertainment Inc | 0.13                 | 0.14                 | 0.00                      | -41.07               |
| Callon Petroleum Co/DE            | 0.10                 | 0.11                 | 0.01                      | -52.32               |
| U S Silica Holdings Inc           | 0.14                 | 0.15                 | 0.01                      | -52.37               |
| McDermott International Inc.      | 0.09                 | 0.10                 | 0.01                      | -85.04               |
| Clovis Oncology Inc               | 0.18                 | 0.21                 | 0.02                      | -58.38               |

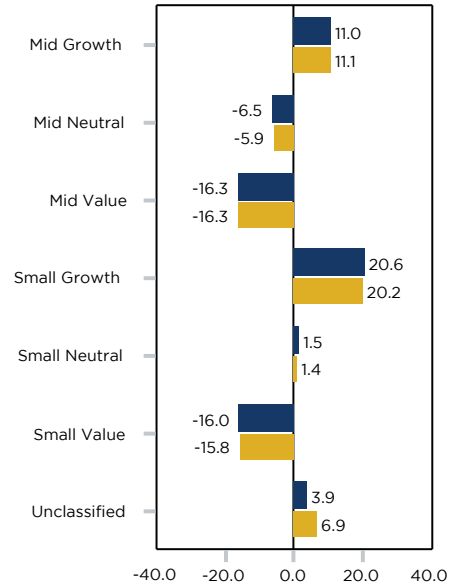


# TIAA-CREF Small-Cap Blend Idx Inst (TISBX)

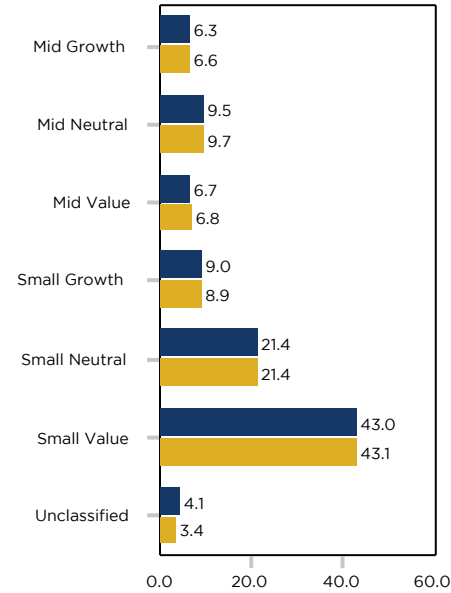
Index: Russell 2000 Index

Report Date: 06/30/2020

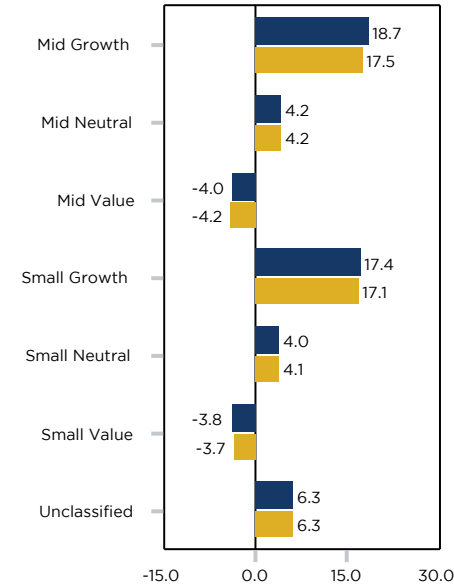
## Performance | 1 Year



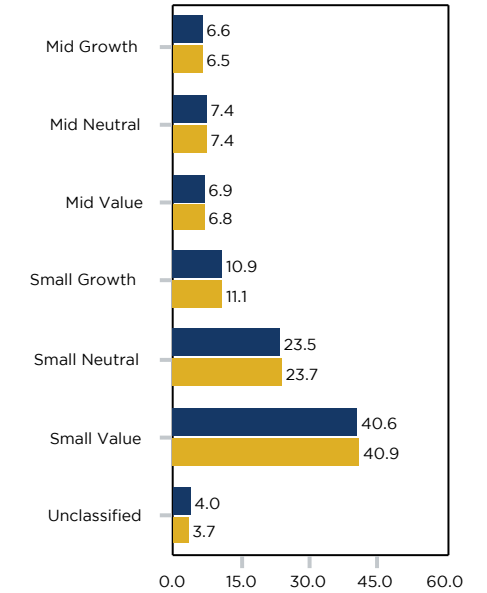
## Allocation | 1 Year



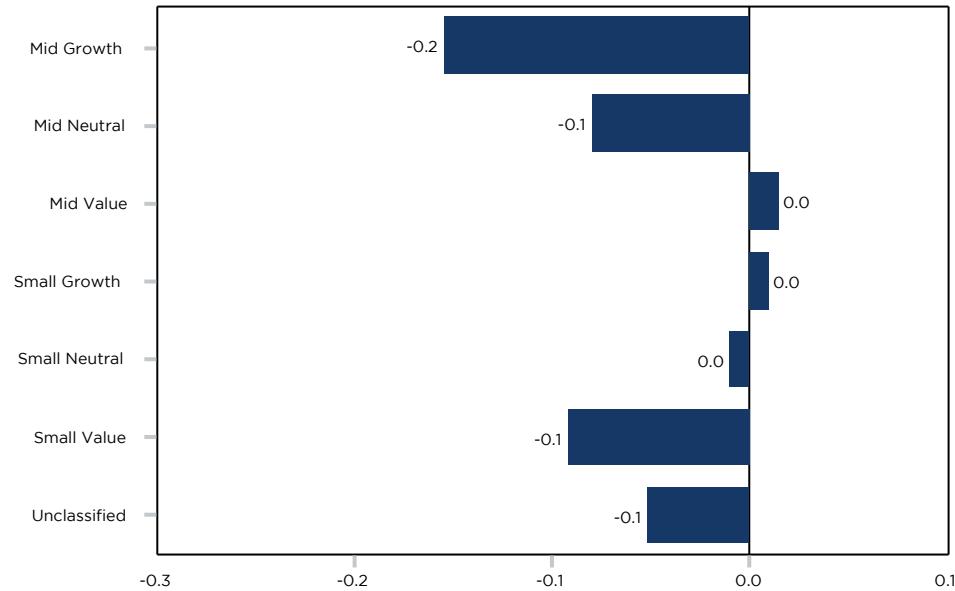
## Performance | 3 Years



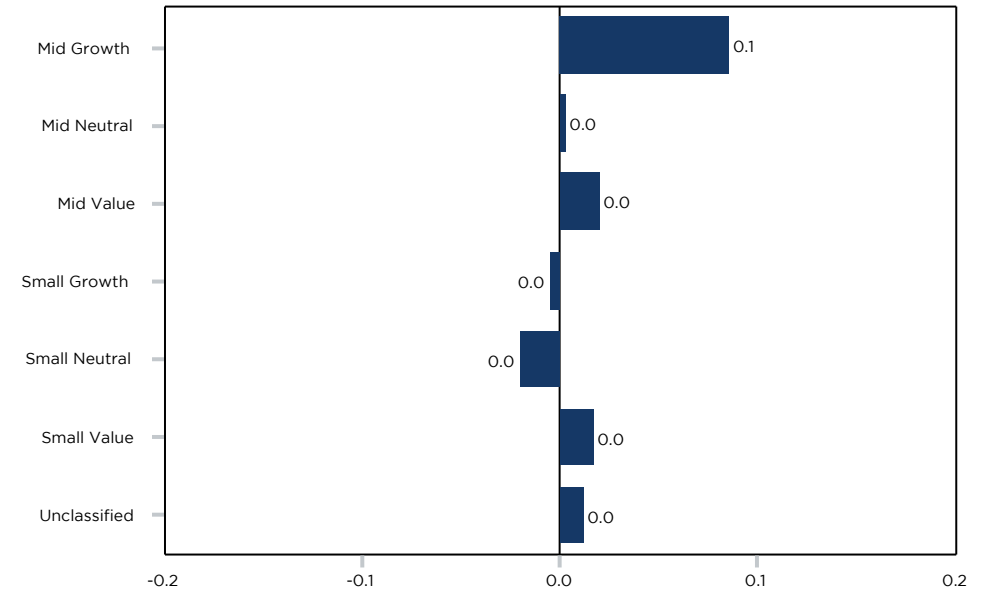
## Allocation | 3 Years



## Total Attribution | 1 Year



## Total Attribution | 3 Years



## Trailing Performance

|            | 1 Quarter  | Year to Date | 1 Year     | 3 Years    | 5 Years   | 10 Years  | 2019       | 2018       | 2017      | 2016      |
|------------|------------|--------------|------------|------------|-----------|-----------|------------|------------|-----------|-----------|
| Manager    | 37.07 (21) | 10.82 (14)   | 15.58 (11) | 20.18 (11) | 14.11 (8) | 17.76 (3) | 36.11 (16) | -0.67 (19) | 34.91 (6) | 6.80 (78) |
| Benchmark  | 30.58      | -3.06        | 3.48       | 7.86       | 6.86      | 12.92     | 28.48      | -9.31      | 22.17     | 11.32     |
| Peer Group | 31.68      | -0.29        | 4.20       | 9.25       | 8.43      | 13.25     | 28.13      | -5.81      | 21.93     | 10.76     |
| Population | 802        | 800          | 780        | 745        | 720       | 639       | 797        | 921        | 859       | 887       |

## Fund Information

|                     |                   |
|---------------------|-------------------|
| Fund Inception      | 03/01/2005        |
| Fund Assets         | 2,933 Million     |
| Portfolio Assets    | 583 Million       |
| Total # of Holdings | 112               |
| % in Top 10         | 15.16 %           |
| PM                  | Team Managed      |
| PM Tenure           | 19 Years 6 Months |
| Turnover            | 70.00 %           |
| Gross Expense (%)   | 0.91 %            |
| Net Expense (%)     | 0.91 %            |
| New Investors       | Open              |

## Portfolio Characteristics

|                           | Portfolio | Benchmark |
|---------------------------|-----------|-----------|
| Wtd. Avg. Mkt. Cap (\$M)  | 5,265     | 2,491     |
| Median Mkt. Cap (\$M)     | 4,142     | 880       |
| Price/Earnings ratio      | 34.3      | 28.1      |
| Price/Book ratio          | 5.4       | 4.4       |
| 5 Yr. EPS Growth Rate (%) | 11.8      | 13.2      |
| Current Yield (%)         | 0.2       | 0.5       |
| Beta (5 Years, Monthly)   | 1.01      | 1.00      |
| Number of Stocks          | 109       | 1,081     |
| Debt to Equity (%)        | 67.0      | 151.8     |
| Forecast P/E              | 37.6      | 26.4      |
| Forecast EPS Growth       | 20.4      | 13.3      |
| Return on Equity (%)      | -4.1      | -0.4      |

## Country/Region Allocation

|                  |              |              |
|------------------|--------------|--------------|
| United States    | 97.6         | 97.9         |
| Non-US Developed | 1.8          | 1.7          |
| Emerging Markets | 0.5          | 0.3          |
| Other            | 0.1          | 0.0          |
| <b>Total</b>     | <b>100.0</b> | <b>100.0</b> |

## Fund Statistics

|                                      | 3 Years | 10 Years |
|--------------------------------------|---------|----------|
| Standard Deviation                   | 23.23   | 19.67    |
| <b>vs. Russell 2000 Growth Index</b> |         |          |
| Beta                                 | 1.00    | 1.00     |
| Alpha                                | 11.57   | 4.48     |
| Information Ratio                    | 2.10    | 0.86     |
| Tracking Error                       | 5.22    | 5.08     |
| R-Squared                            | 0.95    | 0.93     |
| Up Market Capture                    | 121.25  | 106.89   |
| Down Market Capture                  | 83.99   | 88.95    |
| Consistency                          | 77.78   | 56.67    |

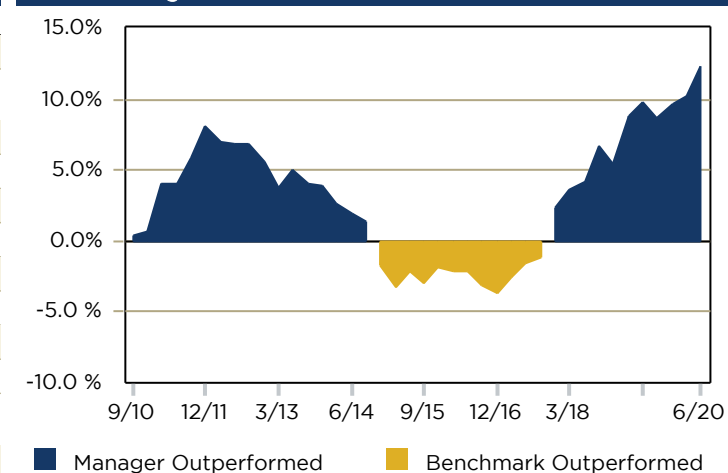
## vs. Risk Free

|              |      |      |
|--------------|------|------|
| Sharpe Ratio | 0.83 | 0.90 |
|--------------|------|------|

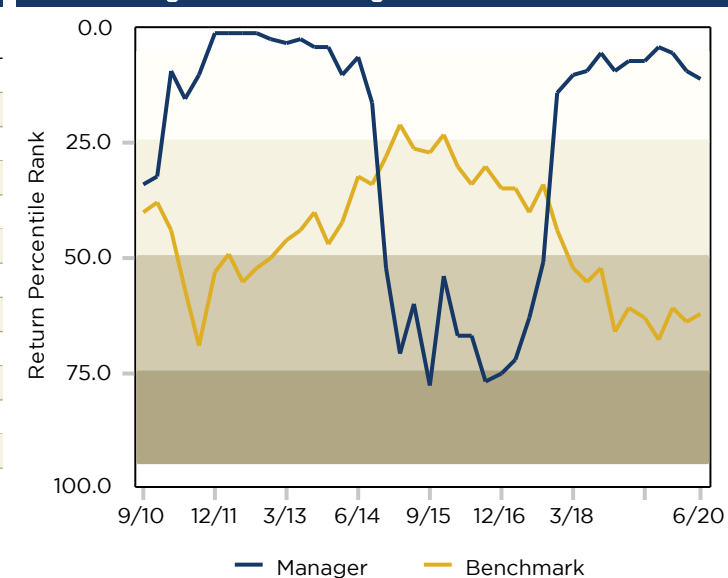
## Sector Allocation

| Sector                 | Portfolio Weight (%) | Benchmark Weight (%) |
|------------------------|----------------------|----------------------|
| Communication Services | 0.0                  | 2.6                  |
| Consumer Discretionary | 14.0                 | 12.6                 |
| Consumer Staples       | 2.9                  | 3.2                  |
| Energy                 | 0.0                  | 0.2                  |
| Financials             | 7.8                  | 4.3                  |
| Health Care            | 29.2                 | 34.4                 |
| Industrials            | 18.3                 | 13.0                 |
| Information Technology | 24.7                 | 21.2                 |
| Materials              | 0.8                  | 2.7                  |
| Real Estate            | 0.7                  | 3.8                  |
| Utilities              | 0.0                  | 1.9                  |
| <b>Total</b>           | <b>98.4</b>          | <b>100.0</b>         |

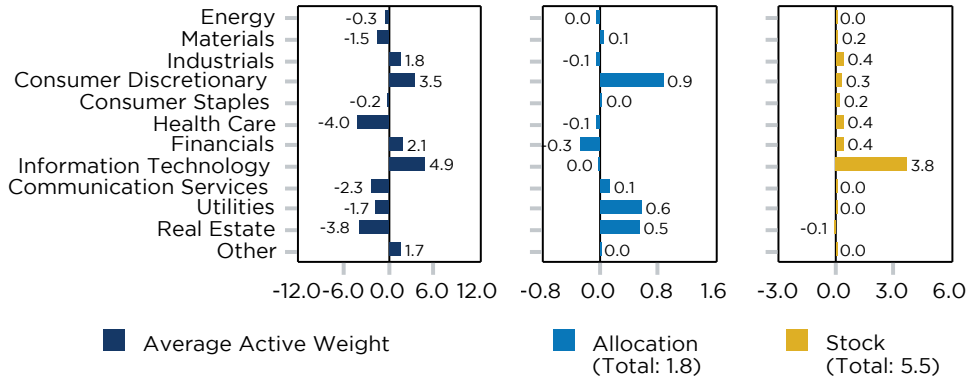
## 3 Years Rolling Excess Performance



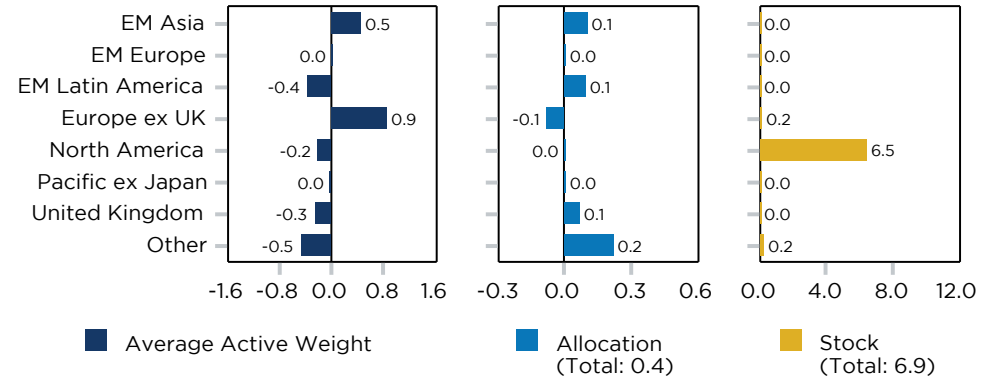
## 3 Years Rolling Percentile Ranking



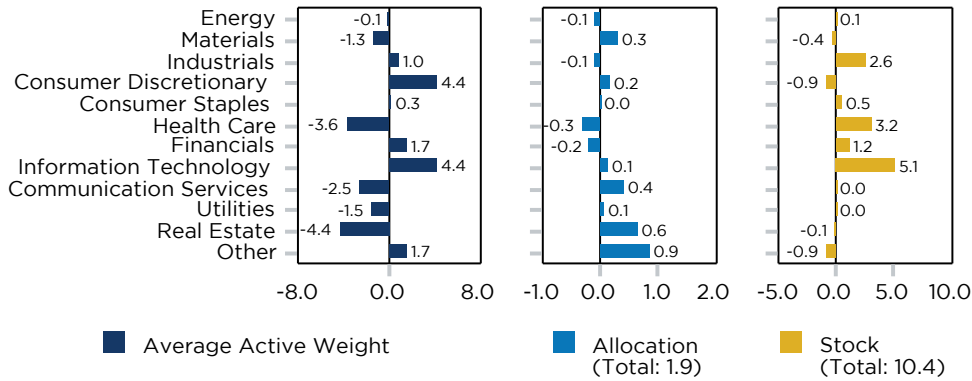
## 1 Quarter Sector Attribution



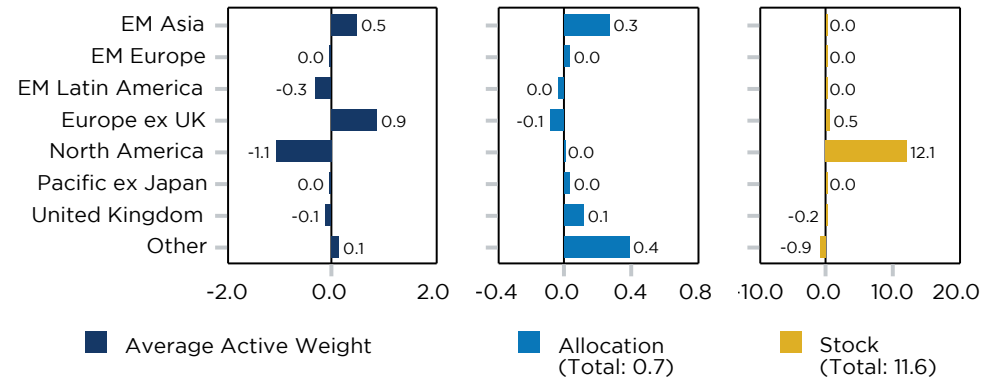
## 1 Quarter Region Attribution



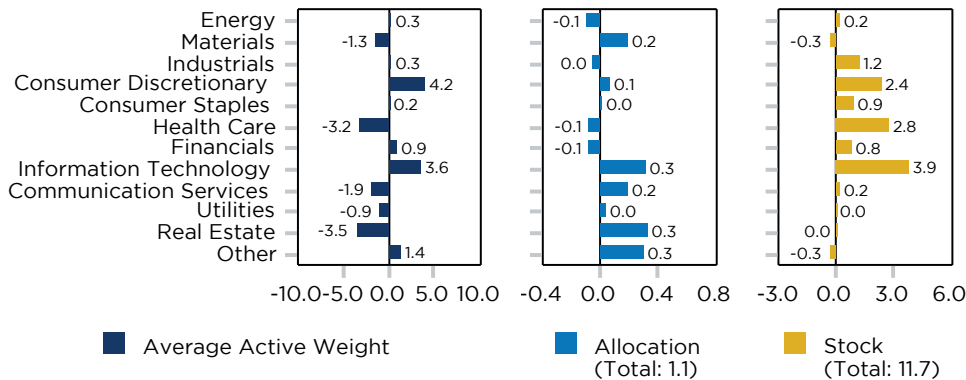
## 1 Year Sector Attribution



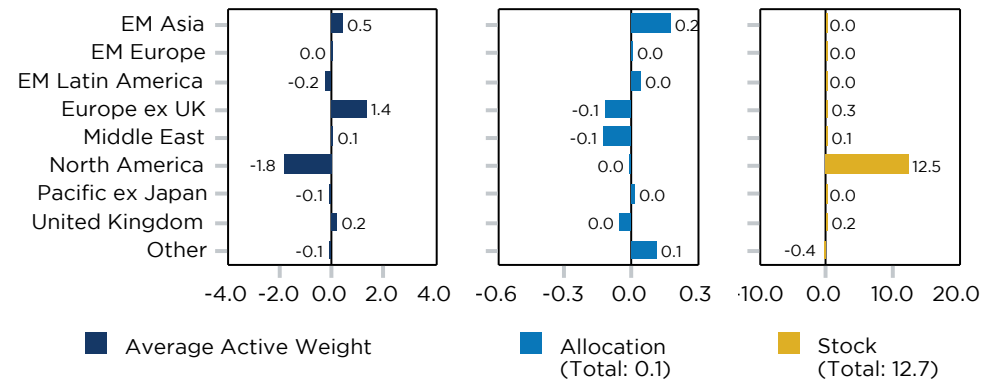
## 1 Year Region Attribution



## 3 Years Sector Attribution



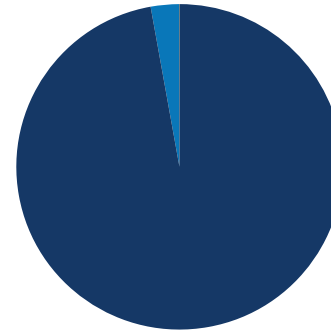
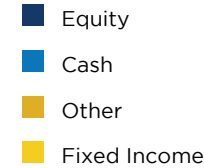
## 3 Years Region Attribution



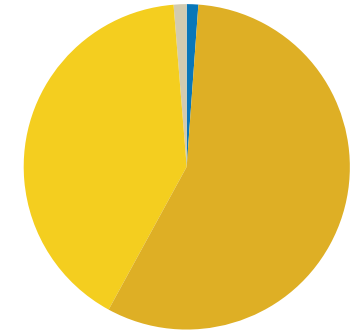
## Top Ten Securities

|                                 |               |
|---------------------------------|---------------|
| Lattice Semiconductor Corp      | 1.6 %         |
| Strategic Education Inc         | 1.6 %         |
| Freshpet Inc                    | 1.5 %         |
| iShares Russell 2000 Growth ETF | 1.5 %         |
| Five9 Inc                       | 1.5 %         |
| Chegg Inc                       | 1.5 %         |
| iRhythm Technologies Inc        | 1.5 %         |
| SiteOne Landscape Supply Inc    | 1.5 %         |
| Novanta Inc                     | 1.5 %         |
| Tetra Tech Inc                  | 1.4 %         |
| <b>Total</b>                    | <b>15.2 %</b> |

## Asset Allocation



## Market Capitalization



## Top Ten Contributors | 1 Quarter

|  | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|--|----------------------|----------------------|---------------------------|----------------------|
| Chegg Inc                              | 1.74                 | 0.53                 | 0.69                      | 87.98                |
| Sleep Number Corp                      | 0.79                 | 0.06                 | 0.63                      | 117.33               |
| Ollie's Bargain Outlet Holdings        | 0.77                 | 0.00                 | 0.62                      | 110.73               |
| Avalara Inc                            | 1.21                 | 0.00                 | 0.58                      | 78.40                |
| Wingstop Inc                           | 1.51                 | 0.27                 | 0.54                      | 74.52                |
| Biohaven Pharmaceutical Holding Co Ltd | 0.68                 | 0.18                 | 0.42                      | 114.84               |
| Trupanion Inc                          | 1.33                 | 0.09                 | 0.41                      | 64.00                |
| Lattice Semiconductor Corp             | 1.51                 | 0.28                 | 0.35                      | 59.32                |
| Trex Co Inc                            | 1.50                 | 0.59                 | 0.29                      | 62.30                |
| Five9 Inc                              | 2.10                 | 0.57                 | 0.22                      | 44.74                |

## Top Ten Contributors | 3 Years

|                                 | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|---------------------------------|----------------------|----------------------|---------------------------|----------------------|
| Trade Desk Inc (The)            | 1.14                 | 0.09                 | 0.98                      | 100.93               |
| Freshpet Inc                    | 1.43                 | 0.04                 | 0.88                      | 71.45                |
| RingCentral Inc                 | 1.10                 | 0.23                 | 0.79                      | 98.30                |
| DexCom Inc                      | 0.93                 | 0.00                 | 0.64                      | 76.97                |
| Planet Fitness Inc              | 1.75                 | 0.20                 | 0.46                      | 37.42                |
| CoStar Group Inc                | 1.18                 | 0.00                 | 0.37                      | 39.18                |
| HubSpot Inc                     | 1.06                 | 0.23                 | 0.35                      | 50.55                |
| Teladoc Health Inc              | 0.61                 | 0.19                 | 0.29                      | 76.51                |
| Five Below Inc                  | 1.60                 | 0.27                 | 0.29                      | 29.38                |
| Ollie's Bargain Outlet Holdings | 1.39                 | 0.21                 | 0.28                      | 31.85                |

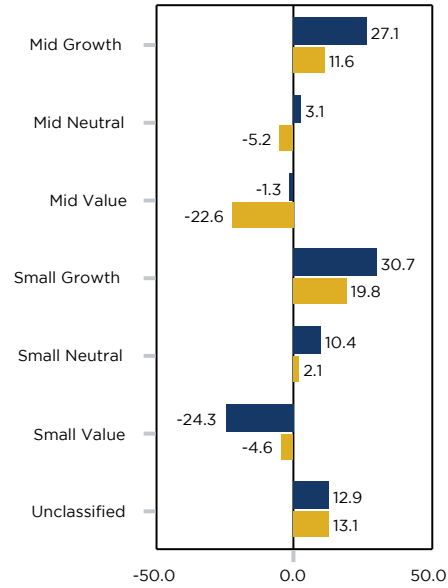
## Top Ten Detractors | 1 Quarter

|                                | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|--------------------------------|----------------------|----------------------|---------------------------|----------------------|
| eHealth Inc                    | 1.19                 | 0.40                 | -0.48                     | -30.24               |
| NextCure Inc                   | 0.59                 | 0.06                 | -0.39                     | -42.16               |
| Armstrong World Industries Inc | 0.98                 | 0.00                 | -0.32                     | -1.57                |
| Carlisle Cos Inc               | 0.84                 | 0.00                 | -0.29                     | -4.03                |
| Tactile Systems Technology Inc | 1.04                 | 0.09                 | -0.26                     | 3.16                 |
| Iovance Biotherapeutics Inc    | 0.92                 | 0.44                 | -0.19                     | -8.30                |
| Coherus BioSciences Inc        | 0.64                 | 0.05                 | -0.12                     | 10.11                |
| Onespaworld Holdings Ltd       | 0.32                 | 0.00                 | -0.04                     | 17.49                |
| Aerie Pharmaceuticals Inc      | 0.22                 | 0.07                 | -0.03                     | 9.33                 |
| United Rentals Inc.            | 0.12                 | 0.00                 | 0.02                      | 44.84                |

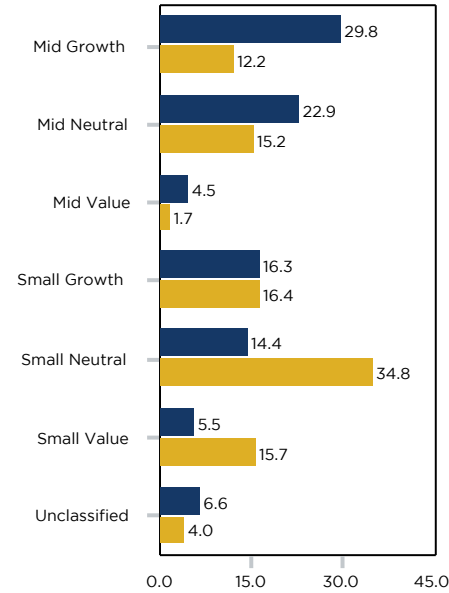
## Top Ten Detractors | 3 Years

|                                   | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|-----------------------------------|----------------------|----------------------|---------------------------|----------------------|
| Tile Shop Holdings Inc            | 1.10                 | 0.07                 | -0.69                     | -59.20               |
| Forum Energy Tech                 | 0.75                 | 0.00                 | -0.57                     | -67.65               |
| Clovis Oncology Inc               | 1.16                 | 0.41                 | -0.50                     | -58.38               |
| Dave & Buster's Entertainment Inc | 1.24                 | 0.29                 | -0.46                     | -41.07               |
| Akorn Inc                         | 0.51                 | 0.00                 | -0.45                     | -79.71               |
| Oil States International Inc.     | 0.79                 | 0.00                 | -0.41                     | -44.07               |
| Summit Materials Inc              | 1.35                 | 0.32                 | -0.26                     | -17.40               |
| DBV Technologies S.A.             | 0.44                 | 0.00                 | -0.26                     | -50.28               |
| Dycom Industries Inc.             | 1.08                 | 0.28                 | -0.25                     | -22.99               |
| Prothena Corp Plc                 | 0.61                 | 0.16                 | -0.23                     | -42.18               |

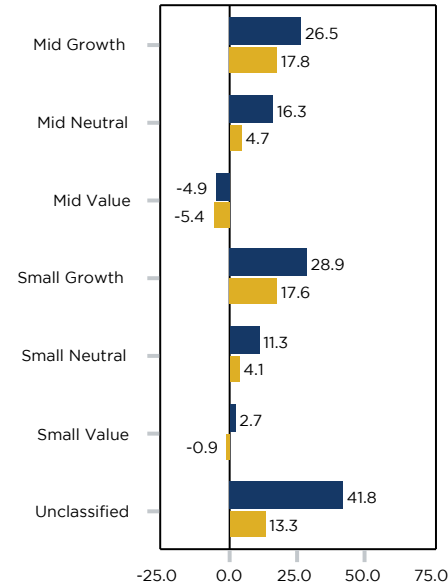
## Performance | 1 Year



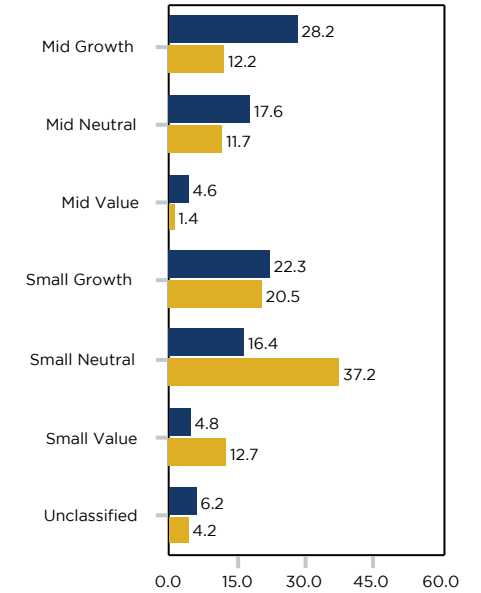
## Allocation | 1 Year



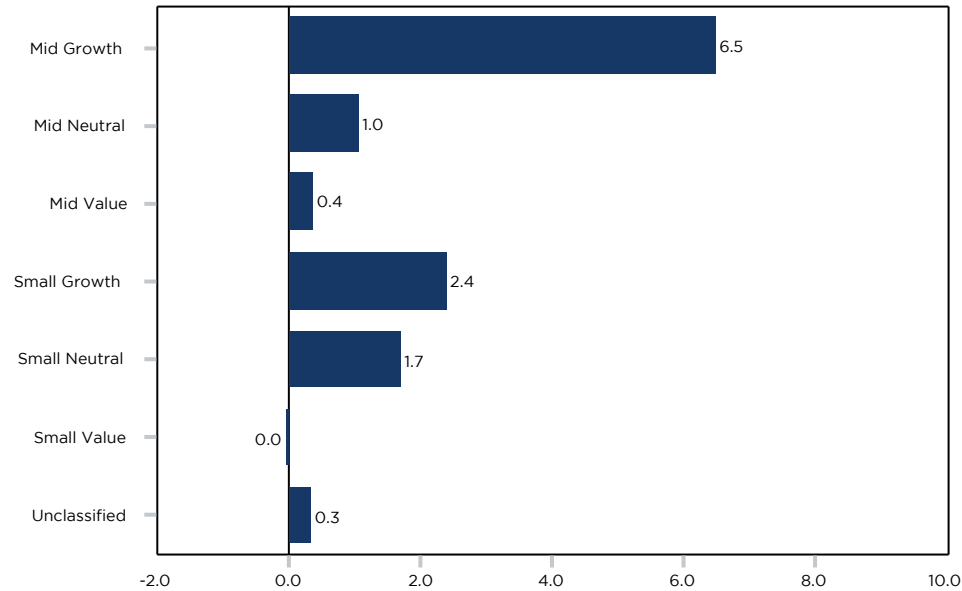
## Performance | 3 Years



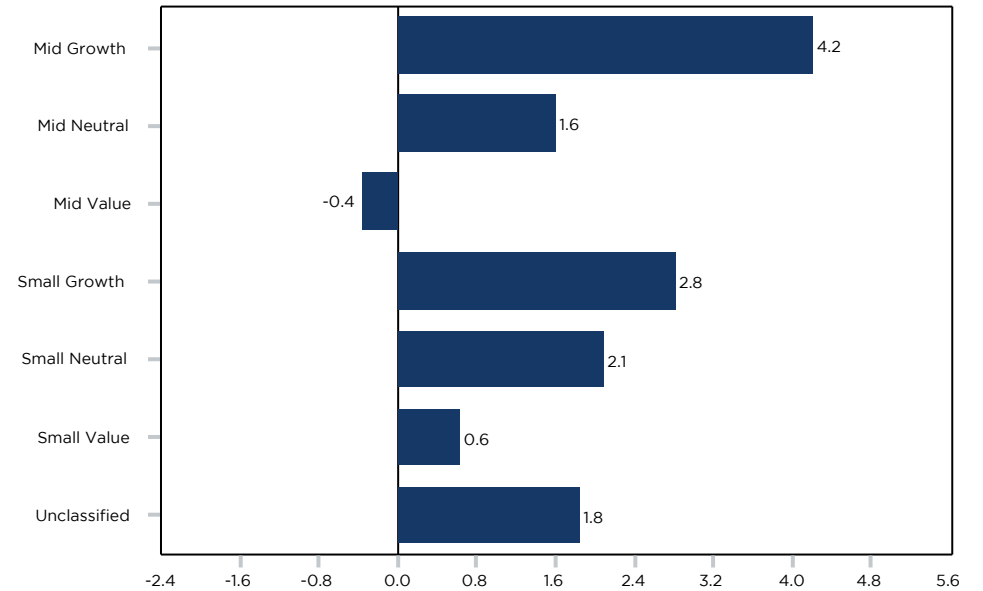
## Allocation | 3 Years



## Total Attribution | 1 Year



## Total Attribution | 3 Years





# CREF Global Equities R3 (QCGLIX)

Index: MSCI World Index  
 Category: World Large Stock  
 Report Date: 06/30/2020

## Trailing Performance

|            | 1 Quarter  | Year to Date | 1 Year    | 3 Years   | 5 Years   | 10 Years  | 2019       | 2018        | 2017       | 2016      |
|------------|------------|--------------|-----------|-----------|-----------|-----------|------------|-------------|------------|-----------|
| Manager    | 22.61 (25) | -4.01 (37)   | 5.19 (34) | 6.58 (40) | 6.29 (44) | 9.82 (38) | 28.28 (39) | -12.36 (77) | 24.81 (40) | 5.11 (55) |
| Benchmark  | 19.54      | -5.48        | 3.40      | 7.29      | 7.50      | 10.57     | 28.40      | -8.20       | 23.07      | 8.15      |
| Peer Group | 19.24      | -6.22        | 1.72      | 5.10      | 5.78      | 9.28      | 26.49      | -9.66       | 23.74      | 5.52      |
| Population | 1,364      | 1,320        | 1,080     | 987       | 870       | 617       | 1,096      | 1,261       | 1,126      | 1,127     |

## Fund Information

|                             |                     |
|-----------------------------|---------------------|
| Fund Inception              | 04-2015             |
| Fund Assets                 | 19,343 Million      |
| Portfolio Assets            | 9,515 Million       |
| Total # of Holdings         | 3209                |
| % Assets in Top 10 Holdings | 17.0 %              |
| PM                          | Franks,T/Tribolet,J |
| PM Tenure                   | 14 Years 1 Month    |
| Turnover                    | 67.0 %              |
| Gross Expense (%)           | 0.27 %              |
| Net Expense (%)             | 0.27 %              |
| New Investors               | Open                |

## Equity Characteristics

|                 |                  |
|-----------------|------------------|
| Avg. Market Cap | 77,294 (Million) |
| Price/Earnings  | 20               |
| Price/Book      | 2                |
| Dividend Yield  | 2.5 %            |

## Top Holdings (%)

|                                    |     |
|------------------------------------|-----|
| Microsoft Corp                     | 3.2 |
| Apple Inc                          | 2.7 |
| Amazon.com Inc                     | 2.6 |
| Tencent Holdings Ltd               | 1.3 |
| JPMorgan Chase & Co                | 1.3 |
| Alphabet Inc Class C               | 1.3 |
| Alibaba Group Holding Ltd ADR      | 1.2 |
| Taiwan Semiconductor Manufacturing | 1.2 |
| Roche Holding AG Dividend Right    | 1.1 |
| Facebook Inc A                     | 1.1 |

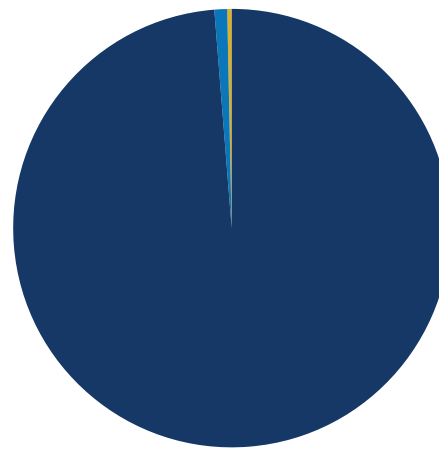
## Fund Statistics

|                             | 3 Years | 10 Years |
|-----------------------------|---------|----------|
| Standard Deviation          | 17.12   | 14.33    |
| <b>vs. MSCI World Index</b> |         |          |
| Beta                        | 1.06    | 1.03     |
| Alpha                       | -1.00   | -0.96    |
| Information Ratio           | -0.23   | -0.35    |
| Tracking Error              | 2.13    | 1.72     |
| R-Squared                   | 0.99    | 0.99     |
| Up Market Capture           | 103.87  | 100.76   |
| Down Market Capture         | 108.66  | 105.95   |
| Consistency                 | 47.22   | 49.17    |

## vs. Risk Free

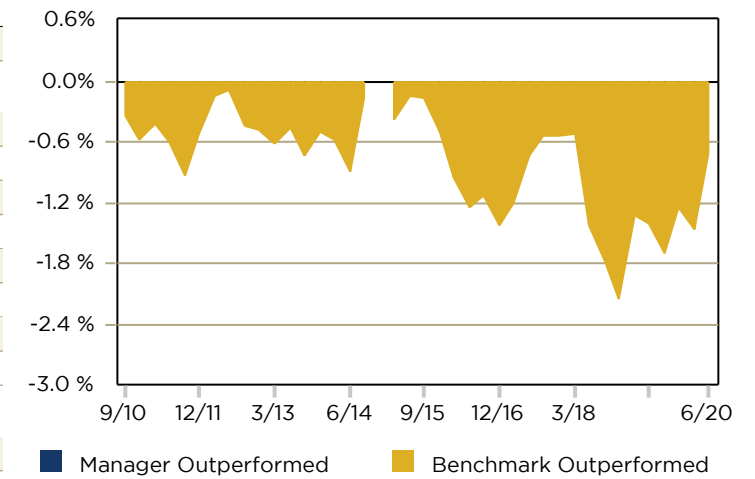
|              |      |      |
|--------------|------|------|
| Sharpe Ratio | 0.36 | 0.68 |
|--------------|------|------|

## Asset Allocation

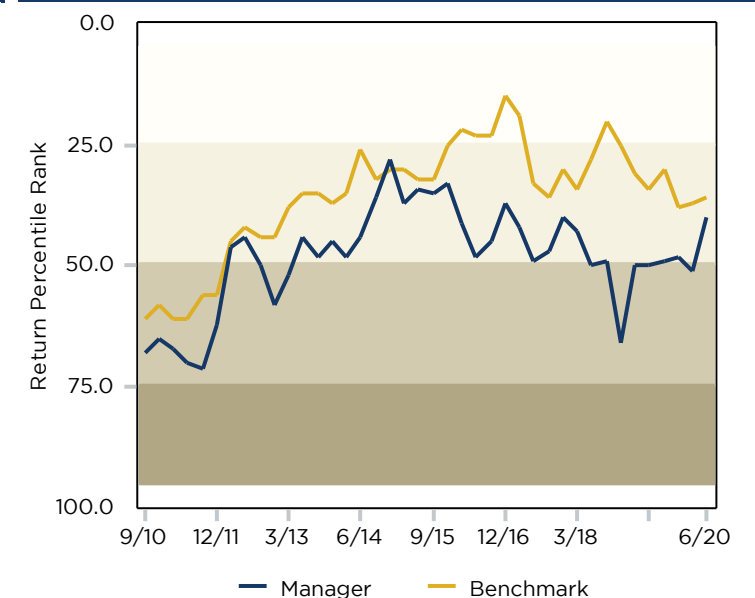


■ Equity    ■ Cash  
 ■ Fixed Income    ■ Other

## 3 Years Rolling Excess Performance



## 3 Years Rolling Percentile Ranking





# TIAA-CREF International Eq Idx Instl (TCIEX)

Index: MSCI EAFE (Net) Index  
 Category: Foreign Large Blend  
 Report Date: 06/30/2020

## Trailing Performance

|            | 1 Quarter  | Year to Date | 1 Year     | 3 Years   | 5 Years   | 10 Years  | 2019       | 2018        | 2017       | 2016      |
|------------|------------|--------------|------------|-----------|-----------|-----------|------------|-------------|------------|-----------|
| Manager    | 15.98 (63) | -10.71 (45)  | -4.65 (52) | 0.99 (41) | 2.25 (38) | 6.03 (25) | 21.79 (52) | -13.25 (17) | 25.32 (52) | 1.22 (49) |
| Benchmark  | 14.88      | -11.34       | -5.13      | 0.81      | 2.05      | 5.73      | 22.01      | -13.79      | 25.03      | 1.00      |
| Peer Group | 16.55      | -10.83       | -4.61      | 0.67      | 1.84      | 5.45      | 21.84      | -14.63      | 25.36      | 1.13      |
| Population | 1,159      | 1,153        | 1,128      | 1,003     | 876       | 686       | 1,145      | 1,195       | 1,143      | 1,147     |

## Fund Information

|                     |                          |
|---------------------|--------------------------|
| Fund Inception      | 10/01/2002               |
| Fund Assets         | 13,339 Million           |
| Portfolio Assets    | 7,722 Million            |
| Total # of Holdings | 935                      |
| % in Top 10         | 13.88 %                  |
| PM                  | Campagna,P/Liao,L/Tran,D |
| PM Tenure           | 14 Years 10 Months       |
| Turnover            | 10.00 %                  |
| Gross Expense (%)   | 0.06 %                   |
| Net Expense (%)     | 0.06 %                   |
| New Investors       | Open                     |

## Portfolio Characteristics

|                           | Portfolio | Benchmark |
|---------------------------|-----------|-----------|
| Wtd. Avg. Mkt. Cap (\$M)  | 68,934    | 62,559    |
| Median Mkt. Cap (\$M)     | 9,784     | 9,717     |
| Price/Earnings ratio      | 16.5      | 17.2      |
| Price/Book ratio          | 2.6       | 2.6       |
| 5 Yr. EPS Growth Rate (%) | 4.5       | 4.7       |
| Current Yield (%)         | 2.7       | 2.8       |
| Beta (5 Years, Monthly)   | 0.98      | 1.00      |
| Number of Stocks          | 905       | 902       |
| Debt to Equity (%)        | 104.7     | 105.4     |
| Forecast P/E              | 18.2      | 18.4      |
| Forecast EPS Growth       | 8.6       | 8.8       |
| Return on Equity (%)      | 3.3       | 3.3       |

## Country/Region Allocation

|                  |              |              |
|------------------|--------------|--------------|
| Non-US Developed | 99.7         | 99.7         |
| Emerging Markets | 0.1          | 0.1          |
| Other            | 0.3          | 0.3          |
| <b>Total</b>     | <b>100.0</b> | <b>100.0</b> |

## Fund Statistics

|                                  | 3 Years | 10 Years |
|----------------------------------|---------|----------|
| Standard Deviation               | 15.21   | 15.04    |
| <b>vs. MSCI EAFE (Net) Index</b> |         |          |
| Beta                             | 1.01    | 0.99     |
| Alpha                            | 0.20    | 0.33     |
| Information Ratio                | 0.12    | 0.15     |
| Tracking Error                   | 1.77    | 2.00     |
| R-Squared                        | 0.99    | 0.98     |
| Up Market Capture                | 100.28  | 100.01   |
| Down Market Capture              | 99.19   | 98.34    |
| Consistency                      | 47.22   | 51.67    |

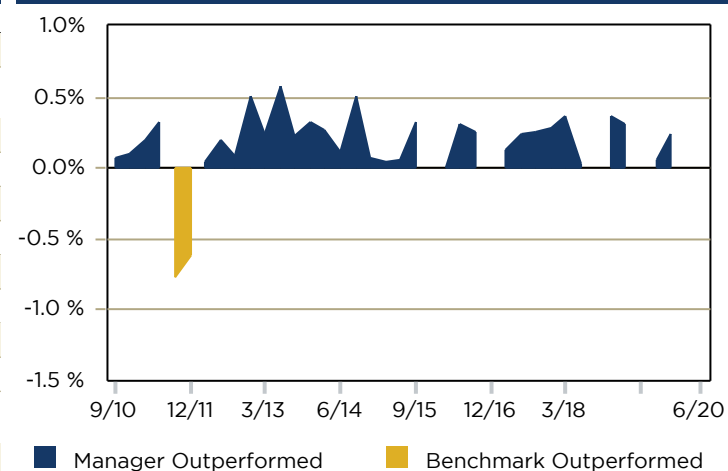
## vs. Risk Free

|              |      |      |
|--------------|------|------|
| Sharpe Ratio | 0.03 | 0.42 |
|--------------|------|------|

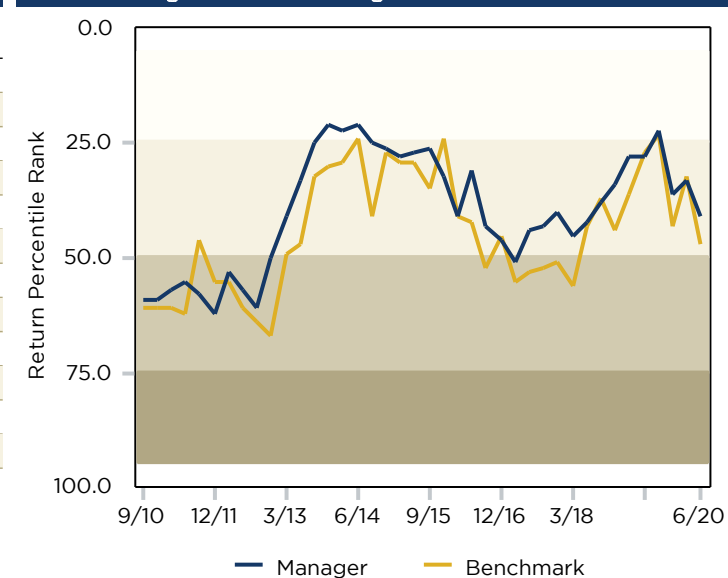
## Sector Allocation

| Sector                 | Portfolio Weight (%) | Benchmark Weight (%) |
|------------------------|----------------------|----------------------|
| Communication Services | 5.4                  | 5.4                  |
| Consumer Discretionary | 11.3                 | 11.3                 |
| Consumer Staples       | 12.1                 | 12.0                 |
| Energy                 | 3.3                  | 3.4                  |
| Financials             | 16.1                 | 16.1                 |
| Health Care            | 14.3                 | 14.5                 |
| Industrials            | 14.5                 | 14.5                 |
| Information Technology | 8.3                  | 8.3                  |
| Materials              | 7.2                  | 7.3                  |
| Real Estate            | 3.3                  | 3.2                  |
| Utilities              | 4.1                  | 4.0                  |
| <b>Total</b>           | <b>100.0</b>         | <b>100.0</b>         |

## 3 Years Rolling Excess Performance



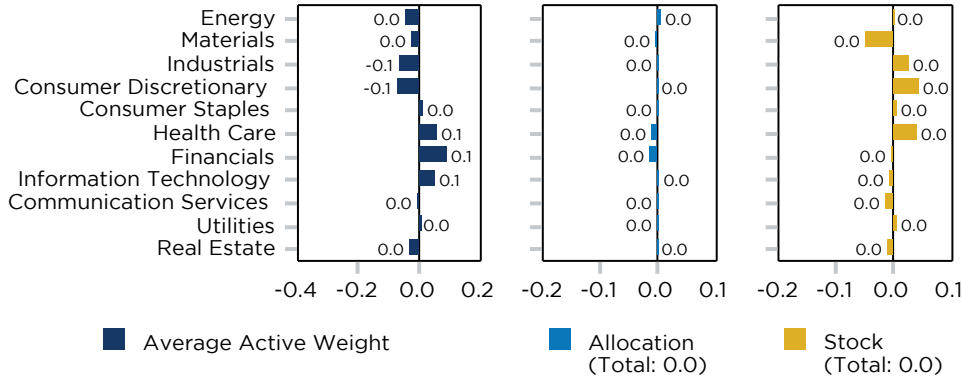
## 3 Years Rolling Percentile Ranking



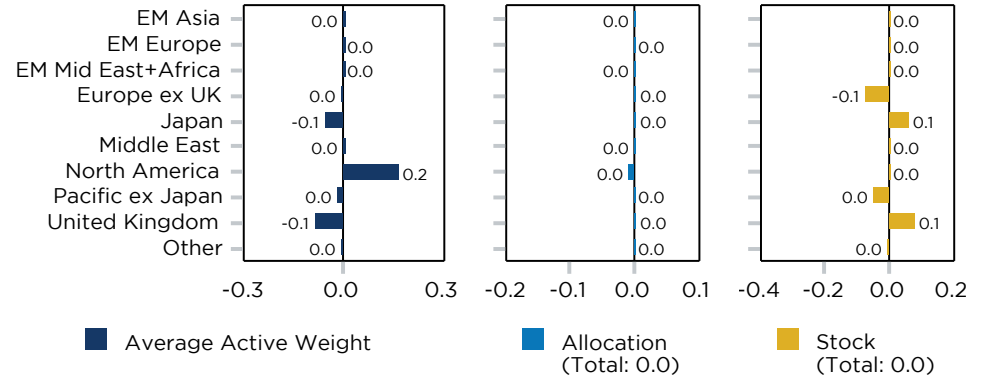




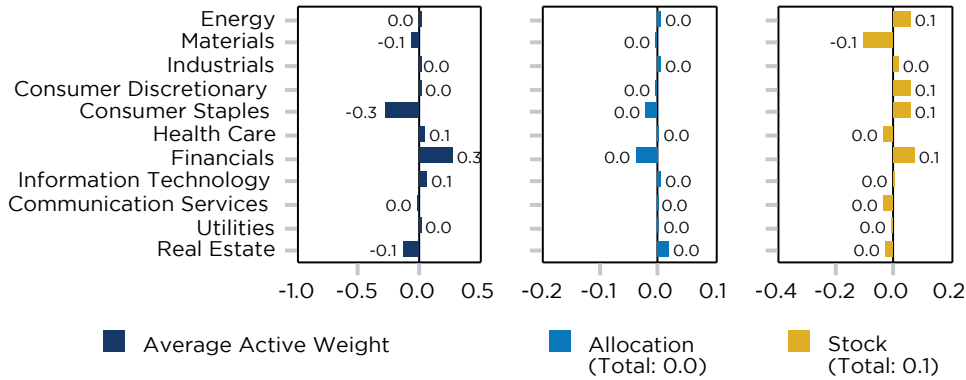
## 1 Quarter Sector Attribution



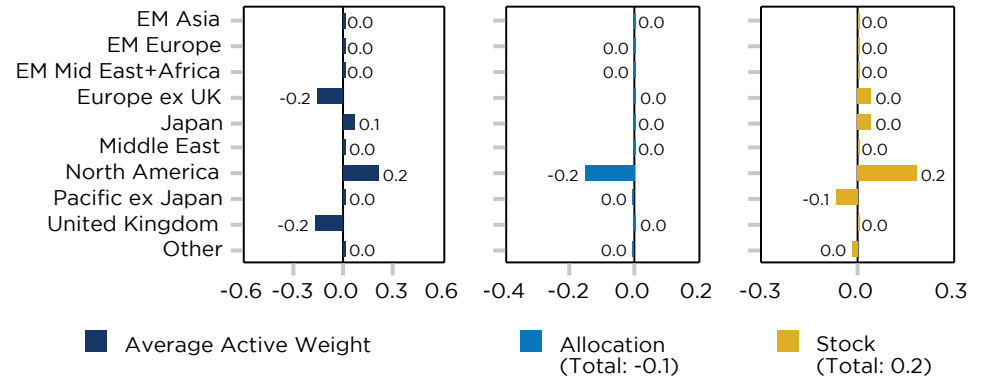
## 1 Quarter Region Attribution



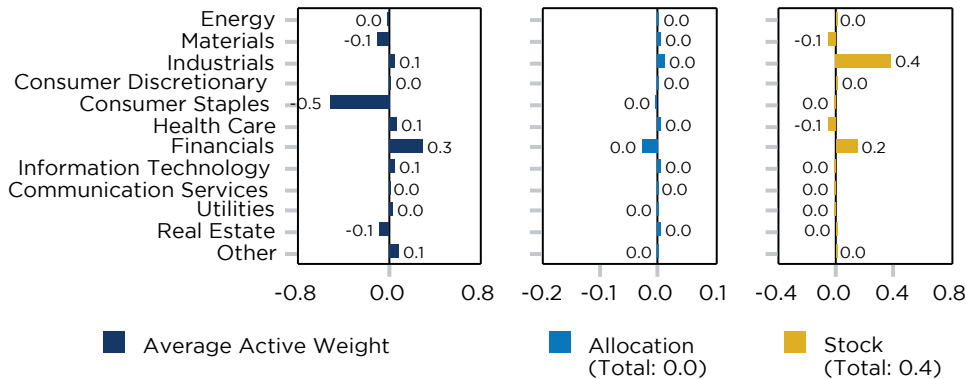
## 1 Year Sector Attribution



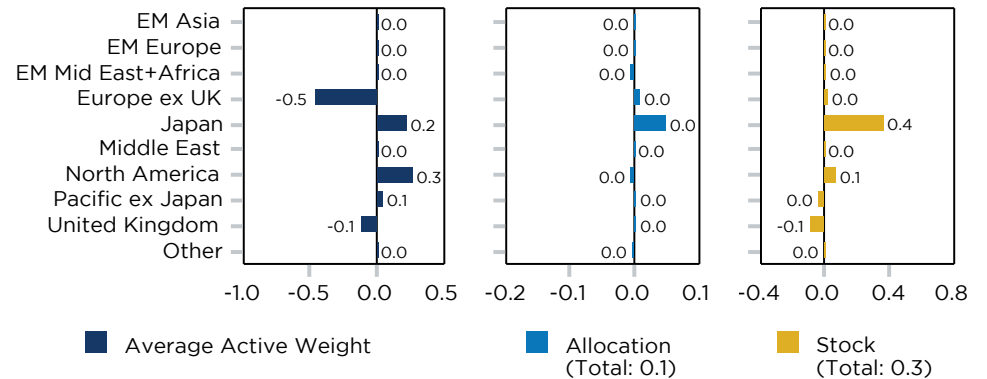
## 1 Year Region Attribution



## 3 Years Sector Attribution



## 3 Years Region Attribution





# TIAA-CREF International Eq Idx Instl (TCIEX)

Index: MSCI EAFE (Net) Index

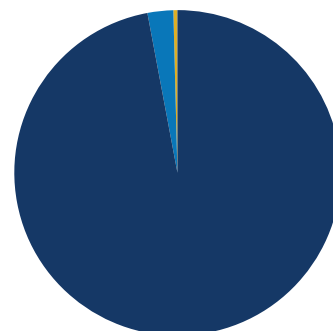
Report Date: 06/30/2020

## Top Ten Securities

|                                  |               |
|----------------------------------|---------------|
| Future on MSCI EAFE Jun20        | 2.5 %         |
| Nestle SA                        | 2.4 %         |
| Roche Holding AG Dividend Right  | 1.8 %         |
| Novartis AG                      | 1.4 %         |
| AstraZeneca PLC                  | 1.0 %         |
| ASML Holding NV                  | 1.0 %         |
| Toyota Motor Corp                | 1.0 %         |
| SAP SE                           | 1.0 %         |
| LVMH Moet Hennessy Louis Vuitton | 0.9 %         |
| Novo Nordisk A/S B               | 0.9 %         |
| <b>Total</b>                     | <b>13.9 %</b> |

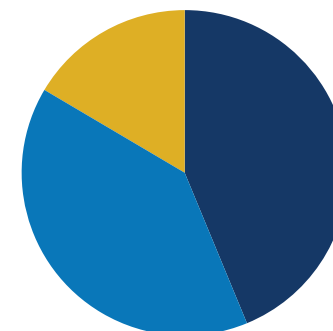
## Asset Allocation

■ 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 (%) |
|-----------------------------|----------------------|----------------------|---------------------------|----------------------|
| Fidelity Federal Bancorp    | 0.26                 | 0.00                 | 0.35                      | 150.06               |
| Nestle SA                   | 2.68                 | 2.69                 | 0.00                      | 9.93                 |
| ASML Holding NV             | 0.99                 | 0.99                 | 0.00                      | 38.79                |
| SAP AG                      | 0.97                 | 0.97                 | 0.00                      | 25.69                |
| Siemens AG                  | 0.57                 | 0.57                 | 0.00                      | 38.50                |
| Softbank Group Corp         | 0.48                 | 0.48                 | 0.00                      | 43.61                |
| Sanofi                      | 0.87                 | 0.87                 | 0.00                      | 19.98                |
| Bayer AG                    | 0.50                 | 0.50                 | 0.00                      | 33.32                |
| Astrazeneca PLC             | 1.03                 | 1.03                 | 0.00                      | 16.06                |
| Louis Vuitton Moet Hennessy | 0.91                 | 0.91                 | 0.00                      | 18.17                |

## Top Ten Contributors | 3 Years

|                             | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|-----------------------------|----------------------|----------------------|---------------------------|----------------------|
| Roche Holding AG            | 1.33                 | 1.31                 | 0.00                      | 13.62                |
| CSL Ltd                     | 0.36                 | 0.35                 | 0.00                      | 24.72                |
| Nestle SA                   | 2.00                 | 1.98                 | 0.00                      | 11.28                |
| Toyota Motor Corp           | 1.01                 | 1.00                 | 0.00                      | 9.51                 |
| ASML Holding NV             | 0.36                 | 0.36                 | 0.00                      | 42.78                |
| Astrazeneca PLC             | 0.62                 | 0.62                 | 0.00                      | 20.33                |
| Louis Vuitton Moet Hennessy | 0.51                 | 0.51                 | 0.00                      | 22.60                |
| Novo Nordisk A/S            | 0.57                 | 0.57                 | 0.00                      | 17.73                |
| Toshiba Corp                | 0.07                 | 0.07                 | 0.00                      | 136.84               |
| SAP AG                      | 0.75                 | 0.75                 | 0.00                      | 11.84                |

## Top Ten Detractors | 1 Quarter

|                            | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|----------------------------|----------------------|----------------------|---------------------------|----------------------|
| Wirecard AG                | 0.12                 | 0.12                 | 0.00                      | -94.39               |
| BP PLC                     | 0.76                 | 0.76                 | 0.00                      | -8.84                |
| Ntt Docomo Inc             | 0.37                 | 0.37                 | 0.00                      | -14.82               |
| Royal Dutch Shell PLC      | 0.65                 | 0.65                 | 0.00                      | -7.81                |
| Compass Group PLC          | 0.22                 | 0.22                 | 0.00                      | -12.51               |
| Fujifilm Holdings Corp     | 0.16                 | 0.16                 | 0.00                      | -15.40               |
| East Japan Railway Co      | 0.20                 | 0.20                 | 0.00                      | -8.75                |
| HSBC Holdings PLC          | 1.00                 | 1.01                 | 0.00                      | -17.11               |
| West Japan Railway Company | 0.09                 | 0.10                 | 0.00                      | -18.40               |
| Royal Dutch Shell PLC      | 0.54                 | 0.65                 | 0.03                      | -8.79                |

## Top Ten Detractors | 3 Years

|                          | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|--------------------------|----------------------|----------------------|---------------------------|----------------------|
| Societe Generale Group   | 0.31                 | 0.30                 | 0.00                      | -28.90               |
| Banco Santander SA       | 0.71                 | 0.70                 | 0.00                      | -24.91               |
| Daimler AG               | 0.52                 | 0.51                 | 0.00                      | -17.51               |
| HSBC Holdings PLC        | 1.35                 | 1.34                 | 0.00                      | -15.64               |
| Westpac Banking Corp     | 0.58                 | 0.57                 | 0.00                      | -14.65               |
| Royal Dutch Shell PLC    | 0.74                 | 0.73                 | 0.00                      | -12.09               |
| British American Tobacco | 0.93                 | 0.93                 | 0.00                      | -16.61               |
| ING Groep NV             | 0.49                 | 0.49                 | 0.00                      | -23.54               |
| Royal Dutch Shell PLC    | 0.86                 | 0.86                 | 0.00                      | -11.19               |
| BBVA                     | 0.41                 | 0.41                 | 0.00                      | -21.30               |

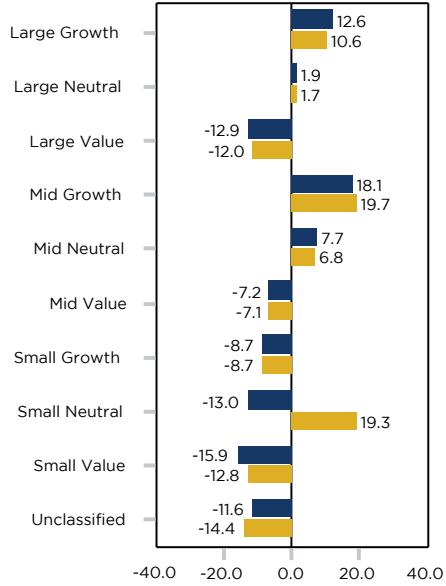


# TIAA-CREF International Eq Idx Instl (TCIEX)

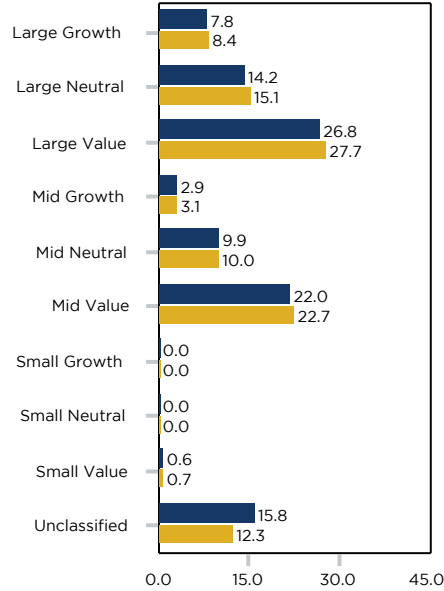
Index: MSCI EAFE (Net) Index

Report Date: 06/30/2020

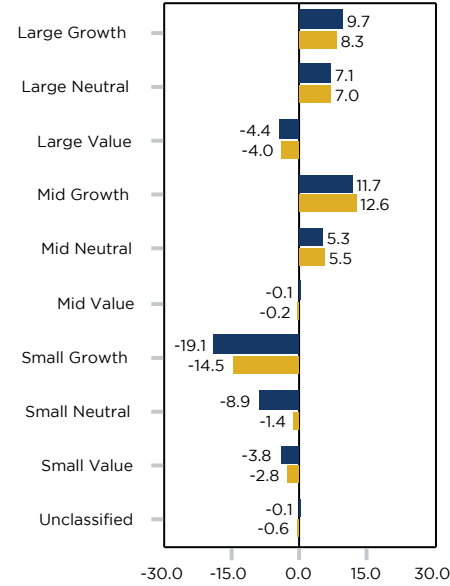
## Performance | 1 Year



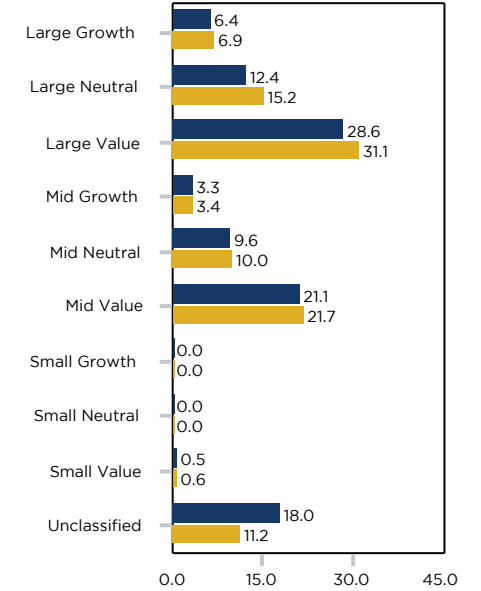
## Allocation | 1 Year



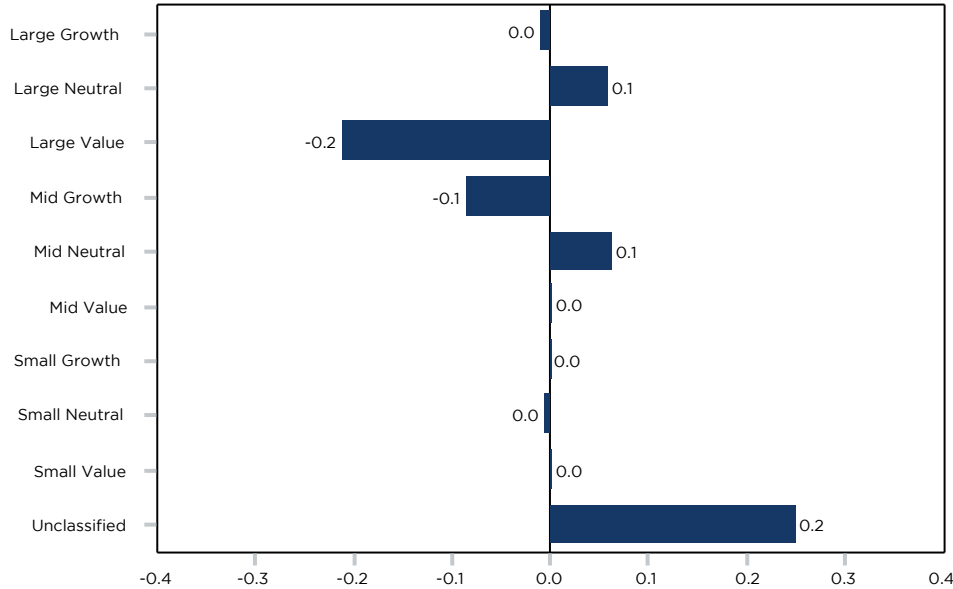
## Performance | 3 Years



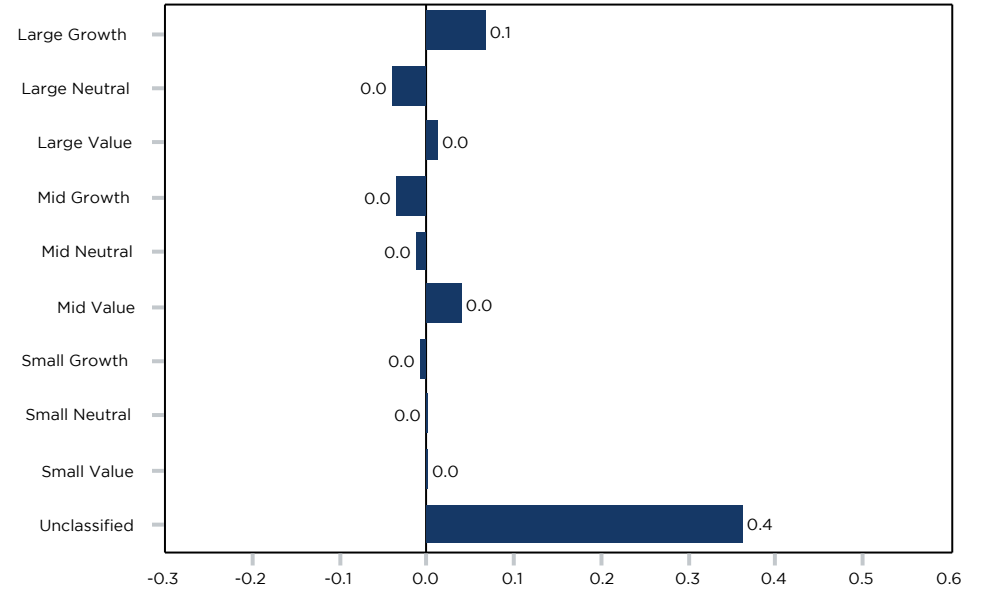
## Allocation | 3 Years



## 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: 06/30/2020

## Trailing Performance

|            | 1 Quarter  | Year to Date | 1 Year    | 3 Years   | 5 Years   | 10 Years  | 2019       | 2018        | 2017       | 2016      |
|------------|------------|--------------|-----------|-----------|-----------|-----------|------------|-------------|------------|-----------|
| Manager    | 22.77 (27) | -4.77 (66)   | 3.17 (62) | 4.76 (59) | 4.90 (52) | 7.48 (52) | 27.40 (61) | -14.91 (57) | 31.17 (46) | 1.01 (27) |
| Benchmark  | 19.11      | -2.62        | 5.80      | 6.07      | 5.61      | 7.04      | 27.34      | -14.43      | 32.01      | 0.12      |
| Peer Group | 20.19      | -3.39        | 5.06      | 5.56      | 4.98      | 7.52      | 27.86      | -14.28      | 30.73      | -1.50     |
| Population | 651        | 651          | 647       | 606       | 551       | 433       | 637        | 694         | 655        | 652       |

## Fund Information

|                     |                 |
|---------------------|-----------------|
| Fund Inception      | 05/01/2009      |
| Fund Assets         | 153,331 Million |
| Portfolio Assets    | 71,104 Million  |
| Total # of Holdings | 339             |
| % in Top 10         | 21.66 %         |
| PM                  | Team Managed    |
| PM Tenure           | 19 Years        |
| Turnover            | 38.00 %         |
| Gross Expense (%)   | 0.46 %          |
| Net Expense (%)     | 0.46 %          |
| New Investors       | Open            |

## Portfolio Characteristics

|                           | Portfolio | Benchmark |
|---------------------------|-----------|-----------|
| Wtd. Avg. Mkt. Cap (\$M)  | 93,890    | 115,180   |
| Median Mkt. Cap (\$M)     | 21,492    | 8,749     |
| Price/Earnings ratio      | 22.7      | 25.1      |
| Price/Book ratio          | 3.6       | 3.8       |
| 5 Yr. EPS Growth Rate (%) | 10.5      | 11.7      |
| Current Yield (%)         | 1.2       | 1.5       |
| Beta (5 Years, Monthly)   | 1.03      | 1.00      |
| Number of Stocks          | 330       | 1,041     |
| Debt to Equity (%)        | 70.7      | 105.7     |
| Forecast P/E              | 23.8      | 19.5      |
| Forecast EPS Growth       | 15.3      | 14.5      |
| Return on Equity (%)      | 1.8       | 4.5       |

## Country/Region Allocation

|                  |              |              |
|------------------|--------------|--------------|
| United States    | 0.2          | 0.0          |
| Non-US Developed | 76.3         | 76.4         |
| Emerging Markets | 23.3         | 23.5         |
| Other            | 0.2          | 0.1          |
| <b>Total</b>     | <b>100.0</b> | <b>100.0</b> |

## Fund Statistics

|  | 3 Years | 10 Years |
|--|---------|----------|
| Standard Deviation                           | 16.66   | 14.86    |
| <b>vs. MSCI AC World ex USA Growth (Net)</b> |         |          |
| Beta   | 1.10    | 0.99     |
| Alpha  | -1.65   | 0.53     |
| Information Ratio                            | -0.27   | 0.14     |
| Tracking Error                               | 3.44    | 3.15     |
| R-Squared                                    | 0.97    | 0.96     |
| Up Market Capture                            | 106.74  | 100.40   |
| Down Market Capture                          | 115.21  | 97.74    |
| Consistency                                  | 47.22   | 54.17    |

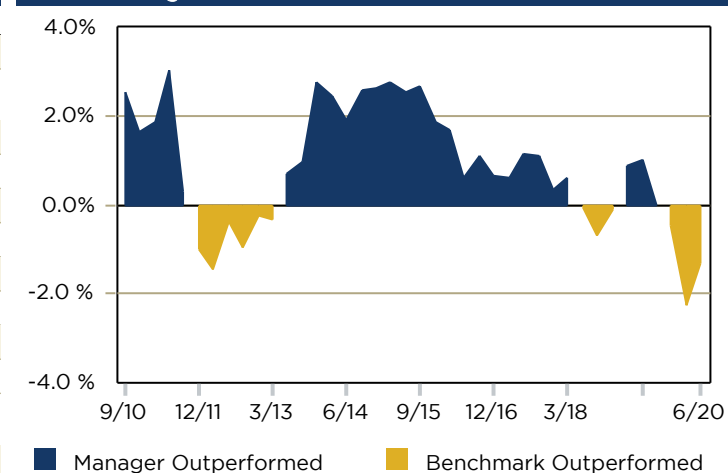
## vs. Risk Free

|              |      |      |
|--------------|------|------|
| Sharpe Ratio | 0.26 | 0.52 |
|--------------|------|------|

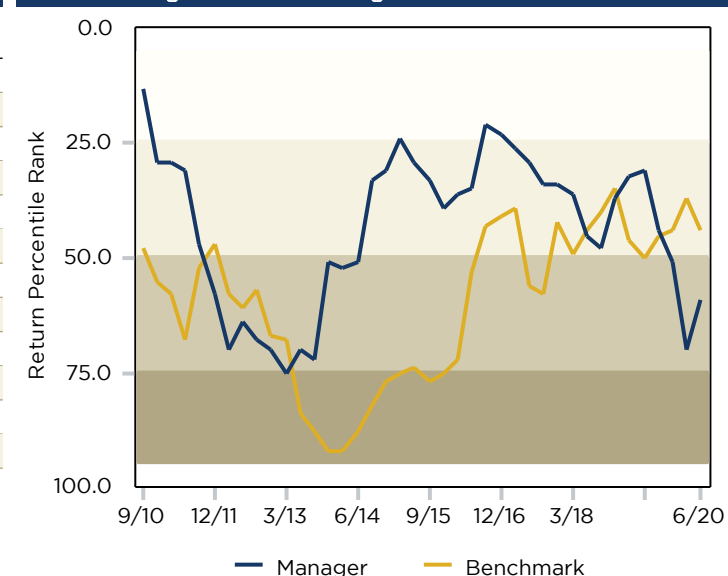
## Sector Allocation

| Sector                 | Portfolio Weight (%) | Benchmark Weight (%) |
|------------------------|----------------------|----------------------|
| Communication Services | 6.9                  | 8.2                  |
| Consumer Discretionary | 18.5                 | 16.1                 |
| Consumer Staples       | 5.8                  | 14.4                 |
| Energy                 | 5.4                  | 1.0                  |
| Financials             | 14.1                 | 7.9                  |
| Health Care            | 14.9                 | 14.8                 |
| Industrials            | 8.5                  | 11.9                 |
| Information Technology | 15.5                 | 16.4                 |
| Materials              | 5.9                  | 6.7                  |
| Real Estate            | 1.3                  | 1.6                  |
| Utilities              | 3.1                  | 1.0                  |
| <b>Total</b>           | <b>100.0</b>         | <b>100.0</b>         |

## 3 Years Rolling Excess Performance



## 3 Years Rolling Percentile Ranking



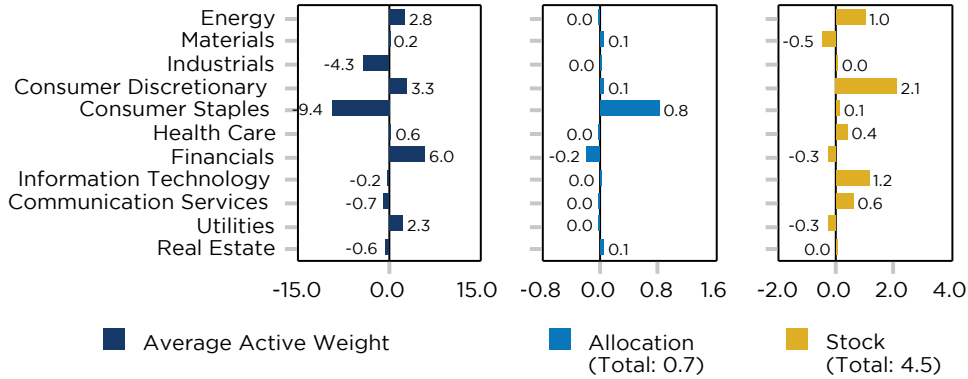


# American Funds Europacific Growth R6 (RERGX)

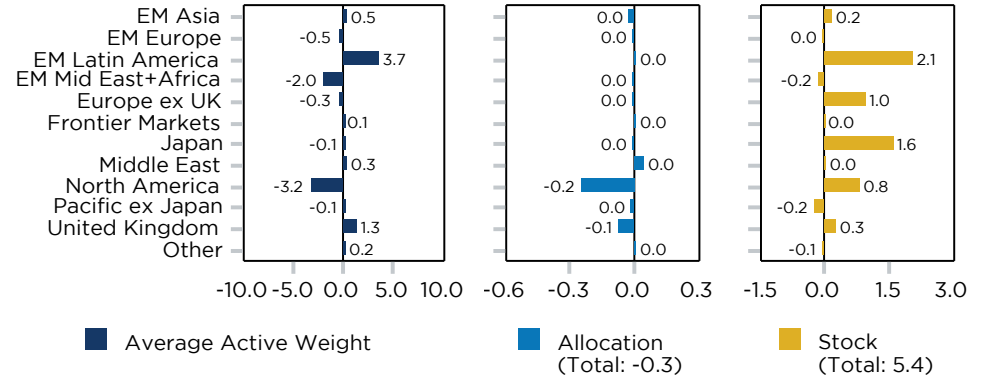
Index: MSCI AC World ex USA (Net)

Report Date: 06/30/2020

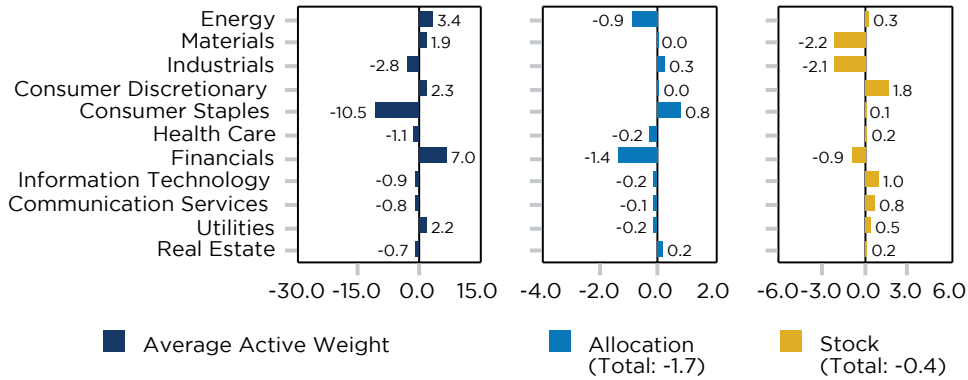
## 1 Quarter Sector Attribution



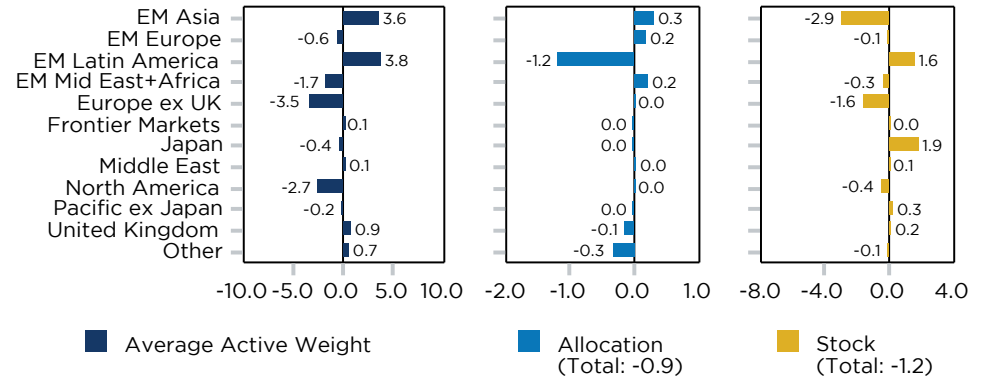
## 1 Quarter Region Attribution



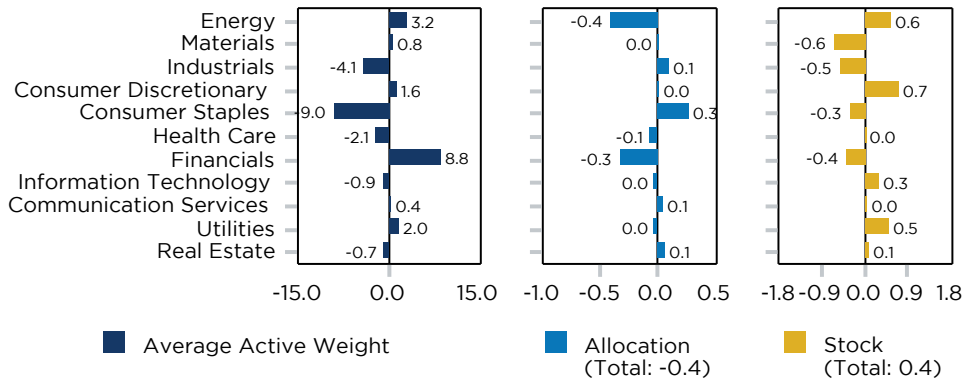
## 1 Year Sector Attribution



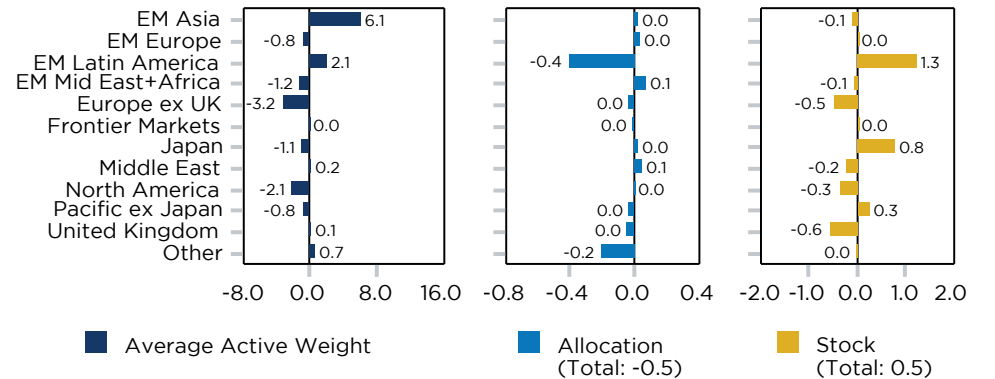
## 1 Year Region Attribution



## 3 Years Sector Attribution



## 3 Years Region Attribution





# American Funds Europacific Growth R6 (RERGX)

Index: MSCI AC World ex USA (Net)

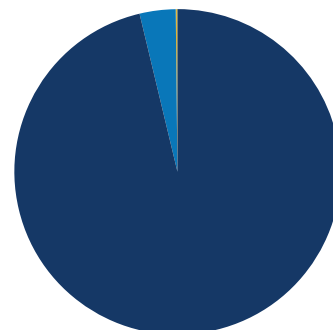
Report Date: 06/30/2020

## Top Ten Securities

|                                    |               |
|------------------------------------|---------------|
| Reliance Industries Ltd            | 2.9 %         |
| ASML Holding NV                    | 2.8 %         |
| MercadoLibre Inc                   | 2.7 %         |
| AIA Group Ltd                      | 2.4 %         |
| Alibaba Group Holding Ltd Ordinary | 2.4 %         |
| Daiichi Sankyo Co Ltd              | 2.1 %         |
| Shopify Inc A                      | 1.8 %         |
| Keyence Corp                       | 1.6 %         |
| LVMH Moet Hennessy Louis Vuitton   | 1.6 %         |
| Chugai Pharmaceutical Co Ltd       | 1.4 %         |
| <b>Total</b>                       | <b>21.7 %</b> |

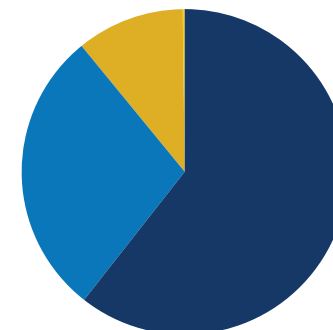
## Asset Allocation

- 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 (%) |
|------------------------------|----------------------|----------------------|---------------------------|----------------------|
| MercadoLibre Inc             | 1.69                 | 0.00                 | 1.40                      | 101.76               |
| Reliance Industries Ltd      | 2.36                 | 0.00                 | 0.82                      | 53.97                |
| Sea Ltd                      | 0.49                 | 0.00                 | 0.60                      | 142.02               |
| Meituan Dianping             | 0.76                 | 0.13                 | 0.41                      | 83.58                |
| Shopify Inc                  | 0.78                 | 0.46                 | 0.35                      | 127.66               |
| ASML Holding NV              | 2.64                 | 1.22                 | 0.28                      | 38.79                |
| Softbank Group Corp          | 1.01                 | 0.00                 | 0.25                      | 43.61                |
| Chugai Pharmaceutical Co Ltd | 1.32                 | 0.28                 | 0.20                      | 38.70                |
| Keyence Corp                 | 1.73                 | 0.63                 | 0.11                      | 29.05                |
| H D F C Bank Ltd             | 1.88                 | 0.00                 | 0.08                      | 23.27                |

## Top Ten Contributors | 3 Years

|                           | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|---------------------------|----------------------|----------------------|---------------------------|----------------------|
| Toshiba Corp              | 0.59                 | 0.05                 | 0.71                      | 136.84               |
| Reliance Industries Ltd   | 1.96                 | 0.00                 | 0.46                      | 29.54                |
| ASML Holding NV           | 1.56                 | 0.49                 | 0.39                      | 42.78                |
| Orsted A/S                | 1.07                 | 0.00                 | 0.36                      | 39.50                |
| Sony Corp                 | 1.98                 | 0.49                 | 0.24                      | 22.31                |
| Alibaba Group Holding Ltd | 3.01                 | 1.62                 | 0.13                      | 15.25                |
| Taiwan Semiconductor      | 2.60                 | 1.72                 | 0.12                      | 19.49                |
| Nintendo Co Ltd           | 2.09                 | 0.25                 | 0.10                      | 11.70                |
| AIA Group Ltd             | 2.86                 | 0.89                 | 0.08                      | 10.28                |
| Tencent Holdings LTD      | 2.41                 | 2.07                 | 0.05                      | 21.93                |

## Top Ten Detractors | 1 Quarter

|                                   | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|-----------------------------------|----------------------|----------------------|---------------------------|----------------------|
| China Gas Holdings Ltd            | 0.62                 | 0.07                 | -0.17                     | -11.47               |
| PICC Property & Casualty Co Ltd   | 0.36                 | 0.00                 | -0.10                     | -8.14                |
| Kose Corp                         | 0.44                 | 0.04                 | -0.09                     | -2.95                |
| Grifols S.A.                      | 0.33                 | 0.11                 | -0.07                     | -10.70               |
| Jardine Matheson                  | 0.18                 | 0.00                 | -0.06                     | -16.52               |
| BP PLC                            | 0.18                 | 0.00                 | -0.05                     | -8.84                |
| The Peoples Ins Co Group of China | 0.16                 | 0.00                 | -0.04                     | -6.73                |
| Rolls Royce Holdings PLC          | 0.17                 | 0.08                 | -0.03                     | -14.10               |
| Grifols S.A.                      | 0.22                 | 0.11                 | -0.03                     | -7.73                |
| China Tower Corporation Ltd       | 0.09                 | 0.10                 | 0.00                      | -20.44               |

## Top Ten Detractors | 3 Years

|                                | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|--------------------------------|----------------------|----------------------|---------------------------|----------------------|
| British American Tobacco       | 3.24                 | 1.29                 | -0.44                     | -16.61               |
| Unicredit SPA                  | 1.38                 | 0.00                 | -0.36                     | -19.91               |
| Intl Consolidated Airlines Gp  | 1.07                 | 0.03                 | -0.33                     | -25.48               |
| Altice Europe N.V.             | 1.57                 | 0.09                 | -0.32                     | -15.69               |
| Barclays PLC                   | 1.57                 | 0.23                 | -0.29                     | -15.64               |
| Ryanair Holdings PLC           | 1.02                 | 0.03                 | -0.21                     | -14.89               |
| Teva Pharmaceutical            | 0.61                 | 0.00                 | -0.21                     | -27.87               |
| Indiabulls Housing Finance Ltd | 0.38                 | 0.00                 | -0.18                     | -42.19               |
| Rolls Royce Holdings PLC       | 0.52                 | 0.19                 | -0.13                     | -32.18               |
| Baidu Inc                      | 1.13                 | 0.50                 | -0.12                     | -12.48               |

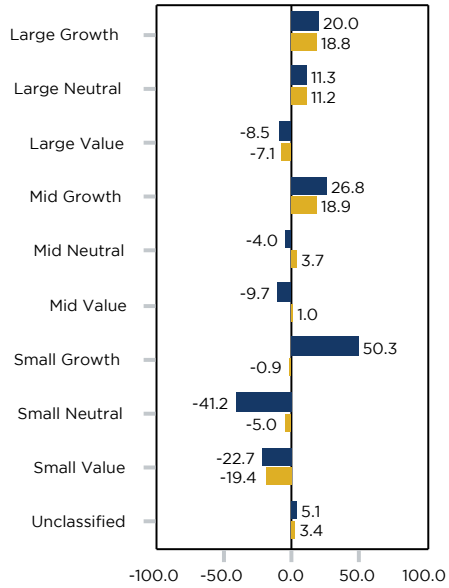


# American Funds Europacific Growth R6 (RERGX)

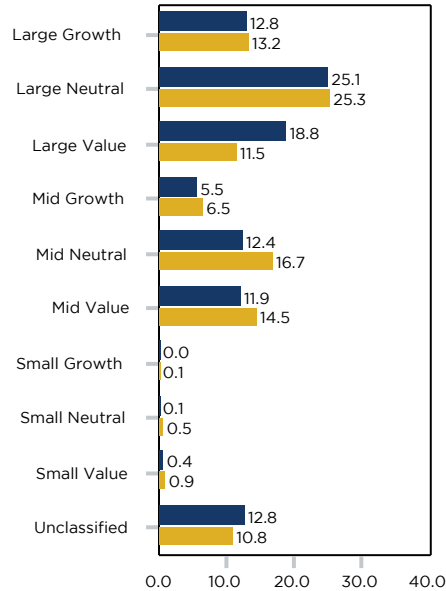
Index: MSCI AC World ex USA (Net)

Report Date: 06/30/2020

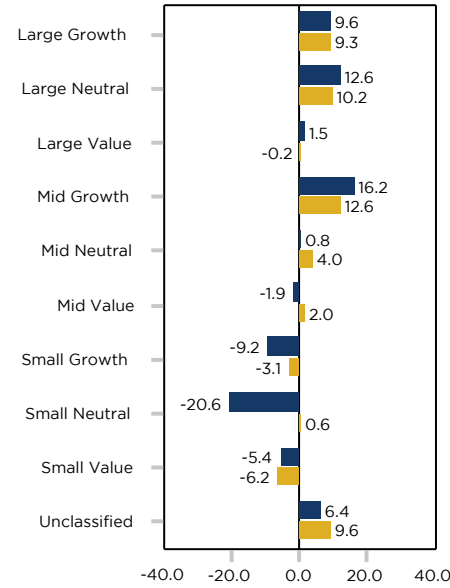
## Performance | 1 Year



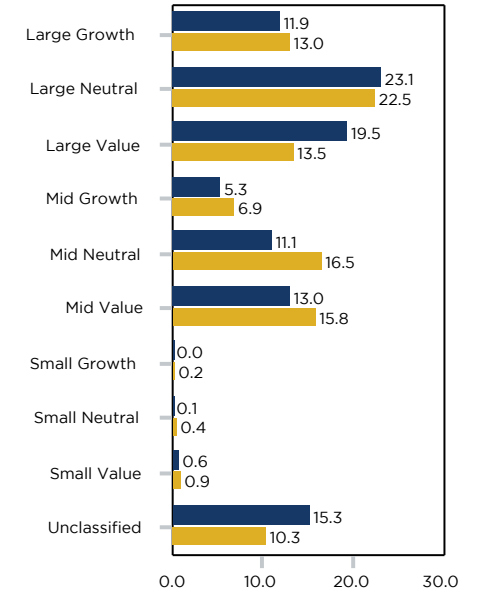
## Allocation | 1 Year



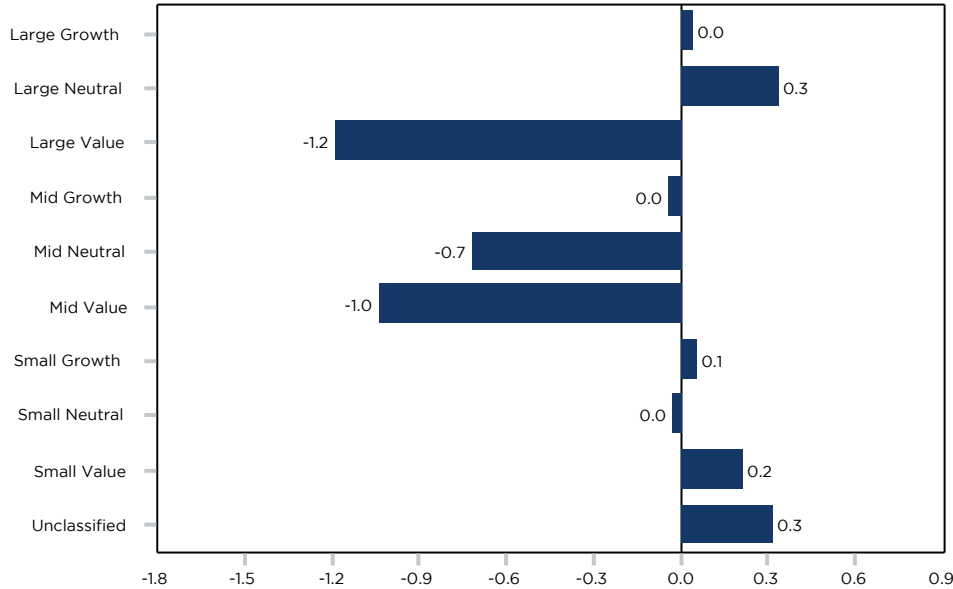
## Performance | 3 Years



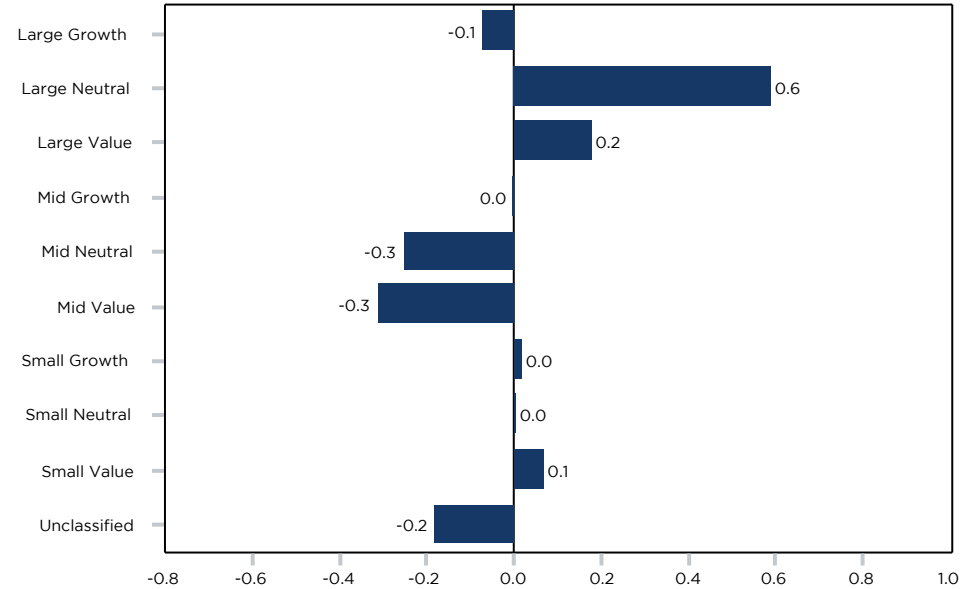
## Allocation | 3 Years



## Total Attribution | 1 Year



## Total Attribution | 3 Years





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

Index: MSCI AC World ex USA Small Cap (Net)

Category: Foreign Small/Mid Value

Report Date: 06/30/2020

## Trailing Performance

|            | 1 Quarter  | Year to Date | 1 Year     | 3 Years    | 5 Years    | 10 Years  | 2019       | 2018        | 2017       | 2016      |
|------------|------------|--------------|------------|------------|------------|-----------|------------|-------------|------------|-----------|
| Manager    | 18.30 (47) | -17.79 (43)  | -9.24 (43) | -3.16 (37) | -0.02 (49) | 6.32 (19) | 20.77 (31) | -18.81 (34) | 33.44 (27) | 2.75 (57) |
| Benchmark  | 22.83      | -12.80       | -4.34      | -0.17      | 2.50       | 6.05      | 22.42      | -18.20      | 31.65      | 3.91      |
| Peer Group | 18.25      | -18.48       | -9.65      | -4.02      | -0.03      | 5.75      | 18.98      | -19.79      | 30.49      | 3.20      |
| Population | 77         | 74           | 57         | 51         | 36         | 17        | 56         | 70          | 70         | 58        |

## Fund Information

|                     |                  |
|---------------------|------------------|
| Fund Inception      | 02/06/2017       |
| Fund Assets         | 640 Million      |
| Portfolio Assets    | 93 Million       |
| Total # of Holdings | 89               |
| % in Top 10         | 26.21 %          |
| PM                  | Team Managed     |
| PM Tenure           | 12 Years 1 Month |
| Turnover            | 33.00 %          |
| Gross Expense (%)   | 1.15 %           |
| Net Expense (%)     | 1.05 %           |
| New Investors       | Open             |

## Portfolio Characteristics

|                           | Portfolio | Benchmark |
|---------------------------|-----------|-----------|
| Wtd. Avg. Mkt. Cap (\$M)  | 1,539     | 2,107     |
| Median Mkt. Cap (\$M)     | 1,053     | 829       |
| Price/Earnings ratio      | 10.9      | 14.0      |
| Price/Book ratio          | 1.8       | 2.3       |
| 5 Yr. EPS Growth Rate (%) | 5.9       | 8.2       |
| Current Yield (%)         | 3.9       | 2.6       |
| Beta (5 Years, Monthly)   | 0.97      | 1.00      |
| Number of Stocks          | 87        | 4,070     |
| Debt to Equity (%)        | 110.3     | 130.0     |
| Forecast P/E              | 13.2      | 16.7      |
| Forecast EPS Growth       | 8.6       | 9.6       |
| Return on Equity (%)      | 2.7       | 2.3       |

## Country/Region Allocation

|                  |              |              |
|------------------|--------------|--------------|
| United States    | 0.0          | 0.3          |
| Non-US Developed | 64.7         | 79.2         |
| Emerging Markets | 35.3         | 19.7         |
| Other            | 0.0          | 0.8          |
| <b>Total</b>     | <b>100.0</b> | <b>100.0</b> |

## Fund Statistics

|   | 3 Years | 10 Years |
|---|---------|----------|
| Standard Deviation                              | 18.51   | 15.34    |
| <b>vs. MSCI AC World ex USA Small Cap (Net)</b> |         |          |
| Beta  | 0.98    | 0.91     |
| Alpha   | -2.96   | 0.80     |
| Information Ratio                               | -1.00   | 0.03     |
| Tracking Error                                  | 3.04    | 4.35     |
| R-Squared                                       | 0.97    | 0.93     |
| Up Market Capture                               | 92.20   | 91.97    |
| Down Market Capture                             | 105.33  | 87.90    |
| Consistency                                     | 47.22   | 51.67    |

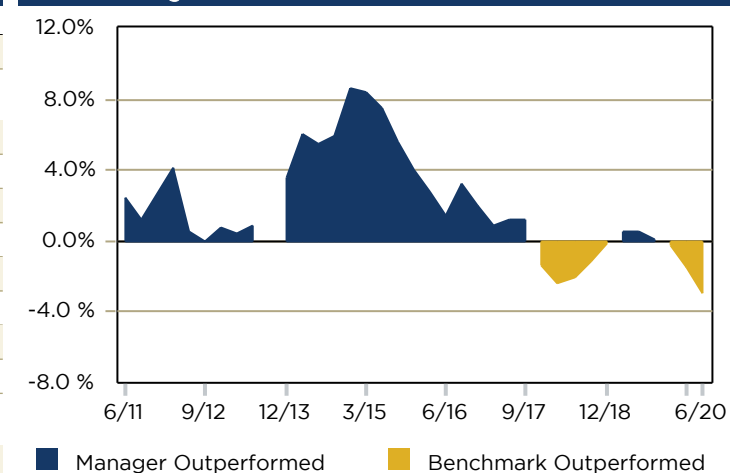
## vs. Risk Free

|              |       |      |
|--------------|-------|------|
| Sharpe Ratio | -0.17 | 0.44 |
|--------------|-------|------|

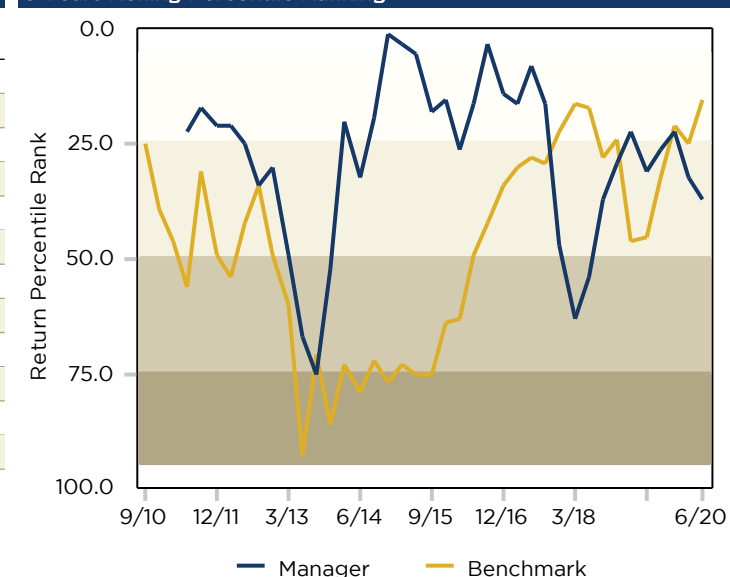
## Sector Allocation

| Sector                 | Portfolio Weight (%) | Benchmark Weight (%) |
|------------------------|----------------------|----------------------|
| Communication Services | 0.4                  | 4.2                  |
| Consumer Discretionary | 16.6                 | 12.4                 |
| Consumer Staples       | 11.2                 | 6.3                  |
| Energy                 | 2.9                  | 2.2                  |
| Financials             | 16.4                 | 10.0                 |
| Health Care            | 1.7                  | 8.4                  |
| Industrials            | 16.5                 | 19.4                 |
| Information Technology | 16.3                 | 12.2                 |
| Materials              | 7.3                  | 10.2                 |
| Real Estate            | 2.8                  | 11.2                 |
| Utilities              | 7.8                  | 3.4                  |
| <b>Total</b>           | <b>100.0</b>         | <b>100.0</b>         |

## 3 Years Rolling Excess Performance



## 3 Years Rolling Percentile Ranking





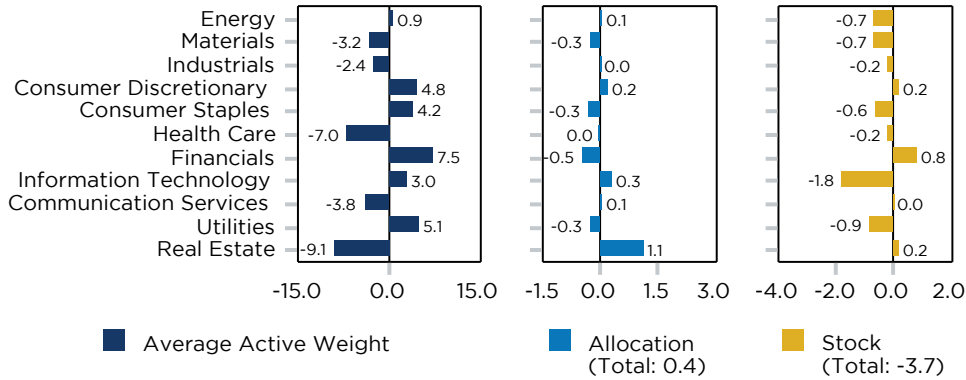


# Pear Tree Polaris Foreign Value Small Cap R6 (QUSRX)

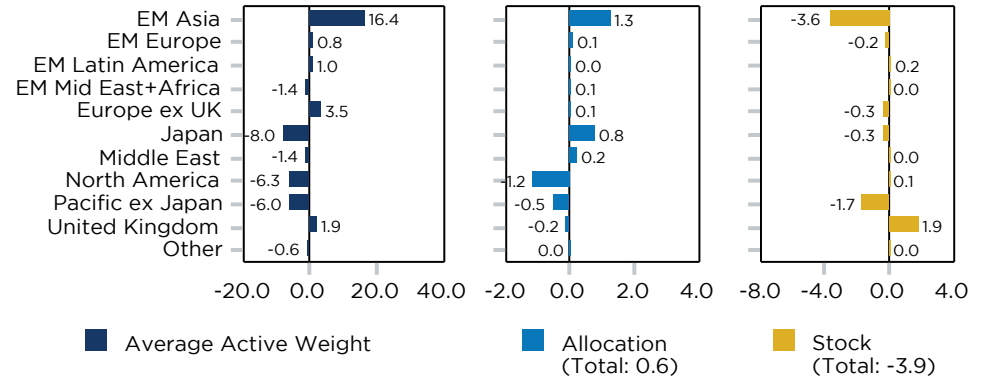
Index: MSCI AC World ex USA Small Cap (Net)

Report Date: 06/30/2020

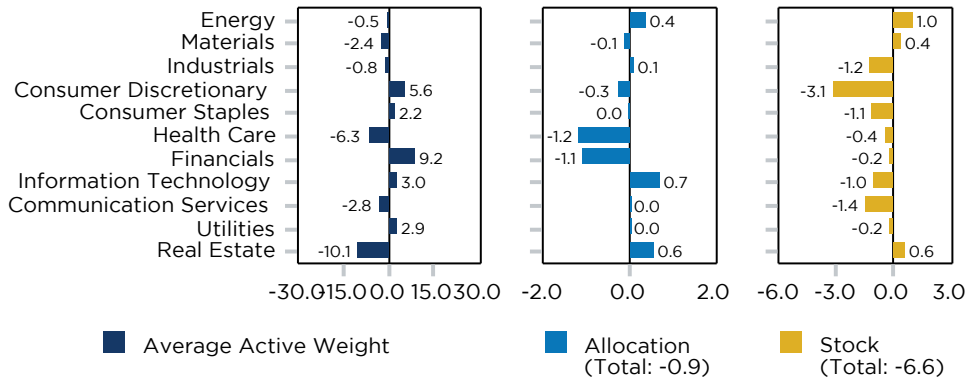
## 1 Quarter Sector Attribution



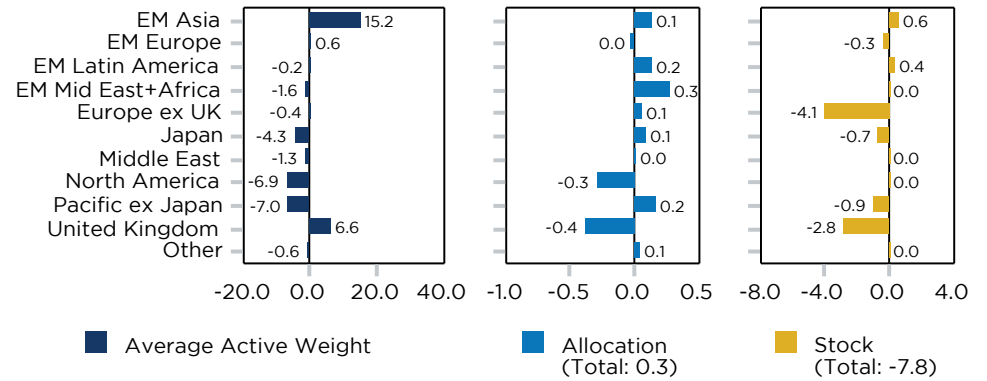
## 1 Quarter Region Attribution



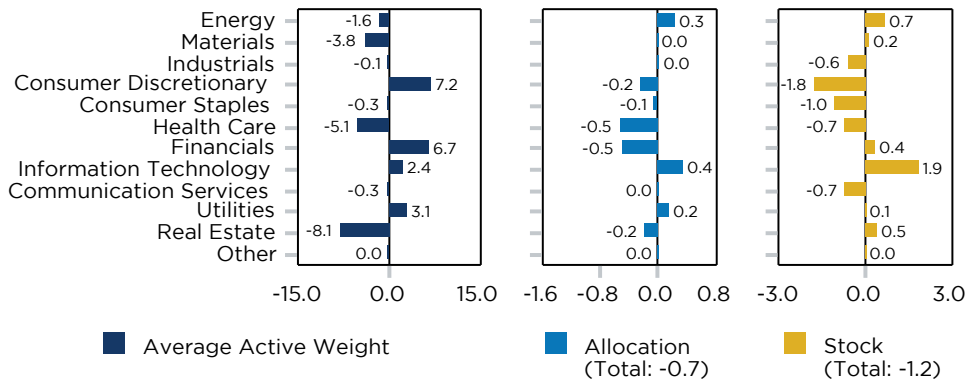
## 1 Year Sector Attribution



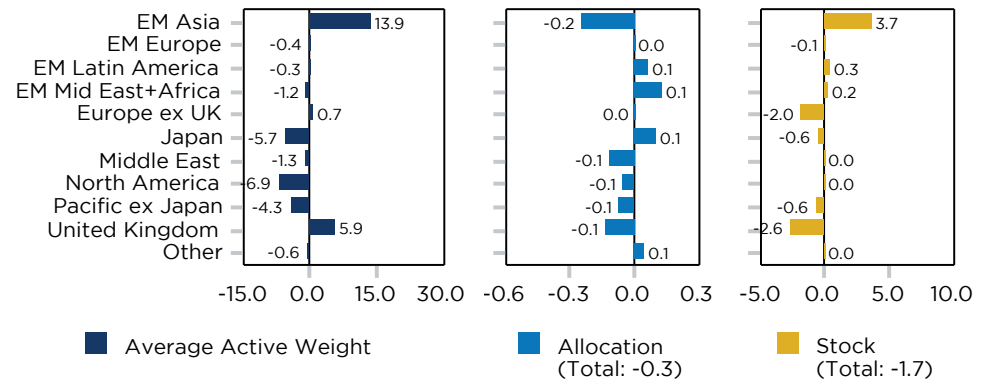
## 1 Year Region Attribution



## 3 Years Sector Attribution



## 3 Years Region Attribution





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

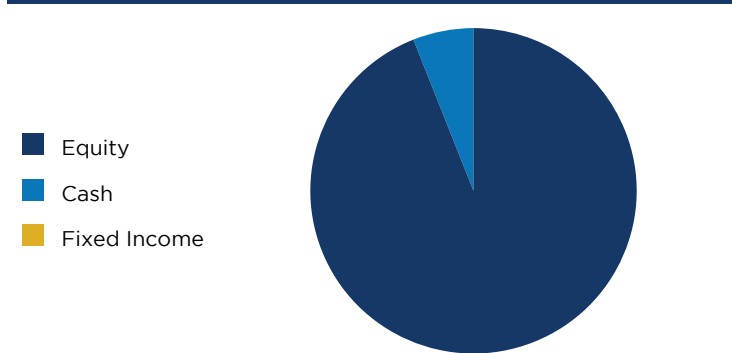
Index: MSCI AC World ex USA Small Cap (Net)

Report Date: 06/30/2020

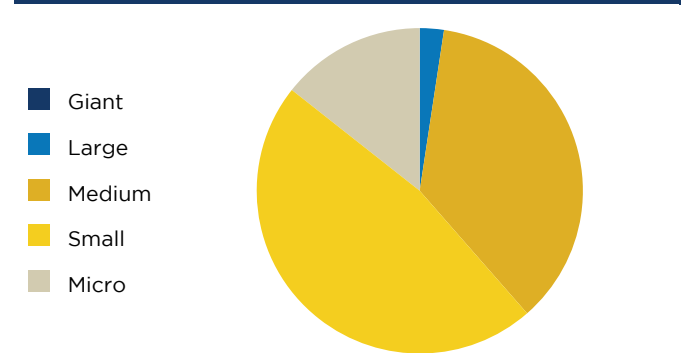
## Top Ten Securities

|                                 |               |
|---------------------------------|---------------|
| Prima Meat Packers Ltd          | 3.3 %         |
| De'Longhi SPA                   | 3.1 %         |
| Ratch Group PCL                 | 2.7 %         |
| Iwatani Corp                    | 2.7 %         |
| Lancashire Holdings Ltd         | 2.7 %         |
| Kanematsu Corp                  | 2.5 %         |
| REN-Redes Energeticas Nacionais | 2.5 %         |
| Glanbia PLC                     | 2.4 %         |
| Equatorial Energia SA           | 2.2 %         |
| NIIT Technologies Ltd           | 2.2 %         |
| <b>Total</b>                    | <b>26.2 %</b> |

## Asset Allocation



## Market Capitalization



## Top Ten Contributors | 1 Quarter

|                          | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|--------------------------|----------------------|----------------------|---------------------------|----------------------|
| Halfords Group PLC       | 0.98                 | 0.01                 | 0.91                      | 116.58               |
| De Longhi SPA, Treviso   | 2.58                 | 0.05                 | 0.86                      | 56.72                |
| Enf Tech Co Ltd          | 1.69                 | 0.00                 | 0.59                      | 57.90                |
| Elite Material Co Ltd    | 1.60                 | 0.04                 | 0.50                      | 54.59                |
| Lancashire Holdings      | 2.67                 | 0.06                 | 0.22                      | 31.35                |
| Origin Enterprises PLC   | 1.29                 | 0.01                 | 0.20                      | 38.40                |
| Sitronix Technology Corp | 1.48                 | 0.02                 | 0.16                      | 34.08                |
| Equatorial Energia SA    | 2.33                 | 0.00                 | 0.04                      | 24.66                |
| NIIT Technologies Ltd    | 2.33                 | 0.01                 | 0.01                      | 23.39                |
| Prima Meat Packers Ltd   | 3.65                 | 0.03                 | -0.20                     | 17.35                |

## Top Ten Contributors | 3 Years

|                              | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|------------------------------|----------------------|----------------------|---------------------------|----------------------|
| Taiwan Union Technology Corp | 2.31                 | 0.01                 | 1.02                      | 44.29                |
| Yageo Corp                   | 1.54                 | 0.04                 | 0.91                      | 60.22                |
| Thanachart Capital           | 1.54                 | 0.02                 | 0.30                      | 19.79                |
| NIIT Technologies Ltd        | 0.79                 | 0.01                 | 0.24                      | 30.22                |
| Sixt SE                      | 1.96                 | 0.02                 | 0.23                      | 11.70                |
| Ratchaburi Electricity       | 1.38                 | 0.00                 | 0.20                      | 14.63                |
| Equatorial Energia SA        | 1.70                 | 0.00                 | 0.19                      | 10.75                |
| Huaku Development Co Ltd     | 0.92                 | 0.02                 | 0.17                      | 18.81                |
| Chong Hong Construction Co   | 0.92                 | 0.01                 | 0.17                      | 18.42                |
| Holtek Semiconductor Inc     | 1.22                 | 0.01                 | 0.14                      | 11.61                |

## Top Ten Detractors | 1 Quarter

|  | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|--|----------------------|----------------------|---------------------------|----------------------|
| Grencore Group PLC                               | 1.65                 | 0.04                 | -0.76                     | -24.15               |
| VTech Holdings Ltd                               | 1.88                 | 0.05                 | -0.73                     | -16.94               |
| Shanghai Mechanical & Electrical Industry Co Ltd | 1.75                 | 0.00                 | -0.53                     | -7.73                |
| Nihon House Holdings Co Ltd                      | 0.83                 | 0.00                 | -0.22                     | -3.23                |
| Samson Holding Ltd                               | 0.47                 | 0.00                 | -0.17                     | -12.54               |
| Amvig Holdings Ltd                               | 0.66                 | 0.00                 | -0.16                     | -1.74                |
| The Vitec Group PLC                              | 0.44                 | 0.00                 | -0.08                     | 5.05                 |
| Xtep International Holdings Ltd                  | 0.38                 | 0.02                 | -0.07                     | 3.86                 |
| Irish Continental Group PLC                      | 0.41                 | 0.00                 | -0.05                     | 11.74                |
| J D Wetherspoon PLC                              | 0.24                 | 0.03                 | -0.02                     | 13.24                |

## Top Ten Detractors | 3 Years

|                              | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|------------------------------|----------------------|----------------------|---------------------------|----------------------|
| Carillion PLC                | 1.70                 | 0.03                 | -0.97                     | -58.31               |
| Lic Housing Finance Ltd      | 2.07                 | 0.00                 | -0.65                     | -31.81               |
| VTech Holdings Ltd           | 2.63                 | 0.08                 | -0.61                     | -24.18               |
| The South Indian Bank Ltd    | 1.60                 | 0.00                 | -0.57                     | -36.06               |
| Unipres Corp                 | 2.21                 | 0.03                 | -0.52                     | -24.00               |
| Crest Nicholson Holdings Plc | 2.08                 | 0.05                 | -0.49                     | -24.29               |
| S.A. Elis                    | 2.28                 | 0.07                 | -0.41                     | -18.87               |
| Freenet AG                   | 2.42                 | 0.13                 | -0.41                     | -18.00               |
| Halfords Group PLC           | 1.82                 | 0.03                 | -0.35                     | -19.54               |
| Texwinca Holdings Ltd        | 1.10                 | 0.01                 | -0.33                     | -30.34               |

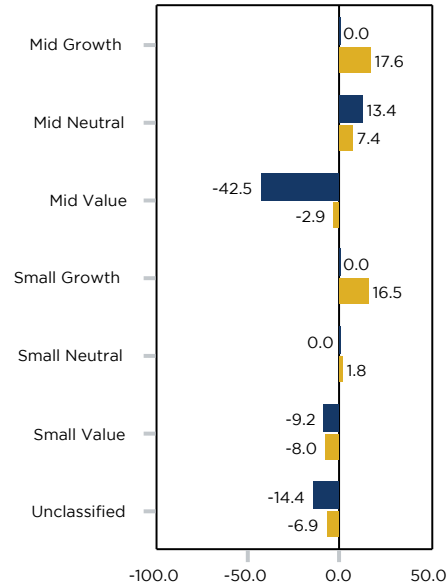


# Pear Tree Polaris Foreign Value Small Cap R6 (QUSRX)

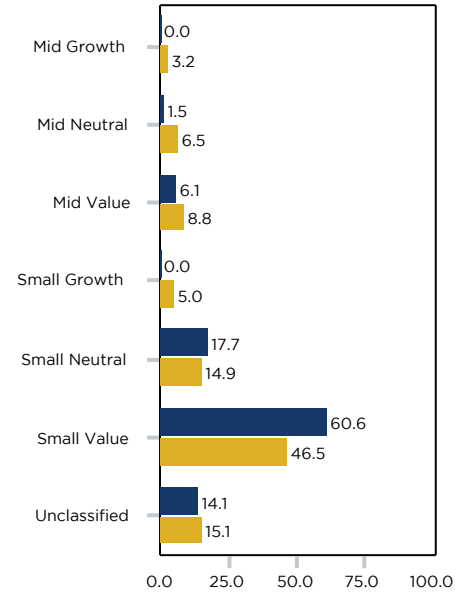
Index: MSCI AC World ex USA Small Cap (Net)

Report Date: 06/30/2020

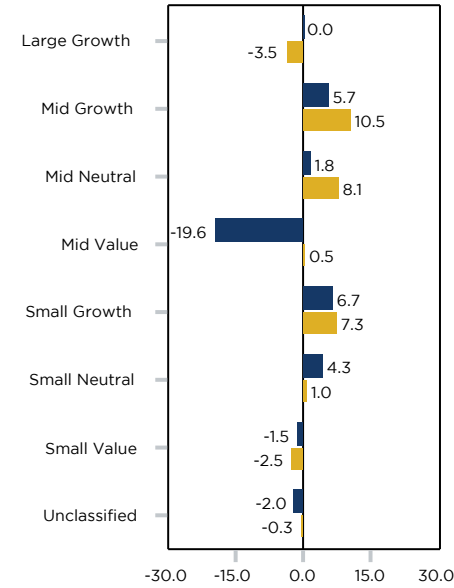
## Performance | 1 Year



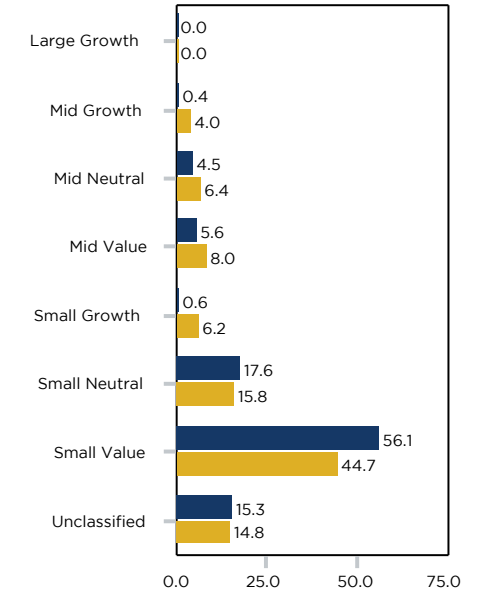
## Allocation | 1 Year



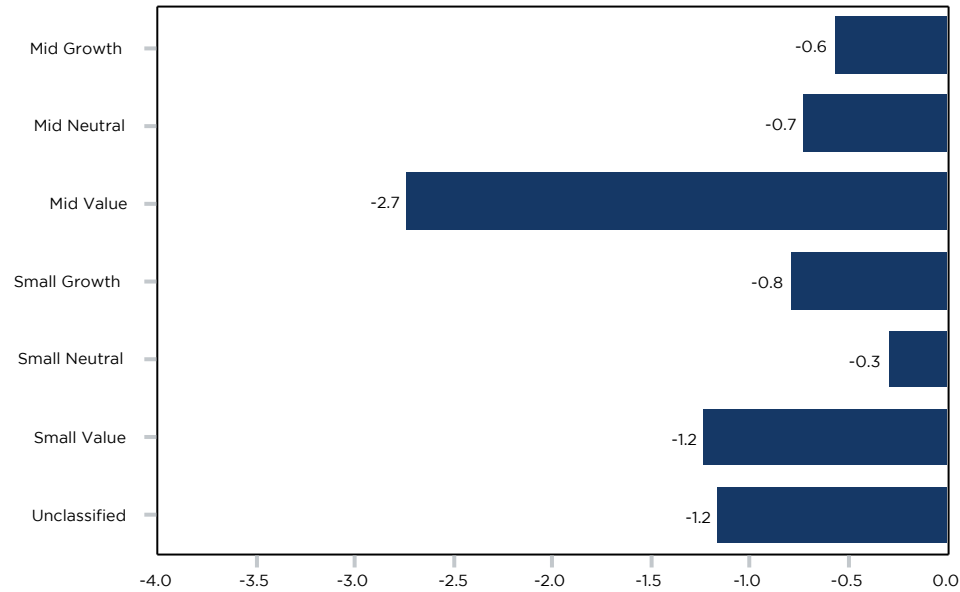
## Performance | 3 Years



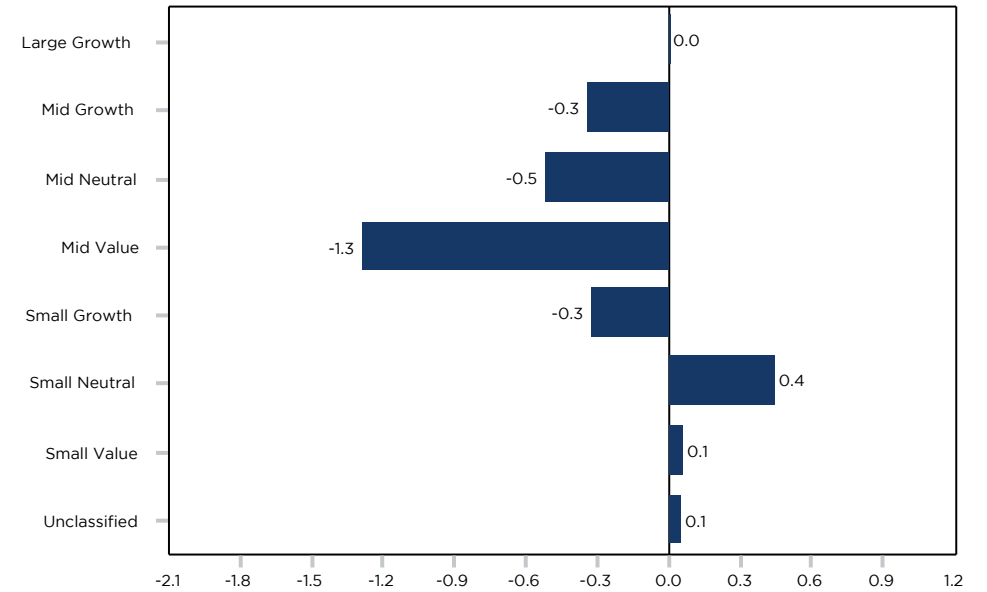
## Allocation | 3 Years



## Total Attribution | 1 Year



## Total Attribution | 3 Years



## Trailing Performance

|            | 1 Quarter  | Year to Date | 1 Year     | 3 Years    | 5 Years   | 10 Years  | 2019       | 2018        | 2017       | 2016       |
|------------|------------|--------------|------------|------------|-----------|-----------|------------|-------------|------------|------------|
| Manager    | 19.68 (51) | -12.79 (74)  | -7.26 (75) | -0.10 (68) | 2.14 (61) | 3.11 (53) | 16.03 (80) | -13.62 (21) | 36.57 (47) | 12.09 (24) |
| Benchmark  | 18.08      | -9.78        | -3.39      | 1.90       | 2.86      | 3.27      | 18.44      | -14.58      | 37.28      | 11.19      |
| Peer Group | 19.68      | -9.70        | -3.22      | 1.21       | 2.66      | 3.20      | 19.78      | -16.23      | 35.89      | 8.88       |
| Population | 1,057      | 1,169        | 1,022      | 905        | 815       | 462       | 1,057      | 1,138       | 1,061      | 1,092      |

## Fund Information

|                     |                   |
|---------------------|-------------------|
| Fund Inception      | 04/25/1994        |
| Fund Assets         | 5,641 Million     |
| Portfolio Assets    | 5,641 Million     |
| Total # of Holdings | 1269              |
| % in Top 10         | 20.84 %           |
| PM                  | Team Managed      |
| PM Tenure           | 10 Years 4 Months |
| Turnover            | 9.00 %            |
| Gross Expense (%)   | 0.53 %            |
| Net Expense (%)     | 0.43 %            |
| New Investors       | Open              |

## Portfolio Characteristics

|                           | Portfolio | Benchmark |
|---------------------------|-----------|-----------|
| Wtd. Avg. Mkt. Cap (\$M)  | 92,123    | 130,266   |
| Median Mkt. Cap (\$M)     | 3,565     | 5,124     |
| Price/Earnings ratio      | 14.1      | 14.6      |
| Price/Book ratio          | 2.6       | 2.9       |
| 5 Yr. EPS Growth Rate (%) | 9.5       | 12.5      |
| Current Yield (%)         | 3.0       | 2.5       |
| Beta (5 Years, Monthly)   | 1.00      | 1.00      |
| Number of Stocks          | 1,199     | 1,385     |
| Debt to Equity (%)        | 97.3      | 78.1      |
| Forecast P/E              | 11.5      | 11.0      |
| Forecast EPS Growth       | 13.6      | 16.2      |
| Return on Equity (%)      | 1.8       | 2.2       |

## Country/Region Allocation

|                  |              |              |
|------------------|--------------|--------------|
| United States    | 0.0          | 0.2          |
| Non-US Developed | 15.0         | 16.7         |
| Emerging Markets | 84.9         | 83.0         |
| Other            | 0.0          | 0.1          |
| <b>Total</b>     | <b>100.0</b> | <b>100.0</b> |

## Fund Statistics

|  | 3 Years | 10 Years |
|--|---------|----------|
| Standard Deviation                           | 18.90   | 17.82    |
| <b>vs. MSCI Emerging Markets (Net) Index</b> |         |          |
| Beta   | 1.02    | 0.99     |
| Alpha  | -1.89   | -0.09    |
| Information Ratio                            | -0.60   | -0.05    |
| Tracking Error                               | 3.03    | 2.64     |
| R-Squared                                    | 0.97    | 0.98     |
| Up Market Capture                            | 97.96   | 99.33    |
| Down Market Capture                          | 105.64  | 99.86    |
| Consistency                                  | 38.89   | 50.83    |

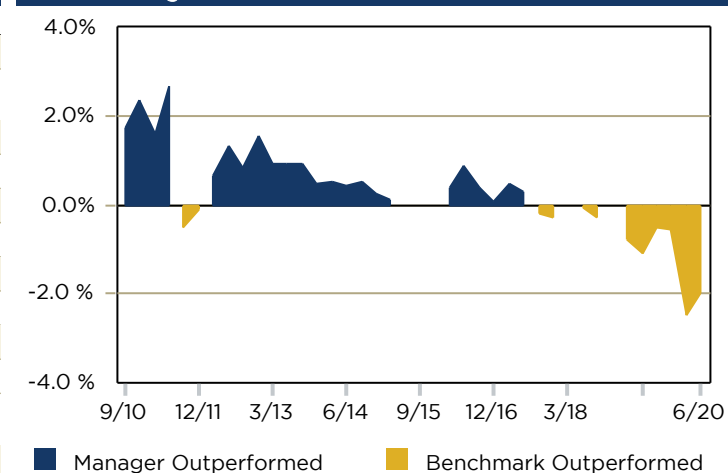
## vs. Risk Free

|              |      |      |
|--------------|------|------|
| Sharpe Ratio | 0.00 | 0.23 |
|--------------|------|------|

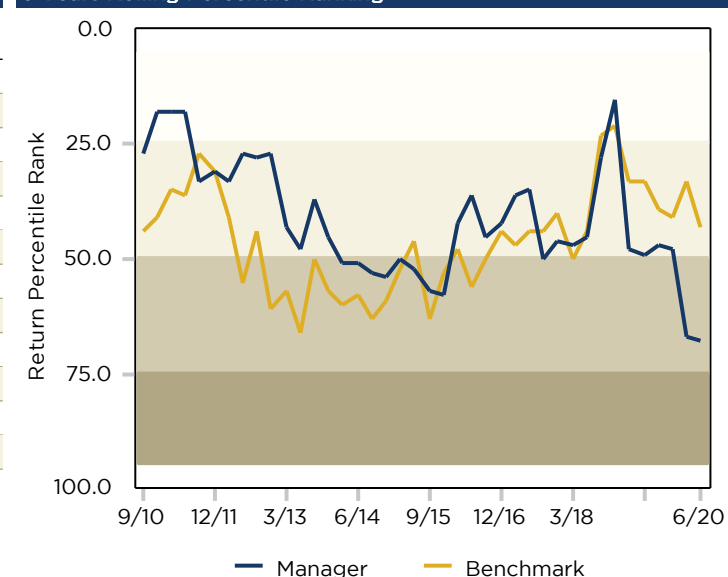
## Sector Allocation

| Sector                 | Portfolio Weight (%) | Benchmark Weight (%) |
|------------------------|----------------------|----------------------|
| Communication Services | 11.5                 | 13.5                 |
| Consumer Discretionary | 12.0                 | 17.4                 |
| Consumer Staples       | 7.5                  | 6.5                  |
| Energy                 | 5.8                  | 5.9                  |
| Financials             | 17.7                 | 19.1                 |
| Health Care            | 3.7                  | 4.3                  |
| Industrials            | 6.3                  | 4.7                  |
| Information Technology | 20.4                 | 17.0                 |
| Materials              | 9.1                  | 6.9                  |
| Real Estate            | 3.3                  | 2.6                  |
| Utilities              | 2.6                  | 2.3                  |
| <b>Total</b>           | <b>100.0</b>         | <b>100.0</b>         |

## 3 Years Rolling Excess Performance

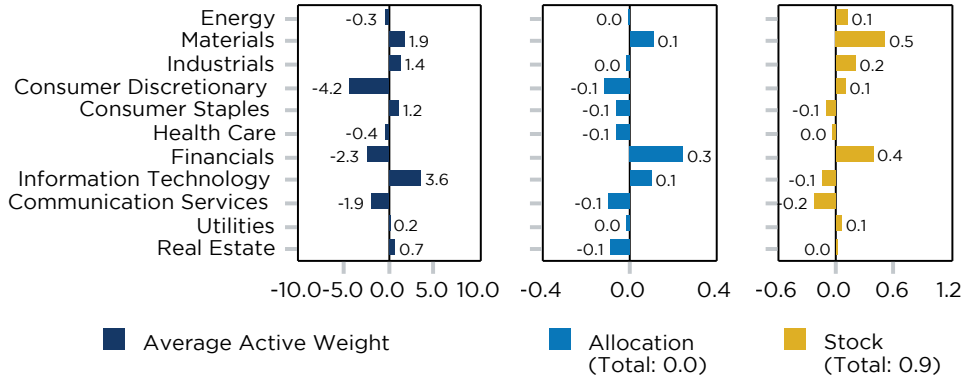


## 3 Years Rolling Percentile Ranking

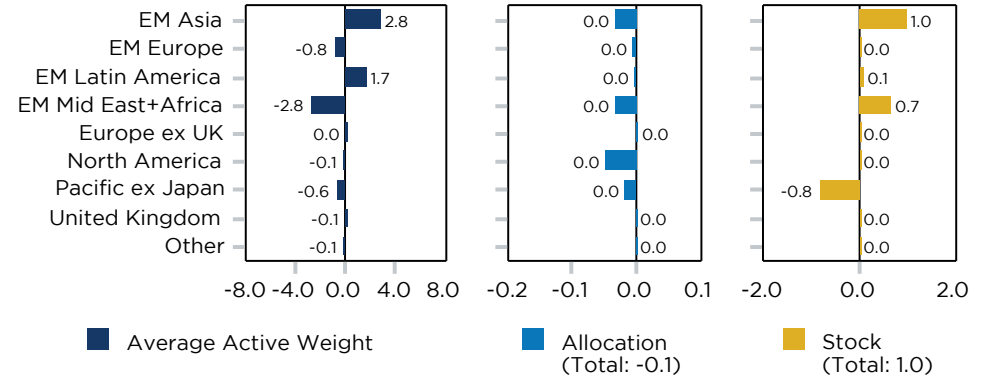




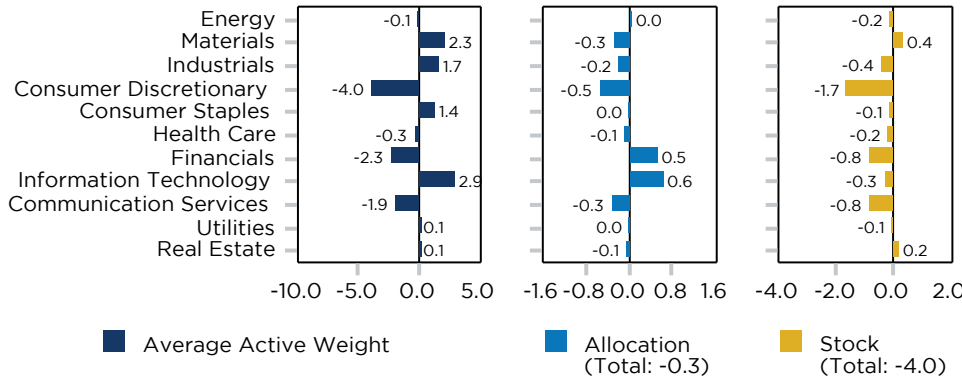
## 1 Quarter Sector Attribution



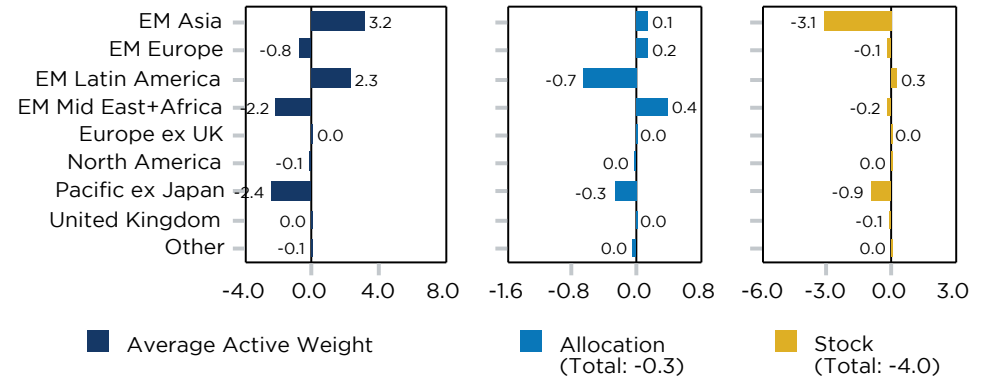
## 1 Quarter Region Attribution



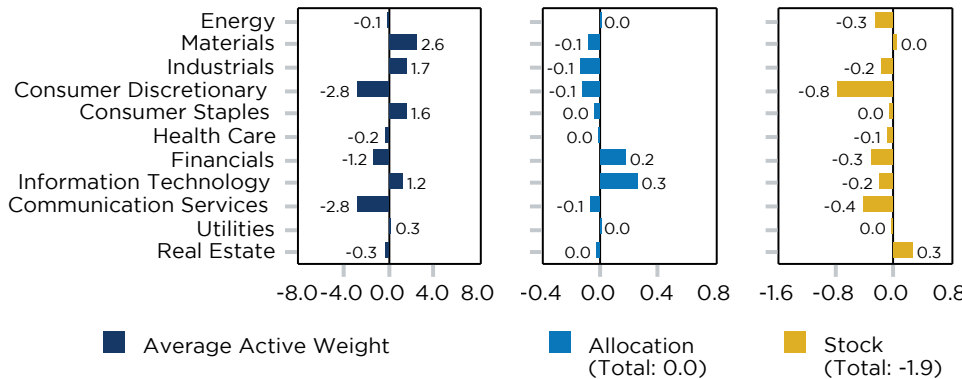
## 1 Year Sector Attribution



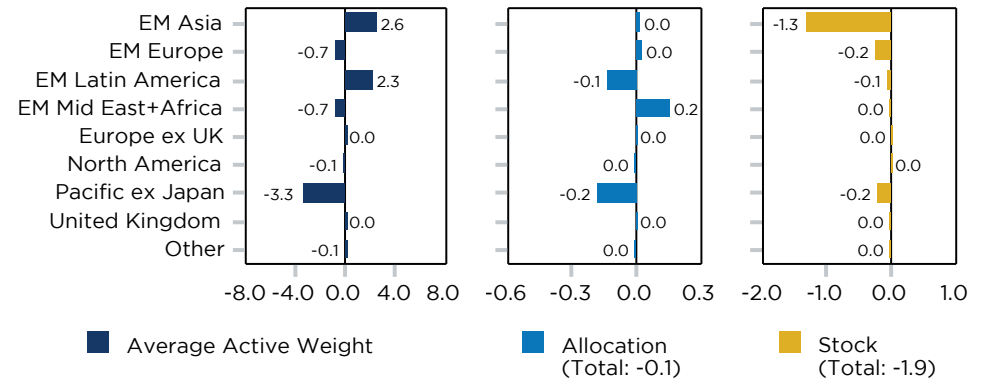
## 1 Year Region Attribution



## 3 Years Sector Attribution



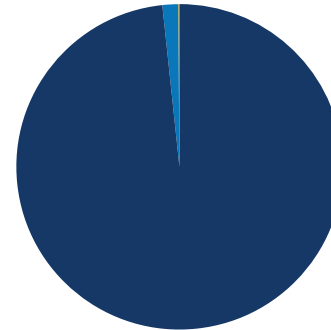
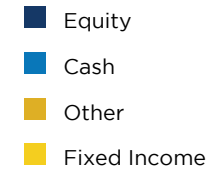
## 3 Years Region Attribution



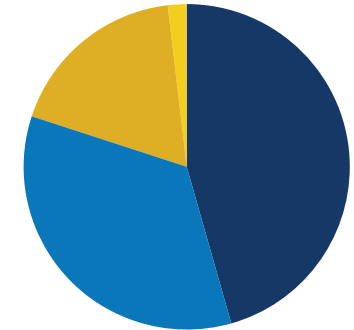
## Top Ten Securities

|                                    |               |
|------------------------------------|---------------|
| Tencent Holdings Ltd               | 4.1 %         |
| Taiwan Semiconductor Manufacturing | 3.9 %         |
| Samsung Electronics Co Ltd         | 3.7 %         |
| Alibaba Group Holding Ltd ADR      | 3.1 %         |
| China Construction Bank Corp Class | 1.1 %         |
| Reliance Industries Ltd            | 1.0 %         |
| Ping An Insurance (Group) Co. of   | 1.0 %         |
| Taiwan Semiconductor Manufacturing | 1.0 %         |
| E-mini S&P 500 Futures June20      | 1.0 %         |
| Samsung Electronics Co Ltd GDR     | 0.9 %         |
| <b>Total</b>                       | <b>20.8 %</b> |

## Asset Allocation



## Market Capitalization



## Top Ten Contributors | 1 Quarter

|                            | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|----------------------------|----------------------|----------------------|---------------------------|----------------------|
| Alibaba Group Holding Ltd  | 2.42                 | 7.07                 | 0.33                      | 10.91                |
| Gold Fields Ltd            | 0.37                 | 0.09                 | 0.22                      | 97.89                |
| AngloGold Ashanti Ltd      | 0.44                 | 0.16                 | 0.17                      | 77.33                |
| Reliance Industries Ltd    | 1.04                 | 0.88                 | 0.06                      | 53.97                |
| Taiwan Semiconductor       | 4.50                 | 4.67                 | 0.00                      | 18.29                |
| Samsung Electronics Co Ltd | 4.31                 | 3.92                 | -0.02                     | 12.84                |
| Taiwan Semiconductor       | 1.46                 | 4.67                 | -0.05                     | 19.68                |
| Naspers Ltd                | 0.71                 | 1.34                 | -0.05                     | 26.71                |
| Mediatek Incorporation     | 0.22                 | 0.34                 | -0.08                     | 81.63                |
| Tencent Holdings LTD       | 4.13                 | 5.88                 | -0.24                     | 31.53                |

## Top Ten Contributors | 3 Years

|                           | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|---------------------------|----------------------|----------------------|---------------------------|----------------------|
| AngloGold Ashanti Ltd     | 0.29                 | 0.09                 | 0.09                      | 45.61                |
| Tata Consultancy Serv     | 0.48                 | 0.37                 | 0.02                      | 17.28                |
| Reliance Industries Ltd   | 0.63                 | 0.59                 | 0.01                      | 29.54                |
| Mediatek Incorporation    | 0.23                 | 0.28                 | -0.02                     | 35.28                |
| Ping An Insurance Group   | 0.55                 | 0.74                 | -0.03                     | 18.45                |
| Naspers Ltd               | 1.31                 | 1.82                 | -0.05                     | 12.39                |
| Taiwan Semiconductor      | 3.14                 | 3.61                 | -0.08                     | 19.49                |
| Alibaba Group Holding Ltd | 1.42                 | 3.41                 | -0.27                     | 15.25                |
| Tencent Holdings LTD      | 2.82                 | 4.35                 | -0.31                     | 21.93                |
| Taiwan Semiconductor      | 1.06                 | 3.61                 | -0.50                     | 21.47                |

## Top Ten Detractors | 1 Quarter

|                                 | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|---------------------------------|----------------------|----------------------|---------------------------|----------------------|
| Sunac China Holdings Ltd        | 0.45                 | 0.24                 | -0.05                     | -6.01                |
| Hindustan Unilever Ltd          | 0.63                 | 0.41                 | -0.05                     | -4.82                |
| China Resources Land Ltd        | 0.40                 | 0.28                 | -0.03                     | -5.25                |
| Thai Union Group Public Co Ltd  | 0.08                 | 0.03                 | -0.02                     | -25.36               |
| Momo Inc                        | 0.13                 | 0.07                 | -0.02                     | -16.68               |
| Clicks Group Ltd                | 0.14                 | 0.08                 | -0.02                     | -16.49               |
| China Railway Construction Corp | 0.08                 | 0.05                 | -0.01                     | -29.83               |
| China Gas Holdings Ltd          | 0.17                 | 0.13                 | -0.01                     | -11.47               |
| China Mobile Ltd                | 0.77                 | 0.96                 | 0.05                      | -7.91                |
| Ind & Comm Bank of China        | 0.65                 | 0.93                 | 0.07                      | -6.24                |

## Top Ten Detractors | 3 Years

|                                   | Portfolio Weight (%) | Benchmark Weight (%) | Contrib. to Rel. Rtn. (%) | Quarterly Return (%) |
|-----------------------------------|----------------------|----------------------|---------------------------|----------------------|
| Grupo Financiero Banorte          | 0.53                 | 0.34                 | -0.04                     | -17.47               |
| Sasol Ltd                         | 0.39                 | 0.33                 | -0.02                     | -33.62               |
| MTN Group Ltd                     | 0.40                 | 0.32                 | -0.02                     | -24.48               |
| ITC Ltd                           | 0.45                 | 0.36                 | -0.02                     | -18.85               |
| Grupo Televisa SAB                | 0.30                 | 0.26                 | -0.02                     | -40.75               |
| Ambev                             | 0.60                 | 0.56                 | -0.01                     | -19.61               |
| Cielo SA                          | 0.20                 | 0.19                 | 0.00                      | -47.24               |
| Tata Motors Ltd                   | 0.24                 | 0.23                 | 0.00                      | -42.08               |
| Cemex SAB de CV                   | 0.29                 | 0.29                 | 0.00                      | -32.07               |
| Steinhoff Investment Holdings Ltd | 0.32                 | 0.33                 | 0.01                      | -77.50               |

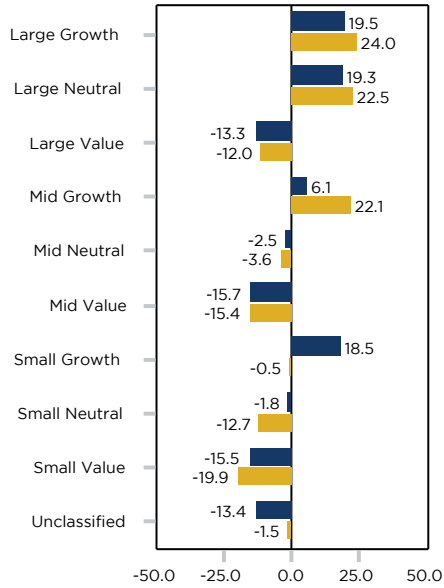


# DFA Emerging Markets I (DFEMX)

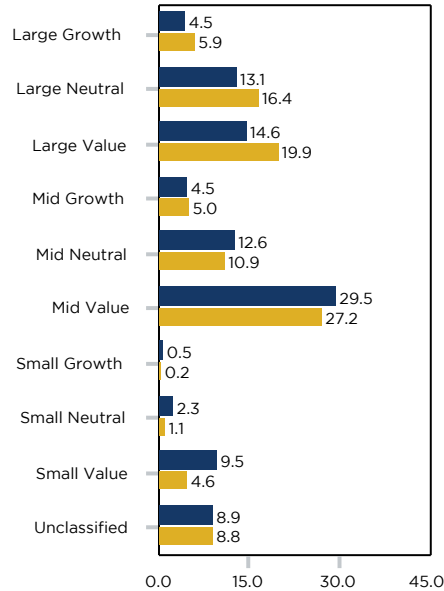
Index: MSCI Emerging Markets (Net) Index

Report Date: 06/30/2020

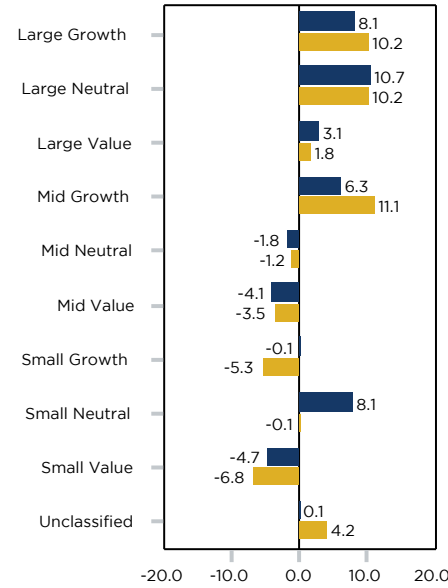
## Performance | 1 Year



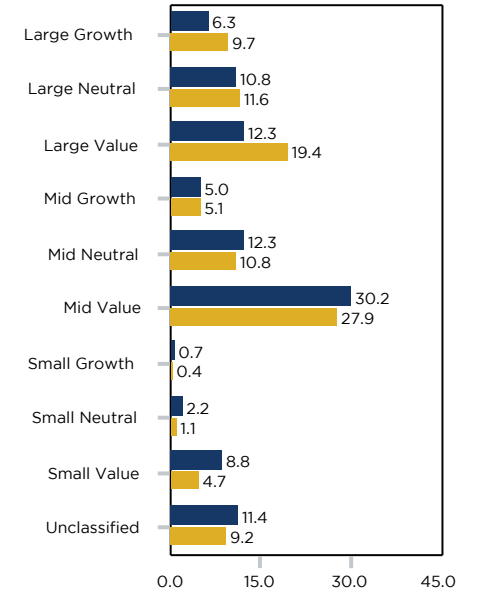
## Allocation | 1 Year



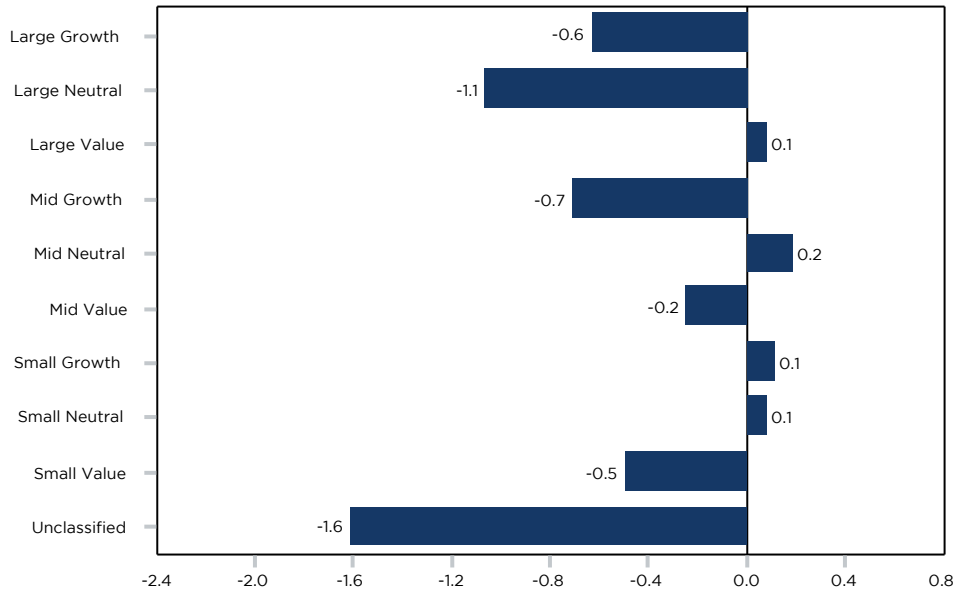
## Performance | 3 Years



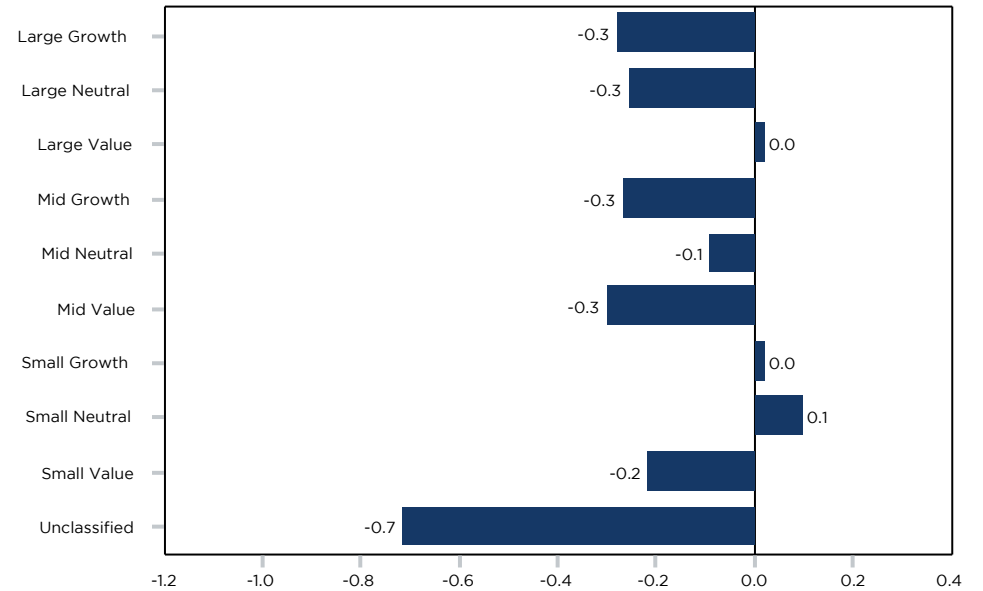
## Allocation | 3 Years



## Total Attribution | 1 Year



## Total Attribution | 3 Years





# TIAA Real Estate Account (QREARX)

Index: NCREIF Fund Index-Open End Diversified

Category: Real Estate

Report Date: 06/30/2020

## Trailing Performance

|           | 1 Quarter | Year to Date | 1 Year | 3 Years | 5 Years | 10 Years | 2019 | 2018 | 2017 | 2016 |
|-----------|-----------|--------------|--------|---------|---------|----------|------|------|------|------|
| Manager   | -1.46     | -1.36        | 0.99   | 3.75    | 4.42    | 8.17     | 5.51 | 4.79 | 4.37 | 5.20 |
| Benchmark | -1.27     | -0.36        | 2.56   | 5.99    | 7.63    | 10.90    | 6.08 | 8.25 | 7.80 | 9.27 |

## Fund Information

|                             |                      |
|-----------------------------|----------------------|
| Fund Inception              | 10-1995              |
| Fund Assets                 | 24,218 Million       |
| Portfolio Assets            | 24,218 Million       |
| Total # of Holdings         | 433                  |
| % Assets in Top 10 Holdings | 19.3 %               |
| PM                          | Giraldo,R/McGibbon,G |
| PM Tenure                   | 4 Years 1 Month      |
| Turnover                    | 11.8 %               |
| Gross Expense (%)           | 0.8 %                |
| Net Expense (%)             | 0.8 %                |
| New Investors               | Open                 |

## Equity Characteristics

|                 |                  |
|-----------------|------------------|
| Avg. Market Cap | 16,726 (Million) |
| Price/Earnings  | 38               |
| Price/Book      | 2                |
| Dividend Yield  | 4.5 %            |

## Top Holdings (%)

|                              |     |
|------------------------------|-----|
| 1001 Pennsylvania Avenue     | 2.9 |
| The Florida Mall             | 2.7 |
| Fashion Show                 | 2.2 |
| 99 High Street               | 2.1 |
| Ontario Industrial Portfolio | 1.9 |
| Ddr Joint Venture            | 1.7 |
| 701 Brickell Avenue          | 1.6 |
| Lincoln Centre               | 1.5 |
| 780 Third Avenue             | 1.4 |
| Colorado Center              | 1.4 |

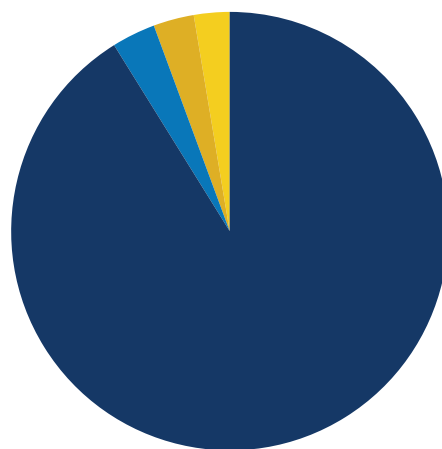
## Fund Statistics

|   | 3 Years | 10 Years |
|---|---------|----------|
| Standard Deviation  | 1.63    | 2.55     |
| <b>vs. NCREIF Fund Index-Open End Diversified Core (EW)</b> |         |          |
| Beta  | 0.82    | 0.93     |
| Alpha   | -1.10   | -1.76    |
| Information Ratio   | -2.86   | -1.89    |
| Tracking Error  | 0.76    | 1.35     |
| R-Squared   | 0.83    | 0.73     |
| Up Market Capture   | 66.58   | 76.24    |
| Down Market Capture   | 115.20  | 115.20   |
| Consistency   | 8.33    | 12.50    |

## vs. Risk Free

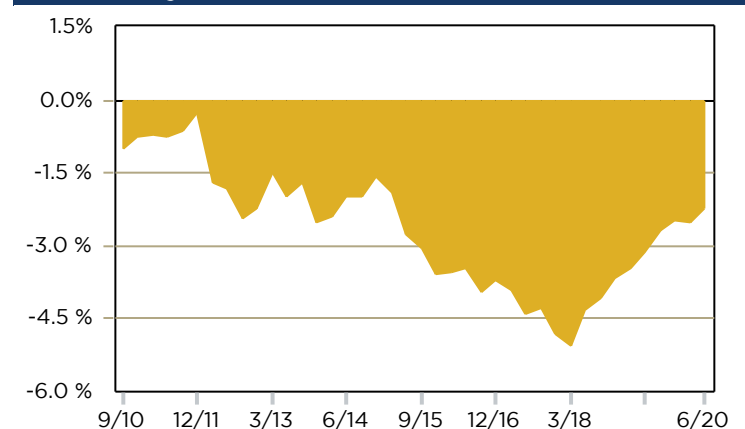
|              |      |      |
|--------------|------|------|
| Sharpe Ratio | 1.36 | 2.66 |
|--------------|------|------|

## 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: 06/30/2020

## Trailing Performance

|            | 1 Quarter  | Year to Date | 1 Year    | 3 Years   | 5 Years   | 10 Years  | 2019       | 2018       | 2017       | 2016      |
|------------|------------|--------------|-----------|-----------|-----------|-----------|------------|------------|------------|-----------|
| Manager    | 14.00 (37) | -1.04 (26)   | 6.01 (22) | 6.89 (22) | 6.69 (22) | 8.39 (39) | 20.80 (24) | -4.29 (26) | 14.27 (50) | 7.40 (39) |
| Benchmark  | 13.00      | -0.76        | 5.78      | 6.86      | 6.58      | 8.49      | 20.46      | -4.56      | 14.34      | 7.02      |
| Peer Group | 13.38      | -2.70        | 3.49      | 5.34      | 5.42      | 8.00      | 19.30      | -5.68      | 14.21      | 6.85      |
| Population | 1,161      | 1,539        | 1,139     | 1,081     | 1,005     | 760       | 1,153      | 1,403      | 1,226      | 1,269     |

## Fund Information

|                             |                                |
|-----------------------------|--------------------------------|
| Fund Inception              | 04-2015                        |
| Fund Assets                 | 15,245 Million                 |
| Portfolio Assets            | 7,597 Million                  |
| Total # of Holdings         | 1836                           |
| % Assets in Top 10 Holdings | 9.8 %                          |
| PM                          | Campagna,P/Liao,L/Liberatore,S |
| PM Tenure                   | 15 Years 6 Months              |
| Turnover                    | 52.0 %                         |
| Gross Expense (%)           | 0.24 %                         |
| Net Expense (%)             | 0.24 %                         |
| New Investors               | Open                           |

## Equity Characteristics

|                 |                  |
|-----------------|------------------|
| Avg. Market Cap | 53,014 (Million) |
| Price/Earnings  | 21               |
| Price/Book      | 2                |
| Dividend Yield  | 2.6 %            |

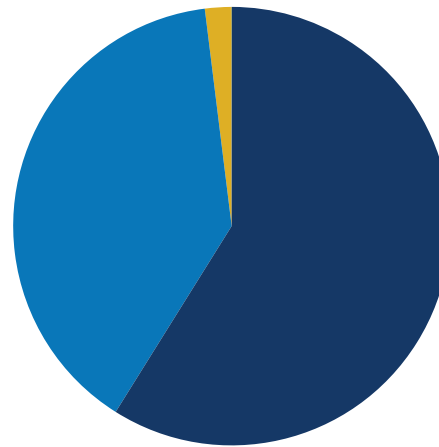
## Fund Statistics

|   | 3 Years | 10 Years |
|---|---------|----------|
| Standard Deviation  | 10.48   | 8.32     |
| <b>vs. 40% BBg US Agg   42% R3000   18% MSCI EAFE + Can</b> |         |          |
| Beta  | 1.05    | 1.00     |
| Alpha   | -0.24   | -0.09    |
| Information Ratio   | 0.07    | -0.09    |
| Tracking Error  | 1.11    | 0.95     |
| R-Squared   | 0.99    | 0.99     |
| Up Market Capture   | 101.27  | 98.50    |
| Down Market Capture   | 101.34  | 97.89    |
| Consistency   | 50.00   | 53.33    |

## vs. Risk Free

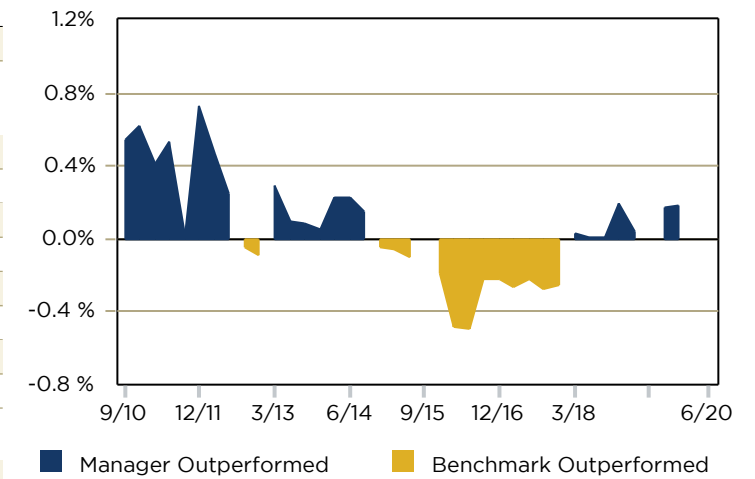
|              |      |      |
|--------------|------|------|
| Sharpe Ratio | 0.52 | 0.93 |
|--------------|------|------|

## Asset Allocation

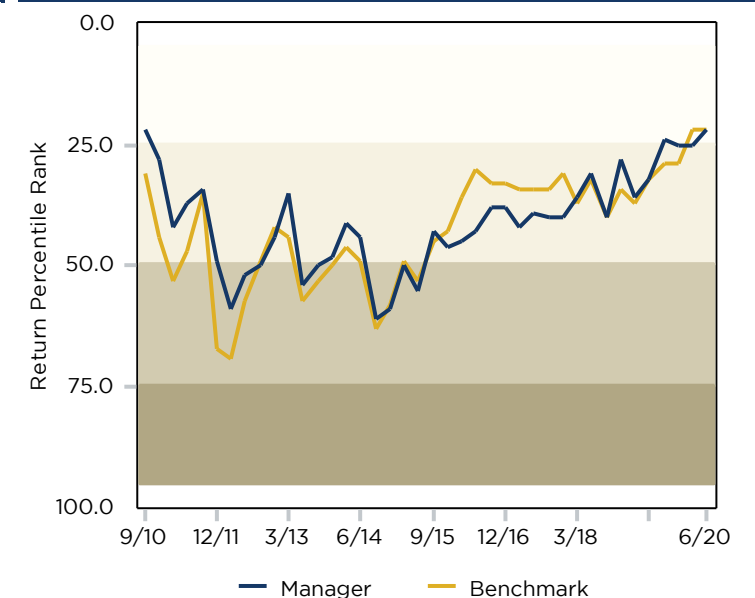


■ Equity      ■ Fixed Income  
■ Cash      ■ Other

## 3 Years Rolling Excess Performance



## 3 Years Rolling Percentile Ranking



## Top Holdings (%)

|                                    |     |
|------------------------------------|-----|
| Microsoft Corp                     | 2.2 |
| Apple Inc                          | 2.0 |
| United States Treasury Bonds 2%    | 1.0 |
| United States Treasury Notes 0.62% | 0.8 |
| Alphabet Inc A                     | 0.7 |
| Alphabet Inc Class C               | 0.7 |
| Federal National Mortgage Asso     | 0.6 |
| Procter & Gamble Co                | 0.6 |
| UnitedHealth Group Inc             | 0.6 |
| Intel Corp                         | 0.6 |

## Trailing Performance

|            | 1 Quarter  | Year to Date | 1 Year    | 3 Years   | 5 Years   | 10 Years   | 2019       | 2018       | 2017       | 2016      |
|------------|------------|--------------|-----------|-----------|-----------|------------|------------|------------|------------|-----------|
| Manager    | 21.33 (21) | -5.86 (41)   | 2.31 (29) | 6.45 (28) | 6.97 (17) | 10.65 (12) | 27.45 (15) | -9.65 (57) | 23.43 (10) | 9.17 (29) |
| Benchmark  | 20.27      | -5.76        | 3.06      | 7.36      | 7.71      | 11.10      | 28.13      | -7.93      | 22.96      | 10.28     |
| Peer Group | 19.79      | -7.01        | 0.91      | 5.11      | 5.60      | 9.59       | 25.24      | -9.40      | 20.25      | 7.59      |
| Population | 279        | 399          | 272       | 253       | 238       | 182        | 267        | 328        | 310        | 317       |

## Fund Information

|                             |                  |
|-----------------------------|------------------|
| Fund Inception              | 04-2015          |
| Fund Assets                 | 106,556 Million  |
| Portfolio Assets            | 61,870 Million   |
| Total # of Holdings         | 9820             |
| % Assets in Top 10 Holdings | 15.8 %           |
| PM                          | Team Managed     |
| PM Tenure                   | 10 Years 1 Month |
| Turnover                    | 60.0 %           |
| Gross Expense (%)           | 0.30 %           |
| Net Expense (%)             | 0.30 %           |
| New Investors               | Open             |

## Equity Characteristics

|                 |                  |
|-----------------|------------------|
| Avg. Market Cap | 54,501 (Million) |
| Price/Earnings  | 19               |
| Price/Book      | 2                |
| Dividend Yield  | 2.6 %            |

## Top Holdings (%)

|                      |     |
|----------------------|-----|
| Microsoft Corp       | 3.4 |
| Apple Inc            | 2.8 |
| Amazon.com Inc       | 2.8 |
| Facebook Inc A       | 1.3 |
| Alphabet Inc Class C | 1.2 |
| JPMorgan Chase & Co  | 1.0 |
| Intel Corp           | 0.9 |
| Johnson & Johnson    | 0.8 |
| Visa Inc Class A     | 0.8 |
| Alphabet Inc A       | 0.8 |

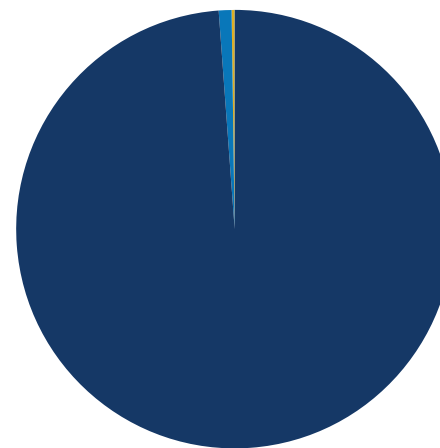
## Fund Statistics

|                                       | 3 Years | 10 Years |
|---------------------------------------|---------|----------|
| Standard Deviation                    | 17.15   | 14.20    |
| <b>vs. 70% R3000   30% ACWI ex US</b> |         |          |
| Beta                                  | 1.03    | 1.02     |
| Alpha                                 | -1.02   | -0.61    |
| Information Ratio                     | -0.77   | -0.40    |
| Tracking Error                        | 0.98    | 0.88     |
| R-Squared                             | 1.00    | 1.00     |
| Up Market Capture                     | 99.37   | 99.92    |
| Down Market Capture                   | 103.34  | 102.56   |
| Consistency                           | 36.11   | 45.00    |

## vs. Risk Free

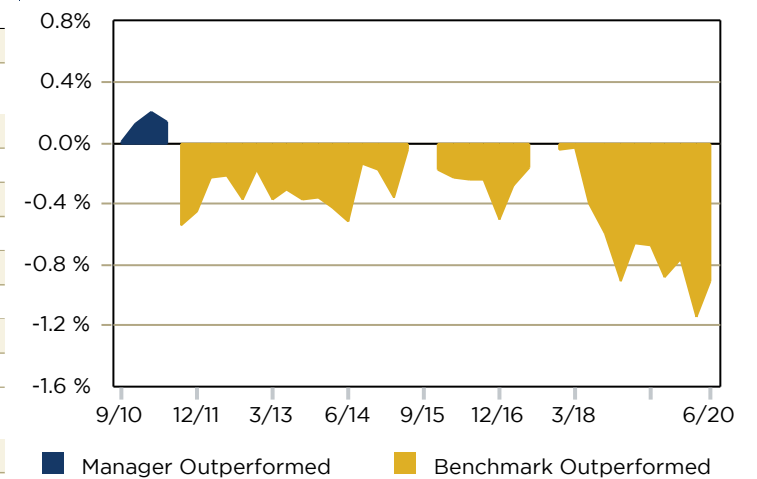
|              |      |      |
|--------------|------|------|
| Sharpe Ratio | 0.35 | 0.74 |
|--------------|------|------|

## Asset Allocation

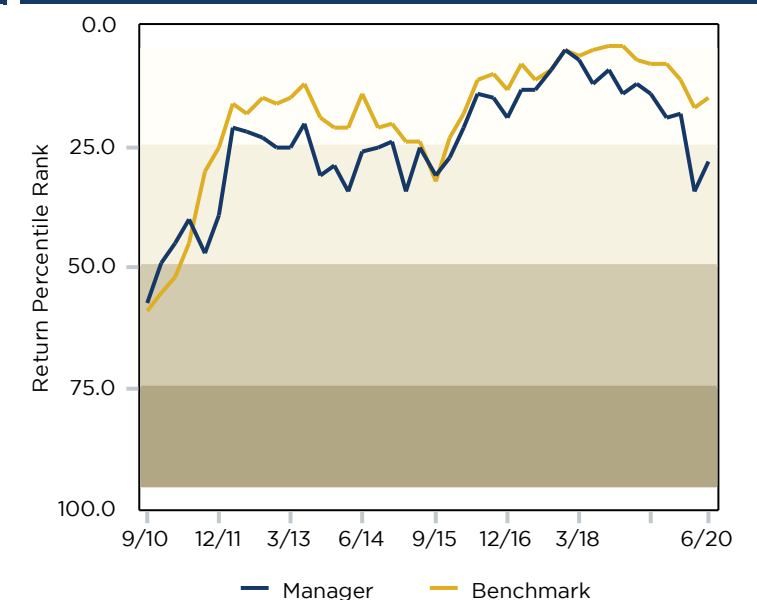


■ Equity    ■ Cash  
■ Fixed Income    ■ Other

## 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: 06/30/2020

## Trailing Performance

|            | 1 Quarter | Year to Date | 1 Year    | 3 Years   | 5 Years  | 10 Years | 2019       | 2018       | 2017      | 2016      |
|------------|-----------|--------------|-----------|-----------|----------|----------|------------|------------|-----------|-----------|
| Manager    | 10.71 (7) | 0.00 (64)    | 4.70 (53) | 5.42 (17) | 5.27 (6) | 6.79 (3) | 15.30 (18) | -3.84 (74) | 12.10 (2) | 6.04 (21) |
| Benchmark  | 9.67      | 1.19         | 6.31      | 6.09      | 5.57     | 6.74     | 15.70      | -2.94      | 10.55     | 5.81      |
| Peer Group | 8.31      | 0.57         | 4.77      | 4.74      | 4.40     | 5.16     | 13.20      | -3.29      | 8.68      | 5.23      |
| Population | 480       | 475          | 446       | 410       | 358      | 256      | 457        | 487        | 474       | 481       |

## Fund Information

|                             |                               |
|-----------------------------|-------------------------------|
| Fund Inception              | 11-2007                       |
| Fund Assets                 | 547 Million                   |
| Portfolio Assets            | 223 Million                   |
| Total # of Holdings         | 22                            |
| % Assets in Top 10 Holdings | 79.5 %                        |
| PM                          | Cunniff,J/Erickson,H/Sedmak,S |
| PM Tenure                   | 12 Years 7 Months             |
| Turnover                    | 25.0 %                        |
| Gross Expense (%)           | 0.5 %                         |
| Net Expense (%)             | 0.4 %                         |
| New Investors               | Open                          |

## Equity Characteristics

|                 |                  |
|-----------------|------------------|
| Avg. Market Cap | 56,609 (Million) |
| Price/Earnings  | 21               |
| Price/Book      | 2                |
| Dividend Yield  | 2.3 %            |

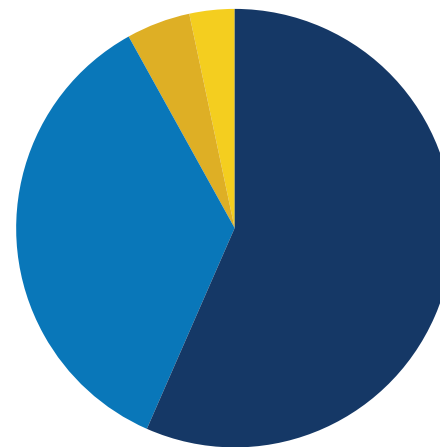
## Top Holdings (%)

|                                  |      |
|----------------------------------|------|
| TIAA-CREF Core Bond W            | 20.4 |
| TIAA-CREF Core Plus Bond W       | 12.9 |
| TIAA-CREF Inflation Link Bd W    | 9.9  |
| TIAA-CREF Short-Term Bond W      | 9.9  |
| TIAA-CREF Growth & Income W      | 5.4  |
| TIAA-CREF Large-Cap Growth W     | 5.0  |
| TIAA-CREF Large-Cap Value W      | 4.5  |
| TIAA-CREF Quant Large-Cap Growth | 4.4  |
| Tiaa Cref Real Property Fnd Lp   | 4.3  |
| TIAA-CREF Quant Intl Eq W        | 2.7  |

## Fund Statistics

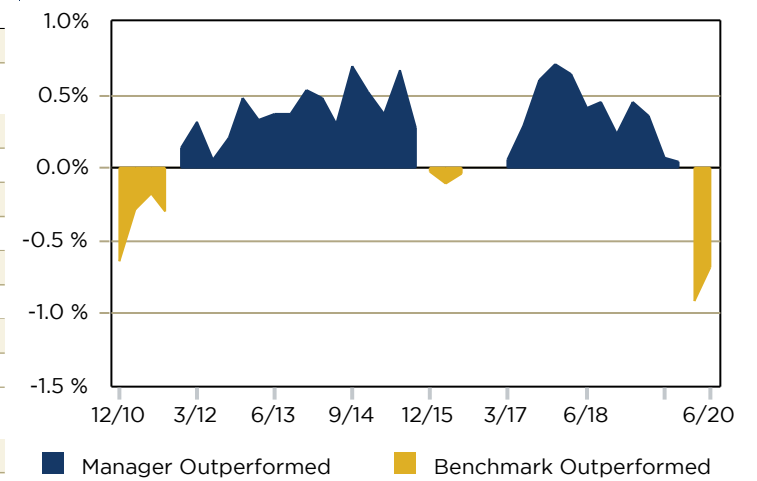
|  | 3 Years | 10 Years |
|--|---------|----------|
| Standard Deviation                         | 7.73    | 6.34     |
| <b>vs. CREF Lifecycle Composite Income</b> |         |          |
| Beta                                       | 1.10    | 1.10     |
| Alpha                                      | -1.20   | -0.56    |
| Information Ratio                          | -0.44   | 0.08     |
| Tracking Error                             | 1.32    | 1.02     |
| R-Squared                                  | 0.98    | 0.98     |
| Up Market Capture                          | 100.51  | 104.77   |
| Down Market Capture                        | 110.45  | 109.94   |
| Consistency                                | 44.44   | 55.00    |
| <b>vs. Risk Free</b>                       |         |          |
| Sharpe Ratio                               | 0.49    | 0.97     |

## Asset Allocation

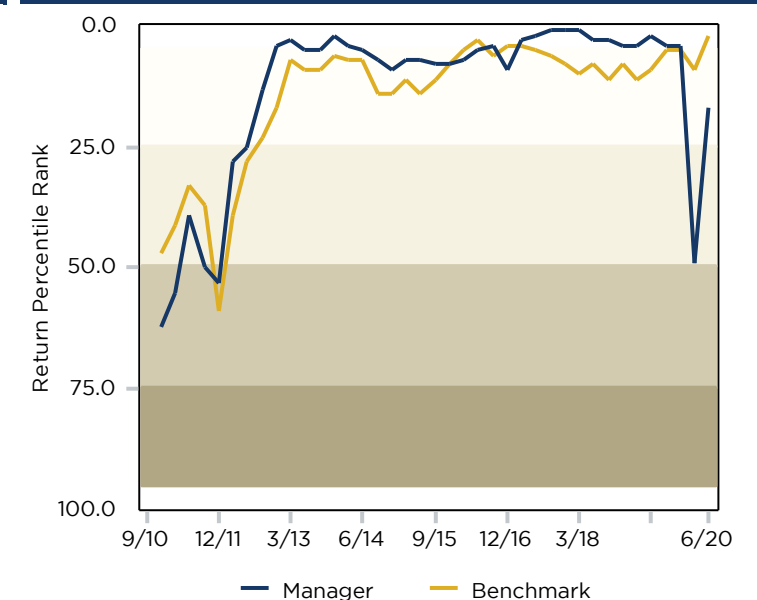


■ Fixed Income    ■ Equity  
■ Cash            ■ Other

## 3 Years Rolling Excess Performance



## 3 Years Rolling Percentile Ranking





# TIAA-CREF Lifecycle 2010 Institutional (TCTIX)

Index: CREF Lifecycle Composite 2010

Category: Target-Date 2000-2010

Report Date: 06/30/2020

## Trailing Performance

|            | 1 Quarter  | Year to Date | 1 Year    | 3 Years   | 5 Years   | 10 Years | 2019       | 2018       | 2017      | 2016      |
|------------|------------|--------------|-----------|-----------|-----------|----------|------------|------------|-----------|-----------|
| Manager    | 10.71 (24) | 0.00 (68)    | 4.79 (59) | 5.54 (24) | 5.42 (17) | 7.34 (8) | 15.43 (14) | -3.92 (78) | 12.76 (2) | 6.20 (43) |
| Benchmark  | 9.71       | 1.12         | 6.29      | 6.65      | 5.98      | 7.43     | 15.94      | -1.84      | 11.19     | 6.09      |
| Peer Group | 8.55       | 0.55         | 4.94      | 5.15      | 4.98      | 6.68     | 14.02      | -3.23      | 10.12     | 5.95      |
| Population | 292        | 288          | 277       | 237       | 222       | 191      | 302        | 322        | 322       | 334       |

## Fund Information

|                             |                               |
|-----------------------------|-------------------------------|
| Fund Inception              | 01-2007                       |
| Fund Assets                 | 1,181 Million                 |
| Portfolio Assets            | 750 Million                   |
| Total # of Holdings         | 22                            |
| % Assets in Top 10 Holdings | 79.3 %                        |
| PM                          | Cunniff,J/Erickson,H/Sedmak,S |
| PM Tenure                   | 14 Years 3 Months             |
| Turnover                    | 22.0 %                        |
| Gross Expense (%)           | 0.5 %                         |
| Net Expense (%)             | 0.4 %                         |
| New Investors               | Open                          |

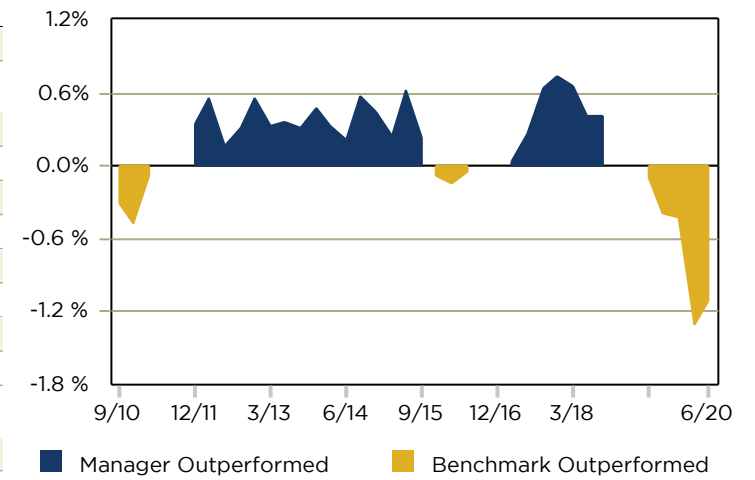
## Equity Characteristics

|                 |                  |
|-----------------|------------------|
| Avg. Market Cap | 56,607 (Million) |
| Price/Earnings  | 21               |
| Price/Book      | 2                |
| Dividend Yield  | 2.3 %            |

## Fund Statistics

|  | 3 Years | 10 Years |
|--|---------|----------|
| Standard Deviation                       | 10.10   | 7.78     |
| <b>vs. CREF Lifecycle Composite 2010</b> |         |          |
| Beta                                     | 1.15    | 1.14     |
| Alpha                                    | -1.95   | -1.05    |
| Information Ratio                        | -0.56   | -0.01    |
| Tracking Error                           | 1.64    | 1.35     |
| R-Squared                                | 0.99    | 0.98     |
| Up Market Capture                        | 101.30  | 105.82   |
| Down Market Capture                      | 125.55  | 122.87   |
| Consistency                              | 33.33   | 47.50    |
| <b>vs. Risk Free</b>                     |         |          |
| Sharpe Ratio                             | 0.41    | 0.87     |

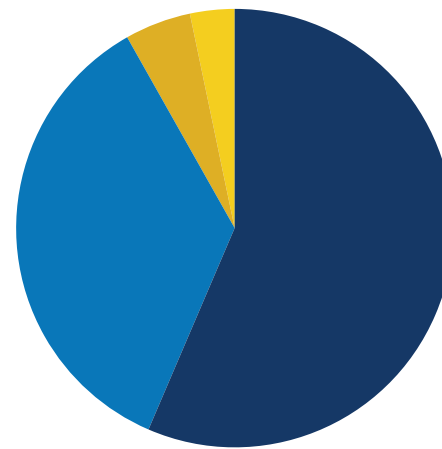
## 3 Years Rolling Excess Performance



## Top Holdings (%)

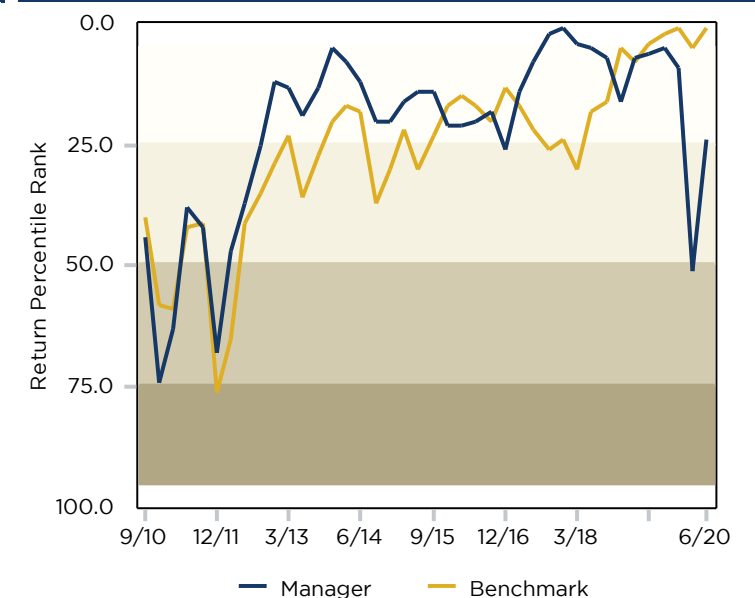
|                                  |      |
|----------------------------------|------|
| TIAA-CREF Core Bond W            | 20.3 |
| TIAA-CREF Core Plus Bond W       | 12.9 |
| TIAA-CREF Inflation Link Bd W    | 9.9  |
| TIAA-CREF Short-Term Bond W      | 9.9  |
| TIAA-CREF Growth & Income W      | 5.4  |
| TIAA-CREF Large-Cap Growth W     | 5.0  |
| TIAA-CREF Large-Cap Value W      | 4.5  |
| TIAA-CREF Quant Large-Cap Growth | 4.4  |
| Tiaa Cref Real Property Fnd Lp   | 4.3  |
| TIAA-CREF Quant Intl Eq W        | 2.7  |

## Asset Allocation



■ Fixed Income ■ Equity  
■ Cash ■ Other

## 3 Years Rolling Percentile Ranking





# TIAA-CREF Lifecycle 2015 Institutional (TCNIX)

Index: CREF Lifecycle Composite 2015

Category: Target-Date 2015

Report Date: 06/30/2020

## Trailing Performance

|            | 1 Quarter  | Year to Date | 1 Year    | 3 Years   | 5 Years   | 10 Years | 2019       | 2018       | 2017      | 2016      |
|------------|------------|--------------|-----------|-----------|-----------|----------|------------|------------|-----------|-----------|
| Manager    | 11.62 (16) | -0.41 (54)   | 4.66 (49) | 5.69 (31) | 5.62 (25) | 7.84 (9) | 16.51 (26) | -4.41 (69) | 13.85 (6) | 6.40 (53) |
| Benchmark  | 10.60      | 0.64         | 6.17      | 6.39      | 5.97      | 7.83     | 17.05      | -3.48      | 12.25     | 6.47      |
| Peer Group | 9.72       | -0.36        | 4.64      | 5.28      | 5.15      | 7.28     | 15.06      | -3.86      | 11.53     | 6.47      |
| Population | 285        | 283          | 273       | 243       | 213       | 160      | 296        | 313        | 316       | 341       |

## Fund Information

|                             |                               |
|-----------------------------|-------------------------------|
| Fund Inception              | 01-2007                       |
| Fund Assets                 | 1,719 Million                 |
| Portfolio Assets            | 1,119 Million                 |
| Total # of Holdings         | 22                            |
| % Assets in Top 10 Holdings | 77.5 %                        |
| PM                          | Cunniff,J/Erickson,H/Sedmak,S |
| PM Tenure                   | 14 Years 3 Months             |
| Turnover                    | 21.0 %                        |
| Gross Expense (%)           | 0.5 %                         |
| Net Expense (%)             | 0.4 %                         |
| New Investors               | Open                          |

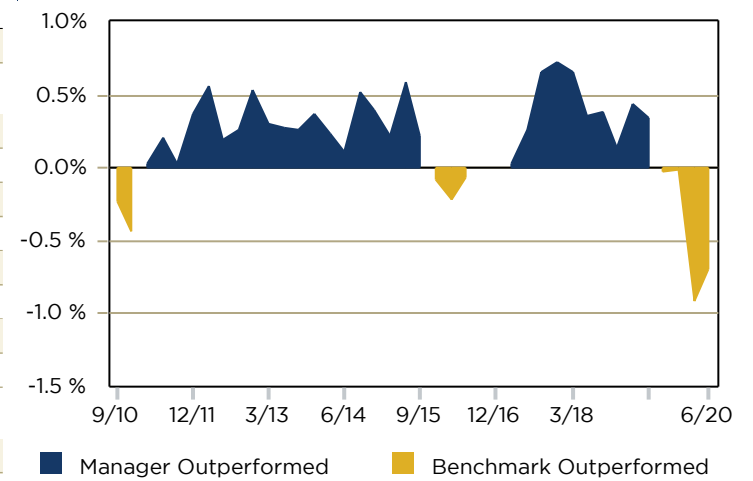
## Equity Characteristics

|                 |                  |
|-----------------|------------------|
| Avg. Market Cap | 56,469 (Million) |
| Price/Earnings  | 21               |
| Price/Book      | 2                |
| Dividend Yield  | 2.3 %            |

## Fund Statistics

|  | 3 Years | 10 Years |
|--|---------|----------|
| Standard Deviation                       | 8.61    | 7.78     |
| <b>vs. CREF Lifecycle Composite 2015</b> |         |          |
| Beta                                     | 1.09    | 1.09     |
| Alpha                                    | -1.15   | -0.62    |
| Information Ratio                        | -0.47   | 0.05     |
| Tracking Error                           | 1.27    | 1.11     |
| R-Squared                                | 0.98    | 0.99     |
| Up Market Capture                        | 100.26  | 104.48   |
| Down Market Capture                      | 108.77  | 109.41   |
| Consistency                              | 44.44   | 54.17    |
| <b>vs. Risk Free</b>                     |         |          |
| Sharpe Ratio                             | 0.48    | 0.93     |

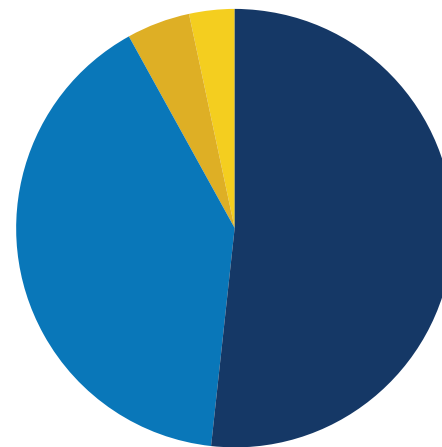
## 3 Years Rolling Excess Performance



## Top Holdings (%)

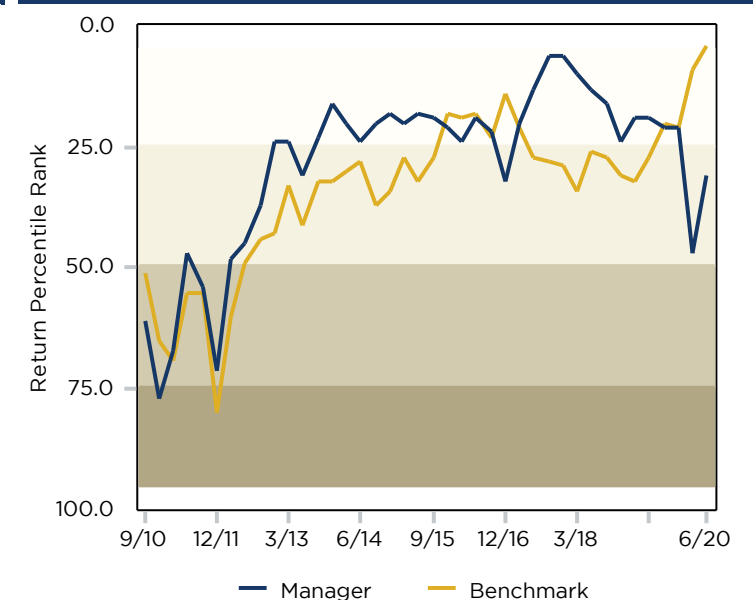
|                                  |      |
|----------------------------------|------|
| TIAA-CREF Core Bond W            | 19.8 |
| TIAA-CREF Core Plus Bond W       | 12.6 |
| TIAA-CREF Inflation Link Bd W    | 7.9  |
| TIAA-CREF Short-Term Bond W      | 7.9  |
| TIAA-CREF Growth & Income W      | 6.1  |
| TIAA-CREF Large-Cap Growth W     | 5.7  |
| TIAA-CREF Large-Cap Value W      | 5.1  |
| TIAA-CREF Quant Large-Cap Growth | 5.0  |
| Tiaa Cref Real Property Fnd Lp   | 4.3  |
| TIAA-CREF Quant Intl Eq W        | 3.1  |

## Asset Allocation



■ Fixed Income    ■ Equity  
■ Cash            ■ Other

## 3 Years Rolling Percentile Ranking





# TIAA-CREF Lifecycle 2020 Institutional (TCWIX)

Index: CREF Lifecycle Composite 2020

Category: Target-Date 2020

Report Date: 06/30/2020

## Trailing Performance

|            | 1 Quarter  | Year to Date | 1 Year    | 3 Years   | 5 Years   | 10 Years | 2019       | 2018       | 2017      | 2016      |
|------------|------------|--------------|-----------|-----------|-----------|----------|------------|------------|-----------|-----------|
| Manager    | 12.61 (12) | -0.88 (51)   | 4.61 (38) | 5.88 (23) | 5.87 (19) | 8.43 (9) | 17.79 (23) | -5.18 (74) | 15.58 (6) | 6.66 (47) |
| Benchmark  | 11.52      | 0.10         | 6.03      | 6.63      | 6.28      | 8.46     | 18.30      | -3.97      | 13.68     | 7.01      |
| Peer Group | 10.54      | -0.85        | 4.38      | 5.33      | 5.27      | 7.70     | 16.24      | -4.45      | 12.76     | 6.58      |
| Population | 475        | 472          | 457       | 412       | 363       | 267      | 481        | 536        | 542       | 546       |

## Fund Information

|                             |                               |
|-----------------------------|-------------------------------|
| Fund Inception              | 01-2007                       |
| Fund Assets                 | 3,646 Million                 |
| Portfolio Assets            | 2,442 Million                 |
| Total # of Holdings         | 22                            |
| % Assets in Top 10 Holdings | 75.7 %                        |
| PM                          | Cunniff,J/Erickson,H/Sedmak,S |
| PM Tenure                   | 14 Years 3 Months             |
| Turnover                    | 23.0 %                        |
| Gross Expense (%)           | 0.5 %                         |
| Net Expense (%)             | 0.4 %                         |
| New Investors               | Open                          |

## Equity Characteristics

|                 |                  |
|-----------------|------------------|
| Avg. Market Cap | 56,498 (Million) |
| Price/Earnings  | 21               |
| Price/Book      | 2                |
| Dividend Yield  | 2.3 %            |

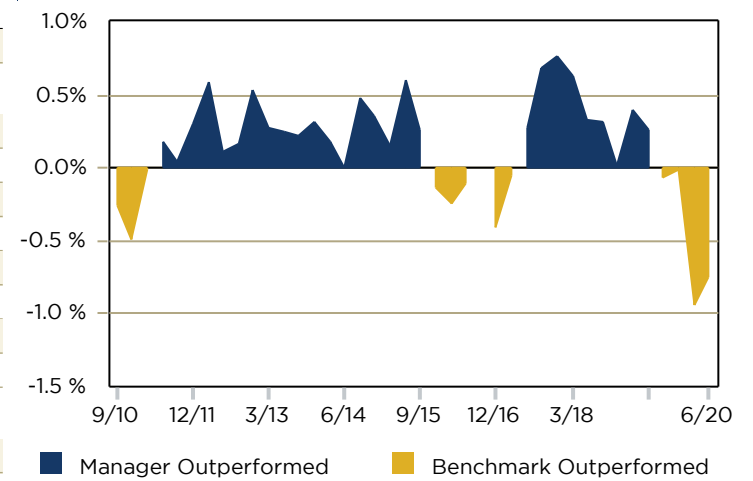
## Fund Statistics

|  | 3 Years | 10 Years |
|--|---------|----------|
| Standard Deviation                       | 9.49    | 8.72     |
| <b>vs. CREF Lifecycle Composite 2020</b> |         |          |
| Beta                                     | 1.08    | 1.08     |
| Alpha                                    | -1.15   | -0.63    |
| Information Ratio                        | -0.49   | 0.03     |
| Tracking Error                           | 1.30    | 1.20     |
| R-Squared                                | 0.99    | 0.99     |
| Up Market Capture                        | 99.95   | 103.69   |
| Down Market Capture                      | 107.65  | 107.77   |
| Consistency                              | 38.89   | 49.17    |

## vs. Risk Free

|              |      |      |
|--------------|------|------|
| Sharpe Ratio | 0.46 | 0.90 |
|--------------|------|------|

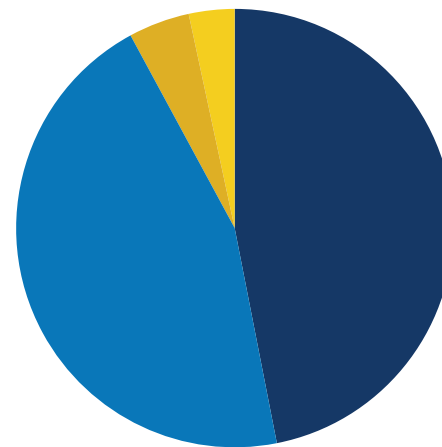
## 3 Years Rolling Excess Performance



## Top Holdings (%)

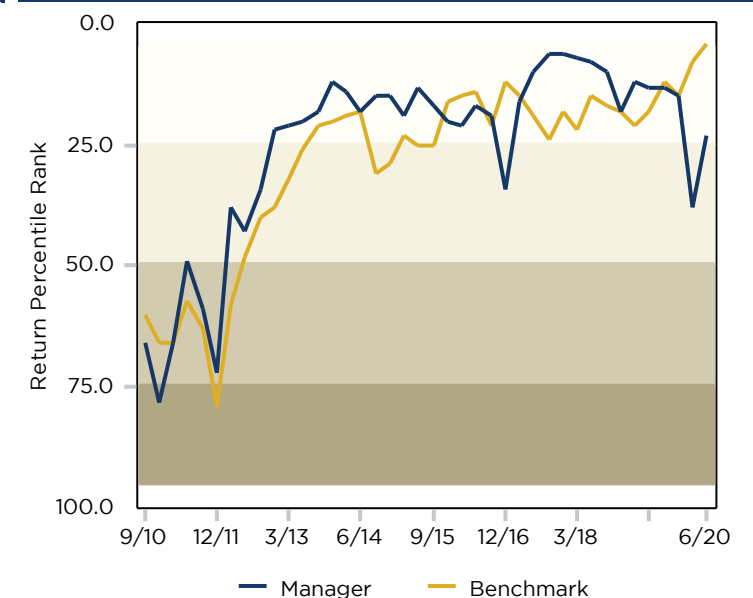
|                                  |      |
|----------------------------------|------|
| TIAA-CREF Core Bond W            | 19.2 |
| TIAA-CREF Core Plus Bond W       | 12.2 |
| TIAA-CREF Growth & Income W      | 6.9  |
| TIAA-CREF Large-Cap Growth W     | 6.4  |
| TIAA-CREF Inflation Link Bd W    | 5.9  |
| TIAA-CREF Short-Term Bond W      | 5.9  |
| TIAA-CREF Large-Cap Value W      | 5.7  |
| TIAA-CREF Quant Large-Cap Growth | 5.6  |
| Tiaa Cref Real Property Fnd Lp   | 4.3  |
| TIAA-CREF Quant Intl Eq W        | 3.5  |

## Asset Allocation



■ Fixed Income    ■ Equity  
■ Cash            ■ Other

## 3 Years Rolling Percentile Ranking





# TIAA-CREF Lifecycle 2025 Institutional (TCYIX)

Index: CREF Lifecycle Composite 2025

Category: Target-Date 2025

Report Date: 06/30/2020

## Trailing Performance

|            | 1 Quarter  | Year to Date | 1 Year    | 3 Years   | 5 Years   | 10 Years  | 2019       | 2018       | 2017      | 2016      |
|------------|------------|--------------|-----------|-----------|-----------|-----------|------------|------------|-----------|-----------|
| Manager    | 14.14 (11) | -1.63 (50)   | 4.29 (50) | 6.07 (27) | 6.12 (22) | 9.03 (13) | 19.44 (27) | -6.05 (74) | 17.40 (5) | 7.00 (56) |
| Benchmark  | 12.95      | -0.76        | 5.71      | 6.86      | 6.61      | 9.10      | 20.00      | -4.66      | 15.36     | 7.61      |
| Peer Group | 12.09      | -1.65        | 4.29      | 5.64      | 5.63      | 8.37      | 18.48      | -5.37      | 14.90     | 7.15      |
| Population | 556        | 550          | 515       | 468       | 401       | 276       | 520        | 528        | 517       | 521       |

## Fund Information

|                             |                               |
|-----------------------------|-------------------------------|
| Fund Inception              | 01-2007                       |
| Fund Assets                 | 4,666 Million                 |
| Portfolio Assets            | 3,256 Million                 |
| Total # of Holdings         | 22                            |
| % Assets in Top 10 Holdings | 73.0 %                        |
| PM                          | Cunniff,J/Erickson,H/Sedmak,S |
| PM Tenure                   | 14 Years 3 Months             |
| Turnover                    | 20.0 %                        |
| Gross Expense (%)           | 0.5 %                         |
| Net Expense (%)             | 0.4 %                         |
| New Investors               | Open                          |

## Equity Characteristics

|                 |                  |
|-----------------|------------------|
| Avg. Market Cap | 56,465 (Million) |
| Price/Earnings  | 21               |
| Price/Book      | 2                |
| Dividend Yield  | 2.3 %            |

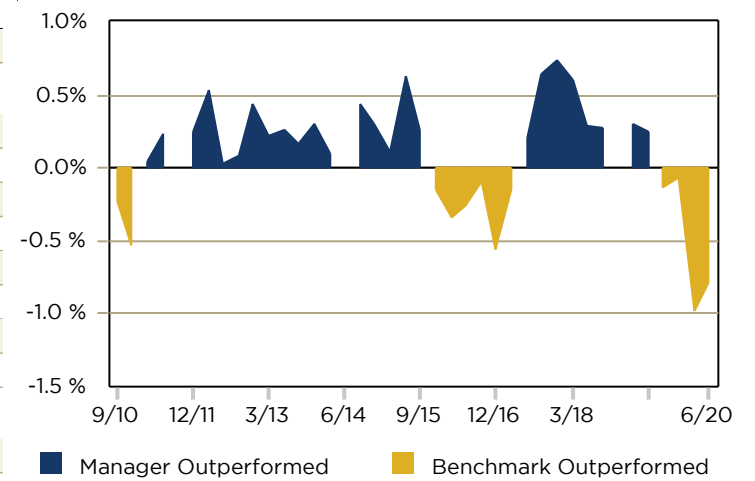
## Fund Statistics

|  | 3 Years | 10 Years |
|--|---------|----------|
| Standard Deviation                       | 10.82   | 9.87     |
| <b>vs. CREF Lifecycle Composite 2025</b> |         |          |
| Beta                                     | 1.07    | 1.08     |
| Alpha                                    | -1.16   | -0.69    |
| Information Ratio                        | -0.49   | 0.01     |
| Tracking Error                           | 1.32    | 1.28     |
| R-Squared                                | 0.99    | 0.99     |
| Up Market Capture                        | 100.44  | 104.02   |
| Down Market Capture                      | 107.48  | 108.56   |
| Consistency                              | 44.44   | 51.67    |

## vs. Risk Free

|              |      |      |
|--------------|------|------|
| Sharpe Ratio | 0.43 | 0.86 |
|--------------|------|------|

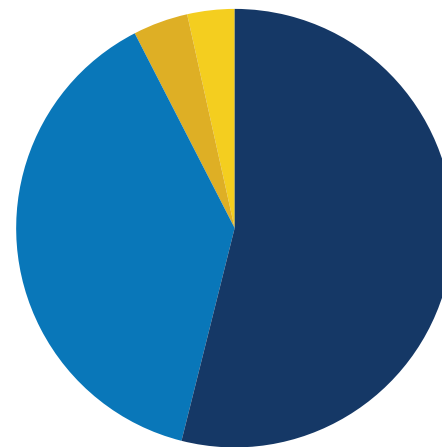
## 3 Years Rolling Excess Performance



## Top Holdings (%)

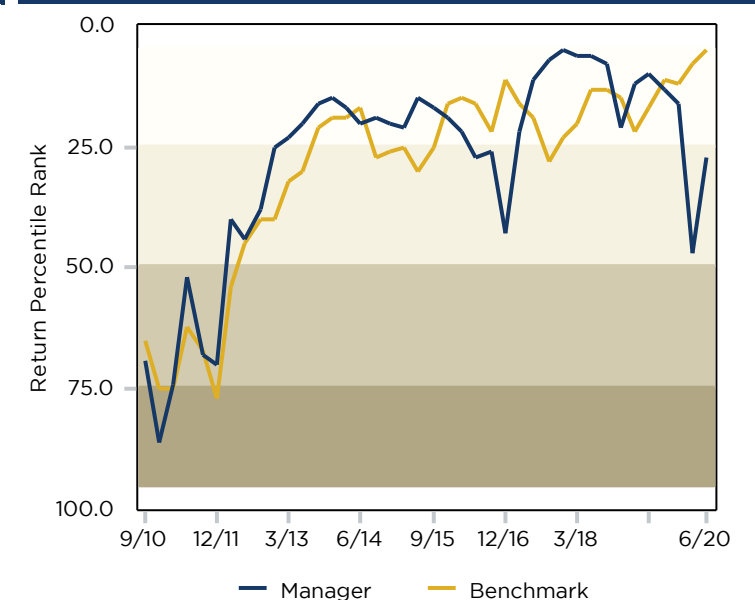
|                                  |      |
|----------------------------------|------|
| TIAA-CREF Core Bond W            | 16.7 |
| TIAA-CREF Core Plus Bond W       | 10.6 |
| TIAA-CREF Growth & Income W      | 8.2  |
| TIAA-CREF Large-Cap Growth W     | 7.7  |
| TIAA-CREF Large-Cap Value W      | 6.8  |
| TIAA-CREF Quant Large-Cap Growth | 6.7  |
| Tiaa Cref Real Property Fnd Lp   | 4.3  |
| TIAA-CREF Quant Intl Eq W        | 4.2  |
| TIAA-CREF Inflation Link Bd W    | 3.9  |
| TIAA-CREF Short-Term Bond W      | 3.9  |

## Asset Allocation



■ Equity      ■ Fixed Income  
■ Cash      ■ Other

## 3 Years Rolling Percentile Ranking





# TIAA-CREF Lifecycle 2030 Institutional (TCRIX)

Index: CREF Lifecycle Composite 2030

Category: Target-Date 2030

Report Date: 06/30/2020

## Trailing Performance

|            | 1 Quarter  | Year to Date | 1 Year    | 3 Years   | 5 Years   | 10 Years  | 2019       | 2018       | 2017      | 2016      |
|------------|------------|--------------|-----------|-----------|-----------|-----------|------------|------------|-----------|-----------|
| Manager    | 15.71 (12) | -2.38 (37)   | 4.08 (38) | 6.27 (26) | 6.36 (27) | 9.57 (14) | 21.27 (28) | -7.09 (72) | 19.21 (6) | 7.33 (59) |
| Benchmark  | 14.39      | -1.65        | 5.36      | 7.06      | 6.93      | 9.73      | 21.71      | -5.35      | 17.07     | 8.21      |
| Peer Group | 13.86      | -2.79        | 3.75      | 5.80      | 5.93      | 8.81      | 20.52      | -6.28      | 16.73     | 7.66      |
| Population | 529        | 526          | 503       | 456       | 406       | 294       | 509        | 521        | 528       | 531       |

## Fund Information

|                             |                               |
|-----------------------------|-------------------------------|
| Fund Inception              | 01-2007                       |
| Fund Assets                 | 4,750 Million                 |
| Portfolio Assets            | 3,359 Million                 |
| Total # of Holdings         | 22                            |
| % Assets in Top 10 Holdings | 74.5 %                        |
| PM                          | Cunniff,J/Erickson,H/Sedmak,S |
| PM Tenure                   | 14 Years 3 Months             |
| Turnover                    | 20.0 %                        |
| Gross Expense (%)           | 0.5 %                         |
| Net Expense (%)             | 0.4 %                         |
| New Investors               | Open                          |

## Equity Characteristics

|                 |                  |
|-----------------|------------------|
| Avg. Market Cap | 56,419 (Million) |
| Price/Earnings  | 21               |
| Price/Book      | 2                |
| Dividend Yield  | 2.3 %            |

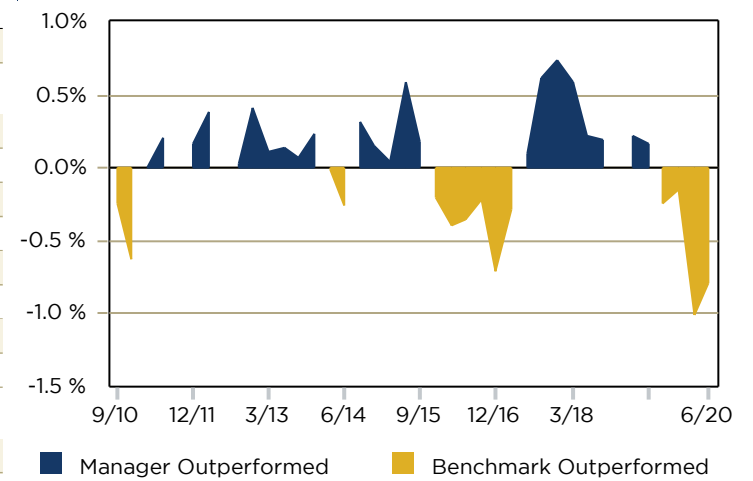
## Fund Statistics

|  | 3 Years | 10 Years |
|--|---------|----------|
| Standard Deviation                       | 12.18   | 11.01    |
| <b>vs. CREF Lifecycle Composite 2030</b> |         |          |
| Beta                                     | 1.07    | 1.07     |
| Alpha                                    | -1.16   | -0.77    |
| Information Ratio                        | -0.48   | -0.04    |
| Tracking Error                           | 1.35    | 1.36     |
| R-Squared                                | 0.99    | 0.99     |
| Up Market Capture                        | 100.83  | 103.59   |
| Down Market Capture                      | 107.10  | 108.09   |
| Consistency                              | 44.44   | 53.33    |

## vs. Risk Free

|              |      |      |
|--------------|------|------|
| Sharpe Ratio | 0.41 | 0.83 |
|--------------|------|------|

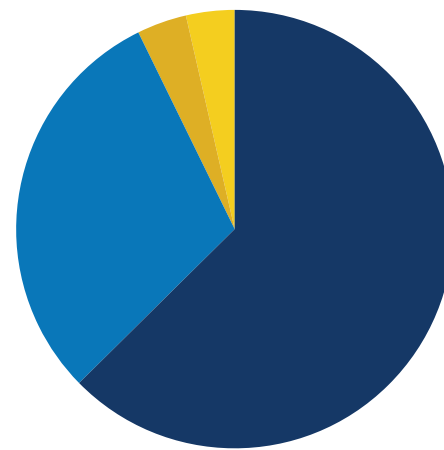
## 3 Years Rolling Excess Performance



## Top Holdings (%)

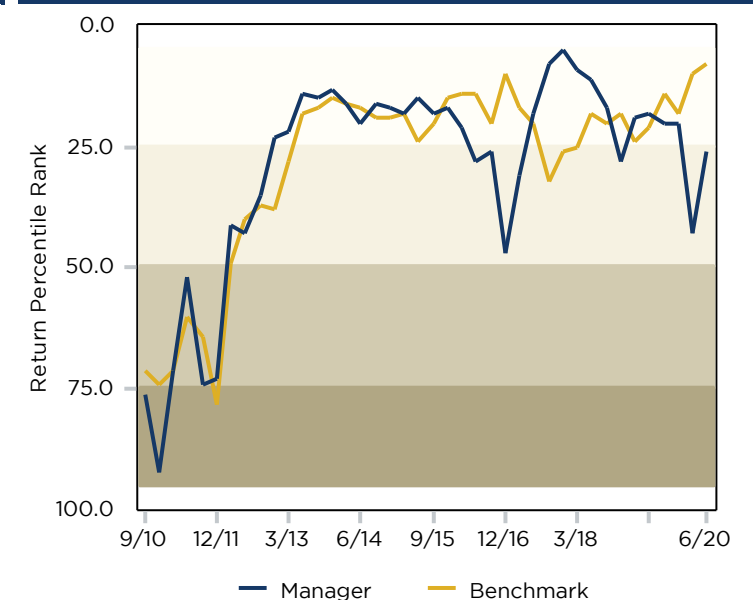
|                                  |      |
|----------------------------------|------|
| TIAA-CREF Core Bond W            | 14.1 |
| TIAA-CREF Growth & Income W      | 9.5  |
| TIAA-CREF Core Plus Bond W       | 9.1  |
| TIAA-CREF Large-Cap Growth W     | 8.9  |
| TIAA-CREF Large-Cap Value W      | 7.9  |
| TIAA-CREF Quant Large-Cap Growth | 7.8  |
| TIAA-CREF Quant Intl Eq W        | 4.8  |
| Tiaa Cref Real Property Fnd Lp   | 4.3  |
| TIAA-CREF International Eq W     | 4.2  |
| TIAA-CREF International Opps W   | 3.9  |

## 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: 06/30/2020

## Trailing Performance

|            | 1 Quarter  | Year to Date | 1 Year    | 3 Years   | 5 Years   | 10 Years   | 2019       | 2018       | 2017      | 2016      |
|------------|------------|--------------|-----------|-----------|-----------|------------|------------|------------|-----------|-----------|
| Manager    | 17.27 (20) | -3.19 (31)   | 3.80 (30) | 6.42 (22) | 6.58 (25) | 10.09 (12) | 23.04 (27) | -8.04 (81) | 21.11 (5) | 7.52 (68) |
| Benchmark  | 15.85      | -2.56        | 4.96      | 7.24      | 7.20      | 10.31      | 23.40      | -6.03      | 18.73     | 8.79      |
| Peer Group | 15.65      | -3.93        | 3.06      | 5.85      | 6.11      | 9.27       | 22.37      | -7.17      | 18.41     | 8.13      |
| Population | 548        | 542          | 512       | 461       | 392       | 268        | 513        | 519        | 507       | 512       |

## Fund Information

|                             |                               |
|-----------------------------|-------------------------------|
| Fund Inception              | 01-2007                       |
| Fund Assets                 | 4,808 Million                 |
| Portfolio Assets            | 3,489 Million                 |
| Total # of Holdings         | 20                            |
| % Assets in Top 10 Holdings | 76.9 %                        |
| PM                          | Cunniff,J/Erickson,H/Sedmak,S |
| PM Tenure                   | 14 Years 3 Months             |
| Turnover                    | 17.0 %                        |
| Gross Expense (%)           | 0.5 %                         |
| Net Expense (%)             | 0.4 %                         |
| New Investors               | Open                          |

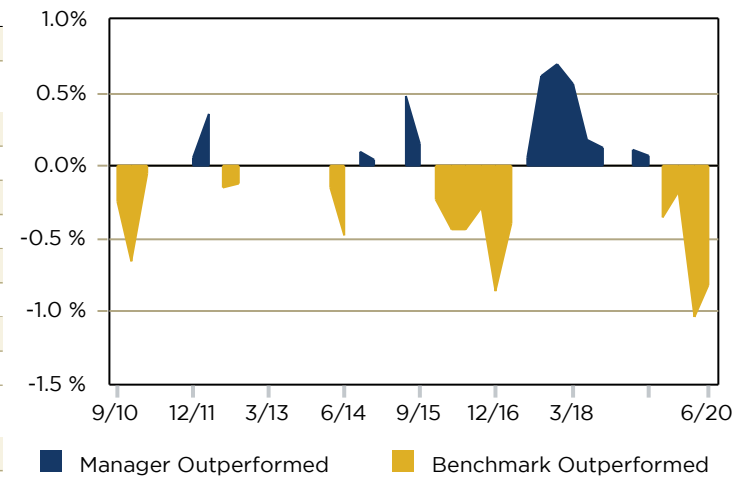
## Equity Characteristics

|                 |                  |
|-----------------|------------------|
| Avg. Market Cap | 56,377 (Million) |
| Price/Earnings  | 21               |
| Price/Book      | 2                |
| Dividend Yield  | 2.3 %            |

## Fund Statistics

|  | 3 Years | 10 Years |
|--|---------|----------|
| Standard Deviation                       | 13.53   | 12.12    |
| <b>vs. CREF Lifecycle Composite 2035</b> |         |          |
| Beta                                     | 1.07    | 1.07     |
| Alpha                                    | -1.16   | -0.80    |
| Information Ratio                        | -0.46   | -0.07    |
| Tracking Error                           | 1.39    | 1.43     |
| R-Squared                                | 0.99    | 0.99     |
| Up Market Capture                        | 101.72  | 103.27   |
| Down Market Capture                      | 107.82  | 107.68   |
| Consistency                              | 50.00   | 54.17    |
| <b>vs. Risk Free</b>                     |         |          |
| Sharpe Ratio                             | 0.40    | 0.80     |

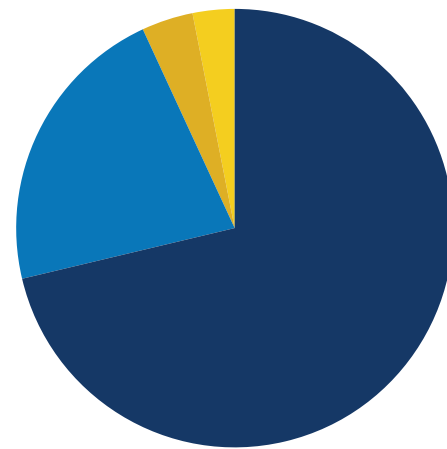
## 3 Years Rolling Excess Performance



## Top Holdings (%)

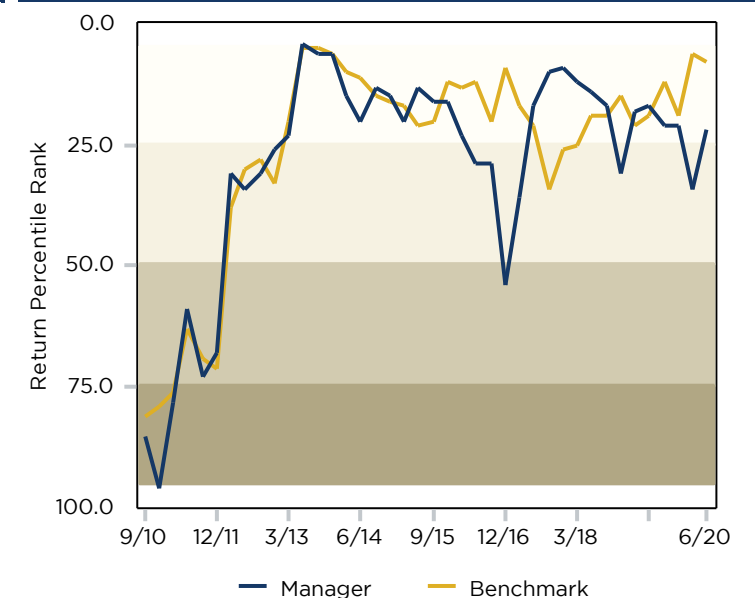
|                                  |      |
|----------------------------------|------|
| TIAA-CREF Core Bond W            | 11.6 |
| TIAA-CREF Growth & Income W      | 10.9 |
| TIAA-CREF Large-Cap Growth W     | 10.1 |
| TIAA-CREF Large-Cap Value W      | 9.0  |
| TIAA-CREF Quant Large-Cap Growth | 8.9  |
| TIAA-CREF Core Plus Bond W       | 7.5  |
| TIAA-CREF Quant Intl Eq W        | 5.5  |
| TIAA-CREF International Eq W     | 4.8  |
| TIAA-CREF International Opps W   | 4.5  |
| Tiaa Cref Real Property Fnd Lp   | 4.3  |

## 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: 06/30/2020

## Trailing Performance

|            | 1 Quarter  | Year to Date | 1 Year    | 3 Years   | 5 Years   | 10 Years  | 2019       | 2018       | 2017      | 2016      |
|------------|------------|--------------|-----------|-----------|-----------|-----------|------------|------------|-----------|-----------|
| Manager    | 18.77 (14) | -3.94 (29)   | 3.56 (25) | 6.53 (21) | 6.73 (23) | 10.34 (9) | 24.56 (24) | -8.92 (86) | 22.91 (1) | 7.78 (66) |
| Benchmark  | 17.29      | -3.59        | 4.39      | 7.32      | 7.41      | 10.61     | 24.97      | -6.72      | 20.37     | 9.37      |
| Peer Group | 17.12      | -4.93        | 2.49      | 5.84      | 6.23      | 9.41      | 23.66      | -7.89      | 19.49     | 8.37      |
| Population | 520        | 516          | 502       | 455       | 405       | 293       | 508        | 520        | 527       | 529       |

## Fund Information

|                             |                               |
|-----------------------------|-------------------------------|
| Fund Inception              | 01-2007                       |
| Fund Assets                 | 5,623 Million                 |
| Portfolio Assets            | 4,071 Million                 |
| Total # of Holdings         | 20                            |
| % Assets in Top 10 Holdings | 76.3 %                        |
| PM                          | Cunniff,J/Erickson,H/Sedmak,S |
| PM Tenure                   | 14 Years 3 Months             |
| Turnover                    | 18.0 %                        |
| Gross Expense (%)           | 0.6 %                         |
| Net Expense (%)             | 0.4 %                         |
| New Investors               | Open                          |

## Equity Characteristics

|                 |                  |
|-----------------|------------------|
| Avg. Market Cap | 56,346 (Million) |
| Price/Earnings  | 21               |
| Price/Book      | 2                |
| Dividend Yield  | 2.3 %            |

## Top Holdings (%)

|                                  |      |
|----------------------------------|------|
| TIAA-CREF Growth & Income W      | 12.2 |
| TIAA-CREF Large-Cap Growth W     | 11.4 |
| TIAA-CREF Large-Cap Value W      | 10.1 |
| TIAA-CREF Quant Large-Cap Growth | 9.9  |
| TIAA-CREF Core Bond W            | 7.0  |
| TIAA-CREF Quant Intl Eq W        | 6.2  |
| TIAA-CREF International Eq W     | 5.3  |
| TIAA-CREF International Opps W   | 5.1  |
| TIAA-CREF Core Plus Bond W       | 4.6  |
| TIAA-CREF Emerging Markets Eq W  | 4.6  |

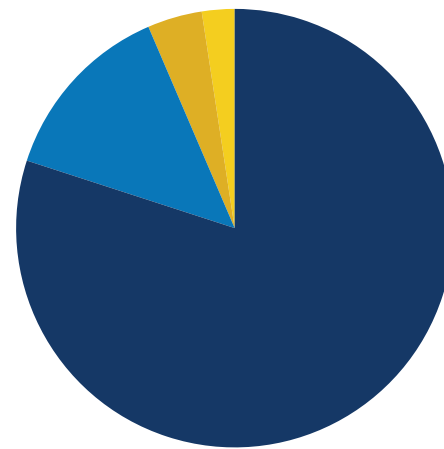
## Fund Statistics

|  | 3 Years | 10 Years |
|--|---------|----------|
| Standard Deviation                       | 14.85   | 12.85    |
| <b>vs. CREF Lifecycle Composite 2040</b> |         |          |
| Beta                                     | 1.06    | 1.06     |
| Alpha                                    | -1.09   | -0.78    |
| Information Ratio                        | -0.43   | -0.09    |
| Tracking Error                           | 1.41    | 1.47     |
| R-Squared                                | 0.99    | 0.99     |
| Up Market Capture                        | 101.58  | 103.15   |
| Down Market Capture                      | 106.70  | 107.49   |
| Consistency                              | 47.22   | 50.83    |

## vs. Risk Free

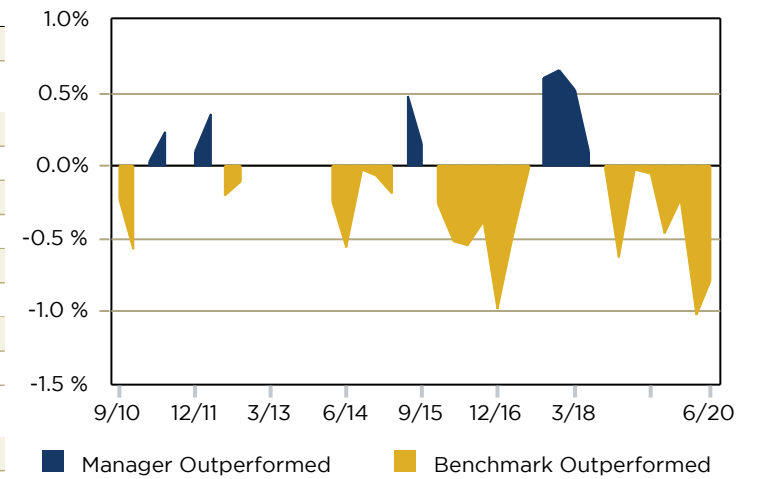
|              |      |      |
|--------------|------|------|
| Sharpe Ratio | 0.38 | 0.78 |
|--------------|------|------|

## Asset Allocation

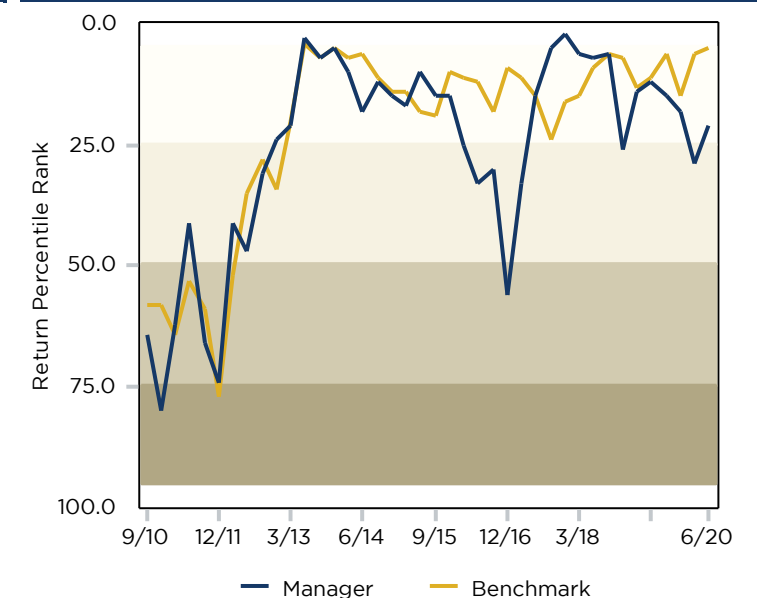


■ Equity      ■ Fixed Income  
■ Other      ■ Cash

## 3 Years Rolling Excess Performance



## 3 Years Rolling Percentile Ranking





# TIAA-CREF Lifecycle 2045 Institutional (TTFIX)

Index: CREF Lifecycle Composite 2045

Category: Target-Date 2045

Report Date: 06/30/2020

## Trailing Performance

|            | 1 Quarter | Year to Date | 1 Year    | 3 Years   | 5 Years   | 10 Years   | 2019       | 2018       | 2017      | 2016      |
|------------|-----------|--------------|-----------|-----------|-----------|------------|------------|------------|-----------|-----------|
| Manager    | 20.10 (8) | -4.72 (29)   | 3.20 (27) | 6.48 (21) | 6.80 (22) | 10.35 (12) | 25.87 (19) | -9.59 (92) | 23.62 (1) | 8.06 (63) |
| Benchmark  | 18.70     | -4.53        | 3.86      | 7.27      | 7.51      | 10.66      | 26.25      | -7.27      | 21.18     | 9.72      |
| Peer Group | 18.18     | -5.58        | 1.95      | 5.80      | 6.29      | 9.52       | 24.64      | -8.22      | 20.36     | 8.57      |
| Population | 549       | 546          | 511       | 460       | 392       | 267        | 513        | 515        | 505       | 510       |

## Fund Information

|                             |                               |
|-----------------------------|-------------------------------|
| Fund Inception              | 11-2007                       |
| Fund Assets                 | 3,413 Million                 |
| Portfolio Assets            | 2,541 Million                 |
| Total # of Holdings         | 20                            |
| % Assets in Top 10 Holdings | 81.2 %                        |
| PM                          | Cunniff,J/Erickson,H/Sedmak,S |
| PM Tenure                   | 12 Years 7 Months             |
| Turnover                    | 13.0 %                        |
| Gross Expense (%)           | 0.6 %                         |
| Net Expense (%)             | 0.5 %                         |
| New Investors               | Open                          |

## Equity Characteristics

|                 |                  |
|-----------------|------------------|
| Avg. Market Cap | 56,329 (Million) |
| Price/Earnings  | 21               |
| Price/Book      | 2                |
| Dividend Yield  | 2.3 %            |

## Fund Statistics

|                    | 3 Years | 10 Years |
|--------------------|---------|----------|
| Standard Deviation | 15.94   | 13.26    |

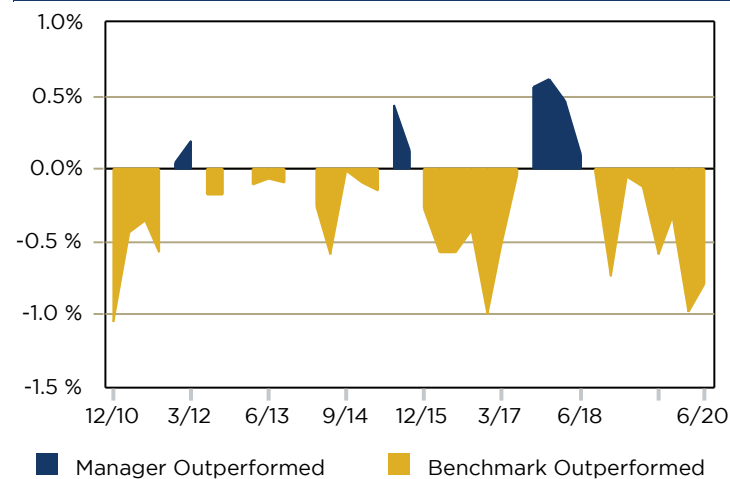
## vs. CREF Lifecycle Composite 2045

|                     |        |        |
|---------------------|--------|--------|
| Beta                | 1.05   | 1.06   |
| Alpha               | -1.03  | -0.79  |
| Information Ratio   | -0.43  | -0.12  |
| Tracking Error      | 1.42   | 1.47   |
| R-Squared           | 0.99   | 0.99   |
| Up Market Capture   | 101.63 | 102.99 |
| Down Market Capture | 106.31 | 107.34 |
| Consistency         | 52.78  | 52.50  |

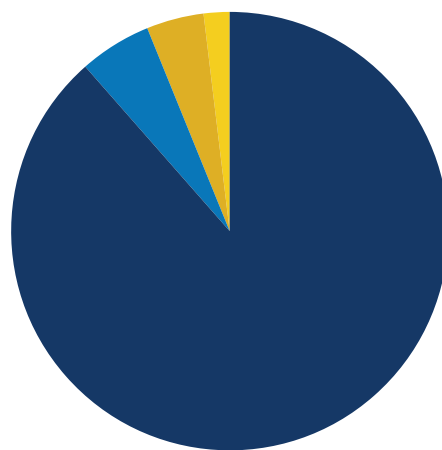
## vs. Risk Free

|              |      |      |
|--------------|------|------|
| Sharpe Ratio | 0.36 | 0.76 |
|--------------|------|------|

## 3 Years Rolling Excess Performance

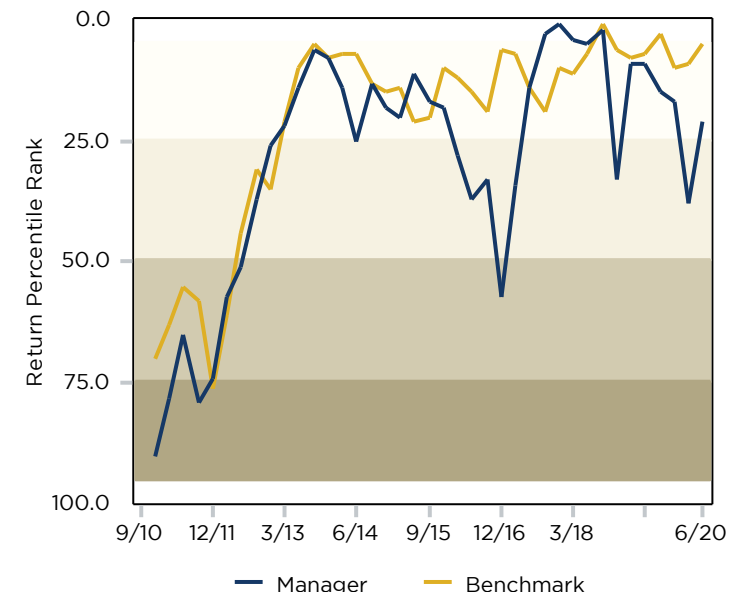


## Asset Allocation



■ Equity      ■ Fixed Income  
 ■ Other      ■ Cash

## 3 Years Rolling Percentile Ranking



## Top Holdings (%)

|                                  |      |
|----------------------------------|------|
| TIAA-CREF Growth & Income W      | 13.5 |
| TIAA-CREF Large-Cap Growth W     | 12.6 |
| TIAA-CREF Large-Cap Value W      | 11.1 |
| TIAA-CREF Quant Large-Cap Growth | 11.0 |
| TIAA-CREF Quant Intl Eq W        | 6.8  |
| TIAA-CREF International Eq W     | 5.9  |
| TIAA-CREF International Opps W   | 5.6  |
| TIAA-CREF Emerging Markets Eq W  | 5.1  |
| Nuveen Dividend Value R6         | 4.9  |
| TIAA-CREF Quant Large-Cap Value  | 4.8  |



# TIAA-CREF Lifecycle 2050 Institutional (TFTIX)

Index: CREF Lifecycle Composite 2050

Category: Target-Date 2050

Report Date: 06/30/2020

## Trailing Performance

|            | 1 Quarter | Year to Date | 1 Year    | 3 Years   | 5 Years   | 10 Years   | 2019       | 2018       | 2017      | 2016      |
|------------|-----------|--------------|-----------|-----------|-----------|------------|------------|------------|-----------|-----------|
| Manager    | 20.31 (6) | -4.84 (32)   | 3.14 (28) | 6.50 (21) | 6.87 (19) | 10.40 (13) | 26.19 (16) | -9.82 (91) | 24.04 (1) | 8.10 (63) |
| Benchmark  | 18.92     | -4.69        | 3.76      | 7.28      | 7.57      | 10.69      | 26.50      | -7.38      | 21.44     | 9.91      |
| Peer Group | 18.34     | -5.66        | 1.89      | 5.78      | 6.33      | 9.67       | 24.79      | -8.41      | 20.60     | 8.65      |
| Population | 518       | 515          | 501       | 452       | 402       | 246        | 504        | 514        | 520       | 519       |

## Fund Information

|                             |                               |
|-----------------------------|-------------------------------|
| Fund Inception              | 11-2007                       |
| Fund Assets                 | 2,396 Million                 |
| Portfolio Assets            | 1,809 Million                 |
| Total # of Holdings         | 20                            |
| % Assets in Top 10 Holdings | 82.3 %                        |
| PM                          | Cunniff,J/Erickson,H/Sedmak,S |
| PM Tenure                   | 12 Years 7 Months             |
| Turnover                    | 12.0 %                        |
| Gross Expense (%)           | 0.6 %                         |
| Net Expense (%)             | 0.5 %                         |
| New Investors               | Open                          |

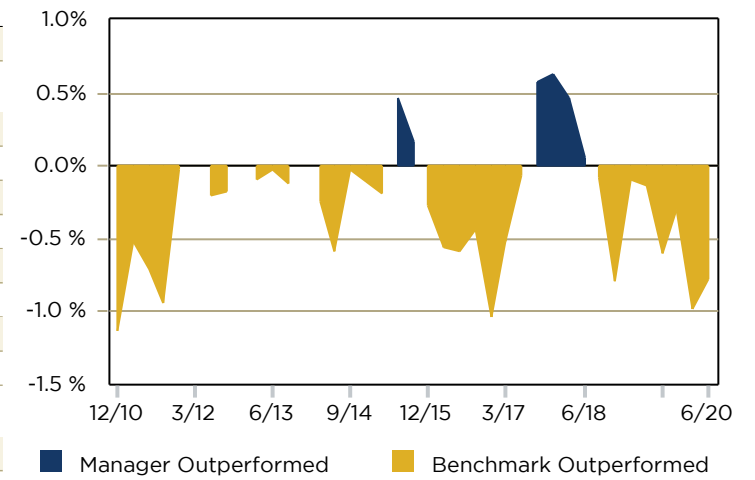
## Equity Characteristics

|                 |                  |
|-----------------|------------------|
| Avg. Market Cap | 56,338 (Million) |
| Price/Earnings  | 21               |
| Price/Book      | 2                |
| Dividend Yield  | 2.3 %            |

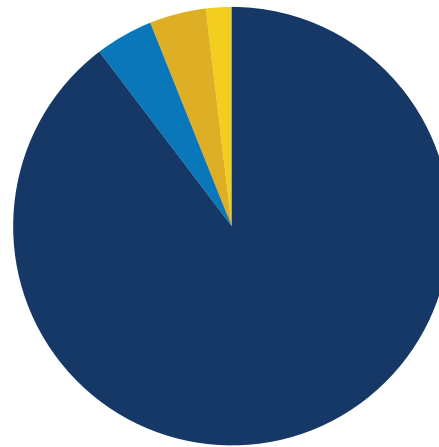
## Fund Statistics

|  | 3 Years | 10 Years |
|--|---------|----------|
| Standard Deviation                       | 16.15   | 13.33    |
| <b>vs. CREF Lifecycle Composite 2050</b> |         |          |
| Beta                                     | 1.05    | 1.05     |
| Alpha                                    | -1.01   | -0.76    |
| Information Ratio                        | -0.40   | -0.11    |
| Tracking Error                           | 1.45    | 1.49     |
| R-Squared                                | 0.99    | 0.99     |
| Up Market Capture                        | 101.72  | 102.87   |
| Down Market Capture                      | 106.28  | 107.03   |
| Consistency                              | 50.00   | 51.67    |
| <b>vs. Risk Free</b>                     |         |          |
| Sharpe Ratio                             | 0.36    | 0.76     |

## 3 Years Rolling Excess Performance

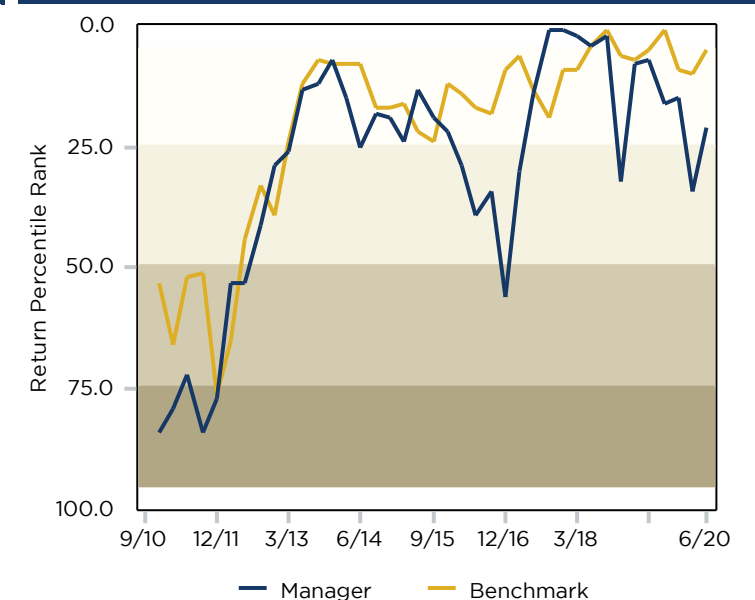


## Asset Allocation



■ Equity      ■ Other  
■ Fixed Income      ■ Cash

## 3 Years Rolling Percentile Ranking



## Top Holdings (%)

|                                  |      |
|----------------------------------|------|
| TIAA-CREF Growth & Income W      | 13.6 |
| TIAA-CREF Large-Cap Growth W     | 12.7 |
| TIAA-CREF Large-Cap Value W      | 11.3 |
| TIAA-CREF Quant Large-Cap Growth | 11.1 |
| TIAA-CREF Quant Intl Eq W        | 6.9  |
| TIAA-CREF International Eq W     | 5.9  |
| TIAA-CREF International Opps W   | 5.7  |
| TIAA-CREF Emerging Markets Eq W  | 5.2  |
| Nuveen Dividend Value R6         | 4.9  |
| TIAA-CREF Quant Large-Cap Value  | 4.8  |



# TIAA-CREF Lifecycle 2055 Institutional (TTRIX)

Index: CREF Lifecycle Composite 2055

Category: Target-Date 2055

Report Date: 06/30/2020

## Trailing Performance

|            | 1 Quarter | Year to Date | 1 Year    | 3 Years   | 5 Years   | 10 Years | 2019       | 2018       | 2017      | 2016      |
|------------|-----------|--------------|-----------|-----------|-----------|----------|------------|------------|-----------|-----------|
| Manager    | 20.51 (6) | -4.97 (30)   | 3.07 (28) | 6.50 (20) | 6.92 (17) | -        | 26.36 (18) | -9.86 (91) | 24.23 (1) | 8.27 (62) |
| Benchmark  | 19.15     | -4.86        | 3.66      | 7.28      | 7.64      | -        | 26.74      | -7.48      | 21.70     | 10.11     |
| Peer Group | 18.85     | -6.15        | 1.42      | 5.78      | 6.32      | -        | 25.13      | -8.48      | 20.83     | 8.59      |
| Population | 547       | 541          | 511       | 452       | 374       | -        | 508        | 513        | 494       | 488       |

## Fund Information

|                             |                               |
|-----------------------------|-------------------------------|
| Fund Inception              | 04-2011                       |
| Fund Assets                 | 942 Million                   |
| Portfolio Assets            | 694 Million                   |
| Total # of Holdings         | 20                            |
| % Assets in Top 10 Holdings | 83.1 %                        |
| PM                          | Cunniff,J/Erickson,H/Sedmak,S |
| PM Tenure                   | 9 Years 2 Months              |
| Turnover                    | 10.0 %                        |
| Gross Expense (%)           | 0.6 %                         |
| Net Expense (%)             | 0.5 %                         |
| New Investors               | Open                          |

## Equity Characteristics

|                 |                  |
|-----------------|------------------|
| Avg. Market Cap | 56,372 (Million) |
| Price/Earnings  | 21               |
| Price/Book      | 2                |
| Dividend Yield  | 2.3 %            |

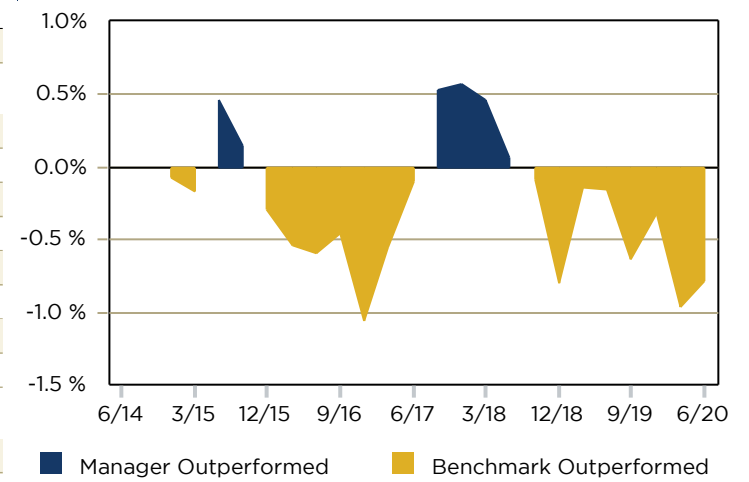
## Fund Statistics

|  | 3 Years | 10 Years |
|--|---------|----------|
| Standard Deviation                       | 16.28   | -        |
| <b>vs. CREF Lifecycle Composite 2055</b> |         |          |
| Beta                                     | 1.05    | -        |
| Alpha                                    | -0.99   | -        |
| Information Ratio                        | -0.42   | -        |
| Tracking Error                           | 1.44    | -        |
| R-Squared                                | 0.99    | -        |
| Up Market Capture                        | 101.17  | -        |
| Down Market Capture                      | 105.50  | -        |
| Consistency                              | 50.00   | -        |

## vs. Risk Free

|              |      |   |
|--------------|------|---|
| Sharpe Ratio | 0.36 | - |
|--------------|------|---|

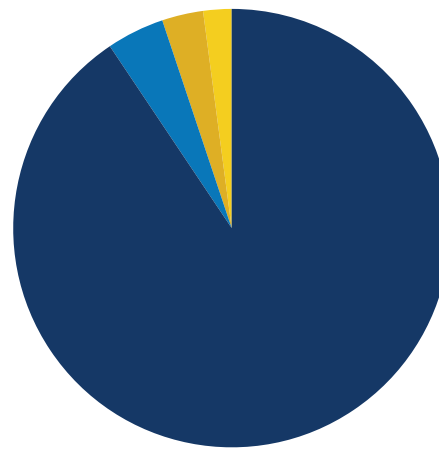
## 3 Years Rolling Excess Performance



## Top Holdings (%)

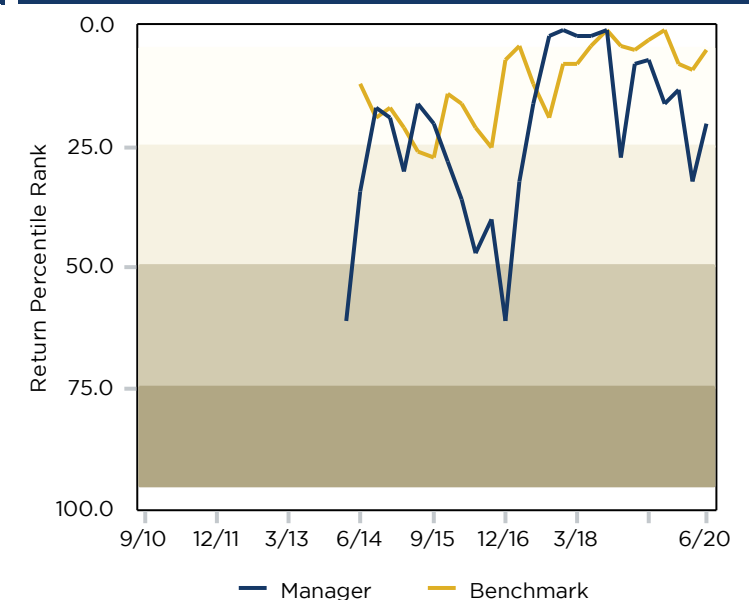
|                                  |      |
|----------------------------------|------|
| TIAA-CREF Growth & Income W      | 13.8 |
| TIAA-CREF Large-Cap Growth W     | 12.8 |
| TIAA-CREF Large-Cap Value W      | 11.5 |
| TIAA-CREF Quant Large-Cap Growth | 11.2 |
| TIAA-CREF Quant Intl Eq W        | 7.0  |
| TIAA-CREF International Eq W     | 6.0  |
| TIAA-CREF International Opps W   | 5.8  |
| TIAA-CREF Emerging Markets Eq W  | 5.2  |
| Nuveen Dividend Value R6         | 5.0  |
| TIAA-CREF Quant Large-Cap Value  | 4.9  |

## 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: 06/30/2020

## Trailing Performance

|            | 1 Quarter | Year to Date | 1 Year    | 3 Years   | 5 Years   | 10 Years | 2019       | 2018        | 2017      | 2016      |
|------------|-----------|--------------|-----------|-----------|-----------|----------|------------|-------------|-----------|-----------|
| Manager    | 20.68 (4) | -5.04 (29)   | 3.03 (29) | 6.52 (25) | 6.97 (27) | -        | 26.70 (12) | -10.06 (87) | 24.40 (1) | 8.39 (63) |
| Benchmark  | 19.38     | -5.02        | 3.57      | 7.29      | 7.70      | -        | 26.99      | -7.59       | 21.97     | 10.31     |
| Peer Group | 18.83     | -6.05        | 1.81      | 5.89      | 6.59      | -        | 25.32      | -8.58       | 21.00     | 8.96      |
| Population | 608       | 572          | 506       | 366       | 188       | -        | 469        | 437         | 377       | 298       |

## Fund Information

|                             |                               |
|-----------------------------|-------------------------------|
| Fund Inception              | 09-2014                       |
| Fund Assets                 | 217 Million                   |
| Portfolio Assets            | 166 Million                   |
| Total # of Holdings         | 20                            |
| % Assets in Top 10 Holdings | 84.0 %                        |
| PM                          | Cunniff,J/Erickson,H/Sedmak,S |
| PM Tenure                   | 5 Years 9 Months              |
| Turnover                    | 36.0 %                        |
| Gross Expense (%)           | 0.7 %                         |
| Net Expense (%)             | 0.5 %                         |
| New Investors               | Open                          |

## Equity Characteristics

|                 |                  |
|-----------------|------------------|
| Avg. Market Cap | 56,397 (Million) |
| Price/Earnings  | 21               |
| Price/Book      | 2                |
| Dividend Yield  | 2.3 %            |

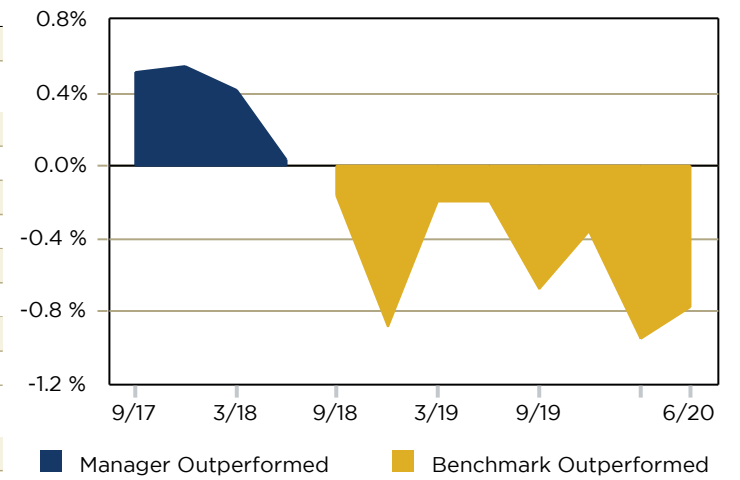
## Fund Statistics

|  | 3 Years | 10 Years |
|--|---------|----------|
| Standard Deviation                       | 16.47   | -        |
| <b>vs. CREF Lifecycle Composite 2060</b> |         |          |
| Beta                                     | 1.04    | -        |
| Alpha                                    | -0.97   | -        |
| Information Ratio                        | -0.41   | -        |
| Tracking Error                           | 1.45    | -        |
| R-Squared                                | 0.99    | -        |
| Up Market Capture                        | 101.12  | -        |
| Down Market Capture                      | 105.31  | -        |
| Consistency                              | 50.00   | -        |

## vs. Risk Free

|              |      |   |
|--------------|------|---|
| Sharpe Ratio | 0.36 | - |
|--------------|------|---|

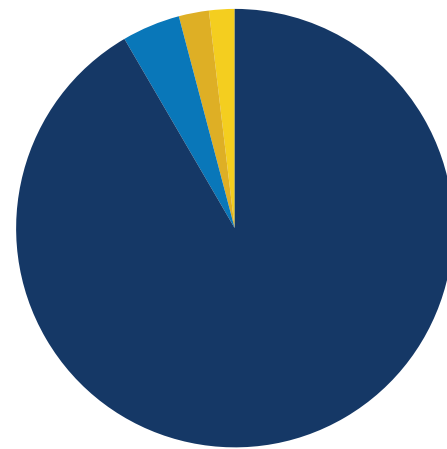
## 3 Years Rolling Excess Performance



## Top Holdings (%)

|                                  |      |
|----------------------------------|------|
| TIAA-CREF Growth & Income W      | 13.9 |
| TIAA-CREF Large-Cap Growth W     | 13.0 |
| TIAA-CREF Large-Cap Value W      | 11.6 |
| TIAA-CREF Quant Large-Cap Growth | 11.4 |
| TIAA-CREF Quant Intl Eq W        | 7.0  |
| TIAA-CREF International Eq W     | 6.0  |
| TIAA-CREF International Opps W   | 5.8  |
| TIAA-CREF Emerging Markets Eq W  | 5.3  |
| Nuveen Dividend Value R6         | 5.1  |
| TIAA-CREF Quant Large-Cap Value  | 5.0  |

## Asset Allocation



■ Equity      ■ Other  
■ Cash      ■ Fixed Income

## 3 Years Rolling Percentile Ranking

