
SEPTEMBER 17, 2020

**AGENDA ITEM 4
ACTION ITEM**

SCHOLARSHARE INVESTMENT BOARD

*Resolution to Approve Placement of the PIMCO Income Fund on Watch Status;
Review and Analysis of Investment Performance for ScholarShare 529*

Recommendation

ScholarShare Investment Board (SIB or Board) staff recommends the Board adopt Resolution No. 2020-06 approving the placement of the PIMCO Income Fund on “watch” status.

Background

SIB and its investment consultant, Meketa Investment Group, Inc. (Meketa), monitor all portfolios in ScholarShare 529 (Plan) in accordance with the ScholarShare Monitoring Procedures and Criteria (Procedures) adopted by the Board.

In this item, SIB will review and discuss “Investment Performance Report” (Exhibit A) for the Plan for second quarter 2020, provided by TIAA-CREF Tuition Financing, Inc., and the “Investment Performance Status Report” (Exhibit B) for second quarter 2020, provided by Meketa. Exhibit B provides comparisons for each underlying fund allocated to the portfolios used in the Plan to applicable benchmark criteria and labels the current status of funds as “positive,” “acceptable,” “caution,” or “watch.”

For the second quarter of 2020:

- Six underlying funds were in the “positive” status,
- Nine underlying funds were in the “acceptable” status, and
- Four underlying funds were in the “caution” status.

As outlined in its memo (Exhibit C), Meketa is recommending the PIMCO Income Fund be placed on “watch” status, pursuant to the Procedures.

Presenters

Jeremy Thiessen, Senior Director, Institutional Investment Strategist,
TIAA-CREF Tuition Financing, Inc.

Glenn Friedman, Director, Asset Allocation and Investments, TIAA-CREF Tuition Financing, Inc.

Eric White, Principal, Meketa Investment Group, Inc.

RESOLUTION NO. 2020-06

RESOLUTION OF THE SCHOLARSHARE INVESTMENT BOARD APPROVING THE PLACEMENT OF THE PIMCO INCOME FUND ON WATCH STATUS

WHEREAS, the ScholarShare Investment Board (“SIB” or the “Board”) was created under Education Code section 69980 et seq. (the “Golden State ScholarShare Trust Act” or “Act”);

WHEREAS, the Board has a fiduciary responsibility on behalf of ScholarShare 529 (“Plan”) participants and beneficiaries to monitor the Plan’s mutual funds and investment performance;

WHEREAS, the Board adopted the Golden State ScholarShare College Savings Trust Monitoring Procedures and Criteria (the “Procedures”) to provide guidelines for monitoring the Plan’s mutual funds and investment performance as part of its fiduciary responsibility on behalf of the Plan’s participants and beneficiaries;

WHEREAS, the SIB staff and Board’s investment consultant (the “Consultant”) have reviewed and analyzed the investment performance of the portfolios and funds in the Plan through the end of second quarter 2020;

WHEREAS, the performance of the PIMCO Income Fund (the “Fund”) has not met its respective investment performance criteria as outlined in the Procedures (the “Benchmarks”) and qualifies for placement on watch status; and

WHEREAS, pursuant to the Procedures, the Board may place underlying funds on watch status.

NOW, THEREFORE, BE IT RESOLVED, that the Board approves the placement of the PIMCO Income Fund on watch status, as recommended by SIB staff and the Consultant as outlined in the Consultant’s memo dated September 17, 2020.

BE IT FURTHER RESOLVED, that this Resolution becomes effective upon its adoption by the Board.

Attest: _____
Chairperson

Date of Adoption: _____

Quarterly Investment Report

2nd Quarter, 2020

BUILT TO PERFORM.

CREATED TO SERVE.

For Institutional client use only. Not for distribution.

Before investing in the ScholarShare 529 College Savings Plan, you should consider the investment objectives, risks, charges, and expenses. The information contained in this report is subject to further change and amendments over time. Some changes may occur due to the result of adjustments. For a prospectus containing this and other information, as well as a Participant Agreement and Disclosure Statement, please call 1-800-544-5248 or view it online at www.scholarshare529.com. Please read these documents carefully before investing.

TIAA-CREF Tuition Financing, Inc., Program Manager. TIAA-CREF Individual & Institutional Services, LLC, member FINRA and SIPC, distributor and underwriter for the ScholarShare 529 College Savings Plan.

ScholarShare529 

Market Overview: Q2 2020

Key Themes

- Businesses around the country began reopening doors after a multi-month hiatus caused by the COVID-19 global pandemic. The pickup in economic activity translated to improved employment and expected GDP growth for the U.S. as well as the global economy, though much uncertainty still remains regarding the future for a sustained recovery. Public health issues also remain a concern and may continue to impact policies.

Equities

- All eleven U.S. equity sectors saw positive returns in what turned out to be a strong risk-on quarter. Consumer Discretionary was the relative winner, gaining 32.86% for the quarter, with Information Technology not far behind. Utilities lagged, though was still up 2.73%. Broad baskets of non-U.S. developed and emerging markets equities gained approximately 15% and 18%, respectively.

Fixed Income

- The Federal Reserve Board maintained a range of 0.00%-0.25% for the Fed Funds Target Rate, and recently reemphasized that it will not be raising rates anytime in the short-term. Yields across the curve have been range-bound throughout the quarter.

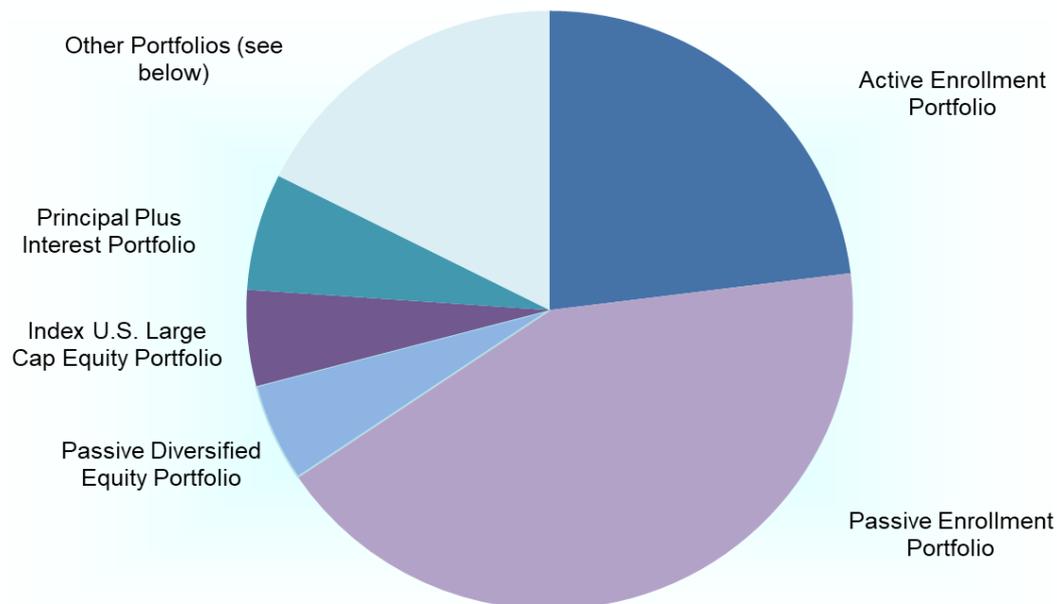
Asset Class	3 Month	1 Year	3 Year	5 Year
U.S. Equities	22.03	6.53	10.04	10.03
U.S. Growth Stocks	27.84	23.28	18.99	15.89
U.S. Value Stocks	14.29	-8.84	1.82	4.64
U.S. Mid-Cap Stocks	24.61	-2.24	5.79	6.76
U.S. Small-Cap Stocks	25.42	-6.63	2.01	4.29
Int'l Developed Stocks	14.88	-5.13	0.81	2.05
Emerging Markets Stocks	18.08	-3.39	1.90	2.86
Real Estate Stocks	13.25	-6.47	3.51	6.56
U.S. Investment Grade Bonds	2.90	8.74	5.32	4.30
Long-dated Bonds	6.23	18.91	10.32	8.98
Inflation-Linked Bonds	3.76	5.75	3.94	2.97
High Yield Bonds	9.42	0.56	3.62	4.78
Commodities	5.08	-17.38	-6.14	-7.69
Cash	0.02	1.65	1.78	1.21
Annualized Tuition Inflation Ending as of 2019-2020 Academic Year* (%)				
Educational Institution		1 Year	3 Year	5 Year
National Average Public 4-Year In-state		2.25	2.59	2.67
National Average Private Nonprofit 4-Year		3.36	3.26	3.35
Consumer Price Index, June 2020		0.65	1.72	1.56

*Data are for the entire academic year and are average total charges for full-time attendance. Tuition and fees were enrollment weighted. SOURCES: CollegeBoard, Trends in College Pricing 2019 and U.S. Department of Labor: Bureau of Labor Statistics

Past performance is not indicative of future results. You can not invest directly in an index. U.S. Equities – Russell 3000 Index; U.S. Growth Stocks – Russell 1000 Growth Index; U.S. Value Stocks – Russell 1000 Value Index; U.S. Mid Cap Stocks – Russell Midcap Index; U.S. Small-Cap Stocks – Russell 2000 Index; International Developed Markets – MSCI EAFE Index; Emerging Markets – MSCI Emerging Markets Index; Real Estate Stocks – FTSE NAREIT All Equity REITS Index; U.S. Investment Grade Bonds – Bloomberg Barclays U.S. Aggregate Bond Index; Long-dated Bonds – Bloomberg Barclays U.S. Government/Credit Long Index; Inflation-Linked Bonds – Bloomberg Barclays TIPS 1-10 Years Index; High Yield Bonds – BofA Merrill Lynch BB/B Cash Pay Index; Commodities - Bloomberg Commodity Index; Cash - Bloomberg Barclays U.S. 3 month Treasury Bellweathers Index C34631

Assets by Portfolio as of Q2 2020

Total Assets: \$9.99 Billion

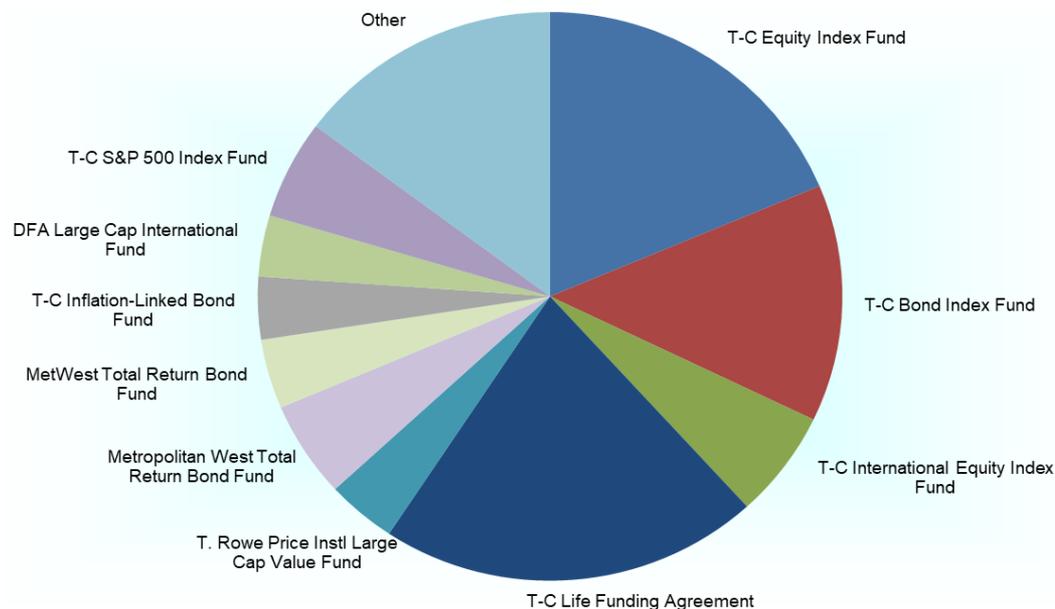


Portfolio	% of Assets	\$ Millions	Portfolio	% of Assets	\$ Millions
Passive Enrollment Portfolio	41.41%	\$ 4,138	Index U.S. Large Cap Equity Portfolio	5.62%	\$ 561
Active Enrollment Portfolio	22.76%	\$ 2,274	Passive Diversified Equity Portfolio	5.55%	\$ 554
Principal Plus Interest Portfolio	6.44%	\$ 643	Other Portfolios (see below)	18.23%	\$ 1,821

Other Portfolios

Index U.S. Equity Portfolio	4.90%	\$ 490	Passive Moderate Growth Portfolio	0.70%	\$ 70
Active Diversified Equity Portfolio	2.61%	\$ 260	Active Moderate Growth Portfolio	0.66%	\$ 66
Active Growth Portfolio	1.86%	\$ 186	Passive Conservative Portfolio	0.66%	\$ 66
Social Choice Portfolio	1.83%	\$ 183	Active Conservative Portfolio	0.44%	\$ 44
Passive Growth Portfolio	1.45%	\$ 145	Active Diversified Fixed Income Portfolio	0.34%	\$ 34
Index International Equity Portfolio	1.14%	\$ 114	Passive Diversified Fixed Income Portfolio	0.34%	\$ 34
Index Bond Portfolio	1.04%	\$ 104	Active International Equity Portfolio	0.26%	\$ 26

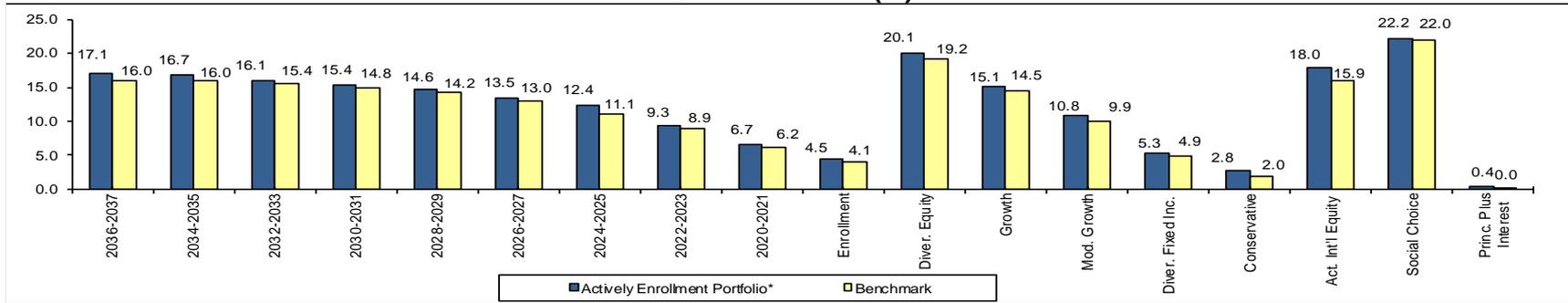
Assets by Underlying Fund as of Q2 2020



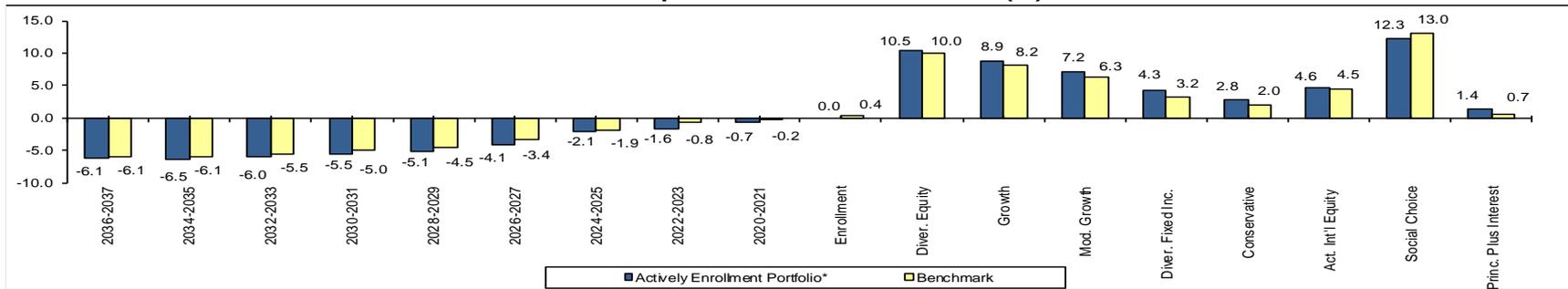
Fund	% of Assets	\$ Millions	Fund	% of Assets	\$ Millions
T-C Life Funding Agreement	21.05%	\$ 2,103	T. Rowe Price Instl Large Cap Growth Fund	3.95%	\$ 394
T-C Equity Index Fund	18.65%	\$ 1,864	T. Rowe Price Instl Large Cap Value Fund	3.86%	\$ 385
T-C Bond Index Fund	13.48%	\$ 1,347	T-C Inflation-Linked Bond Fund	3.56%	\$ 356
T-C International Equity Index Fund	6.10%	\$ 609	DFA Large Cap International Fund	3.48%	\$ 348
T-C S&P 500 Index Fund	5.62%	\$ 561	Other	14.78%	\$ 1,477
Metropolitan West Total Return Bond Fund	5.46%	\$ 546			
Other Funds					
T-C Real Estate Securities Fund	2.47%	\$ 246	T-C Emerging Markets Equity Index Fund	1.54%	\$ 154
PIMCO Real Return Fund	2.20%	\$ 220	T. Rowe Price Instl Floating Rate Fund	1.08%	\$ 108
PIMCO Income Fund	2.18%	\$ 218	DFA Emerging Markets Core Equity Portfolio	0.87%	\$ 87
T-C Social Choice Equity Fund	1.83%	\$ 183	T-C Quant Small Cap Equity Fund	0.86%	\$ 86
T-C High Yield Bond Fund	1.75%	\$ 175			

Actively Managed Portfolios vs Composite Benchmarks Q2 and Since Inception Returns (%)

Q2 2020 Returns (%)



Since Inception Returns as of 06/30/20 (%)



* Returns are net of most recent weighted average Underlying Fund Fees, Program Management Fees and State Administrative Fees (5 bps).

** Inception for the Multi-Fund and Single-Fund Portfolios was 11/4/11 - 11/10/11. Inception for the Enrollment Year Portfolios was 1/24/20.

- As many people returned to the labor market following weeks of coronavirus-induced restrictions, the U.S. unemployment rate dropped to 11.1% in June, easing further from an all-time high of 14.7% reached in April and remaining below market expectations of 12.3%.
- Average hourly earnings of all employees on private nonfarm payrolls showed a 5.04% year-over-year increase from last June.
- Confidence among the nation's homebuilders jumped 21 points to 58 in June in the National Association of Home Builders/Wells Fargo Housing Market Index, signaling that housing stands poised to lead a post-pandemic economic recovery.
- All Active Enrollment Year Portfolios had positive absolute returns in Q2 and outperformed their blended benchmarks.
- Contributing most to absolute returns was the T. Rowe Price Large Cap Growth Fund, which returned 28.60% for the quarter and outperformed its benchmark by 76 basis points. In fact, all underlying funds posted positive absolute returns in Q2.
- On the fixed income side, the PIMCO Income Fund returned 6.48%, outperforming its benchmark by 358 basis points due to its allocation to credit.
- The highest performing option in Q2 was the Social Choice Option. This returned 22.23% and outperformed by 20 basis points.

Actively Managed Portfolios vs Composite Benchmarks

Investment Portfolios	Average Annual Total Return						Inception Date
	3 Month	YTD	1 Year	3 Year	5 Year	Since Inception	
Enrollment Year Portfolios**							
2036/2037 Enrollment Portfolio Active	17.08%	-	-	-	-	-6.10%	01/24/20
Blended Benchmark Returns	16.03%	-	-	-	-	-6.07%	
Difference	1.05%	-	-	-	-	-0.03%	
2034/2035 Enrollment Portfolio Active	16.73%	-	-	-	-	-6.50%	01/24/20
Blended Benchmark Returns	16.05%	-	-	-	-	-6.06%	
Difference	0.68%	-	-	-	-	-0.44%	
2032/2033 Enrollment Portfolio Active	16.05%	-	-	-	-	-6.00%	01/24/20
Blended Benchmark Returns	15.43%	-	-	-	-	-5.53%	
Difference	0.62%	-	-	-	-	-0.47%	
2030/2031 Enrollment Portfolio Active	15.38%	-	-	-	-	-5.50%	01/24/20
Blended Benchmark Returns	14.80%	-	-	-	-	-5.02%	
Difference	0.58%	-	-	-	-	-0.48%	
2028/2029 Enrollment Portfolio Active	14.61%	-	-	-	-	-5.10%	01/24/20
Blended Benchmark Returns	14.21%	-	-	-	-	-4.48%	
Difference	0.40%	-	-	-	-	-0.62%	
2026/2027 Enrollment Portfolio Active	13.49%	-	-	-	-	-4.10%	01/24/20
Blended Benchmark Returns	12.99%	-	-	-	-	-3.43%	
Difference	0.50%	-	-	-	-	-0.67%	
2024/2025 Enrollment Portfolio Active	12.40%	-	-	-	-	-2.10%	01/24/20
Blended Benchmark Returns	11.14%	-	-	-	-	-1.92%	
Difference	1.26%	-	-	-	-	-0.18%	
2022/2023 Enrollment Portfolio Active	9.33%	-	-	-	-	-1.60%	01/24/20
Blended Benchmark Returns	8.90%	-	-	-	-	-0.76%	
Difference	0.43%	-	-	-	-	-0.84%	
2020/2021 Enrollment Portfolio Active	6.66%	-	-	-	-	-0.70%	01/24/20
Blended Benchmark Returns	6.25%	-	-	-	-	-0.23%	
Difference	0.41%	-	-	-	-	-0.47%	
Enrollment Year Portfolio Active	4.49%	-	-	-	-	0.00%	01/24/20
Blended Benchmark Returns	4.14%	-	-	-	-	0.40%	
Difference	0.35%	-	-	-	-	-0.40%	
Active Multi-Fund Investment Portfolios							
Active Diversified Equity Portfolio	20.11%	-7.80%	-0.34%	6.37%	7.47%	10.46%	11/04/11
Blended Benchmark Returns	19.18%	-7.31%	1.14%	6.53%	7.26%	10.04%	
Difference	0.93%	-0.49%	-1.48%	-0.16%	0.21%	0.42%	
Active Growth Portfolio	15.14%	-4.01%	2.26%	6.18%	6.77%	8.85%	11/04/11
Blended Benchmark Returns	14.47%	-3.37%	3.51%	6.36%	6.54%	8.16%	
Difference	0.67%	-0.64%	-1.25%	-0.18%	0.23%	0.69%	
Active Moderate Growth Portfolio	10.83%	-0.44%	4.23%	5.79%	5.81%	7.19%	11/09/11
Blended Benchmark Returns	9.91%	0.39%	5.53%	5.93%	5.60%	6.29%	
Difference	0.92%	-0.83%	-1.30%	-0.14%	0.21%	0.90%	
Active Conservative Portfolio	2.76%	2.35%	4.03%	3.11%	2.72%	2.75%	11/04/11
Blended Benchmark Returns	2.01%	2.79%	4.58%	3.36%	2.63%	1.99%	
Difference	0.75%	-0.44%	-0.55%	-0.25%	0.09%	0.76%	
Active International Equity Portfolio	17.96%	-11.76%	-5.86%	0.34%	1.89%	4.63%	11/10/11
Blended Benchmark Returns	15.91%	-11.11%	-4.96%	1.10%	2.25%	4.49%	
Difference	2.05%	-0.65%	-0.90%	-0.76%	-0.36%	0.14%	
Active Diversified Fixed Income Portfolio	5.26%	3.67%	6.19%	4.66%	4.10%	4.31%	11/08/11
Blended Benchmark Returns	4.90%	4.00%	6.50%	4.64%	3.89%	3.15%	
Difference	0.36%	-0.33%	-0.31%	0.02%	0.21%	1.16%	
Active Single Fund Investment Portfolios							
Social Choice Portfolio	22.23%	-2.82%	8.02%	10.11%	10.09%	12.26%	11/04/11
Benchmark Returns	22.03%	-3.48%	6.53%	10.04%	10.03%	12.98%	
Difference	0.20%	0.66%	1.49%	0.07%	0.06%	-0.72%	
Principal Plus Interest Portfolio**	0.36%	0.81%	1.72%	1.53%	1.39%	1.37%	11/04/11
Benchmark Returns	0.02%	0.48%	1.47%	1.68%	1.12%	0.06%	
Difference	0.34%	0.33%	0.25%	-0.15%	0.27%	1.31%	

* Returns are net of most recent weighted average Underlying Fund Fees, Program Management Fees and State Administrative Fees (5 bps).

**The crediting rate of 1.70% for the TC Life Funding Agreement in the Active Age-Based Portfolio for the Principal Plus Interest Portfolio are guaranteed through 12/31/20.

Asset Allocation, Fees, and Performance

Active Enrollment Year Portfolio	Annual Asset Based Fees (bp)*	T. Rowe Price Instl Large Cap Growth Fund	T. Rowe Price Instl Large Cap Value Fund	T. Rowe Price Instl Floating Rate Fund	TIAA-CREF Quant Small Cap Equity Fund	TIAA-CREF Real Estate Securities Fund	DFA Large Cap International Portfolio	DFA Emerging Markets Core Equity I Portfolio	MetWest Total Return Bond Fund	PIMCO Real Return Fund	PIMCO Income Fund	T-C Life Funding Agreement
Underlying Fund Expenses (bp)		56	57	58	42	51	22	48	37	45	50	N/A
2036-2037	52	22.70%	22.70%	2.00%	5.00%	5.60%	19.20%	4.80%	10.00%	4.00%	4.00%	0.00%
2034-2035	52	22.70%	22.70%	2.00%	5.00%	5.60%	19.20%	4.80%	10.00%	4.00%	4.00%	0.00%
2032-2033	52	21.60%	21.60%	2.40%	4.80%	5.30%	18.10%	4.60%	12.00%	4.80%	4.80%	0.00%
2030-2031	52	20.40%	20.40%	2.80%	4.50%	5.10%	17.30%	4.30%	14.00%	5.60%	5.60%	0.00%
2028-2029	51	19.30%	19.30%	3.20%	4.30%	4.80%	16.30%	4.00%	16.00%	6.40%	6.40%	0.00%
2026-2027	51	17.00%	17.00%	4.00%	3.80%	4.20%	14.40%	3.60%	20.00%	8.00%	8.00%	0.00%
2024-2025	51	13.60%	13.60%	5.20%	3.00%	3.40%	11.50%	2.90%	26.00%	10.40%	10.40%	0.00%
2022-2023	46	10.20%	10.20%	5.40%	2.30%	2.50%	8.60%	2.20%	27.00%	10.80%	10.80%	10.00%
2020-2021	35	7.10%	7.10%	4.00%	1.50%	1.80%	6.00%	1.50%	20.00%	8.00%	8.00%	35.00%
Enrollment	28	4.20%	4.20%	3.50%	1.00%	1.10%	3.60%	0.90%	17.50%	7.00%	7.00%	50.00%

Active Multi-Fund Investment Portfolios

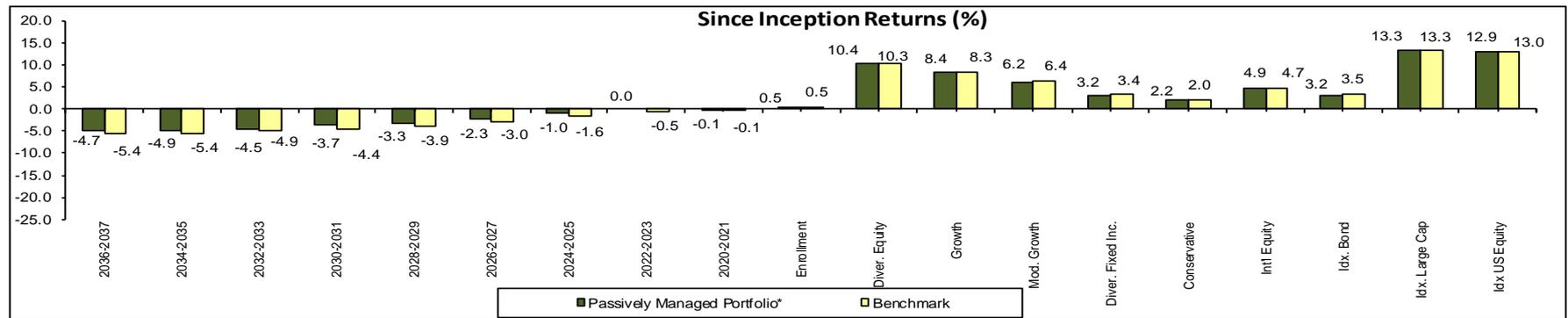
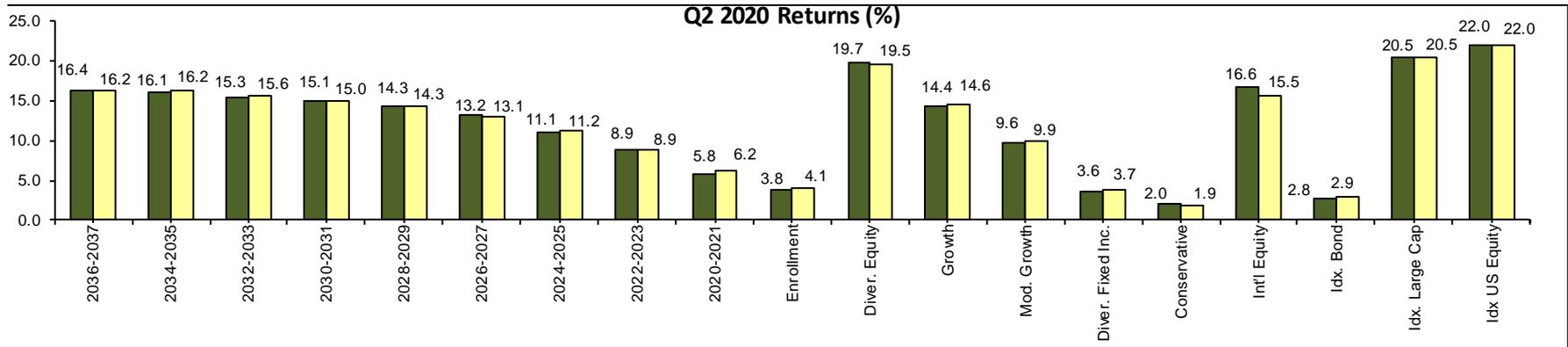
Active Diversified Equity Portfolio	52	28.35%	28.35%		6.30%	7.00%	24.00%	6.00%				
Active Growth Portfolio	51	19.85%	19.85%	3.00%	4.40%	4.90%	16.80%	4.20%	15.00%	6.00%	6.00%	
Active Moderate Growth Portfolio	51	11.34%	11.34%	6.00%	2.52%	2.80%	9.60%	2.40%	30.00%	12.00%	12.00%	
Active Diversified Fixed Income Portfolio	49			10.00%					50.00%	20.00%	20.00%	
Active Conservative Portfolio	28			5.00%					25.00%	10.00%	10.00%	50.00%
Active International Equity Portfolio	33						80.00%	20.00%				
Fund's Performance vs Benchmk Q2 2020 (bp)		76	16	(216)	(28)	11	193	268	122	114	358	34

Active Single Fund Investment Portfolios

Investment Portfolios	Annual Asset Based Fees (bp)*	Percent Allocation	Underlying Mutual Fund	Fund's Performance vs Benchmk Q2 2020 (bp)
Social Choice Portfolio	23	100.00%	TIAA-CREF Social Choice Equity Fund	23
Principal Plus Interest Portfolio	N/A	100.00%	TIAA-CREF Life Co. Funding Agreement	34

* Asset Based Fees include most recent weighted average Underlying Fund Fees, Program Management Fees and State Administrative Fees (5 bps).

Passively Managed Portfolios vs Composite Benchmarks Q2 and Since Inception Returns (%)



* Returns are net of most recent weighted average Underlying Fund Fees and Program Management Fees for the quarter, as well as State Administrative Fees (5 bps) before 11/12/13.

** Inception for the Multi-Fund and Single-Fund Portfolios was 11/4/11 - 11/8/11. Inception for the Enrollment Year Portfolios was 1/24/20.

- Global markets in Q2 staged a strong recovery following Q1's downturn caused by the coronavirus pandemic. The S&P 500 Index gained 20.54%.
- Treasury yields remained range-bound for much of the quarter and ended slightly lower. The Bloomberg Barclays U.S. Aggregate Bond Index of intermediate-term investment grade U.S. bonds returned 2.90%.
- All Passive Enrollment Year Portfolios posted positive absolute returns in Q2.
- A main contributor to absolute returns was the TIAA-CREF Equity Index Fund, which tracks a diversified index of U.S. stocks and returned 21.98%. The TIAA-CREF Quant Small-Cap Equity Fund saw even higher gains, returning 25.14%.
- Multi-Fund and Single Fund Portfolios also saw positive results in Q2, with more aggressive portfolios achieving higher returns. The Index U.S. Equity Portfolio saw the highest absolute results due to the risk-on rally, returning 22.01% for the quarter.

Passively Managed Portfolios vs Composite Benchmarks

Investment Portfolios	3 Month	YTD	1 Year	3 Year	5 Year	Since Inception	Inception Date
Passive Enrollment Portfolio**							
2036/2037 Enrollment Portfolio Passive	16.36%	-	-	-	-	-4.70%	01/24/20
Blended Benchmark Returns	16.23%	-	-	-	-	-5.43%	
Difference	0.13%	-	-	-	-	0.73%	
2034/2035 Enrollment Portfolio Passive	16.12%	-	-	-	-	-4.90%	01/24/20
Blended Benchmark Returns	16.24%	-	-	-	-	-5.42%	
Difference	-0.12%	-	-	-	-	0.52%	
2032/2033 Enrollment Portfolio Passive	15.34%	-	-	-	-	-4.50%	01/24/20
Blended Benchmark Returns	15.60%	-	-	-	-	-4.93%	
Difference	-0.26%	-	-	-	-	0.43%	
2030/2031 Enrollment Portfolio Passive	15.05%	-	-	-	-	-3.70%	01/24/20
Blended Benchmark Returns	14.96%	-	-	-	-	-4.44%	
Difference	0.09%	-	-	-	-	0.74%	
2028/2029 Enrollment Portfolio Passive	14.30%	-	-	-	-	-3.30%	01/24/20
Blended Benchmark Returns	14.33%	-	-	-	-	-3.95%	
Difference	-0.03%	-	-	-	-	0.65%	
2026/2027 Enrollment Portfolio Passive	13.21%	-	-	-	-	-2.30%	01/24/20
Blended Benchmark Returns	13.07%	-	-	-	-	-2.97%	
Difference	0.14%	-	-	-	-	0.67%	
2024/2025 Enrollment Portfolio Passive	11.11%	-	-	-	-	-1.00%	01/24/20
Blended Benchmark Returns	11.17%	-	-	-	-	-1.57%	
Difference	-0.06%	-	-	-	-	0.57%	
2022/2023 Enrollment Portfolio Passive	8.93%	-	-	-	-	0.00%	01/24/20
Blended Benchmark Returns	8.90%	-	-	-	-	-0.51%	
Difference	0.03%	-	-	-	-	0.51%	
2020/2021 Enrollment Portfolio Passive	5.83%	-	-	-	-	-0.10%	01/24/20
Blended Benchmark Returns	6.24%	-	-	-	-	-0.07%	
Difference	-0.41%	-	-	-	-	-0.03%	
Enrollment Year Portfolio Passive	3.82%	-	-	-	-	0.50%	01/24/20
Blended Benchmark Returns	4.11%	-	-	-	-	0.48%	
Difference	-0.29%	-	-	-	-	0.02%	
Passive Multi-Fund Investment Portfolios							
Passive Diversified Equity Portfolio	19.74%	-5.89%	2.76%	7.15%	7.66%	10.36%	11/04/11
Blended Benchmark Returns	19.47%	-6.44%	2.20%	6.93%	7.52%	10.28%	
Difference	0.27%	0.55%	0.56%	0.22%	0.14%	0.08%	
Passive Growth Portfolio	14.41%	-2.33%	4.74%	6.74%	6.77%	8.39%	11/04/11
Blended Benchmark Returns	14.62%	-2.82%	4.18%	6.61%	6.71%	8.34%	
Difference	-0.21%	0.49%	0.56%	0.13%	0.06%	0.05%	
Passive Moderate Growth Portfolio	9.64%	0.84%	5.98%	6.02%	5.66%	6.21%	11/08/11
Blended Benchmark Returns	9.87%	0.59%	5.80%	6.04%	5.71%	6.42%	
Difference	-0.23%	0.25%	0.18%	-0.02%	-0.05%	-0.21%	
Passive Conservative Portfolio	1.95%	2.73%	4.33%	3.12%	2.64%	2.17%	11/04/11
Blended Benchmark Returns	1.92%	2.66%	4.45%	3.32%	2.63%	2.03%	
Difference	0.03%	0.07%	-0.12%	-0.20%	0.01%	0.14%	
Index International Equity Portfolio	16.62%	-10.45%	-4.31%	1.27%	2.51%	4.87%	11/04/11
Blended Benchmark Returns	15.54%	-10.99%	-4.72%	1.08%	2.28%	4.74%	
Difference	1.08%	0.54%	0.41%	0.19%	0.23%	0.13%	
Passive Diversified Fixed Income Portfolio	3.55%	4.55%	6.93%	4.65%	3.90%	3.18%	11/08/11
Blended Benchmark Returns	3.72%	4.80%	7.39%	4.92%	4.11%	3.41%	
Difference	-0.17%	-0.25%	-0.46%	-0.27%	-0.21%	-0.23%	
Passive Single Fund Investment Portfolios							
Index Bond Portfolio	2.81%	6.20%	8.66%	5.14%	4.14%	3.24%	11/04/11
Benchmark Returns	2.90%	6.14%	8.74%	5.32%	4.30%	3.45%	
Difference	-0.09%	0.06%	-0.08%	-0.18%	-0.16%	-0.21%	
Index U.S. Large Cap Equity Portfolio	20.52%	-3.07%	7.46%	10.65%	10.63%	13.26%	11/04/11
Benchmark Returns	20.54%	-3.08%	7.51%	10.73%	10.73%	13.31%	
Difference	-0.02%	0.01%	-0.05%	-0.08%	-0.10%	-0.05%	
Index U.S. Equity Portfolio	22.01%	-3.47%	6.50%	9.99%	9.98%	12.94%	11/04/11
Benchmark Returns	22.03%	-3.48%	6.53%	10.04%	10.03%	12.98%	
Difference	-0.02%	0.01%	-0.03%	-0.05%	-0.05%	-0.04%	

* Returns are net of most recent weighted average Underlying Fund Fees and Program Management Fees for the quarter, as well as State Administrative Fees (5 bps) before 11/12/13.

**The crediting rate of 1.70% for the TC Life Funding Agreement in the Passive Age-Based Portfolio is guaranteed through 12/31/20.

Asset Allocation, Fees, and Performance

Passive Enrollment Portfolio	Annual Asset Based Fees (bp)*	TIAA-CREF Equity Index Fund	TIAA-CREF International Equity Index Fund	TIAA-CREF Emerging Markets Equity Index Fund	TIAA-CREF Real Estate Securities Fund	TIAA-CREF Bond Index Fund	TIAA-CREF Inflation-Linked Bond Fund	TIAA-CREF High Yield Fund	T-C Life Funding Agreement
Underlying Fund Expenses (bp)		5	6	20	51	11	26	36	N/A
2036-2037	12	50.40%	19.20%	4.80%	5.60%	14.00%	4.00%	2.00%	0.00%
2034-2035	12	50.40%	19.20%	4.80%	5.60%	14.00%	4.00%	2.00%	0.00%
2032-2033	12	47.90%	18.20%	4.60%	5.30%	16.80%	4.80%	2.40%	0.00%
2030-2031	12	45.40%	17.30%	4.30%	5.00%	19.60%	5.60%	2.80%	0.00%
2028-2029	13	42.80%	16.30%	4.10%	4.80%	22.40%	6.40%	3.20%	0.00%
2026-2027	13	37.80%	14.40%	3.60%	4.20%	28.00%	8.00%	4.00%	0.00%
2024-2025	14	30.20%	11.50%	2.90%	3.40%	36.40%	10.40%	5.20%	0.00%
2022-2023	13	22.70%	8.60%	2.20%	2.50%	37.80%	10.80%	5.40%	10.00%
2020-2021	10	15.70%	6.00%	1.50%	1.80%	28.00%	8.00%	4.00%	35.00%
Enrollment	8	9.40%	3.60%	0.90%	1.10%	24.50%	7.00%	3.50%	50.00%

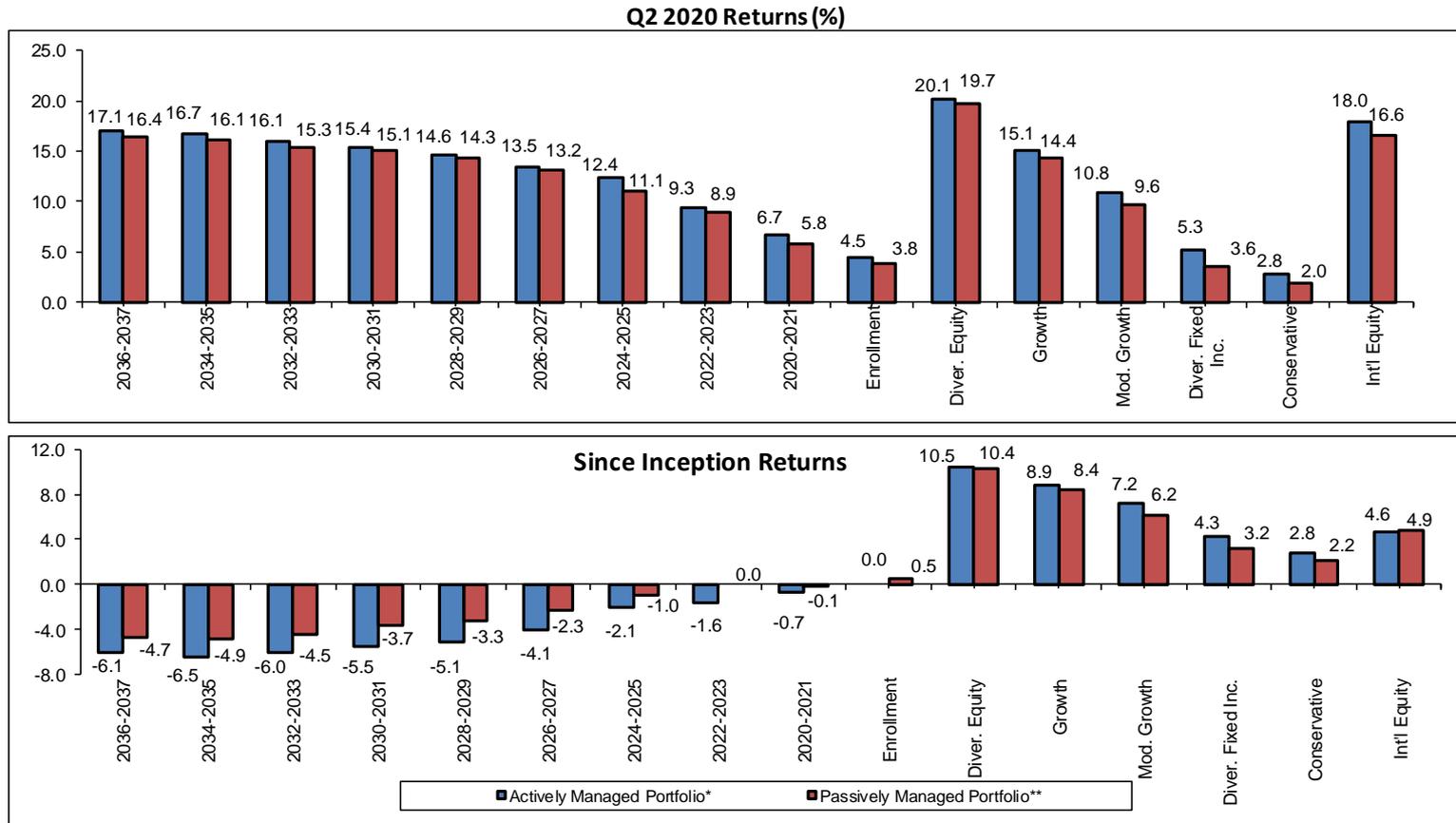
Passive Multi-Fund Investment Portfolios

Passive Diversified Equity Portfolio	10	63.00%	24.00%	6.00%	7.00%				
Passive Growth Portfolio	13	44.10%	16.80%	4.20%	4.90%	21.00%	6.00%	3.00%	
Passive Moderate Growth Portfolio	15	25.20%	9.60%	2.40%	2.80%	42.00%	12.00%	6.00%	
Passive Diversified Fixed Income Portfolio	18					70.00%	20.00%	10.00%	
Passive Conservative Portfolio	9					35.00%	10.00%	5.00%	50.00%
Index International Equity Portfolio	10		80.00%	20.00%					
Fund's Performance vs Benchmk Q2 2020 (bp)		(5)	110	110	11	(12)	(14)	(83)	34

Investment Portfolios	Annual Asset Based Fees (bp)*	Percent Allocation	Underlying Mutual Fund	Fund's Performance vs Benchmk Q2 2020 (bp)
Index Bond Portfolio	12	100.00%	TIAA-CREF Bond Index Fund	(12)
Index U.S. Large Cap Equity Portfolio	6	100.00%	TIAA-CREF S&P 500 Index Fund	(1)
Index U.S. Equity Portfolio	6	100.00%	TIAA-CREF Equity Index Fund	(5)

* Asset Based Fees include most recent weighted average Underlying Fund Fees and Program Management Fees.

Actively Managed Portfolios vs. Passively Managed Portfolios Q2 and Since Inception Returns (%)



* Returns are net of most recent weighted average Underlying Fund Fees, Program Management Fees, and State Administrative Fees (5 bps).

** Returns are net of most recent weighted average Underlying Fund Fees, Program Management Fees, and State Administrative Fees (5 bps) before 11/12/13.

*** Inception for the Multi-Fund and Single-Fund Portfolios was 11/4/11 - 11/10/11. Inception for the Enrollment Year Portfolios was 1/24/20.

- In Q2, Actively Managed Portfolios outperformed the Passively Managed Portfolios.
- Certain underlying funds in the Active Portfolios outperformed their benchmark, which resulted in higher returns for some portfolios with allocations to those funds compared to their passive counterparts. For example, the PIMCO Income Fund, which has more credit risk than its benchmark, significantly outperformed during a period of narrowing spreads.
- Active tends to outperform Passive for the Multi-Fund Portfolios with longer performance history.

Underlying Funds vs. Benchmarks

	Average Annual Total Return							3-Year Standard Deviation	Fund Incept. Date
	3 Month	YTD	1 Year	3 Year	5 Year	Life			
TIAA-CREF FUNDS									
T-C Bond Index Fund	2.78%	6.21%	8.67%	5.17%	4.17%	3.93%	3.24%	09/14/2009	
Bloomberg Barclays U.S. Aggregate Bond Index	2.90%	6.14%	8.74%	5.32%	4.30%	4.12%	3.27%		
Difference	-0.12%	0.07%	-0.07%	-0.15%	-0.13%	-0.19%			
T-C Emerging Markets Equity Index Fund*	19.18%	-9.45%	-3.01%	1.92%	2.92%	2.44%	18.81%	08/31/2010	
MSCI Emerging Markets® Index	18.08%	-9.78%	-3.39%	1.90%	2.86%	2.70%	18.52%		
Difference	1.10%	0.33%	0.38%	0.02%	0.06%	-0.26%			
T-C Equity Index Fund	21.98%	-3.47%	6.49%	10.00%	10.00%	6.21%	17.66%	07/01/1999	
Russell 3000 Index	22.03%	-3.48%	6.53%	10.04%	10.03%	6.28%	17.69%		
Difference	-0.05%	0.01%	-0.04%	-0.04%	-0.03%	-0.07%			
T-C High Yield Bond Fund	8.59%	-6.90%	-2.92%	2.47%	3.95%	6.26%	9.28%	03/31/2006	
ICE BofAML BB/B Cash Pay Index	9.42%	-3.57%	0.56%	3.62%	4.78%	6.44%	8.23%		
Difference	-0.83%	-3.33%	-3.48%	-1.15%	-0.83%	-0.18%			
T-C Inflation-Linked Bond Fund	3.62%	4.13%	5.66%	3.78%	2.76%	4.04%	2.57%	10/01/2002	
Bloomberg Barclays 1-10 Year U.S. TIPS Index	3.76%	4.08%	5.75%	3.94%	2.96%	3.85%	2.67%		
Difference	-0.14%	0.05%	-0.09%	-0.16%	-0.20%	0.19%			
T-C International Equity Index Fund*	15.98%	-10.71%	-4.65%	0.99%	2.25%	6.84%	15.42%	10/01/2002	
MSCI EAFE Index	14.88%	-11.34%	-5.13%	0.81%	2.05%	6.76%	15.17%		
Difference	1.10%	0.63%	0.48%	0.18%	0.20%	0.08%			
T-C Real Estate Securities Fund	13.36%	-8.89%	-1.05%	6.47%	8.04%	9.99%	15.99%	10/01/2002	
FTSE NAREIT Equity Index	13.25%	-13.30%	-6.47%	3.51%	6.56%	9.79%	17.42%		
Difference	0.11%	4.41%	5.42%	2.96%	1.48%	0.20%			
T-C S&P 500 Index Fund	20.53%	-3.08%	7.49%	10.68%	10.66%	9.71%	16.94%	10/01/2002	
S&P 500 Index	20.54%	-3.08%	7.51%	10.73%	10.72%	9.80%	16.95%		
Difference	-0.01%	0.00%	-0.02%	-0.05%	-0.06%	-0.09%			
T-C Quant Small Cap Equity Fund	25.14%	-17.28%	-13.39%	-0.26%	3.35%	9.18%	23.54%	10/01/2002	
Russell 2000 Index	25.42%	-12.98%	-6.63%	2.01%	4.29%	9.46%	22.93%		
Difference	-0.28%	-4.30%	-6.76%	-2.27%	-0.94%	-0.28%			
T-C Social Choice Equity Fund	22.26%	-2.80%	8.10%	10.20%	10.19%	6.08%	17.55%	07/01/1999	
Russell 3000 Index	22.03%	-3.48%	6.53%	10.04%	10.03%	6.28%	17.69%		
Difference	0.23%	0.68%	1.57%	0.16%	0.16%	-0.20%			
DFA FUNDS									
DFA Emerging Markets Core Equity Portfolio*	20.76%	-13.43%	-8.29%	-0.77%	1.68%	6.32%	19.73%	04/05/2005	
MSCI Emerging Markets® Index	18.08%	-9.78%	-3.39%	1.90%	2.86%	6.48%	18.52%		
Difference	2.68%	-3.65%	-4.90%	-2.67%	-1.18%	-0.16%			
DFA Large Cap International Portfolio*	17.27%	-11.38%	-5.22%	0.70%	2.03%	5.19%	16.41%	07/17/1991	
MSCI World Ex US Index	15.34%	-11.49%	-5.42%	0.84%	2.01%	5.27%	15.49%		
Difference	1.93%	0.11%	0.20%	-0.14%	0.02%	-0.08%			
METWEST FUNDS									
MetWest Total Return Bond Fund	4.12%	6.47%	9.18%	5.66%	4.41%	4.58%	3.44%	07/01/1999	
Bloomberg Barclays U.S. Aggregate Bond Index	2.90%	6.14%	8.74%	5.32%	4.30%	3.67%	3.27%		
Difference	1.22%	0.33%	0.44%	0.34%	0.11%	0.91%			
PIMCO FUNDS									
PIMCO Income Fund	6.48%	-1.68%	0.69%	3.31%	4.69%	7.78%	5.52%	03/30/2007	
Barclays Capital U.S. Aggregate Bond Index	2.90%	6.14%	8.74%	5.32%	4.30%	4.54%	3.27%		
Difference	3.58%	-7.82%	-8.05%	-2.01%	0.39%	3.24%			
PIMCO Real Return Fund	5.38%	6.20%	8.38%	4.94%	3.73%	5.81%	3.77%	01/29/1997	
Bloomberg Barclays U.S. TIPS Index	4.24%	6.01%	8.28%	5.04%	3.75%	-	3.66%		
Difference	1.14%	0.19%	0.10%	-0.10%	-0.02%	-			
T. ROWE PRICE FUNDS									
T. Rowe Price Instl Floating Rate Fund	8.16%	-4.03%	-1.11%	2.27%	2.93%	4.58%	7.36%	01/31/2008	
S&P/LSTA Performing Loan Index	10.32%	-4.60%	-1.95%	2.17%	3.10%	4.70%	8.97%		
Difference	-2.16%	0.57%	0.84%	0.10%	-0.17%	-0.12%			
T. Rowe Price Instl Large Cap Growth Fund	28.60%	10.76%	20.48%	19.59%	16.85%	11.23%	17.99%	10/31/2001	
Russell 1000 Growth Index	27.84%	9.81%	23.28%	18.99%	15.88%	9.39%	17.64%		
Difference	0.76%	0.95%	-2.80%	0.60%	0.97%	1.84%			
T. Rowe Price Instl Large Cap Value Fund	14.45%	-18.24%	-10.76%	0.88%	4.51%	7.13%	18.28%	3/31/2000	
Russell 1000 Value Index	14.29%	-16.26%	-8.84%	1.82%	4.64%	5.99%	18.09%		
Difference	0.16%	-1.98%	-1.92%	-0.94%	-0.13%	1.14%			

* For funds holding securities traded on foreign exchange that close before the U.S. market, fair value pricing creates tracking error relative to a benchmark index that uses foreign closing prices.



TIAA-CREF Tuition Financing, Inc.

BUILT TO PERFORM.

CREATED TO SERVE.

ScholarShare 529 College Savings Plan

September 17, 2020

2Q 2020 Investment
Performance Status Report

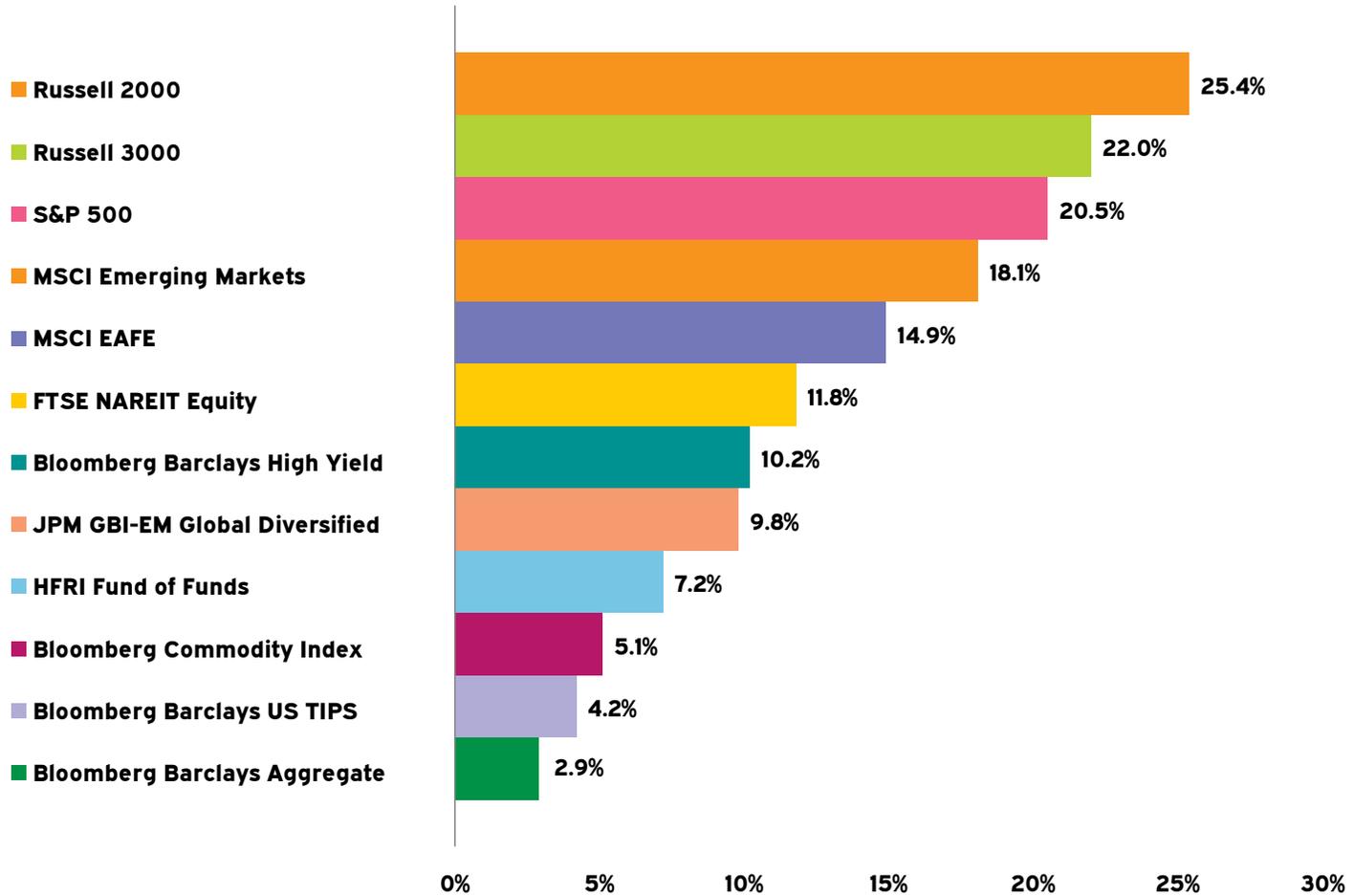
1. The World Markets in the Second Quarter of 2020
2. Review of ScholarShare Policy
3. Sensitivity Analyses
4. Summary Points
5. Enrollment Date Fund Analysis
6. Appendix

Takeaways

- The Program transitioned to Enrollment-Date portfolios during the first quarter and trailing performance is not yet available.
- Global risk assets recovered meaningfully from their lows during the second quarter, largely driven by record fiscal and monetary policy stimulus.
- US and International equity posted positive results over the quarter and trailing 1-year periods. US small cap equities outperformed large cap equities over the quarter, however the Program's T. Rowe Institutional Large Cap Growth fund outperformed the TIAA Small Cap Equity fund by 3.5%. Growth outperformed value in the large-, mid-, and small-cap spaces. Information technology is the best performing sector, with a narrow group of companies like Amazon and Netflix largely driving market gains. The outperformance has been due to consumers moving to online purchases and entertainment.
- Large Cap Growth indices outperformed Large Cap Value indices. The Program's T. Rowe Institutional Large Cap Growth outperformed its benchmark over the quarter.
- The Program's underlying active international fund, DFA Large Cap International, produced positive relative results over the quarter and trailing 1-year.
- Fixed income returns trailed equity over the most recent quarter but outperformed over the trailing 1-year. The Program's actively-managed fixed income funds generated mixed results versus their respective benchmarks for the quarter. The PIMCO Income fund generated a return of 6.5% and outperformed its benchmark by 3.6% over the quarter. The fund underperformed its benchmark by (8.0%) over the trailing 1-year period.
- The TIAA Real Estate Securities fund produced positive absolute and relative results over the most recent quarter.

The World Markets Second Quarter of 2020

The World Markets¹ Second Quarter of 2020



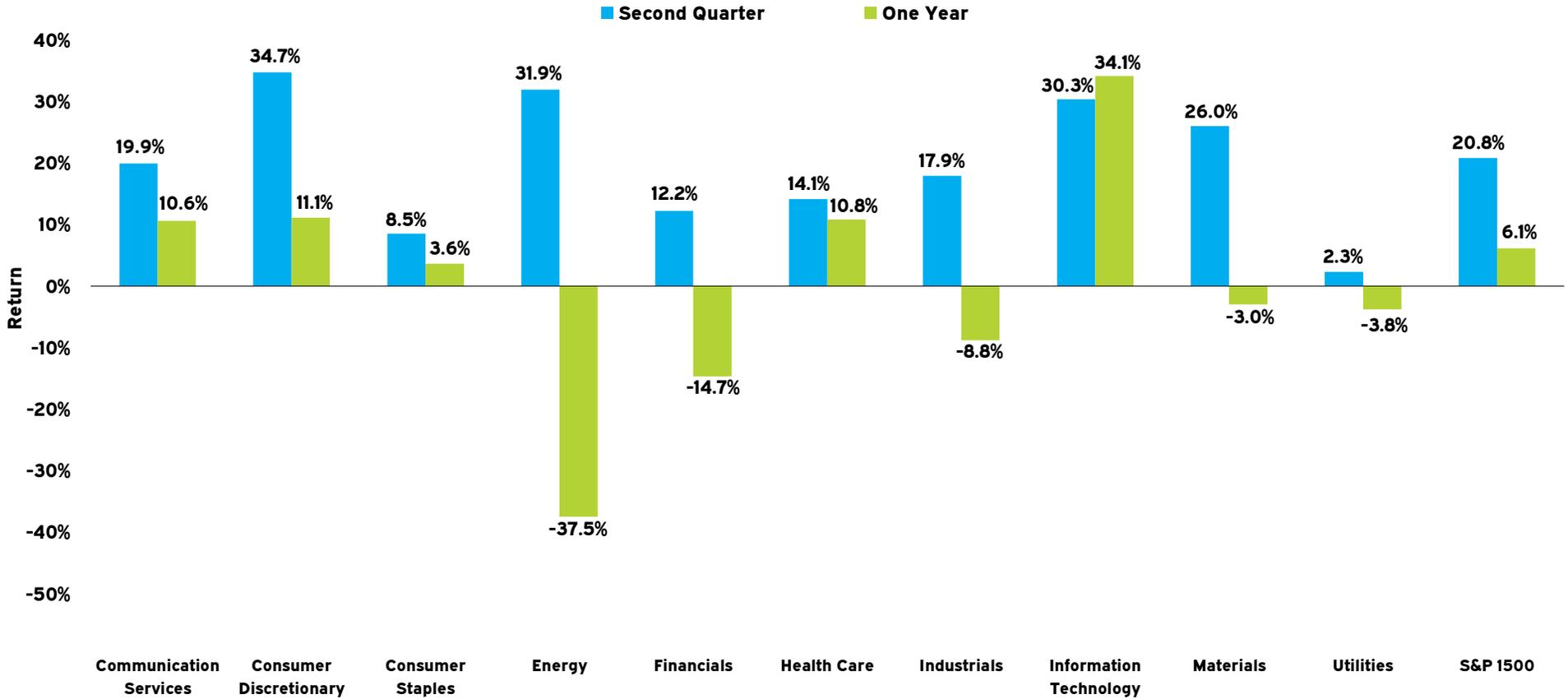
¹ Source: InvestorForce.

Index Returns¹

	2Q20 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
Domestic Equity						
S&P 500	20.5	-3.1	7.5	10.7	10.7	14.0
Russell 3000	22.0	-3.5	6.5	10.0	10.0	13.7
Russell 1000	21.8	-2.8	7.5	10.6	10.5	14.0
Russell 1000 Growth	27.8	9.8	23.3	19.0	15.9	17.2
Russell 1000 Value	14.3	-16.3	-8.8	1.8	4.6	10.4
Russell MidCap	24.6	-9.1	-2.2	5.8	6.8	12.3
Russell MidCap Growth	30.3	4.2	11.9	14.8	11.6	15.1
Russell MidCap Value	19.9	-18.1	-11.8	-0.5	3.3	10.3
Russell 2000	25.4	-13.0	-6.6	2.0	4.3	10.5
Russell 2000 Growth	30.6	-3.1	3.5	7.9	6.9	12.9
Russell 2000 Value	18.9	-23.5	-17.5	-4.3	1.3	7.8
Foreign Equity						
MSCI ACWI (ex. US)	16.1	-11.0	-4.8	1.1	2.3	5.0
MSCI EAFE	14.9	-11.3	-5.1	0.8	2.1	5.7
MSCI EAFE (Local Currency)	12.6	-10.5	-4.2	1.3	2.6	6.9
MSCI EAFE Small Cap	19.9	-13.1	-3.5	0.5	3.8	8.0
MSCI Emerging Markets	18.1	-9.8	-3.4	1.9	2.9	3.3
MSCI Emerging Markets (Local Currency)	16.7	-5.5	1.4	4.5	5.1	6.0
Fixed Income						
Bloomberg Barclays Universal	3.8	5.2	7.9	5.2	4.4	4.1
Bloomberg Barclays Aggregate	2.9	6.1	8.7	5.3	4.3	3.8
Bloomberg Barclays US TIPS	4.2	6.0	8.3	5.0	3.7	3.5
Bloomberg Barclays High Yield	10.2	-3.8	0.0	3.3	4.8	6.7
JPM GBI-EM Global Diversified	9.8	-6.9	-2.8	1.1	2.3	1.6
Other						
FTSE NAREIT Equity	11.8	-18.7	-13.0	0.0	4.1	9.1
Bloomberg Commodity Index	5.1	-19.4	-17.4	-6.1	-7.7	-5.8
HFRI Fund of Funds	7.2	-2.2	-0.2	2.0	1.4	2.7

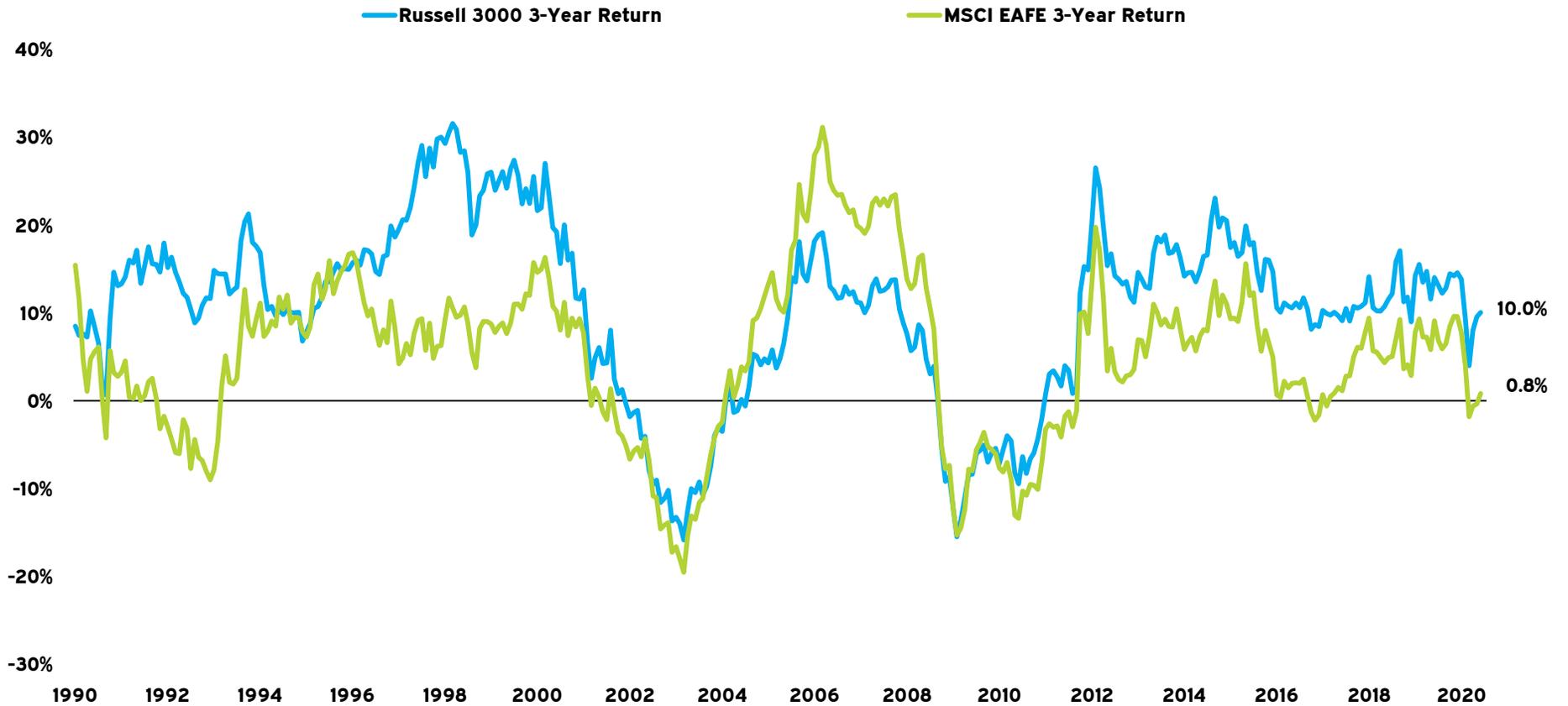
¹ Source: InvestorForce.

S&P Sector Returns¹



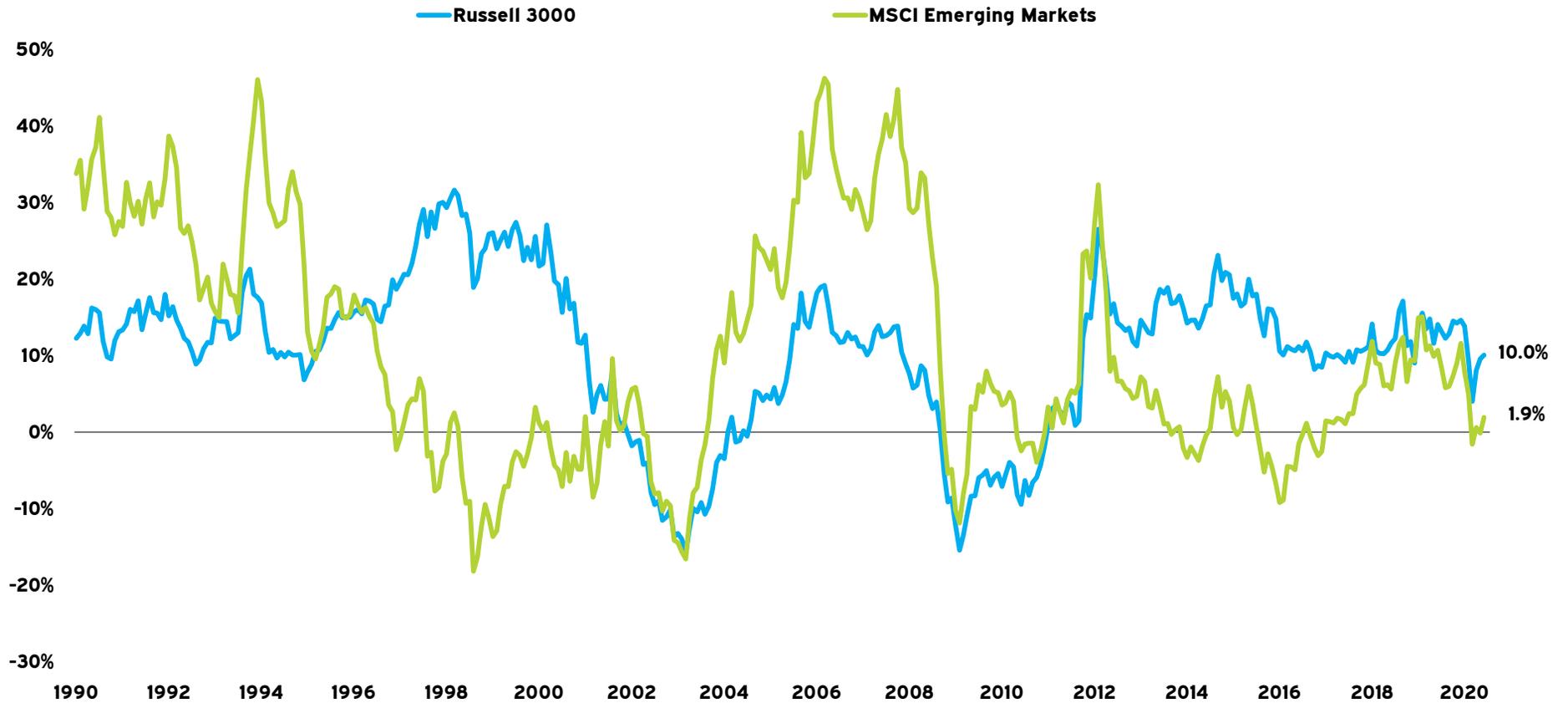
¹ Source: InvestorForce. Represents S&P 1500 (All Cap) data.

US and Developed Market Foreign Equity Rolling Three-Year Returns¹



¹ Source: InvestorForce.

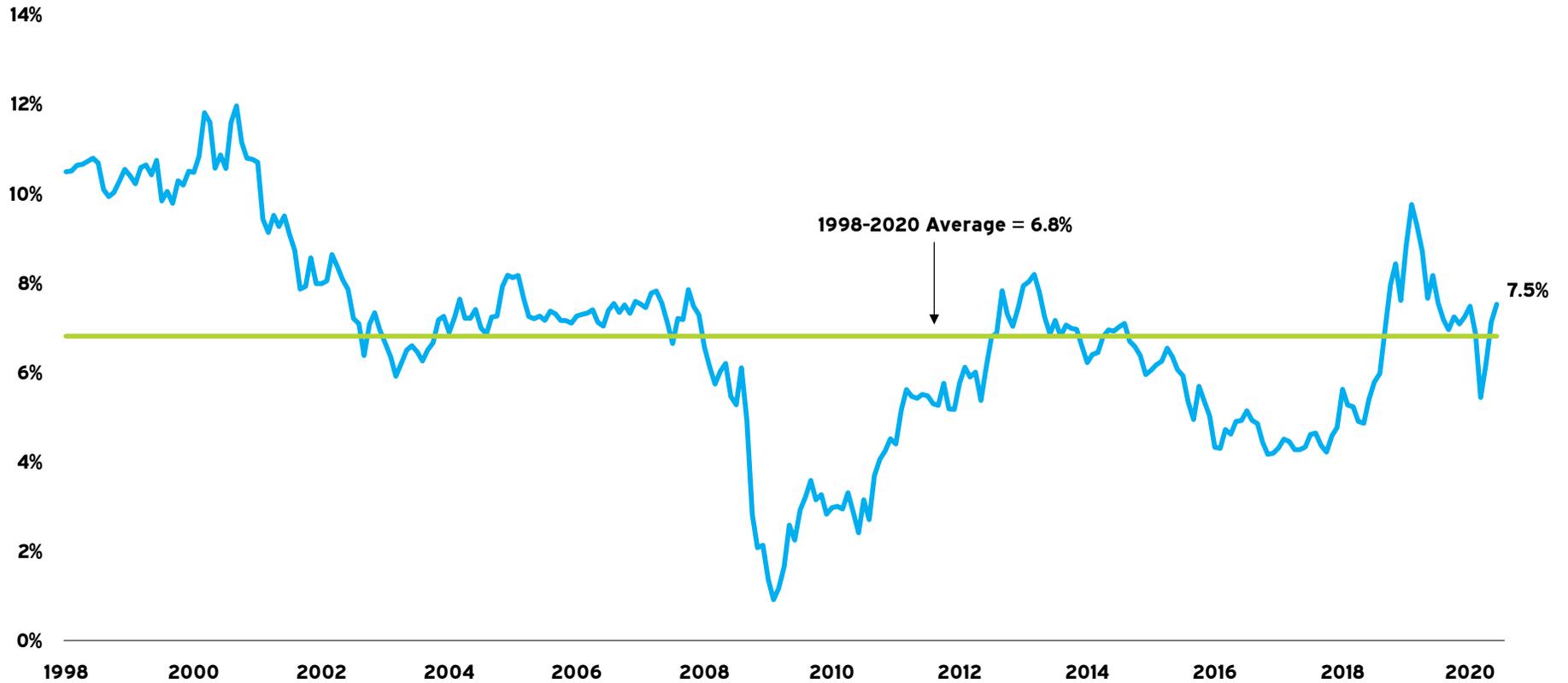
US and Emerging Market Equity Rolling Three-Year Returns¹



¹ Source: InvestorForce.

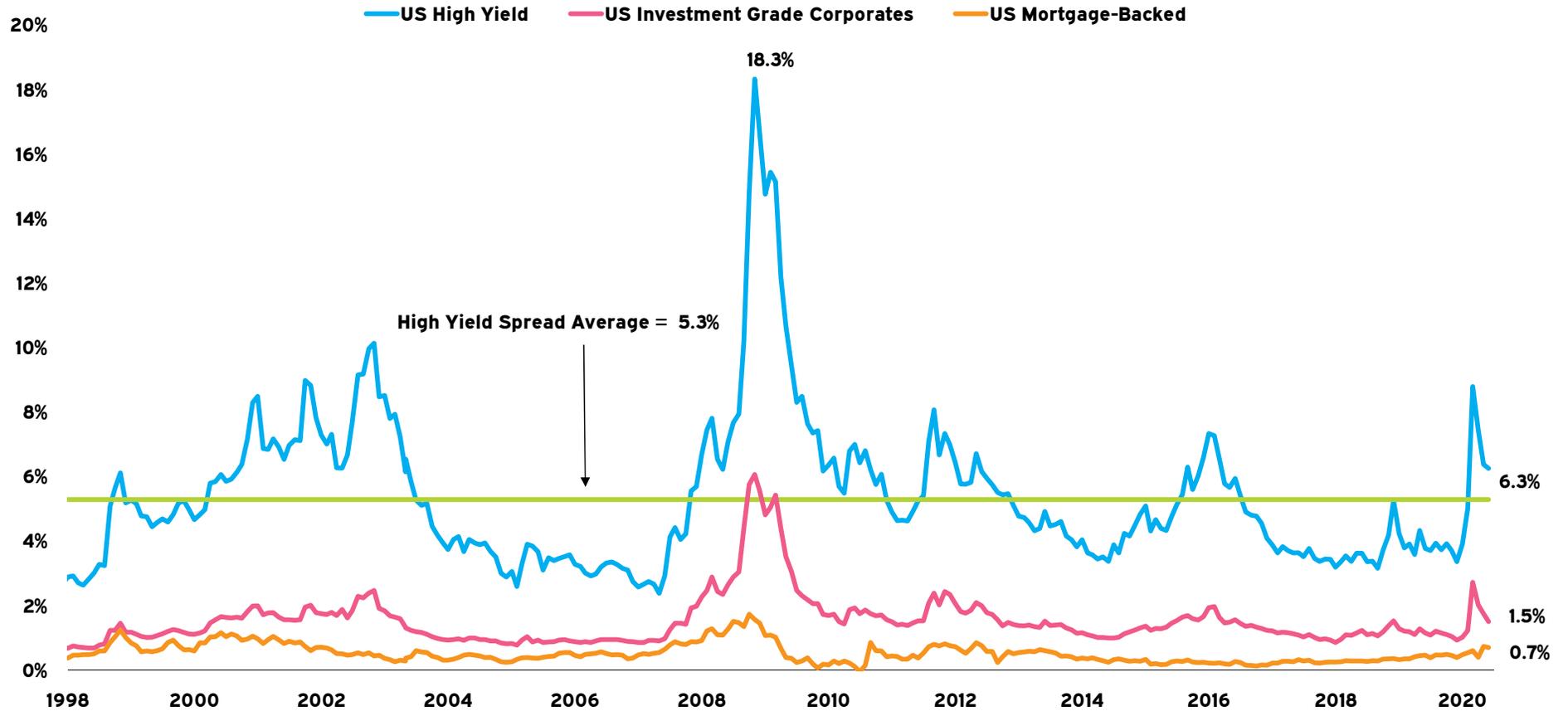
Rolling Ten-Year Returns: 65% Stocks and 35% Bonds¹

— 65% Stocks (MSCI ACWI) / 35% Bonds (Bloomberg Barclays Aggregate) 10-Year Rolling Return



¹ Source: InvestorForce.

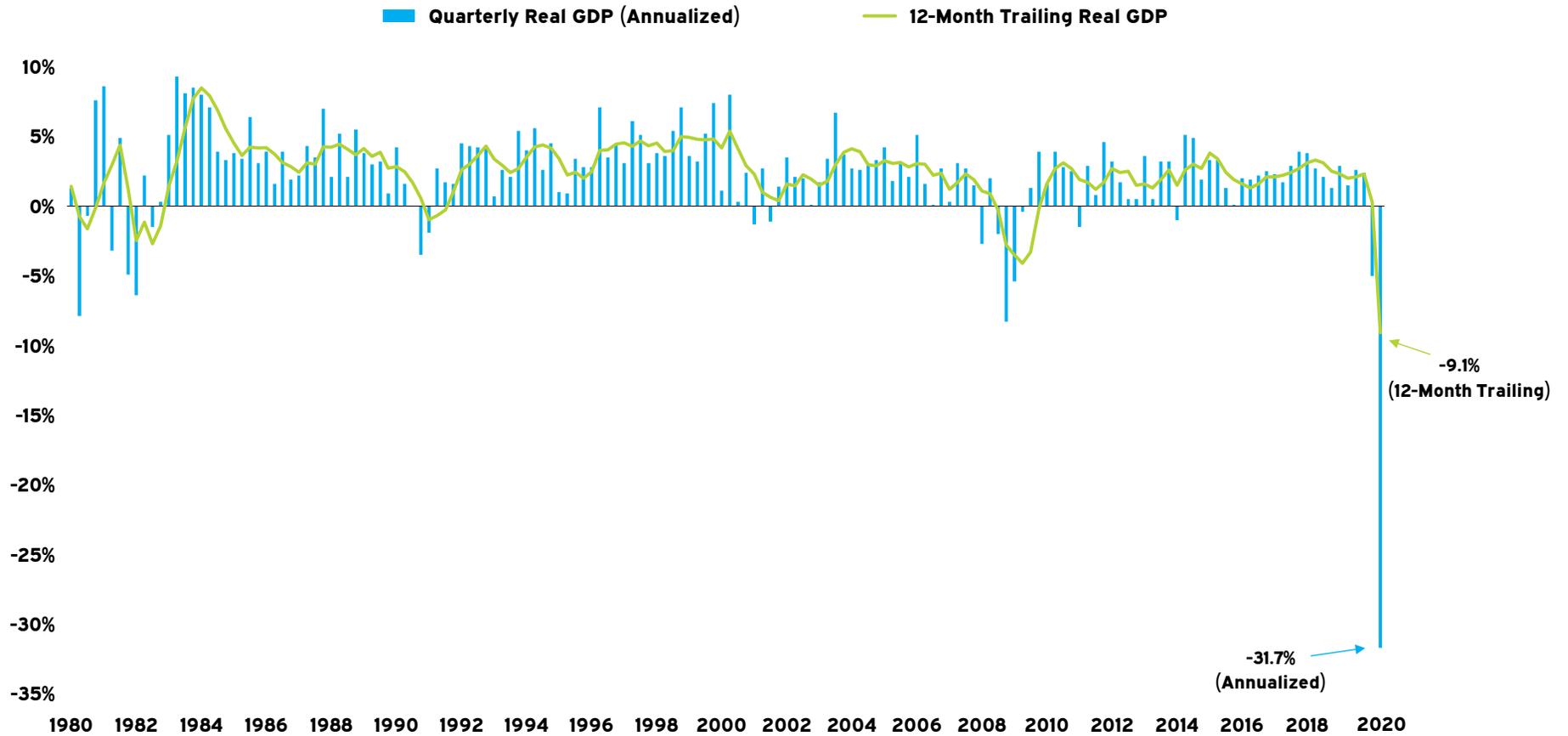
Credit Spreads vs. US Treasury Bonds^{1,2}



¹ Source: Barclays Live. Data represents the OAS.

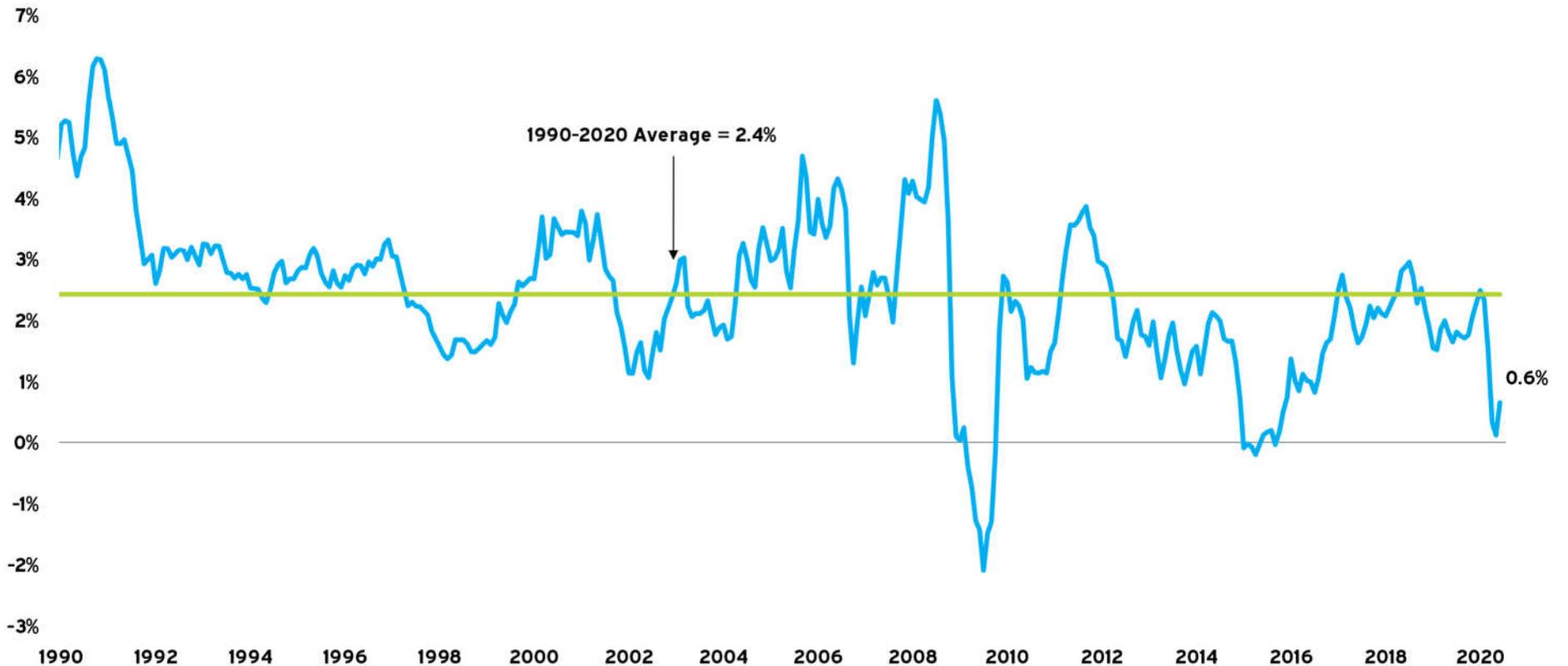
² The median high yield spread was 4.8% from 1997-2020.

US Real Gross Domestic Product (GDP) Growth¹



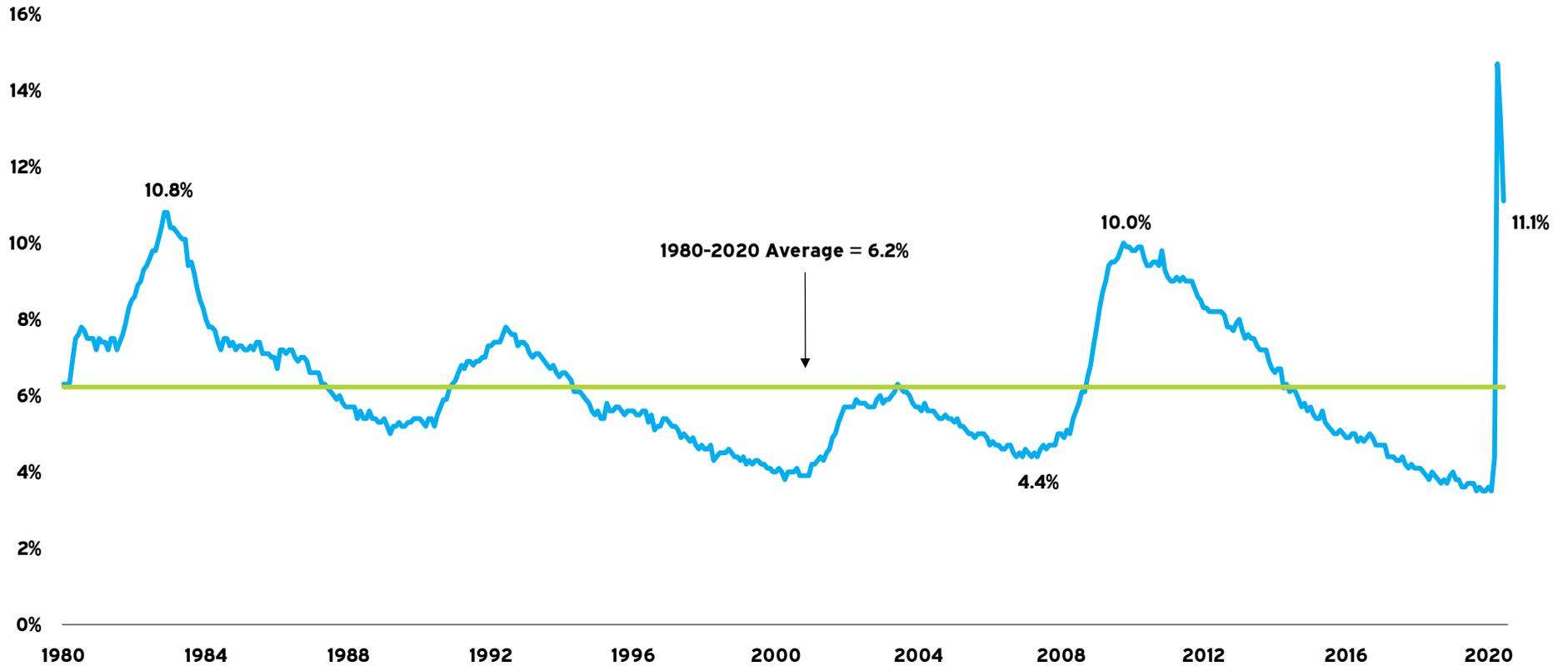
¹ Source: Bureau of Economic Analysis. Data is as of Q2 2020 and represents the second estimate.

US Inflation (CPI) Trailing Twelve Months¹



¹ Source: Bureau of Labor Statistics. Data is non-seasonally adjusted CPI, which may be volatile in the short-term. Data is as of June 30, 2020.

US Unemployment¹



¹ Source: Bureau of Labor Statistics. Data is as of June 30, 2020.

Review of ScholarShare Policy

Active Funds		
Fund	Asset Class	Benchmark
T. Rowe Price Instl Large Cap Growth	Domestic Equity	Russell 1000 Growth TR USD
T. Rowe Price Instl Large Cap Value	Domestic Equity	Russell 1000 Value TR USD
TIAA-CREF Small Cap Equity	Domestic Equity	Russell 2000 TR USD
TIAA-CREF Social Choice Equity	Domestic Equity	Russell 3000 TR USD
TIAA-CREF Real Estate Securities	Domestic Equity	FTSE NAREIT All Equity REITs TR
DFA Large Cap International	International Equity	MSCI World ex US NR USD
DFA Emerging Markets Core Equity	International Equity	MSCI EM NR USD
Metropolitan West Total Return Bond	Fixed Income	BBg BarCap US Agg Bond TR USD
PIMCO Real Return	Fixed Income	BBg BarCap US Trsy US TIPS TR USD
PIMCO Income	Fixed Income	BBg BarCap US Agg Bond TR USD
TIAA-CREF Inflation-Linked Bond	Fixed Income	BBg BarCap US TIPS 1-10 year TR USD
T. Rowe Price Institutional Floating Rate	High Yield	S&P/LSTA Performing Loan TR
TIAA-CREF High Yield Bond	High Yield	BofA ML US HY C Pay BB-B Constd TR
Passive Funds		
Fund	Asset Class	Benchmark
TIAA-CREF Equity Index	Domestic Equity	Russell 3000 TR USD
TIAA-CREF S&P 500 Index	Domestic Equity	S&P 500 TR
TIAA-CREF International Equity Index	International Equity	MSCI EAFE NR USD
TIAA-CREF Emerging Markets Equity Index	International Equity	MSCI EM NR USD
TIAA-CREF Bond Index	Fixed Income	BBg BarCap US Agg Bond TR USD
T-C Life Funding Agreements		
T-C Life Funding Agreements*	---	---

* Investment through a funding agreement with TIAA-CREF Life Insurance Company. Not benchmarked to an index, rather, portfolio performance is monitored using a set of qualitative guidelines.

Performance Criteria for Placing a Fund on Watch

Actively Managed Funds

Asset Class	Short-Term (rolling 12-month periods)	Medium-term (rolling 36-month periods)	Long-term (> 60 months)
Domestic Equity	Fund return < bench return -3.5% for 6 consecutive months	Fund return < bench return -1.75% for 6 consecutive months	VRR < 0.97 for 6 consecutive months
International Equity	Fund return < bench return -4.5% for 6 consecutive months	Fund return < bench return -2.0% for 6 consecutive months	VRR < 0.97 for 6 consecutive months
Fixed Income	Fund return < bench return -1.0% for 6 consecutive months	Fund return < bench return -0.5% for 6 consecutive months	VRR < 0.98 for 6 consecutive months
High Yield	Fund return < bench return -6.5% for 6 consecutive months	Fund return < bench return -3.25% for 6 consecutive months	VRR < 0.96 for 6 consecutive months
Social Choice	Fund return < bench return -5.0% for 6 consecutive months	Fund return < bench return -2.50% for 6 consecutive months	VRR < 0.9 for 6 consecutive months

Passively Managed Funds

Asset Class	Short-Term (rolling 12-month periods)	Medium-term (rolling 36-month periods)	Long-term (rolling 60-month periods)
Domestic Equity	Tracking Error > 0.30% for 6 consecutive months	Tracking Error > 0.25% for 6 consecutive months	Fd annlzd return < bench annlzd return -0.30% for 6 consecutive months
International Equity	Tracking Error > 0.75% for 6 consecutive months	Tracking Error > 0.70% for 6 consecutive months	Fd annlzd return < bench annlzd return -0.30% for 6 consecutive months
Fixed Income	Tracking Error > 0.40% for 6 consecutive months	Tracking Error > 0.55% for 6 consecutive months	Fd annlzd return < bench annlzd return -0.35% for 6 consecutive months

[1] Return discounts from a benchmark return based on 2/3rds of the typical tracking error estimates of the specified type of fund manager.

[2] Annualized return is the average annual return of either the manager or its benchmark.

[3] VRR – Value Relative Ratio – is calculated as: Manager Cumulative Return / Benchmark Cumulative Return.

[4] Tracking error is a measure of the volatility of the average annual difference between the manager’s return and the benchmark’s return.

Performance Criteria for Placing a Fund on Watch (Continued)

T-C Life Funding Agreements
(based on non-investment performance criteria)

Fund Name	Financial Strength	Mortgage Portfolio	Bond Portfolio	Account Diversification
T-C Life Funding Agreements	Moody's \geq Aa2 Standard & Poor's \geq AA A.M. Best \geq A+ Fitch \geq AA	100% in Good Standing	At least 90% Investment Grade	Portfolio is diversified across asset classes and types

The T-C Life Funding Agreements are measured against a set of non-investment performance criteria (see above) in a published TIAA-CREF report every quarter.

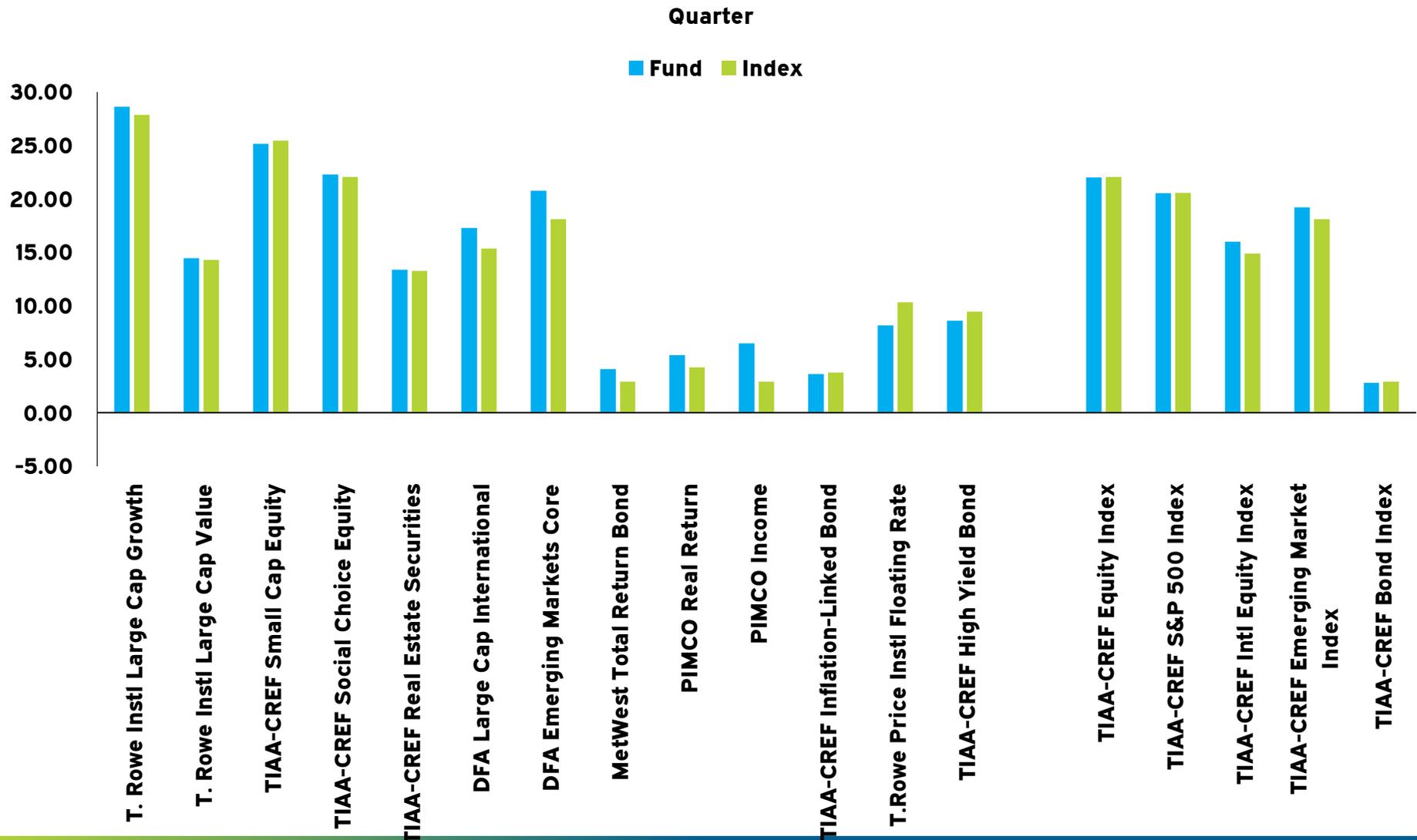
Investment Status Schedule

Performance Category	Actively Managed Portfolios	Passively Managed Portfolios
Positive	<ul style="list-style-type: none"> Performance exceeds the benchmark. 	<ul style="list-style-type: none"> Performance exceeds the benchmark (first 1-12 month period), or Tracking error is within the allowable range¹ (short, medium, and long time periods).
Acceptable	<ul style="list-style-type: none"> Performance meets or is under the benchmark and is within the allowable range. 	<ul style="list-style-type: none"> Performance does not exceed the benchmark but is within the allowable range (first 1-12 month period only).
Caution	<ul style="list-style-type: none"> Performance is below allowable range but either: <ul style="list-style-type: none"> i) for less than six consecutive months, or ii) the Board has not taken (or decided not to take) a formal action to place the asset class or individual fund portfolio on Watch even though performance has been below allowable range for six months or longer. 	<ul style="list-style-type: none"> Tracking error falls outside of the allowable range but either <ul style="list-style-type: none"> i) for less than six consecutive months, or ii) the Board has not voted to place the asset class or stand alone fund on Watch
Watch ²	<ul style="list-style-type: none"> Performance is below allowable range for more than six consecutive months and the Board has formally voted to place the asset class or individual fund on Watch. 	<ul style="list-style-type: none"> Tracking error falls outside of the allowable range for more than six consecutive months and the Board has formally voted to place the asset class or individual fund portfolio on Watch.

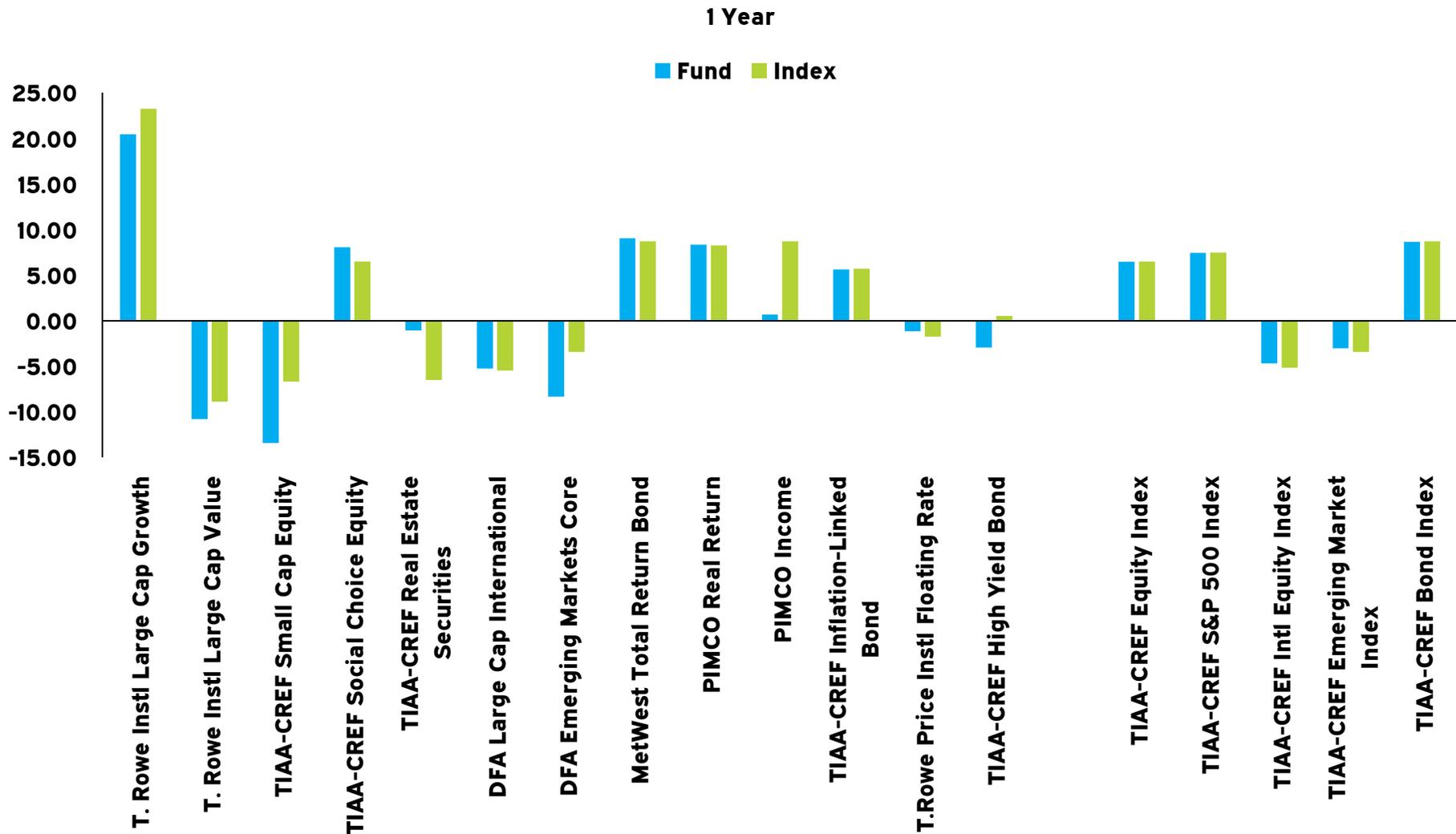
¹ Ranges are shown in the Investment Performance Criteria Schedules.

² The amount of time generally required before an investment is put on watch.

Summary Of Fund Performance 6/30/20



Summary Of Fund Performance 6/30/20



Summary of Fund Performance Status

Program	Total Funds	Positive	Acceptable	Caution	Watch [^]
Number of Funds	19	6	9	4	0
% of Funds	100%	32%	47%	21%	--
% of Program Assets	100%	40%	54%	6%	--
Fund Status ↑	2	1	1	--	--
Fund Status ↓	3	--	--	3	--
Domestic Equity Funds	7	1	5	1	--
Intl Equity Funds	4	3	--	1	--
Fixed Income Funds	5	1	3	1	--
High Yield Funds	2	--	1	1	--
Funding Agreement	1	1	--	--	--

[^]Includes funds on Watch and new funds qualifying for Watch status. Number has not been adjusted to remove funds no longer qualifying for Watch.

- Seventy-nine percent of the Program's funds have either a Positive or Acceptable performance status
- Two funds improved in status over the quarter.
 - T. Rowe Large Cap Growth
 - DFA Large Cap International I
- The status of three funds declined over the quarter
 - TIAA-CREF Small Cap Equity
 - TIAA-CREF High-Yield I
 - DFA Emerging Markets Core Equity
- One new fund qualifies for "Watch" status
 - PIMCO Income

Summary of Fund Performance Status

Funds	Prior Quarter		Current Quarter	
	Status	On Watch	Status	On Watch
Active Funds				
T. Rowe Price Instl Large Cap Growth	Caution		Acceptable	
T. Rowe Price Instl Large Cap Value	Acceptable		Acceptable	
TIAA-CREF Small Cap Equity	Acceptable		Caution	
TIAA-CREF Social Choice Equity	Acceptable	7/1/17	Acceptable	
TIAA-CREF Real Estate Securities	Positive		Positive	
DFA Large Cap International	Acceptable		Positive	
DFA Emerging Markets Core Equity	Acceptable		Caution	
Metropolitan West Total Return Bond	Positive		Positive	
PIMCO Real Return	Acceptable		Acceptable	
PIMCO Income	Caution		Caution	
TIAA-CREF Inflation-Linked Bond	Acceptable		Acceptable	
T. Rowe Price Instl Floating Rate	Acceptable		Acceptable	
TIAA-CREF High-Yield Bond	Acceptable		Caution	
Passive Funds				
TIAA-CREF Equity Index	Acceptable		Acceptable	
TIAA-CREF S&P 500 Index	Acceptable		Acceptable	
TIAA-CREF International Equity Index ¹	Positive		Positive	
TIAA-CREF Emerging Markets Index ¹	Positive		Positive	
TIAA-CREF Bond Index	Acceptable		Acceptable	
T-C Life Funding Agreements				
T-C Life Funding Agreements	Positive		Positive	

- Current status is based on Short-Term (rolling 12-month), Medium-Term (rolling 36-month) and Long-Term (rolling 60-month) evaluation results.
- According to the Investment Status Schedule on the previous page, the portfolio's overall "Current Status" equals the lowest status as achieved by one or more of the criteria during the quarter.

¹ The TIAA-CREF International Equity and Emerging Markets Index funds' returns have been adjusted to remove F/X and Fair Value impact for the purpose of monitoring

Summary of Fund Assets as of 6/30/20

Funds	Assets (\$)	% of Total
Active Funds		
T. Rowe Price Instl Large Cap Growth	394,413,932	3.95
T. Rowe Price Instl Large Cap Value	385,346,068	3.86
TIAA-CREF Small Cap Equity	86,060,322	0.86
TIAA-CREF Social Choice Equity	182,933,468	1.83
TIAA-CREF Real Estate Securities	246,389,636	2.47
DFA Large Cap International	3347,807,386	3.48
DFA Emerging Markets Core Equity	87,021,390	0.87
Metropolitan West Total Return Bond	545,598,653	5.46
PIMCO Real Return	219,525,589	2.20
PIMCO Income	218,283,946	2.18
TIAA-CREF Inflation-Linked Bond	355,988,665	3.56
T. Rowe Price Instl Floating Rate	108,160,267	1.08
TIAA-CREF High-Yield Bond	174,849,468	1.75
Active Funds Total	3,352,378,788	33.55
Passive Funds		
TIAA-CREF Equity Index	1,863,068,663	18.65
TIAA-CREF S&P 500 Index	561,236,857	5.62
TIAA-CREF International Equity Index	610,363,051	6.11
TIAA-CREF Emerging Markets Index	153,879,125	1.54
TIAA-CREF Bond Index	1,346,631,198	13.48
Passive Funds Total	4,535,178,894	45.39
T-C Life Funding Agreements		
T-C Life Funding Agreements	2,103,711,028	21.06
TOTAL	9,991,268,710	100.00

Portfolio Management Overview

Fund	Ticker	Current PM Team		Recent PM Departures*	
T.Rowe Price Large Cap Growth	TRLGX	01/01/2017-	Taymour R. Tamaddon	12/31/2002-01/01/2017	Robert W. Sharps
T.Rowe Price Large Cap Value	TILCX	03/31/2000- 02/25/2010- 01/01/2015-	John D. Linehan Mark S. Finn Heather K. McPherson		
TIAA-CREF Small Cap Equity	TISEX	12/31/2006- 03/01/2016- 03/01/2019-	Adam Cao Pei Chen Max Kozlov		
TIAA-CREF Social Choice Equity	TISCX	12/31/2005- 05/30/2014-	Philip James Campagna Lei Liao		
TIAA-CREF Real Estate Securities	TIREX	12/31/2005- 07/10/2006-	David Copp Brendan W. Lee		
DFA Large Cap International	DFALX	02/28/2010- 07/21/2015- 02/28/2020 02/28/2020	Jed S. Fogdall Bhanu P. Singh Joel P. Schneider Arun C. Keswani	02/28/2012-02/28/2017 02/28/2010-02/28/2019 07/21/2015-02/28/2020	Henry F. Gray Joseph H. Chi Mary T. Phillips
DFA Emerging Markets Core Equity	DFCEX	02/28/2010- 07/21/2015- 07/21/2015- 02/28/2017- 02/28/2019-	Jed S. Fogdall Allen Pu Bhanu P. Singh Mary T. Phillips William Collins-Dean	02/28/2010-02/28/2019	Joseph H. Chi
Metropolitan West Total Return Bond	MWTIX	03/31/1997- 03/31/1997- 03/31/1997- 12/31/2004-	Stephen M. Kane Laird R. Landman Tad Rivelle Bryan T. Whalen		
PIMCO Real Return	PRRIX	01/09/2019- 12/11/2019-	Stephen A. Rodosky Daniel He	01/02/2015-01/09/2019 12/31/2007-12/11/2019	Jeramie Banet Mihir P. Worah
PIMCO Income	PIMIX	03/30/2007- 03/15/2013- 07/30/2018-	Daniel J. Ivascyn Alfred T. Murata Joshua Anderson		

*Recent is defined as having occurred in the last three years.

Source: MorningStar

Portfolio Management Overview

Fund	Ticker	Current PM Team	Recent PM Departures*
TIAA-CREF Inflation-Linked Bond	TIILX	08/21/2008-08/01/2016 08/01/2019 John Michael Cerra Nicholas Travaglino Chad W. Kemper	
T.Rowe Price Floating Rate	RPIFX	05/01/2009- Paul M. Massaro	
TIAA-CREF High Yield	TIHYX	03/31/2006-10/01/2011- Kevin R. Lorenz Jean C. Lin	
TIAA-CREF Equity Index	TIEIX	12/31/2005-05/30/2014-03/01/2019- Philip James Campagna Lei Liao Darren Tran	
TIAA-CREF S&P 500 Index	TISPX	12/31/2005-05/30/2014-03/01/2019- Philip James Campagna Lei Liao Darren Tran	
TIAA-CREF International Equity Index	TCIEIX	08/01/2005-05/30/2014-03/01/2019- Philip James Campagna Lei Liao Darren Tran	
TIAA-CREF Emerging Markets Equity Index	TEQLX	08/31/2010-05/30/2014-03/01/2019- Philip James Campagna Lei Liao Darren Tran	
TIAA-CREF Bond Index	TBIIX	12/31/2009-08/24/2011- Lijun (Kevin) Chen James Tsang	

Observations:

- There were no significant changes during the quarter.

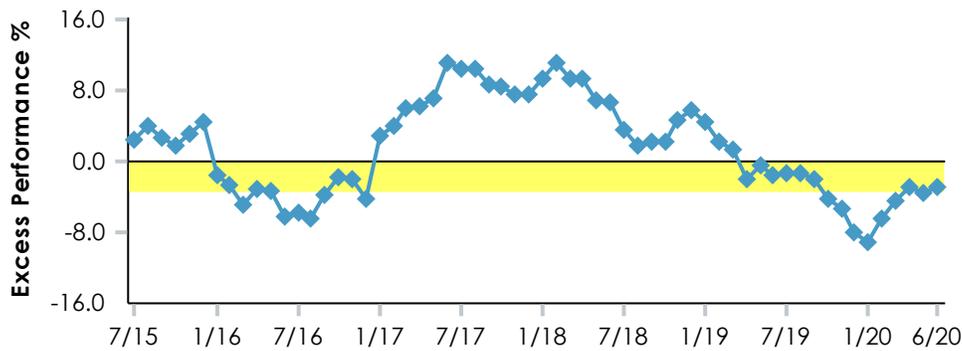
*Recent is defined as having occurred in the last three years.

Source: MorningStar

Sensitivity Analyses: Active Funds

TRowe Price Large Cap Growth I vs. Russell 1000 Growth Index

Short-term (Rolling 12 Months Excess Performance)

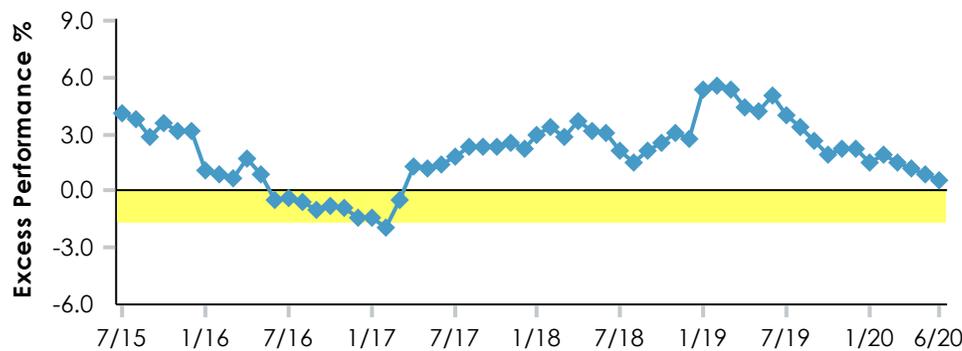


Short-Term Performance

Acceptable

Probationary Performance -3.50%

Medium-term (Rolling 36 Months Excess Performance)

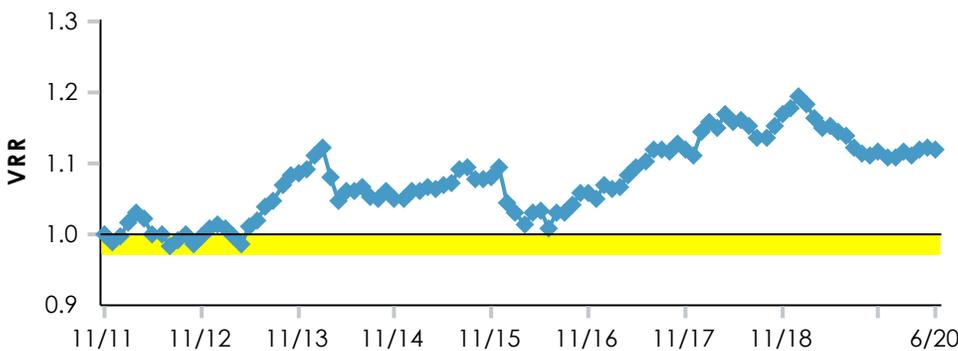


Medium-Term Performance

Positive

Probationary Performance -1.75%

Long-term (December 1, 2011 To June 30, 2020 VRR)



Long-Term Performance

Positive

Probationary Performance < 0.97

Annualized Performance Results (Net of management fees)

	Qtr	1 Year	3 Years	5 Years	Inception (12/2011)
TRowe Price Large Cap Growth I	28.6 (35)	20.5 (55)	19.6 (29)	16.9 (10)	18.2 (5)
Russell 1000 Growth Index	27.8 (46)	23.3 (26)	19.0 (37)	15.9 (24)	16.7 (25)
IM U.S. Large Cap Growth Equity (MF) Median	27.7	21.1	18.0	14.5	15.7

Monitoring Status

Acceptable

TRowe Price Large Cap Growth I | As of June 30, 2020

Description:

The investment seeks to provide long-term capital appreciation through investments in common stocks of growth companies.

In taking a growth approach to stock selection, the fund will normally invest at least 80% of its net assets (including any borrowings for investment purposes) in the common stocks of large-cap companies. The advisor defines a large-cap company as one whose market capitalization is larger than the median market capitalization of companies in the Russell 1000® Growth Index, a widely used benchmark of the largest U.S. growth stocks. The fund is non-diversified.

Portfolio Fund Information as of June 30, 2020

Ticker	TRLGX
Morningstar Category	Large Growth
Average Market Cap (\$mm)	208,286.87
Net Assets (\$mm)	17,583.60
% Assets in Top 10 Holdings	48.07
Total Number of Holdings	65
Manager Name	Taymour R. Tamaddon
Manager Tenure	4
Expense Ratio	0.56%
Closed to New Investors	No

Return Summary



Large Growth MStar MF Return Comparison

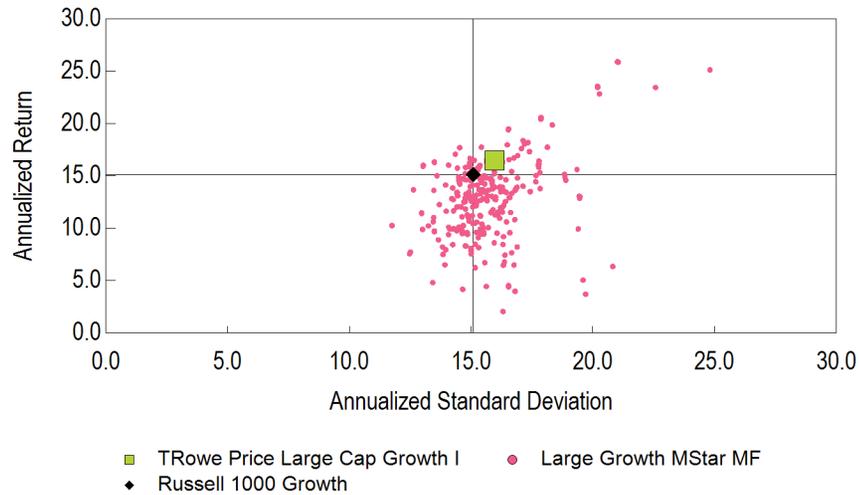


Large Growth MStar MF Return Comparison

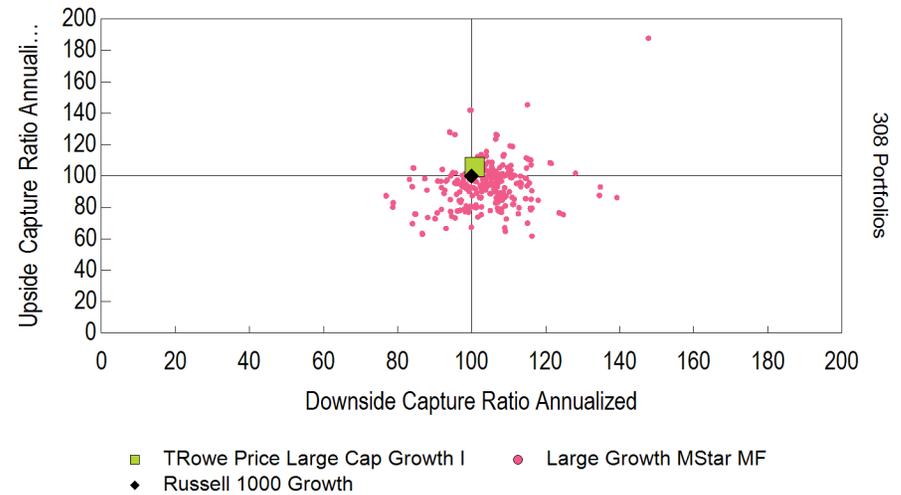


TRowe Price Large Cap Growth I | As of June 30, 2020

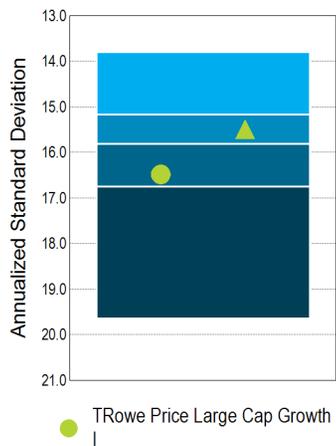
Annualized Return vs. Annualized Standard Deviation
5 Years 6 Months Ending June 30, 2020



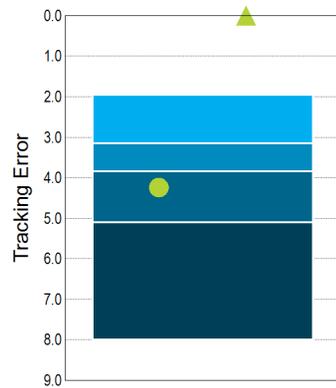
Upside Capture Ratio Annualized vs. Downside Capture Ratio Annualized
5 Years 6 Months Ending June 30, 2020



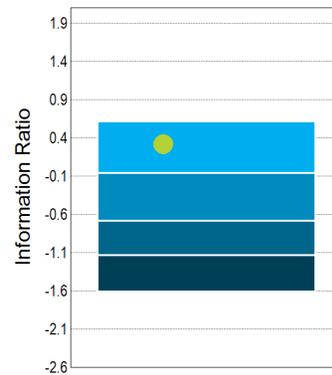
Annualized Standard Deviation



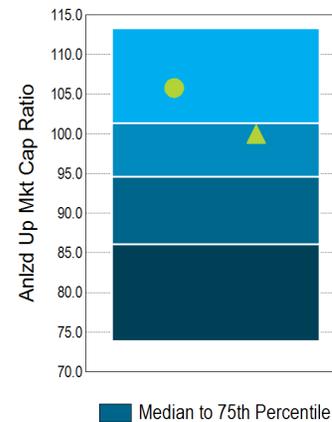
Tracking Error



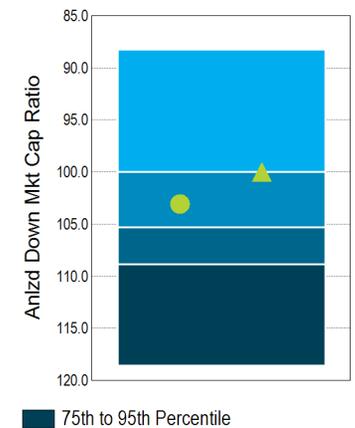
Information Ratio



Anlzd Up Mkt Cap Ratio



Anlzd Down Mkt Cap Ratio



Fund Characteristics as of June 30, 2020

Sharpe Ratio (3 Year)	1.00
Average Market Cap (\$mm)	208,286.87
Price/Earnings	33.46
Price/Book	4.54
Price/Sales	2.95
Price/Cash Flow	17.53
Dividend Yield	0.48
Number of Equity Holdings	64
R-Squared (3 Year)	0.96
Alpha (3 Year)	0.05%

Sector Allocation as of June 30, 2020

BASIC MATERIALS	0.51%
COMMUNICATION SERVICES	21.57%
CONSUMER CYCLICAL	20.21%
CONSUMER DEFENSIVE	1.58%
ENERGY	0.30%
FINANCIAL SERVICES	8.41%
HEALTHCARE	14.35%
INDUSTRIALS	4.32%
REAL ESTATE	0.79%
TECHNOLOGY	26.38%
UTILITIES	1.58%

Top Holdings as of June 30, 2020

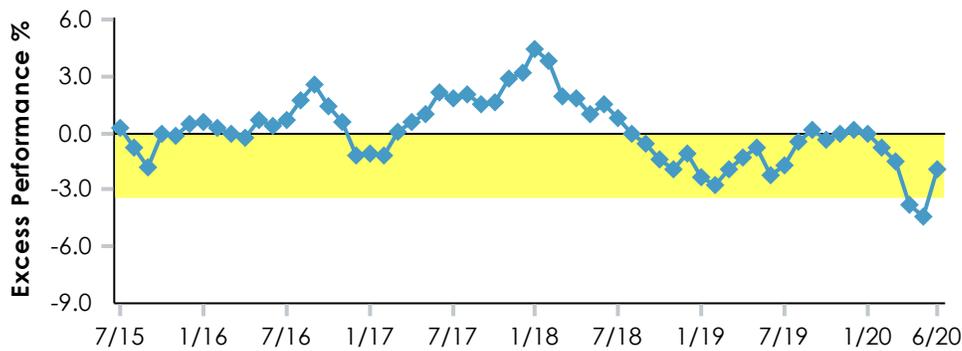
AMAZON.COM INC	10.01%
MICROSOFT CORP	8.92%
FACEBOOK INC A	5.89%
ALPHABET INC A	5.46%
VISA INC CLASS A	4.28%
APPLE INC	3.85%
GLOBAL PAYMENTS INC	2.93%
INTUIT INC	2.31%
ALPHABET INC CLASS C	2.21%
NETFLIX INC	2.20%

Top Countries as of June 30, 2020

United States	93.48%
China	4.77%
Netherlands	1.40%
Israel	0.24%
Brazil	0.11%

TRowe Price Large Cap Value I vs. Russell 1000 Value Index

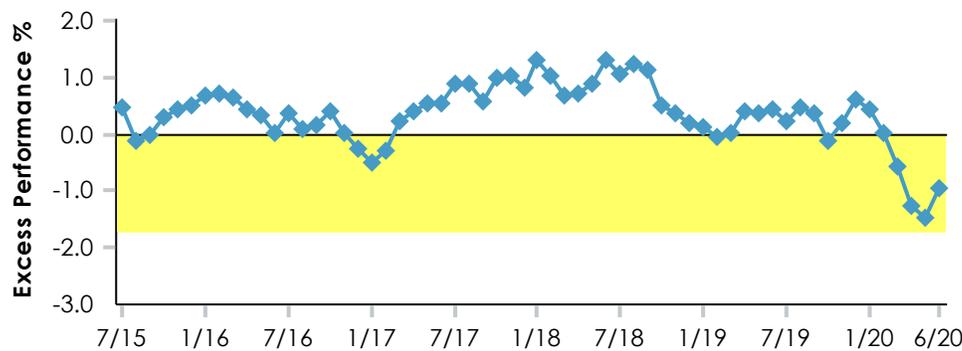
Short-term (Rolling 12 Months Excess Performance)



Short-Term Performance

Acceptable
 Probationary Performance -3.50%

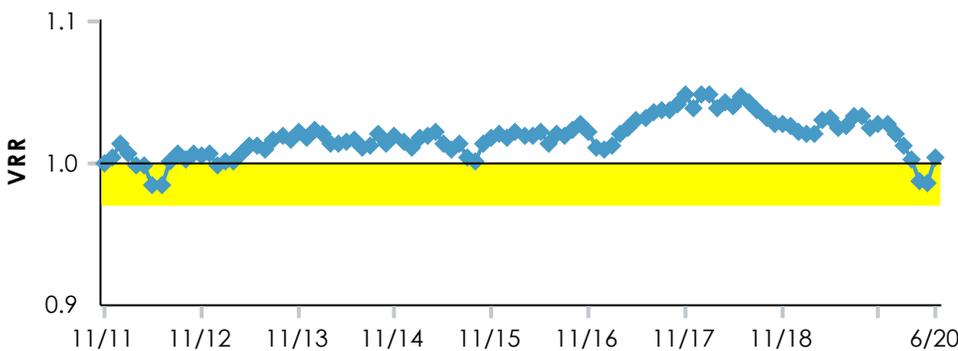
Medium-term (Rolling 36 Months Excess Performance)



Medium-Term Performance

Acceptable
 Probationary Performance -1.75%

Long-term (December 1, 2011 To June 30, 2020 VRR)



Long-Term Performance

Positive
 Probationary Performance < 0.97

Annualized Performance Results (Net of management fees)

	Qtr	1 Year	3 Years	5 Years	Inception (12/2011)
TRowe Price Large Cap Value I	14.5 (65)	-10.8 (84)	0.9 (73)	4.5 (44)	9.9 (26)
Russell 1000 Value Index	14.3 (68)	-8.8 (65)	1.8 (55)	4.6 (42)	9.9 (27)
IM U.S. Large Cap Value Equity (MF) Median	15.4	-7.7	2.1	4.3	9.3

Monitoring Status

Acceptable

Description:

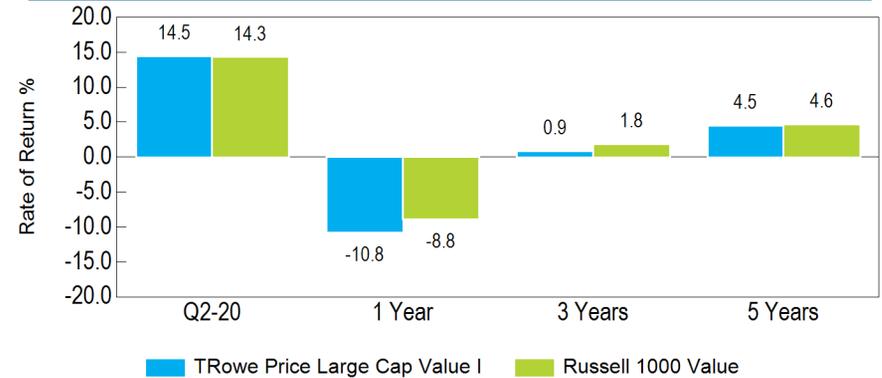
The investment seeks long-term capital appreciation; income is a secondary objective.

The fund will normally invest at least 80% of its net assets (including any borrowings for investment purposes) in securities of large-cap companies that the portfolio manager regards as undervalued. The manager defines a large-cap company as having a market capitalization that, at the time of purchase, is either (i) larger than the current median market capitalization of companies in the Russell 1000® Value Index or (ii) larger than the three year average median market capitalization of companies in the index as of December 31 of the three preceding years.

Portfolio Fund Information as of June 30, 2020

Ticker	TILCX
Morningstar Category	Large Value
Average Market Cap (\$mm)	58,617.26
Net Assets (\$mm)	2,744.94
% Assets in Top 10 Holdings	25.45
Total Number of Holdings	88
Manager Name	John D. Linehan
Manager Tenure	20
Expense Ratio	0.56%
Closed to New Investors	No

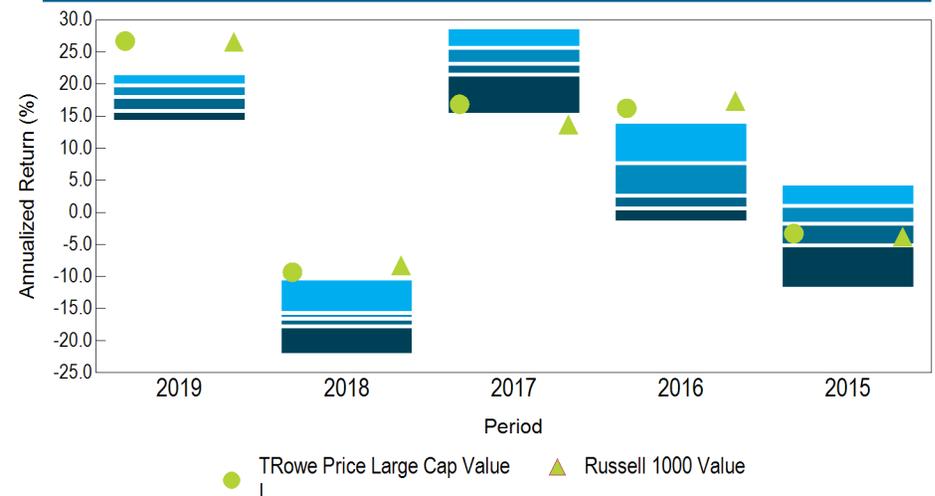
Return Summary



Foreign Large Value MStar MF Return Comparison

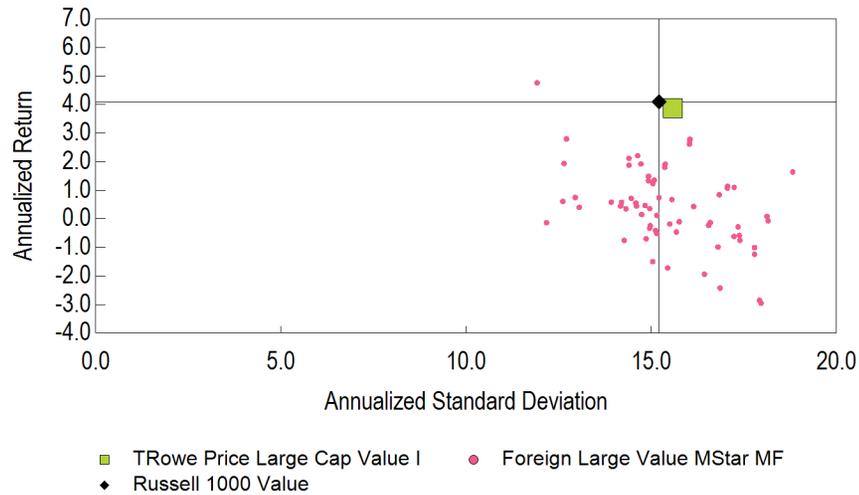


Foreign Large Value MStar MF Return Comparison

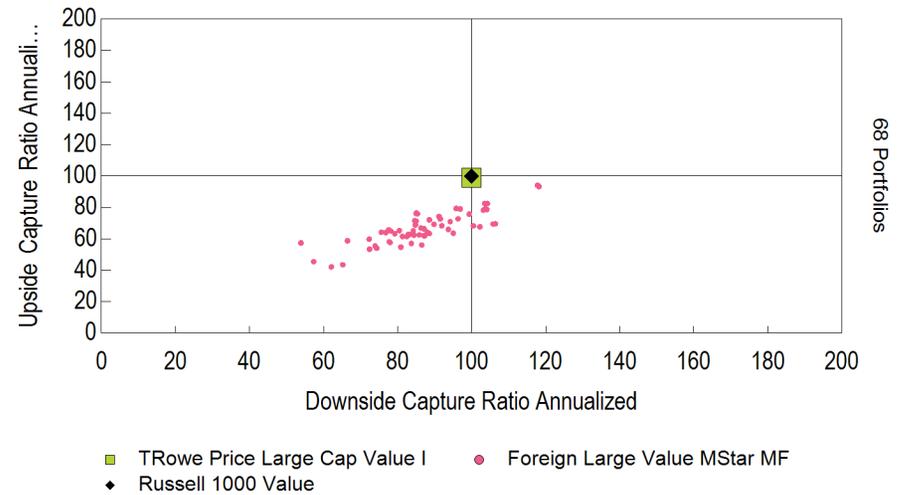


TRowe Price Large Cap Value I | As of June 30, 2020

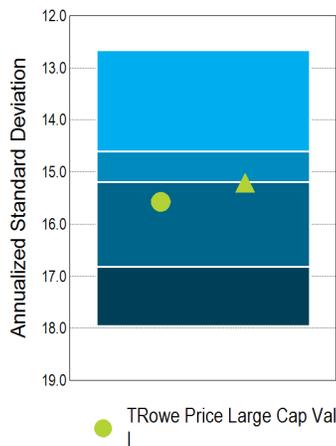
Annualized Return vs. Annualized Standard Deviation
5 Years 6 Months Ending June 30, 2020



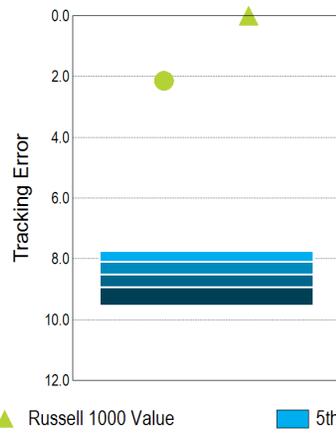
Upside Capture Ratio Annualized vs. Downside Capture Ratio Annualized
5 Years 6 Months Ending June 30, 2020



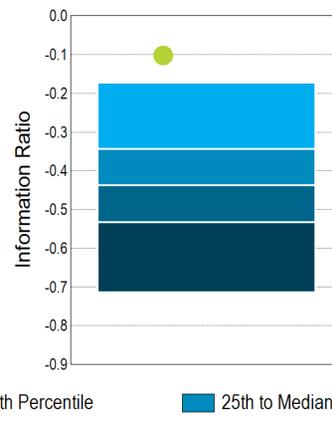
Annualized Standard Deviation



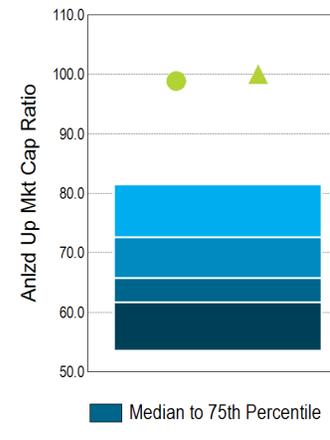
Tracking Error



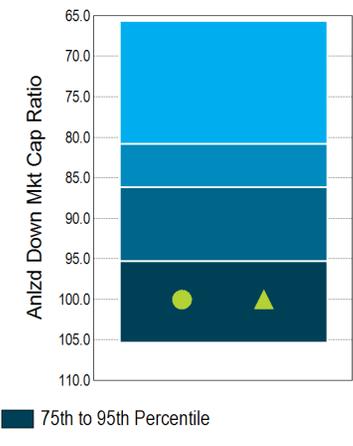
Information Ratio



Anlzd Up Mkt Cap Ratio



Anlzd Down Mkt Cap Ratio



Fund Characteristics as of June 30, 2020

Sharpe Ratio (3 Year)	-0.04
Average Market Cap (\$mm)	58,617.26
Price/Earnings	17.29
Price/Book	1.52
Price/Sales	1.22
Price/Cash Flow	6.52
Dividend Yield	3.74
Number of Equity Holdings	84
R-Squared (3 Year)	0.98
Alpha (3 Year)	-0.07%

Sector Allocation as of June 30, 2020

BASIC MATERIALS	0.83%
COMMUNICATION SERVICES	5.33%
CONSUMER CYCLICAL	4.60%
CONSUMER DEFENSIVE	9.31%
ENERGY	8.11%
FINANCIAL SERVICES	21.37%
HEALTHCARE	17.53%
INDUSTRIALS	10.37%
REAL ESTATE	2.39%
TECHNOLOGY	12.26%
UTILITIES	7.90%

Top Holdings as of June 30, 2020

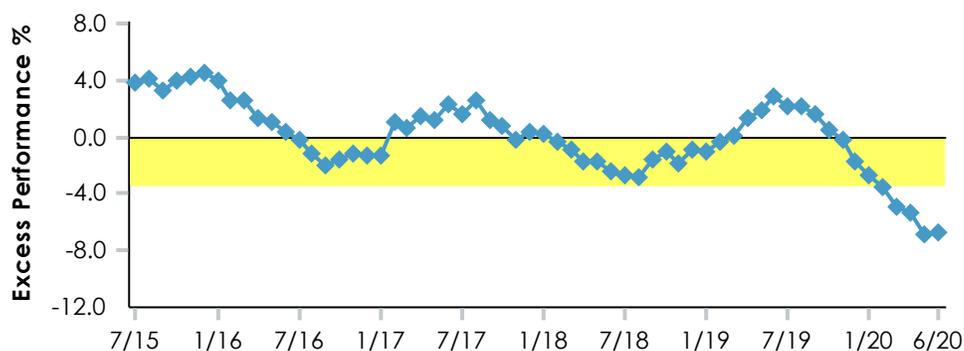
MORGAN STANLEY	3.19%
MICROSOFT CORP	2.83%
SOUTHERN CO	2.64%
QUALCOMM INC	2.54%
CHUBB LTD	2.52%
JOHNSON & JOHNSON	2.41%
WELLS FARGO & CO	2.40%
TOTAL SE ADR	2.38%
UNITED PARCEL SERVICE INC CLASS B	2.32%
GENERAL ELECTRIC CO	2.23%

Top Countries as of June 30, 2020

United States	91.50%
Canada	2.88%
Switzerland	2.57%
France	2.43%
China	0.62%

TIAA-CREF Small Cap Equity I vs. Russell 2000 Index

Short-term (Rolling 12 Months Excess Performance)

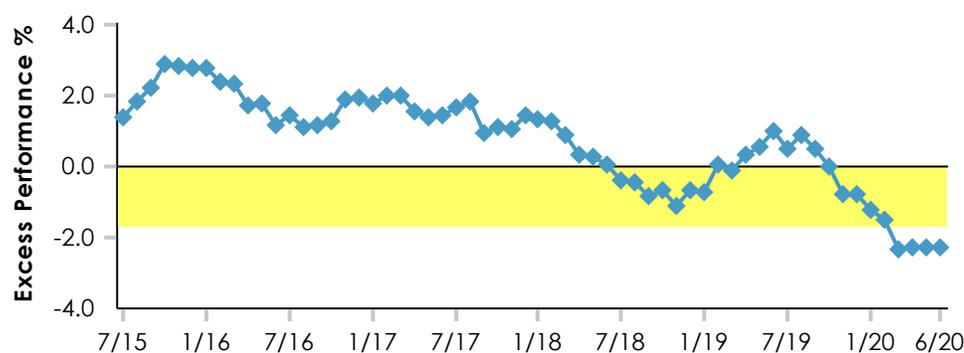


Short-Term Performance

Caution

Probationary Performance -3.50%

Medium-term (Rolling 36 Months Excess Performance)

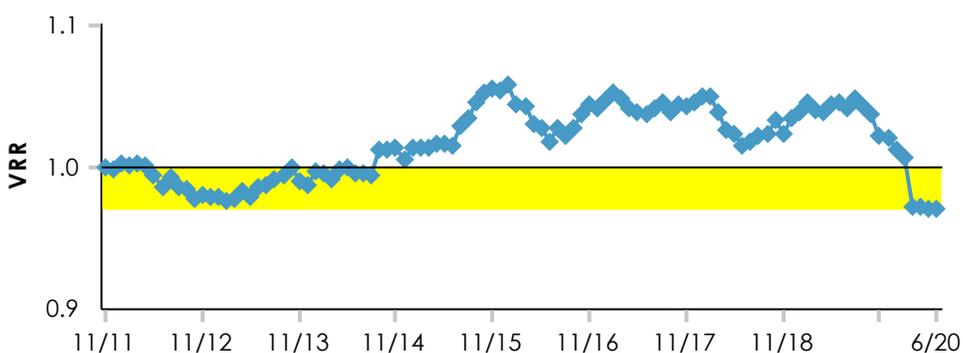


Medium-Term Performance

Caution

Probationary Performance -1.75%

Long-term (December 1, 2011 To June 30, 2020 VRR)



Long-Term Performance

Caution

Probationary Performance < 0.97

Annualized Performance Results (Net of management fees)

	Qtr	1 Year	3 Years	5 Years	Inception (12/2011)
TIAA-CREF Small Cap Equity I	25.1 (28)	-13.4 (74)	-0.3 (57)	3.4 (45)	9.3 (36)
Russell 2000 Index	25.4 (26)	-6.6 (22)	2.0 (36)	4.3 (37)	9.6 (31)
IM U.S. SMID Cap Core Equity (MF) Median	23.9	-9.3	0.8	2.7	8.4

Monitoring Status

Caution

Description:

The investment seeks a favorable long-term total return, mainly through capital appreciation, primarily from equity securities of smaller domestic companies.

Under normal circumstances, the fund invests at least 80% of its assets in small-cap equity securities. A small-cap equity security is a security within the capitalization range of the companies included in the fund's benchmark index, the Russell 2000® Index, at the time of purchase. It invests primarily in equity securities of smaller domestic companies across a wide range of sectors, growth rates and valuations.

Portfolio Fund Information as of June 30, 2020

Ticker	TISEX
Morningstar Category	Small Blend
Average Market Cap (\$mm)	1,763.75
Net Assets (\$mm)	1,173.29
% Assets in Top 10 Holdings	8.52
Total Number of Holdings	409
Manager Name	Adam Cao
Manager Tenure	14
Expense Ratio	0.42%
Closed to New Investors	No

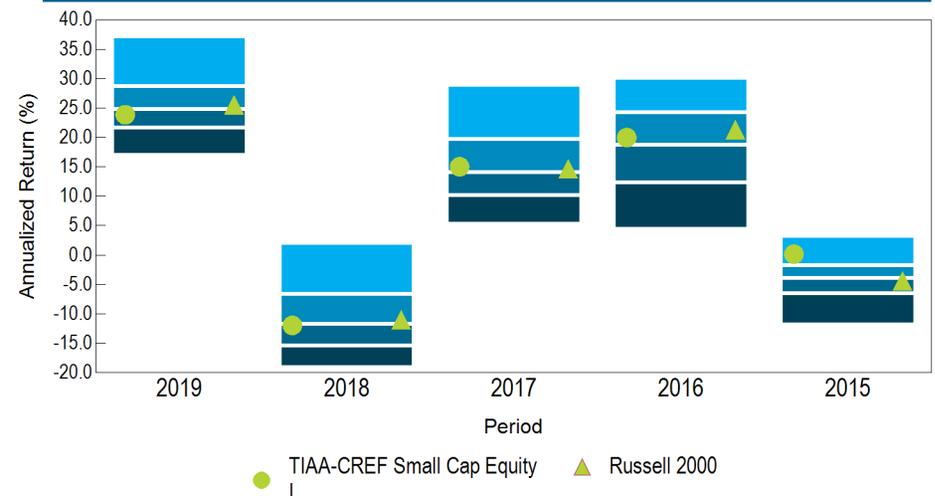
Return Summary



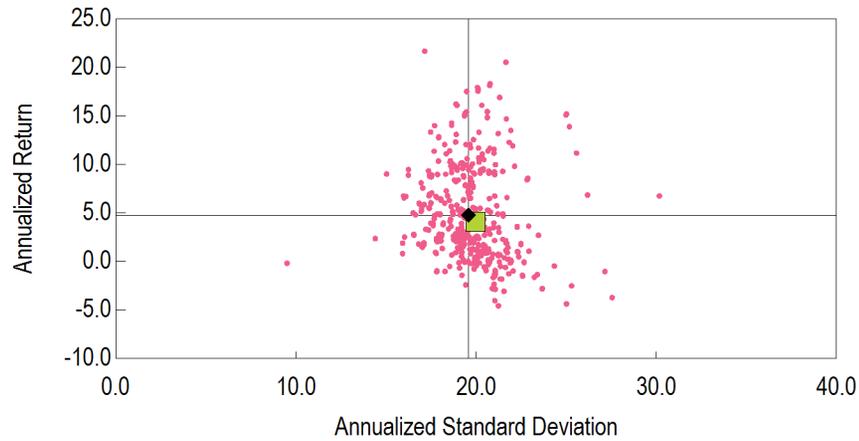
Small Cap MStar MF Return Comparison



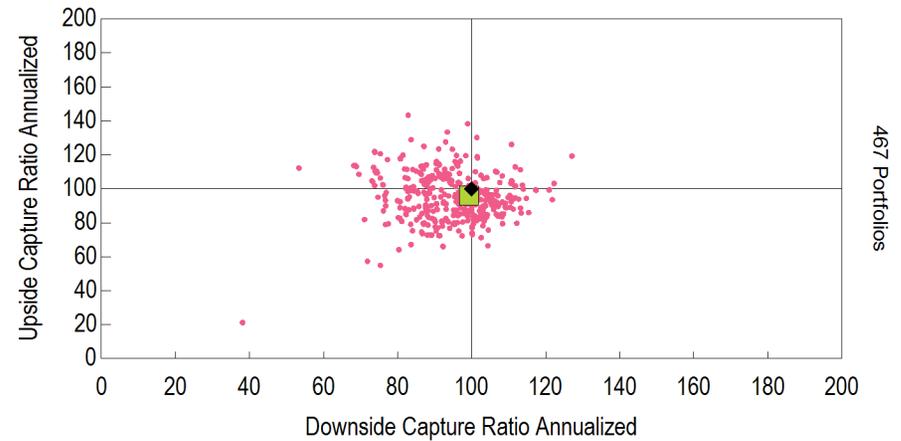
Small Cap MStar MF Return Comparison



Annualized Return vs. Annualized Standard Deviation
5 Years 6 Months Ending June 30, 2020



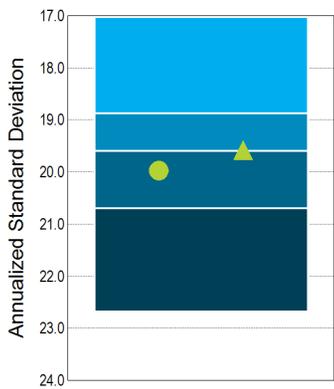
Upside Capture Ratio Annualized vs. Downside Capture Ratio Annualized
5 Years 6 Months Ending June 30, 2020



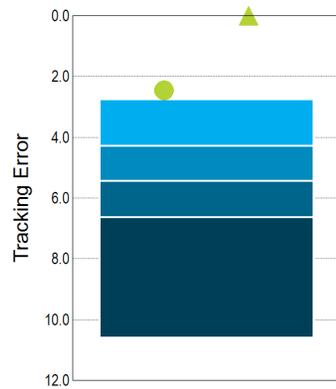
■ TIAA-CREF Small Cap Equity I ◆ Russell 2000 ● Small Cap MStar MF

■ TIAA-CREF Small Cap Equity I ◆ Russell 2000 ● Small Cap MStar MF

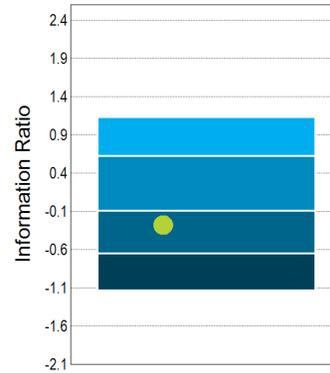
Annualized Standard Deviation



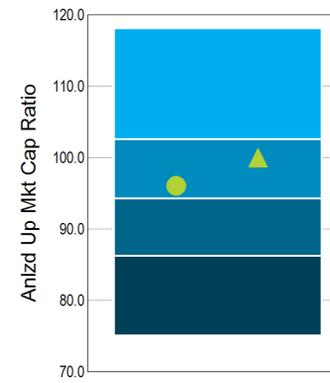
Tracking Error



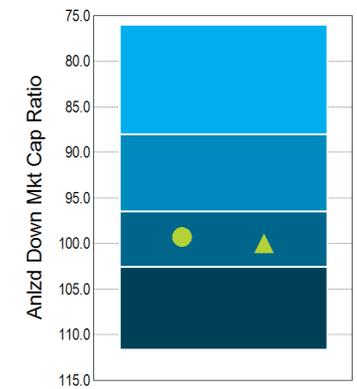
Information Ratio



Anlzd Up Mkt Cap Ratio



Anlzd Down Mkt Cap Ratio



● TIAA-CREF Small Cap Equity I ▲ Russell 2000 ■ 5th to 25th Percentile ■ 25th to Median ■ Median to 75th Percentile ■ 75th to 95th Percentile

Fund Characteristics as of June 30, 2020

Sharpe Ratio (3 Year)	-0.08
Average Market Cap (\$mm)	1,763.75
Price/Earnings	16.85
Price/Book	1.59
Price/Sales	0.80
Price/Cash Flow	4.75
Dividend Yield	1.63
Number of Equity Holdings	405
R-Squared (3 Year)	0.99
Alpha (3 Year)	-0.18%

Sector Allocation as of June 30, 2020

BASIC MATERIALS	4.69%
COMMUNICATION SERVICES	1.98%
CONSUMER CYCLICAL	8.17%
CONSUMER DEFENSIVE	5.61%
ENERGY	2.27%
FINANCIAL SERVICES	13.81%
HEALTHCARE	20.47%
INDUSTRIALS	17.49%
REAL ESTATE	7.41%
TECHNOLOGY	14.90%
UTILITIES	3.21%

Top Holdings as of June 30, 2020

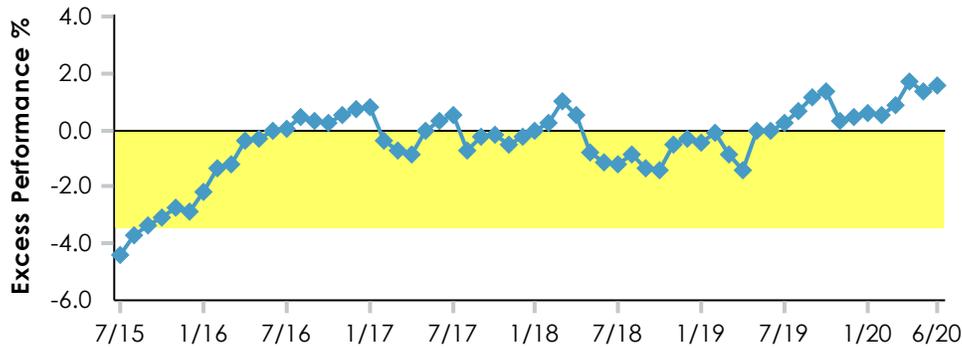
E-MINI RUSS 2000 SEP20 XCME 20200918	1.26%
EXPONENT INC	0.92%
EASTGROUP PROPERTIES INC	0.89%
BJ'S WHOLESALE CLUB HOLDINGS INC	0.88%
REXNORD CORP	0.88%
PS BUSINESS PARKS INC	0.79%
SPS COMMERCE INC	0.78%
COMFORT SYSTEMS USA INC	0.72%
HMS HOLDINGS CORP	0.70%
TRINET GROUP INC	0.70%

Top Countries as of June 30, 2020

United States	99.69%
Puerto Rico	0.31%

TIAA-CREF Social Choice Equity I vs. Russell 3000 Index

Short-term (Rolling 12 Months Excess Performance)

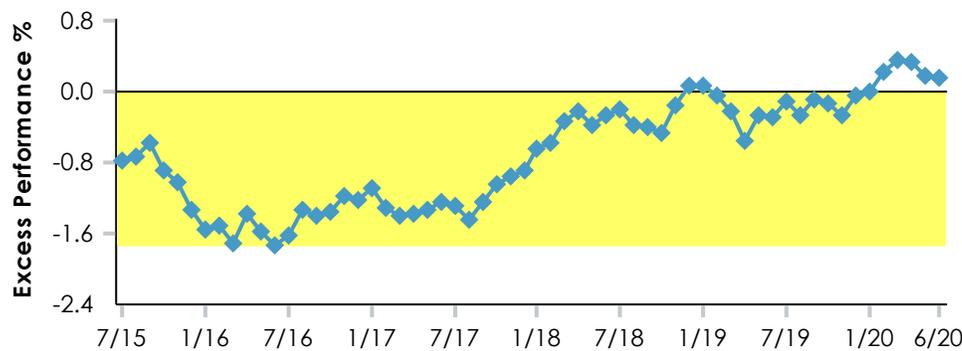


Short-Term Performance

Positive

Probationary Performance -5.00%

Medium-term (Rolling 36 Months Excess Performance)

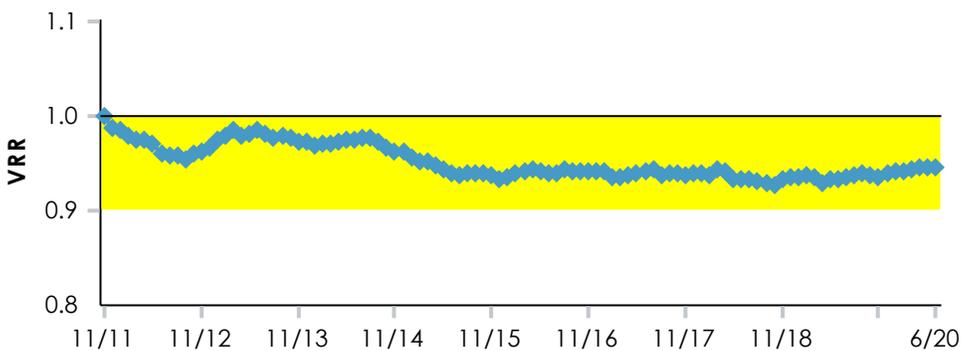


Medium-Term Performance

Positive

Probationary Performance -2.50%

Long-term (December 1, 2011 To June 30, 2020 VRR)



Long-Term Performance

Acceptable

Probationary Performance < 0.90

Annualized Performance Results (Net of management fees)

	Qtr	1 Year	3 Years	5 Years	Inception (12/2011)
TIAA-CREF Social Choice Equity I	22.3 (17)	8.1 (27)	10.2 (33)	10.2 (25)	12.5 (43)
Russell 3000 Index	22.0 (19)	6.5 (42)	10.0 (36)	10.0 (27)	13.2 (25)
IM U.S. Large Cap Core Equity (MF) Median	19.4	5.7	9.0	9.0	12.2

Monitoring Status

Acceptable

TIAA-CREF Social Choice Equity I | As of June 30, 2020

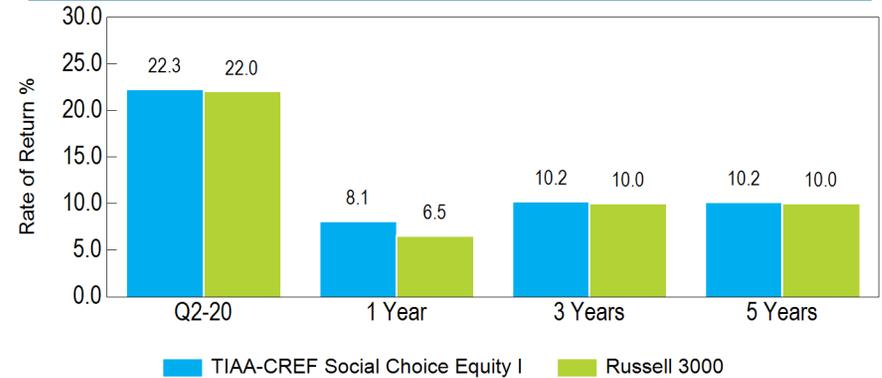
Description:

The investment seeks a favorable long-term total return that reflects the investment performance of the overall U.S. stock market while giving special consideration to certain ESG criteria. Under normal circumstances, the fund invests at least 80% of its assets in equity securities. The Advisor attempts to achieve the return of the U.S. stock market as represented by its benchmark, the Russell 3000® Index, while investing in companies whose activities are consistent with the fund's ESG criteria.

Portfolio Fund Information as of June 30, 2020

Ticker	TISCX
Morningstar Category	Large Blend
Average Market Cap (\$mm)	68,229.15
Net Assets (\$mm)	3,546.54
% Assets in Top 10 Holdings	21.81
Total Number of Holdings	633
Manager Name	Philip James(Jim) Campagna
Manager Tenure	15
Expense Ratio	0.17%
Closed to New Investors	No

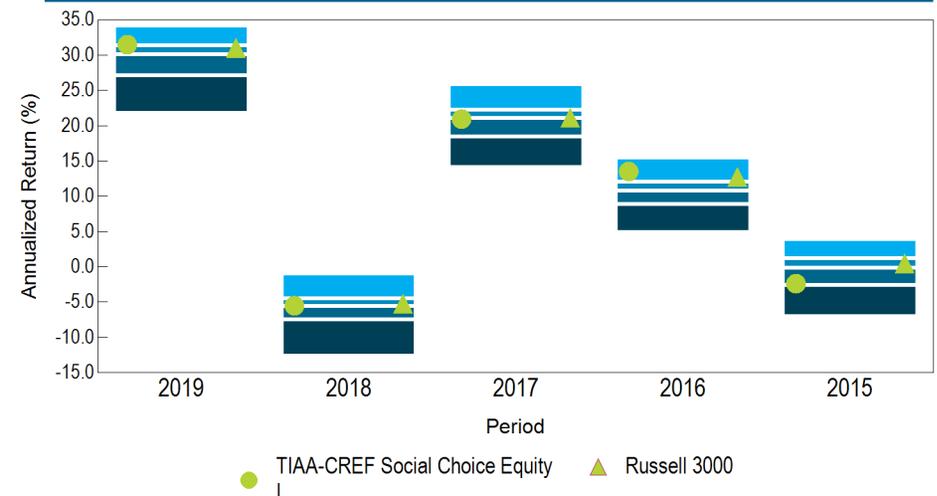
Return Summary



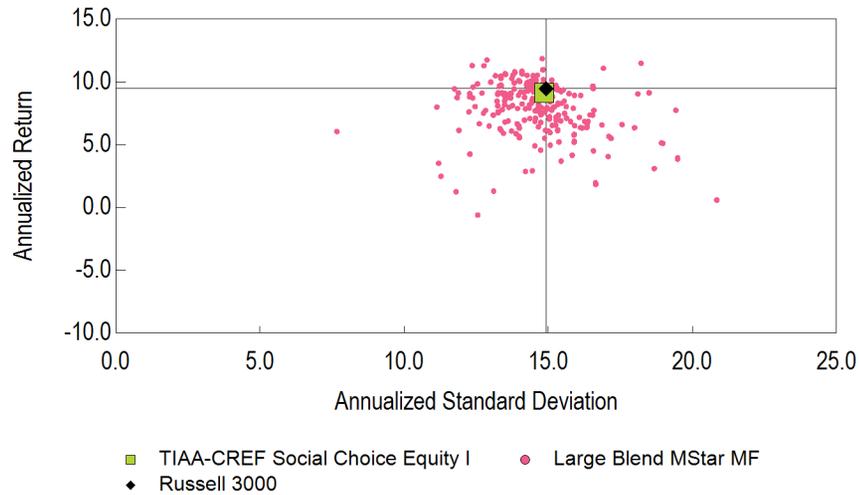
Large Blend MStar MF Return Comparison



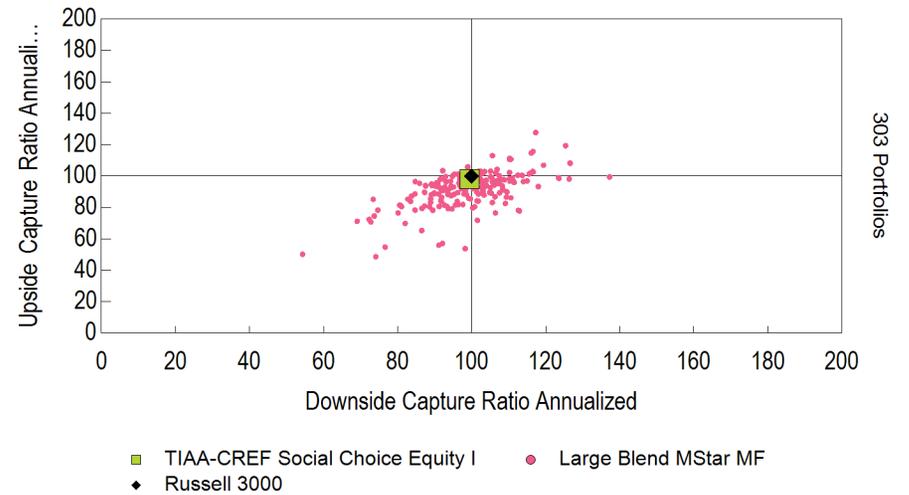
Large Blend MStar MF Return Comparison



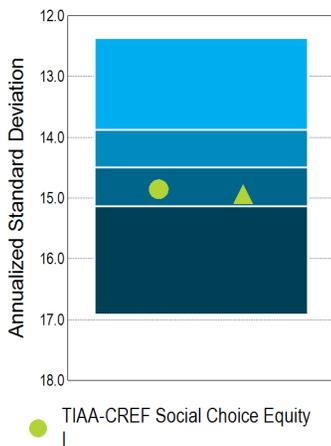
Annualized Return vs. Annualized Standard Deviation
5 Years 6 Months Ending June 30, 2020



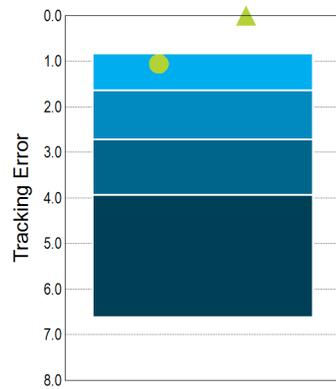
Upside Capture Ratio Annualized vs. Downside Capture Ratio Annualized
5 Years 6 Months Ending June 30, 2020



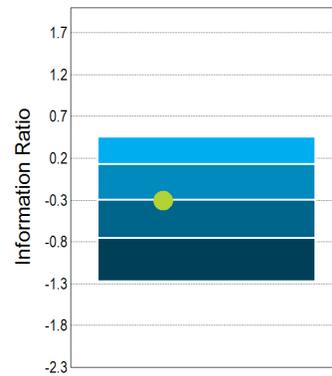
Annualized Standard Deviation



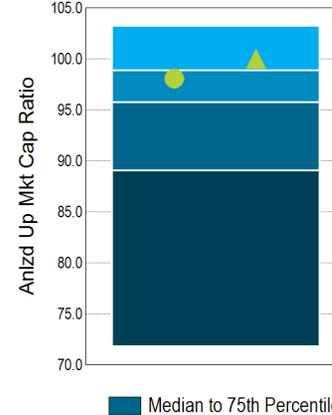
Tracking Error



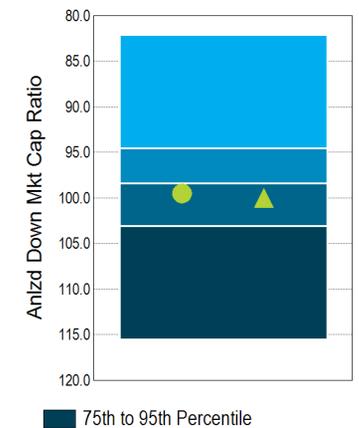
Information Ratio



Anlzd Up Mkt Cap Ratio



Anlzd Down Mkt Cap Ratio



Fund Characteristics as of June 30, 2020

Sharpe Ratio (3 Year)	0.49
Average Market Cap (\$mm)	68,229.15
Price/Earnings	22.30
Price/Book	2.89
Price/Sales	1.92
Price/Cash Flow	9.37
Dividend Yield	2.05
Number of Equity Holdings	628
R-Squared (3 Year)	1.00
Alpha (3 Year)	0.02%

Sector Allocation as of June 30, 2020

BASIC MATERIALS	2.69%
COMMUNICATION SERVICES	8.77%
CONSUMER CYCLICAL	10.21%
CONSUMER DEFENSIVE	7.00%
ENERGY	2.82%
FINANCIAL SERVICES	11.29%
HEALTHCARE	15.46%
INDUSTRIALS	8.80%
REAL ESTATE	3.65%
TECHNOLOGY	26.20%
UTILITIES	3.09%

Top Holdings as of June 30, 2020

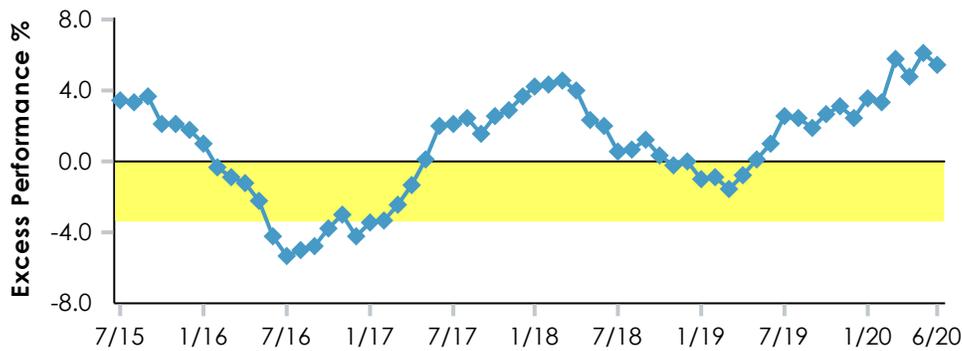
MICROSOFT CORP	5.43%
APPLE INC	5.31%
ALPHABET INC A	1.63%
ALPHABET INC CLASS C	1.60%
PROCTER & GAMBLE CO	1.43%
UNITEDHEALTH GROUP INC	1.36%
INTEL CORP	1.31%
THE HOME DEPOT INC	1.29%
NVIDIA CORP	1.22%
VERIZON COMMUNICATIONS INC	1.22%

Top Countries as of June 30, 2020

United States	98.54%
United Kingdom	0.90%
Switzerland	0.53%
Canada	0.02%
Ireland	0.01%

TIAA-CREF Real Estate Securities I vs. FTSE NAREIT All Equity REITs

Short-term (Rolling 12 Months Excess Performance)

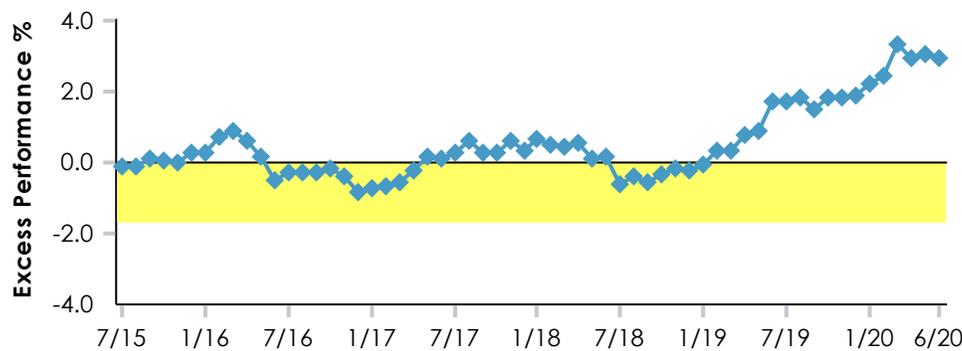


Short-Term Performance

Positive

Probationary Performance -3.50%

Medium-term (Rolling 36 Months Excess Performance)

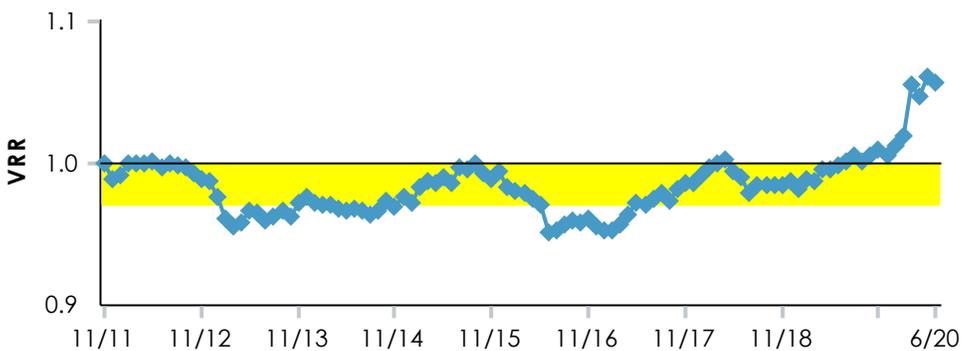


Medium-Term Performance

Positive

Probationary Performance -1.75%

Long-term (December 1, 2011 To June 30, 2020 VRR)



Long-Term Performance

Positive - Long-term Criteria for placing Fund on Watch took effect as of 2Q 2017

Probationary Performance < 0.97

Annualized Performance Results (Net of management fees)

	Qtr	1 Year	3 Years	5 Years	Inception (12/2011)
TIAA-CREF Real Estate Securities I	13.4 (29)	-1.0 (10)	6.5 (5)	8.0 (3)	10.0 (2)
FTSE NAREIT All Equity REITs	13.2 (30)	-6.5 (29)	3.5 (25)	6.6 (13)	9.3 (9)
IM Real Estate Sector (MF) Median	11.9	-8.1	1.9	4.6	7.5

Monitoring Status

Positive

TIAA-CREF Real Estate Securities I | As of June 30, 2020

Description:

The investment seeks to obtain a favorable long-term total return through both capital appreciation and current income, by investing primarily in equity securities of companies principally engaged in or related to the real estate industry.

The fund invests at least 80% of its assets in the securities of companies that are principally engaged in or related to the real estate industry, including those that own significant real estate assets. It may invest up to 15% of its assets in real estate securities of foreign issuers and up to 20% of its assets in equity and debt securities of issuers that are not engaged in or related to the real estate industry.

Portfolio Fund Information as of June 30, 2020

Ticker	TIREX
Morningstar Category	Real Estate
Average Market Cap (\$mm)	20,980.49
Net Assets (\$mm)	1,706.86
% Assets in Top 10 Holdings	48.36
Total Number of Holdings	76
Manager Name	David Copp
Manager Tenure	15
Expense Ratio	0.51%
Closed to New Investors	No

Return Summary



Real Estate MStar MF Return Comparison

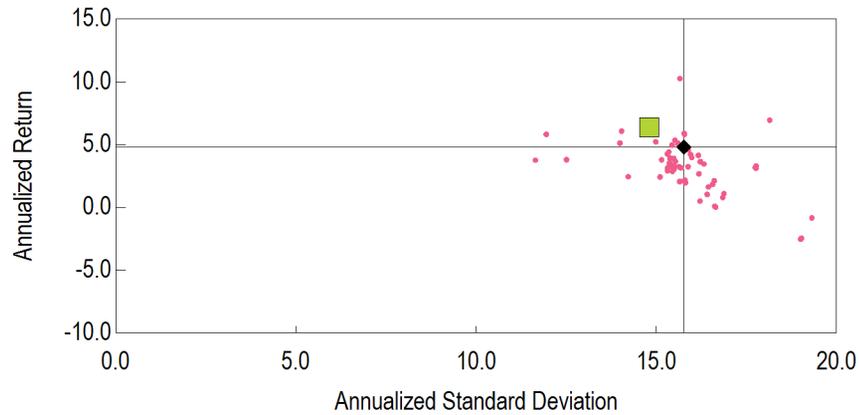


Real Estate MStar MF Return Comparison



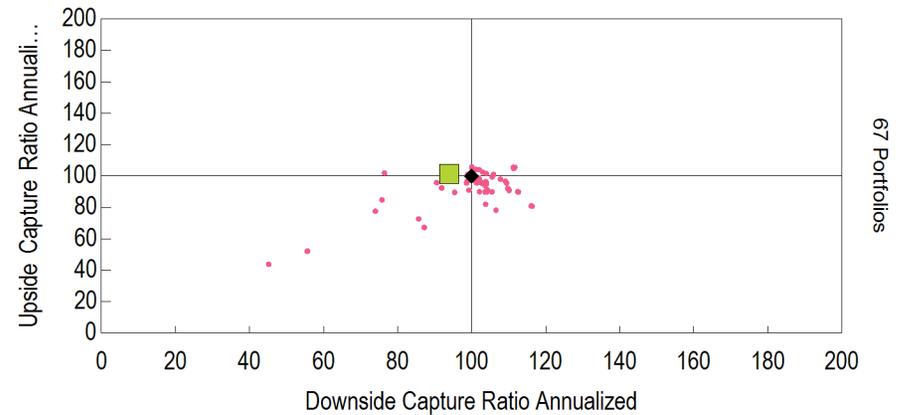
TIAA-CREF Real Estate Securities I | As of June 30, 2020

Annualized Return vs. Annualized Standard Deviation
5 Years 6 Months Ending June 30, 2020



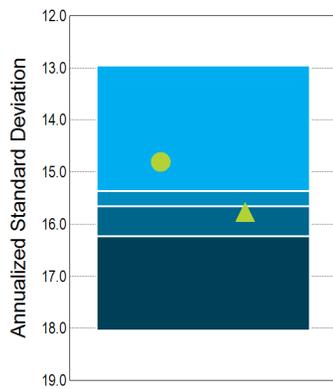
- TIAA-CREF Real Estate Securities I
- Real Estate MStar MF
- FTSE NAREIT All Equity REIT

Upside Capture Ratio Annualized vs. Downside Capture Ratio Annualized
5 Years 6 Months Ending June 30, 2020



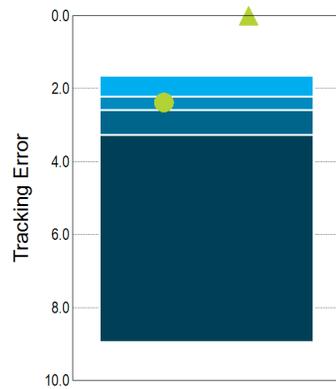
- TIAA-CREF Real Estate Securities I
- Real Estate MStar MF
- FTSE NAREIT All Equity REIT

Annualized Standard Deviation



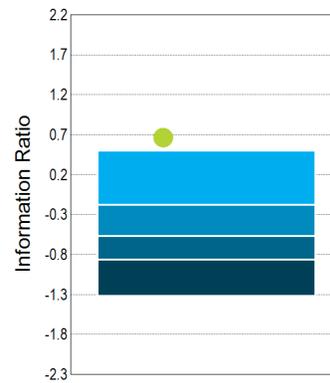
- TIAA-CREF Real Estate Securities

Tracking Error



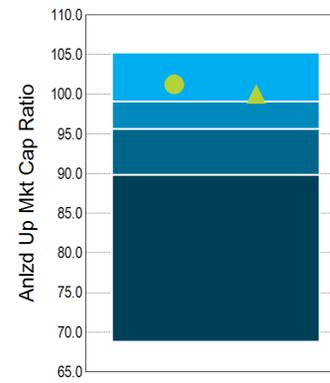
- FTSE NAREIT All Equity REIT

Information Ratio



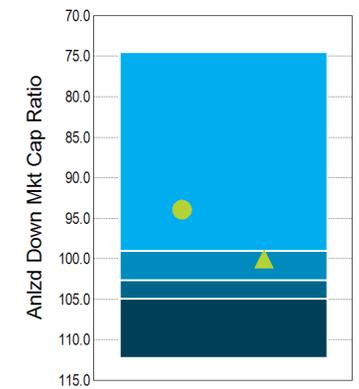
- 5th to 25th Percentile

Anlzd Up Mkt Cap Ratio



- 25th to Median

Anlzd Down Mkt Cap Ratio



- Median to 75th Percentile

Fund Characteristics as of June 30, 2020

Sharpe Ratio (3 Year)	0.30
Average Market Cap (\$mm)	20,980.49
Price/Earnings	49.32
Price/Book	2.51
Price/Sales	6.92
Price/Cash Flow	16.91
Dividend Yield	3.76
Number of Equity Holdings	68
R-Squared (3 Year)	0.99
Alpha (3 Year)	0.26%

Sector Allocation as of June 30, 2020

BASIC MATERIALS	0.00%
COMMUNICATION SERVICES	0.00%
CONSUMER CYCLICAL	1.45%
CONSUMER DEFENSIVE	0.00%
ENERGY	0.00%
FINANCIAL SERVICES	0.75%
HEALTHCARE	0.00%
INDUSTRIALS	0.00%
REAL ESTATE	95.34%
TECHNOLOGY	2.47%
UTILITIES	0.00%

Top Holdings as of June 30, 2020

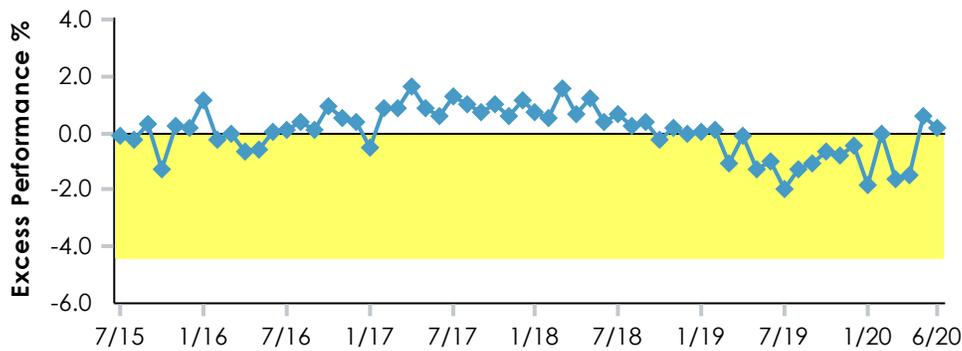
AMERICAN TOWER CORP	10.29%
PROLOGIS INC	7.24%
EQUINIX INC	6.37%
CROWN CASTLE INTERNATIONAL CORP	4.86%
SUN COMMUNITIES INC	3.86%
EQUITY LIFESTYLE PROPERTIES INC	3.60%
REXFORD INDUSTRIAL REALTY INC	3.21%
SBA COMMUNICATIONS CORP	3.14%
INVITATION HOMES INC	3.09%
ALEXANDRIA REAL ESTATE EQUITIES INC	2.68%

Top Countries as of June 30, 2020

United States	97.54%
China	1.38%
Australia	1.09%

DFA Large Cap International I vs. MSCI World ex-U.S. (net)

Short-term (Rolling 12 Months Excess Performance)

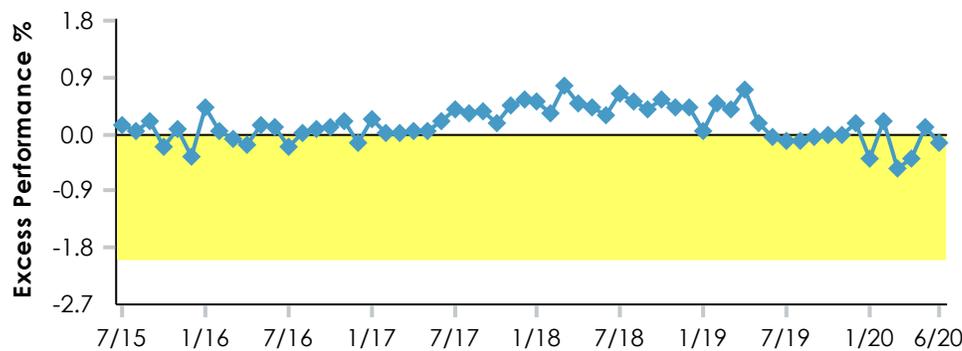


Short-Term Performance

Positive

Probationary Performance -4.50%

Medium-term (Rolling 36 Months Excess Performance)

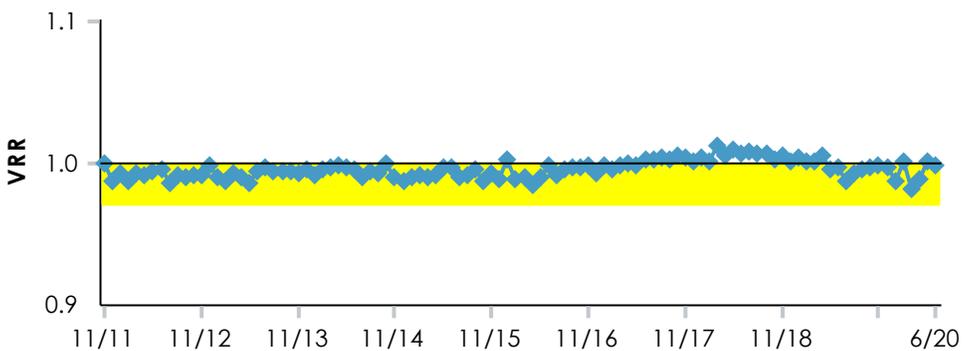


Medium-Term Performance

Positive

Probationary Performance -2.00%

Long-term (December 1, 2011 To June 30, 2020 VRR)



Long-Term Performance

Positive

Probationary Performance < 0.97

Annualized Performance Results (Net of management fees)

	Qtr	1 Year	3 Years	5 Years	Inception (12/2011)
DFA Large Cap International I	17.3 (33)	-5.2 (53)	0.7 (38)	2.0 (34)	5.1 (45)
MSCI World ex-U.S. (net)	15.3 (68)	-5.4 (55)	0.8 (33)	2.0 (36)	5.1 (43)
IM International Multi-Cap Core Equity (MF) Median	16.2	-5.1	0.1	1.5	5.0

Monitoring Status

Positive

Description:

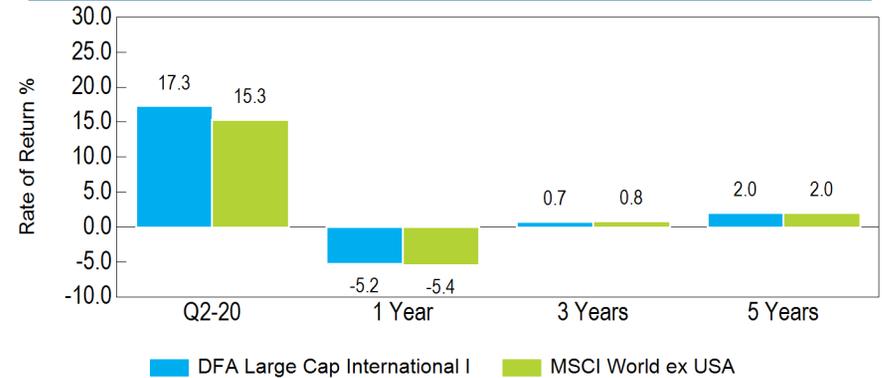
The investment seeks long-term capital appreciation.

The Portfolio will invest at least 80% of its net assets in securities of large cap companies in the particular markets in which the Portfolio invests. The Advisor determines the minimum market capitalization of a large company with respect to each country or region in which the Portfolio invests. It also may purchase or sell futures contracts and options on futures contracts for foreign or U.S. equity securities and indices, to adjust market exposure based on actual or expected cash inflows to or outflows from the Portfolio.

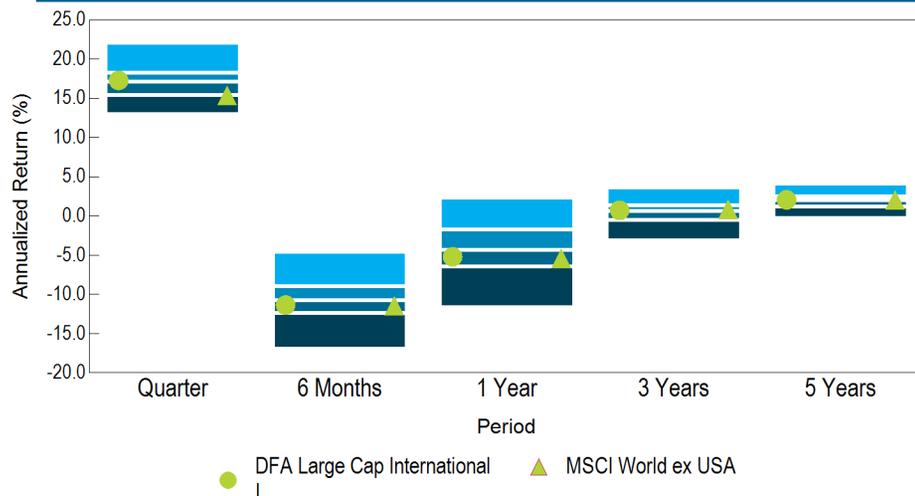
Portfolio Fund Information as of June 30, 2020

Ticker	DFALX
Morningstar Category	Foreign Large Blend
Average Market Cap (\$mm)	26,160.11
Net Assets (\$mm)	5,021.90
% Assets in Top 10 Holdings	9.48
Total Number of Holdings	1,372
Manager Name	Jed S. Fogdall
Manager Tenure	10
Expense Ratio	0.22%
Closed to New Investors	No

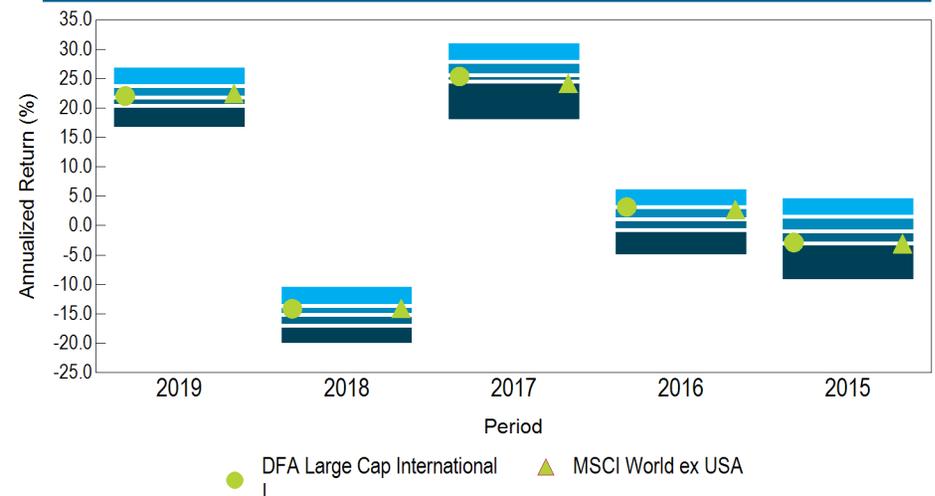
Return Summary



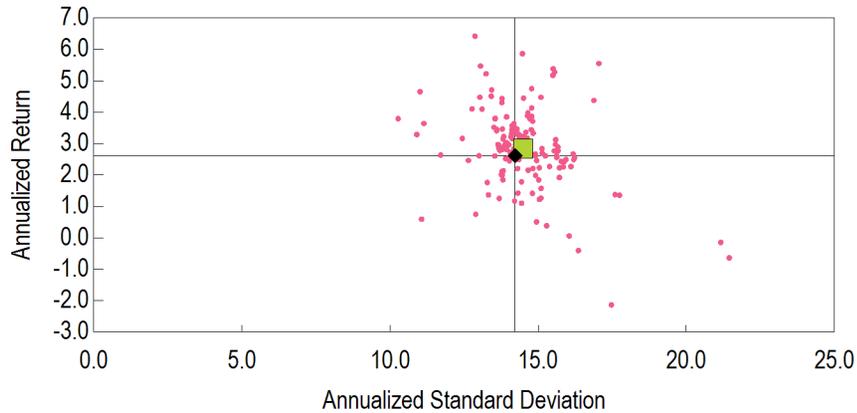
Foreign Large Blend MStar MF Return Comparison



Foreign Large Blend MStar MF Return Comparison

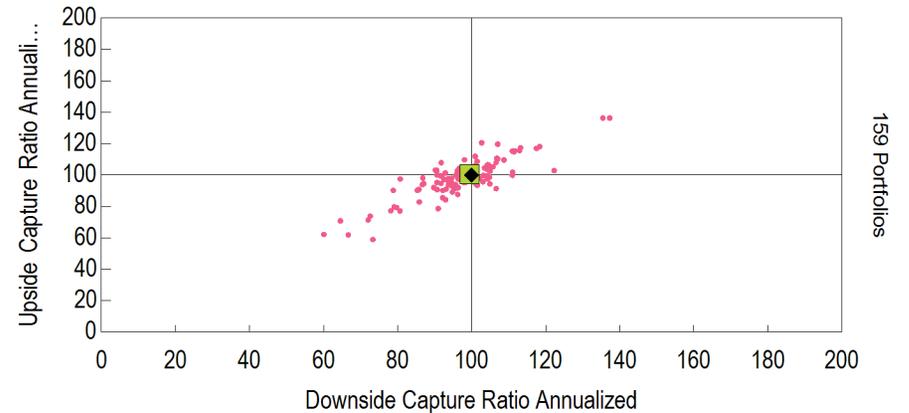


Annualized Return vs. Annualized Standard Deviation
5 Years 6 Months Ending June 30, 2020



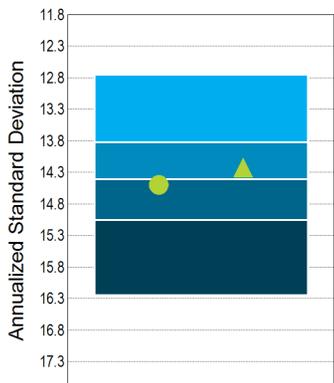
- DFA Large Cap International I
- Foreign Large Blend MStar MF
- ◆ MSCI World ex USA

Upside Capture Ratio Annualized vs. Downside Capture Ratio Annualized
5 Years 6 Months Ending June 30, 2020



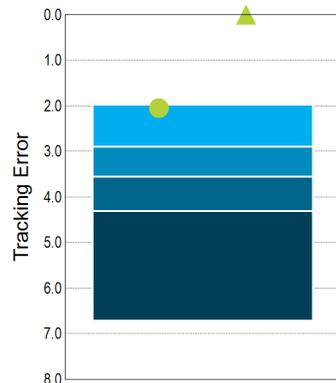
- DFA Large Cap International I
- Foreign Large Blend MStar MF
- ◆ MSCI World ex USA

Annualized Standard Deviation



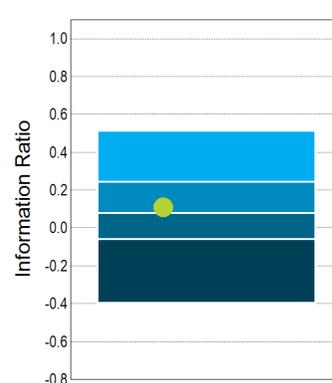
- DFA Large Cap International I
- ▲ MSCI World ex USA

Tracking Error



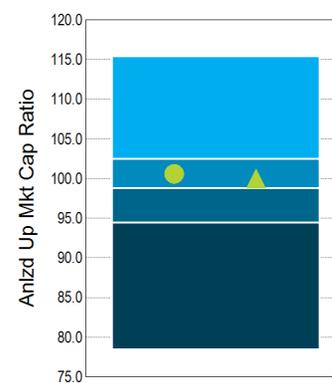
- ▲ MSCI World ex USA

Information Ratio



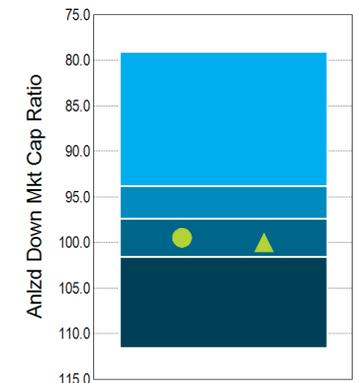
- 5th to 25th Percentile
- 25th to Median

Anlzd Up Mkt Cap Ratio



- Median to 75th Percentile
- 75th to 95th Percentile

Anlzd Down Mkt Cap Ratio



Fund Characteristics as of June 30, 2020

Sharpe Ratio (3 Year)	-0.06
Average Market Cap (\$mm)	26,160.11
Price/Earnings	18.12
Price/Book	1.35
Price/Sales	0.94
Price/Cash Flow	5.64
Dividend Yield	3.85
Number of Equity Holdings	1,351
R-Squared (3 Year)	0.99
Alpha (3 Year)	-0.01%

Sector Allocation as of June 30, 2020

BASIC MATERIALS	9.61%
COMMUNICATION SERVICES	7.25%
CONSUMER CYCLICAL	11.15%
CONSUMER DEFENSIVE	10.65%
ENERGY	4.86%
FINANCIAL SERVICES	15.29%
HEALTHCARE	12.50%
INDUSTRIALS	15.25%
REAL ESTATE	1.90%
TECHNOLOGY	8.04%
UTILITIES	3.51%

Top Holdings as of June 30, 2020

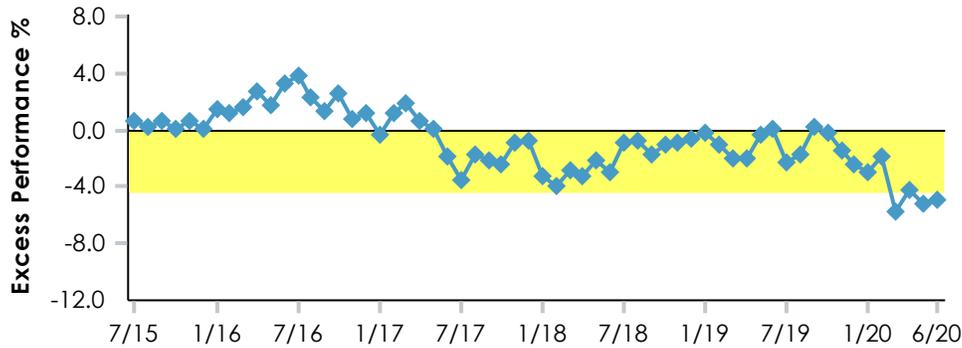
NESTLE SA	2.01%
ROCHE HOLDING AG DIVIDEND RIGHT CERT.	1.56%
TOYOTA MOTOR CORP	0.91%
LVMH MOET HENNESSY LOUIS VUITTON SE	0.81%
NOVARTIS AG	0.78%
ROYAL BANK OF CANADA	0.74%
NOVO NORDISK A/S B	0.70%
SOFTBANK GROUP CORP	0.69%
SAP SE	0.67%
ASTRAZENECA PLC ADR	0.60%

Top Countries as of June 30, 2020

Japan	24.59%
United Kingdom	13.06%
France	9.13%
Canada	8.97%
Switzerland	8.68%
Germany	7.73%
Australia	5.99%
Netherlands	4.16%
Sweden	2.85%
Hong Kong	2.53%

DFA Emerging Markets Core Equity I vs. MSCI Emerging Markets (Net) Index

Short-term (Rolling 12 Months Excess Performance)

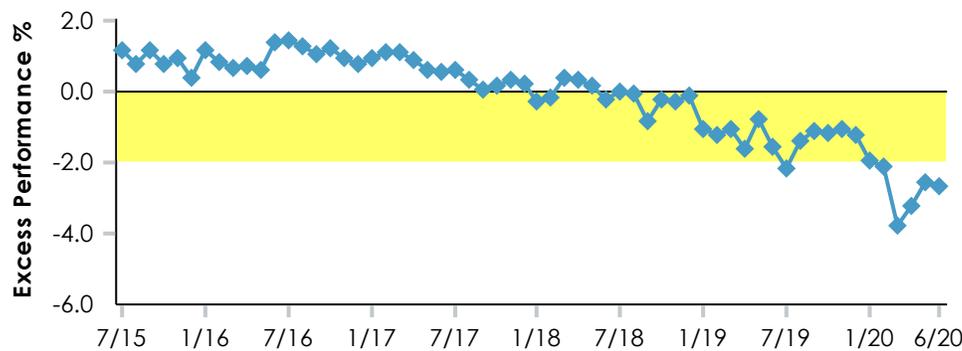


Short-Term Performance

Acceptable

Probationary Performance -4.50%

Medium-term (Rolling 36 Months Excess Performance)

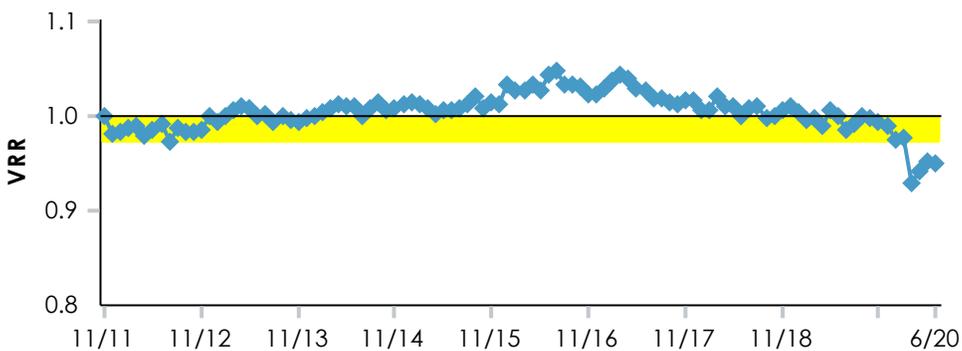


Medium-Term Performance

Caution

Probationary Performance -2.00%

Long-term (December 1, 2011 To June 30, 2020 VRR)



Long-Term Performance

Caution

Probationary Performance < 0.97

Annualized Performance Results (Net of management fees)

	Qtr	1 Year	3 Years	5 Years	Inception (12/2011)
DFA Emerging Markets Core Equity I	20.8 (48)	-8.3 (76)	-0.8 (76)	1.7 (67)	2.7 (58)
MSCI Emerging Markets (Net) Index	18.1 (75)	-3.4 (53)	1.9 (44)	2.9 (46)	3.3 (43)
IM Emerging Markets Equity (MF) Median	20.3	-3.0	1.2	2.6	3.0

Monitoring Status

Caution

DFA Emerging Markets Core Equity I | As of June 30, 2020

Description:

The investment seeks long-term capital appreciation.

The Portfolio purchases a broad and diverse group of securities associated with emerging markets, which may include frontier markets (emerging market countries in an earlier stage of development), authorized for investment by Dimensional Fund Advisors LP's (the "Advisor") Investment Committee ("Approved Markets"), with a greater emphasis on small capitalization, value, and/or high profitability companies.

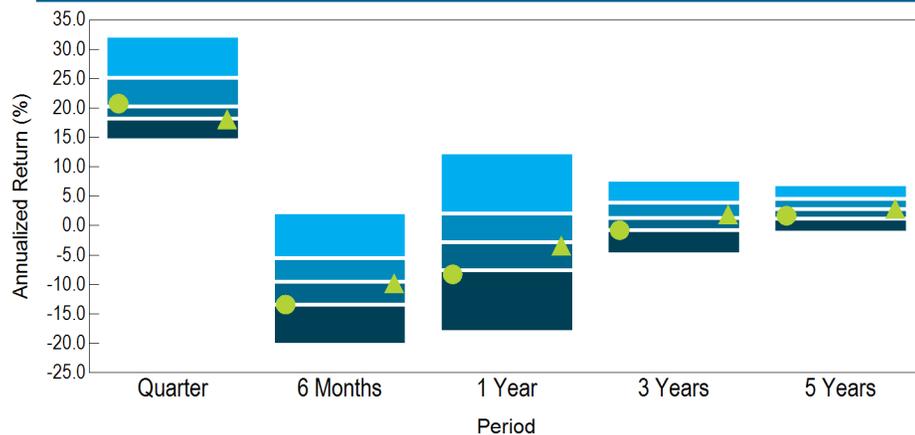
Portfolio Fund Information as of June 30, 2020

Ticker	DFCEX
Morningstar Category	Diversified Emerging Mkts
Average Market Cap (\$mm)	12,328.65
Net Assets (\$mm)	23,522.90
% Assets in Top 10 Holdings	19.67
Total Number of Holdings	5,410
Manager Name	Jed S. Fogdall
Manager Tenure	10
Expense Ratio	0.48%
Closed to New Investors	No

Return Summary

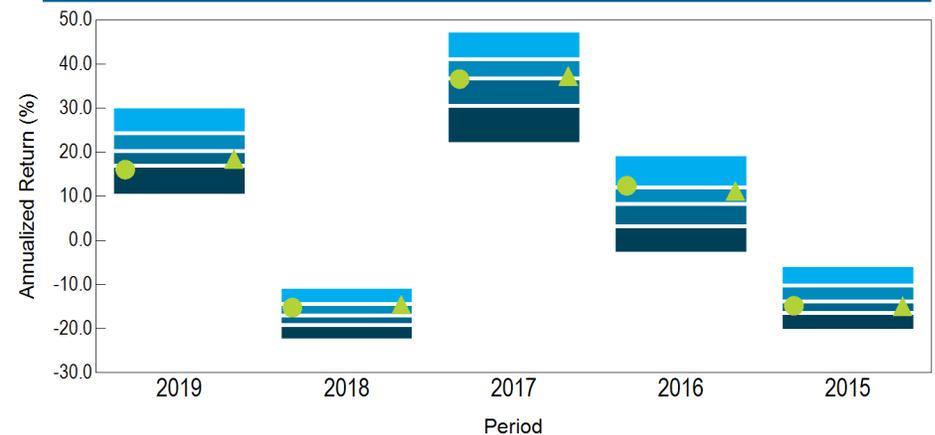


Diversified Emerging Mkts MStar MF Return Comparison



● DFA Emerging Markets Core Equity I ▲ MSCI Emerging Markets

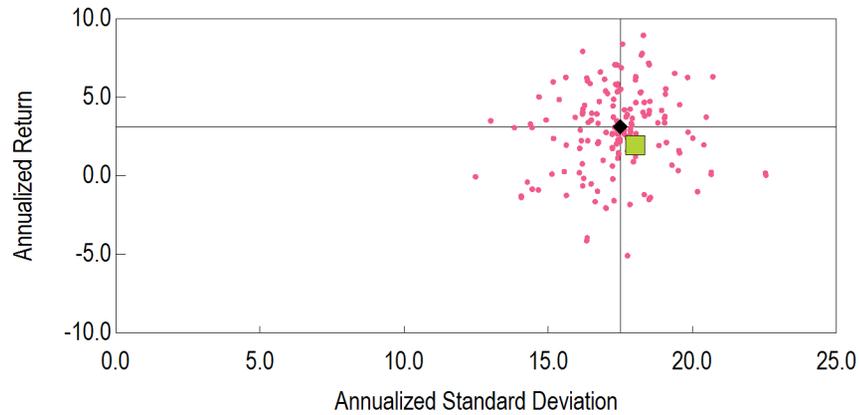
Diversified Emerging Mkts MStar MF Return Comparison



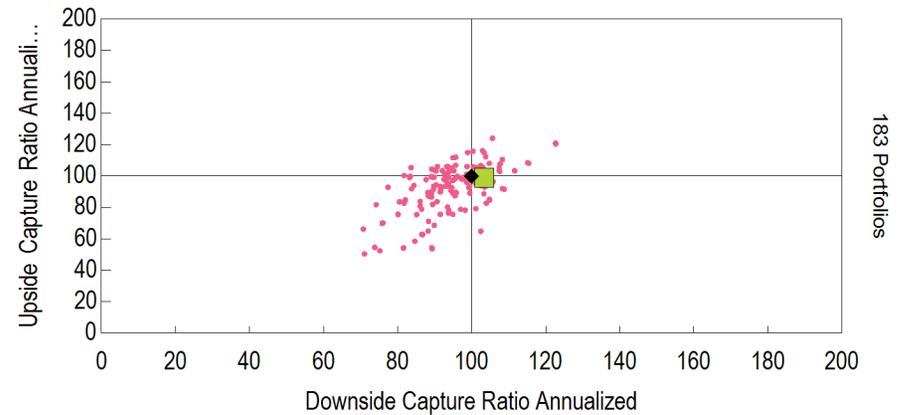
● DFA Emerging Markets Core Equity I ▲ MSCI Emerging Markets

DFA Emerging Markets Core Equity I | As of June 30, 2020

Annualized Return vs. Annualized Standard Deviation
5 Years 6 Months Ending June 30, 2020



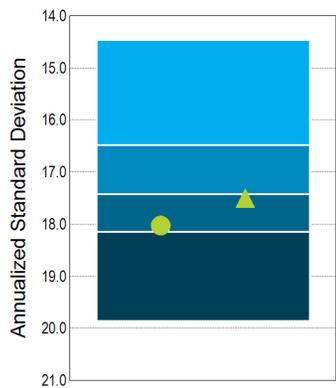
Upside Capture Ratio Annualized vs. Downside Capture Ratio Annualized
5 Years 6 Months Ending June 30, 2020



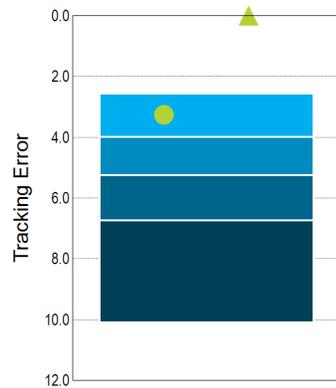
- DFA Emerging Markets Core Equity I
- Diversified Emerging Mkts MStar MF
- ◆ MSCI Emerging Markets

- DFA Emerging Markets Core Equity I
- Diversified Emerging Mkts MStar MF
- ◆ MSCI Emerging Markets

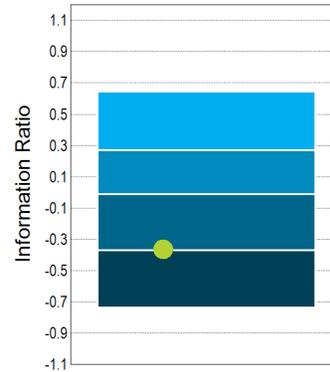
Annualized Standard Deviation



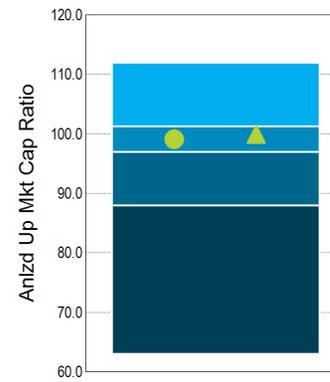
Tracking Error



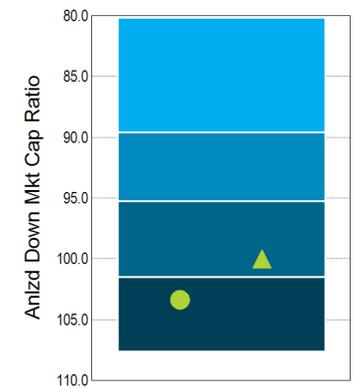
Information Ratio



Anlzd Up Mkt Cap Ratio



Anlzd Down Mkt Cap Ratio



- DFA Emerging Markets Core Equity I
- ▲ MSCI Emerging Markets
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile

DFA Emerging Markets Core Equity I | As of June 30, 2020

Fund Characteristics as of June 30, 2020

Sharpe Ratio (3 Year)	-0.12
Average Market Cap (\$mm)	12,328.65
Price/Earnings	12.24
Price/Book	1.16
Price/Sales	0.76
Price/Cash Flow	4.12
Dividend Yield	3.77
Number of Equity Holdings	5,349
R-Squared (3 Year)	0.97
Alpha (3 Year)	-0.21%

Sector Allocation as of June 30, 2020

BASIC MATERIALS	9.49%
COMMUNICATION SERVICES	11.15%
CONSUMER CYCLICAL	10.94%
CONSUMER DEFENSIVE	6.91%
ENERGY	5.85%
FINANCIAL SERVICES	16.16%
HEALTHCARE	4.21%
INDUSTRIALS	7.76%
REAL ESTATE	4.73%
TECHNOLOGY	19.70%
UTILITIES	3.09%

Top Holdings as of June 30, 2020

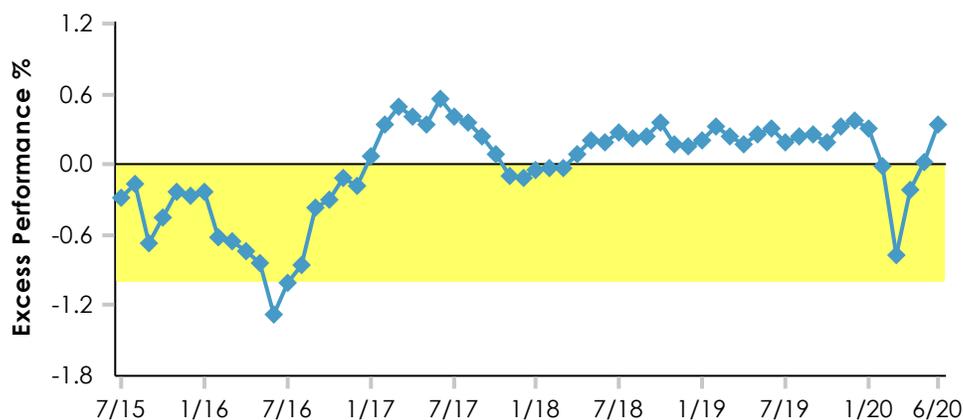
TENCENT HOLDINGS LTD	4.76%
SAMSUNG ELECTRONICS CO LTD	4.14%
ALIBABA GROUP HOLDING LTD ADR	2.12%
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	1.89%
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD ADR	1.77%
PING AN INSURANCE (GROUP) CO. OF CHINA LTD CLASS H	1.30%
CHINA CONSTRUCTION BANK CORP CLASS H	1.14%
RELIANCE INDUSTRIES LTD	0.95%
VALE SA	0.90%
SK HYNIX INC	0.70%

Top Countries as of June 30, 2020

China	30.62%
Taiwan	16.54%
South Korea	13.20%
India	10.81%
Brazil	6.24%
South Africa	4.70%
Thailand	2.59%
Malaysia	2.39%
Mexico	2.33%
Indonesia	2.19%

Metropolitan West Total Return Bond I vs. BBg BC U.S. Aggregate Index

Short-term (Rolling 12 Months Excess Performance)

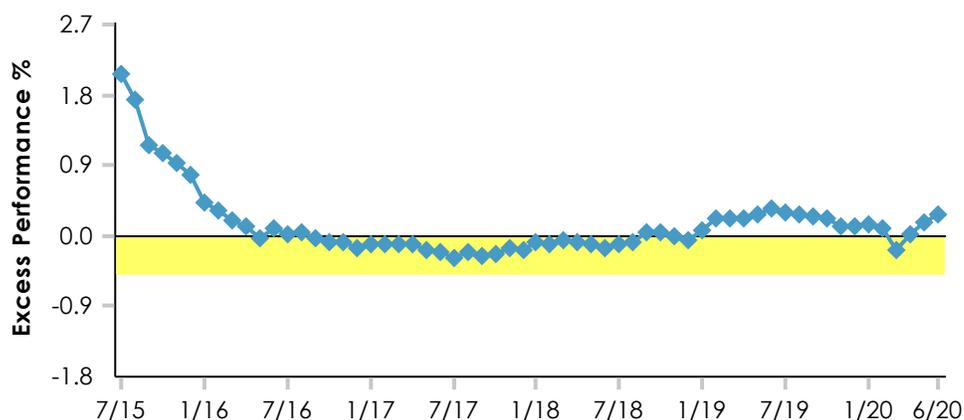


Short-Term Performance

Positive

Probationary Performance -1.00%

Medium-term (Rolling 36 Months Excess Performance)



Medium-Term Performance

Positive

Probationary Performance -0.50%

- Long-term criteria to take effect 1Q 2021

Annualized Performance Results (Net of management fees)

	Qtr	1 Year	3 Years	5 Years	Inception (10/2015)
Metropolitan West Total Return Bond I	4.1 (85)	9.1 (18)	5.6 (15)	4.3 (43)	4.4 (54)
BBg BC U.S. Aggregate Index	2.9 (97)	8.7 (22)	5.3 (25)	4.3 (45)	4.3 (61)
IM U.S. Broad Market Core+ Fixed Income (MF) Median	6.1	7.5	4.9	4.2	4.5

Monitoring Status

Positive

Metropolitan West Total Return Bond I | As of June 30, 2020

Description:

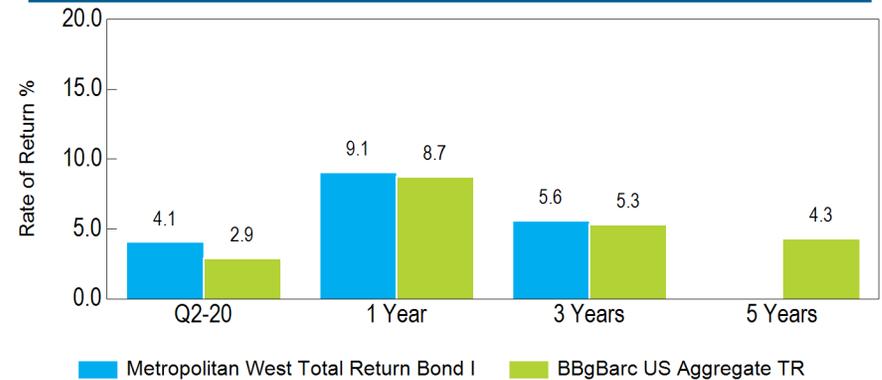
The investment seeks to maximize long-term total return.

The fund pursues its objective by investing, under normal circumstances, at least 80% of its net assets in investment grade fixed income securities or unrated securities determined by the Adviser to be of comparable quality. Up to 20% of the fund's net assets may be invested in securities rated below investment grade or unrated securities determined by the Adviser to be of comparable quality. The fund also invests at least 80% of its net assets plus borrowings for investment purposes in fixed income securities it regards as bonds.

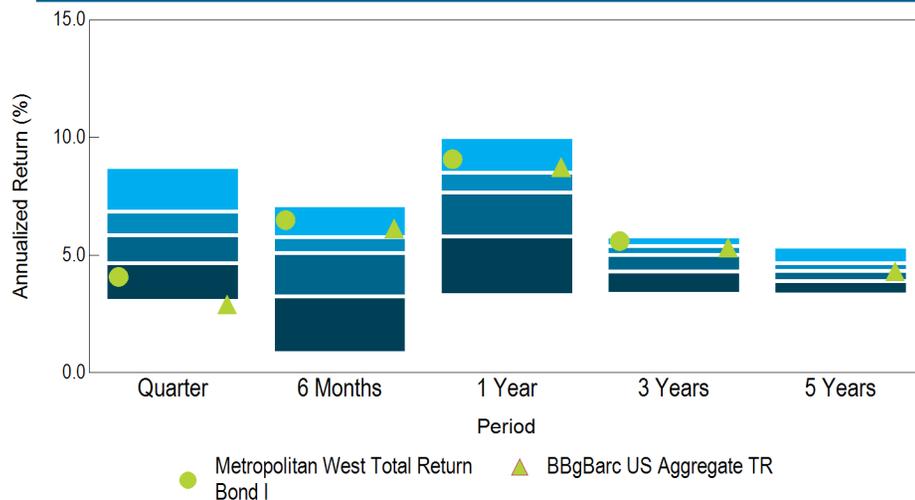
Portfolio Fund Information as of June 30, 2020

Ticker	MWTIX
Morningstar Category	Intermediate Core-Plus Bond
Average Market Cap (\$mm)	
Net Assets (\$mm)	49,071.85
% Assets in Top 10 Holdings	22.03
Total Number of Holdings	2,061
Manager Name	Stephen M. Kane
Manager Tenure	23
Expense Ratio	0.44%
Closed to New Investors	No

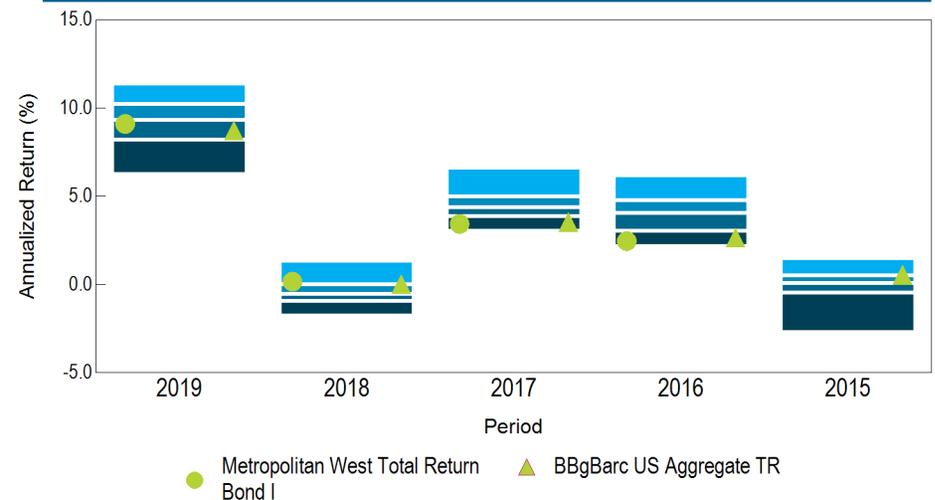
Return Summary



Intermediate Core Plus Bond MStar MF Return Comparison

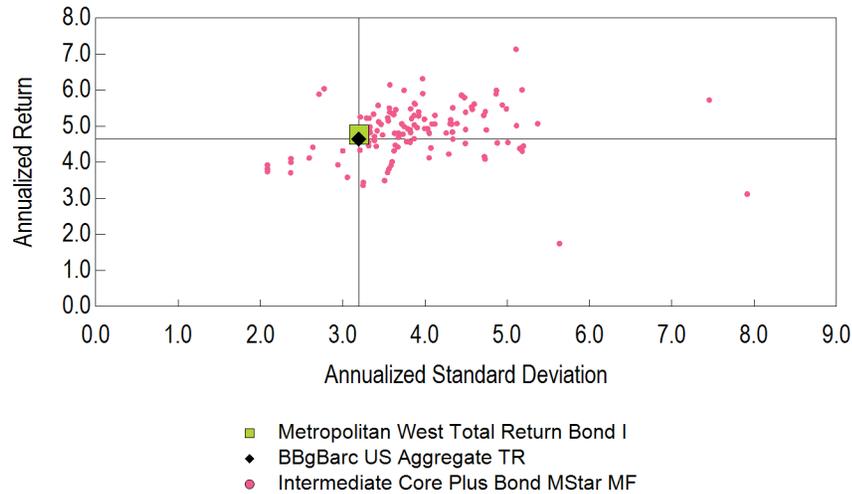


Intermediate Core Plus Bond MStar MF Return Comparison

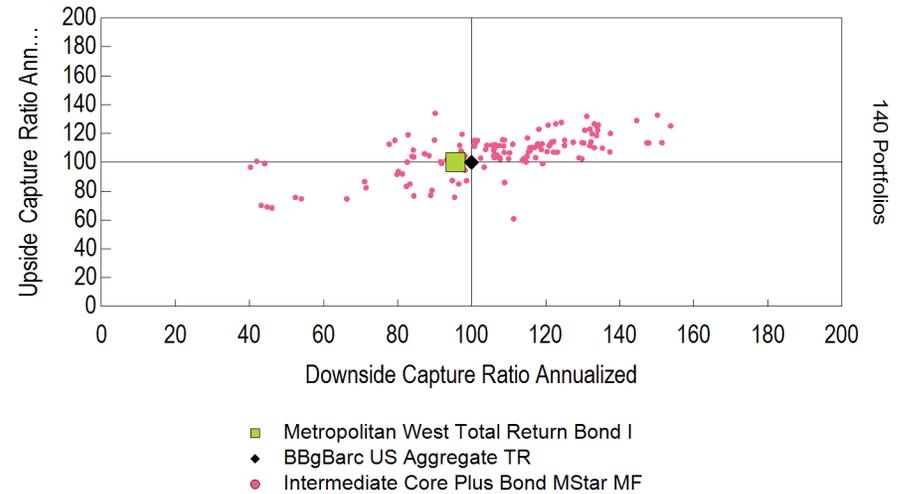


Metropolitan West Total Return Bond I | As of June 30, 2020

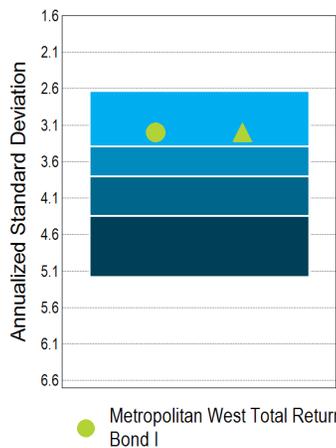
Annualized Return vs. Annualized Standard Deviation
4 Years 6 Months Ending June 30, 2020



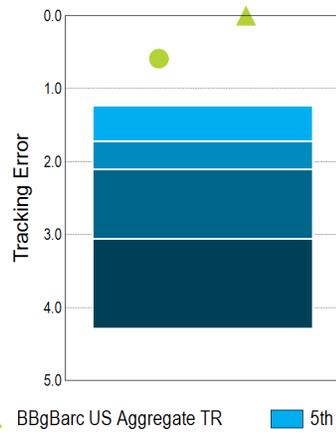
Upside Capture Ratio Annualized vs. Downside Capture Ratio Annualized
4 Years 6 Months Ending June 30, 2020



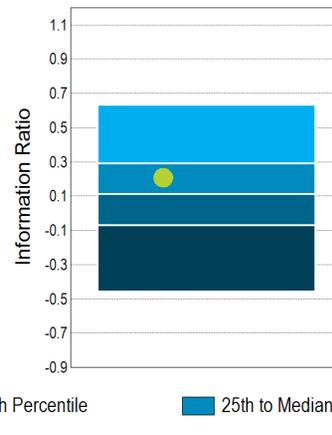
Annualized Standard Deviation



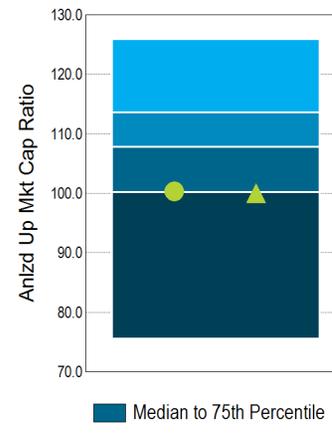
Tracking Error



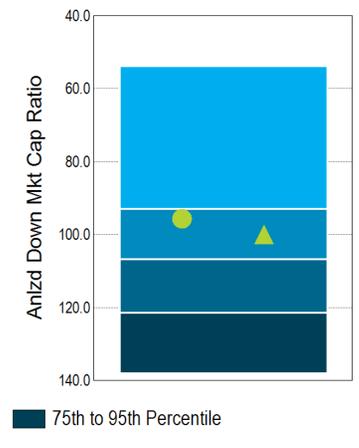
Information Ratio



Anlzd Up Mkt Cap Ratio



Anlzd Down Mkt Cap Ratio



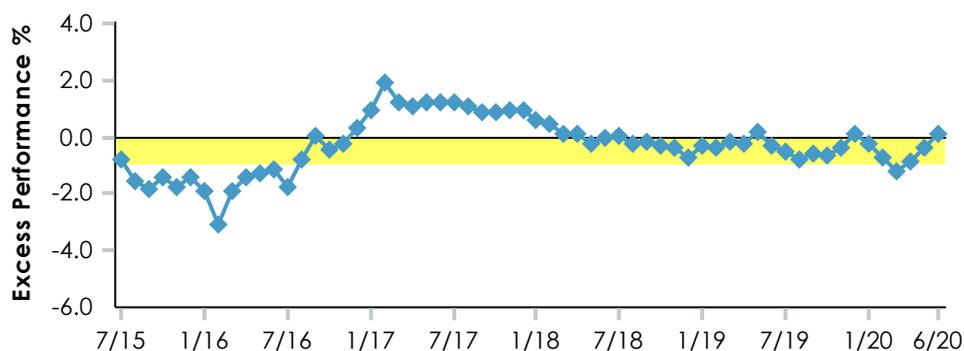
Metropolitan West Total Return Bond I | As of June 30, 2020

Fund Characteristics as of June 30, 2020		Top Holdings as of June 30, 2020		Fixed Income Sectors as of June 30, 2020	
Sharpe Ratio (3 Year)	1.15	FEDERAL NATIONAL MORTGAGE ASSOCIATION	4.31%	GOVERNMENT	21.14%
Average Duration	5.40	2.5%		MUNICIPAL	1.26%
Average Coupon	2.93%	UNITED STATES TREASURY NOTES 0.25%	4.29%	CORPORATE	27.97%
Average Effective Maturity	7.59	UNITED STATES TREASURY NOTES 0.25%	2.82%	SECURITIZED	46.65%
R-Squared (3 Year)	0.97	FEDERAL NATIONAL MORTGAGE ASSOCIATION	2.05%	CASH & EQUIVALENTS	2.96%
Alpha (3 Year)	0.01%	2.5%		DERIVATIVE	0.01%
Beta (3 Year)	1.03	UNITED STATES TREASURY BONDS 1.25%	1.73%		
		FEDERAL NATIONAL MORTGAGE ASSOCIATION	1.60%		
		3%			
		UNITED STATES TREASURY BONDS 0.25%	1.45%		
		FEDERAL NATIONAL MORTGAGE ASSOCIATION	1.36%		
		2.5%			
		UNITED STATES TREASURY BILLS 0%	1.23%		
		UNITED STATES TREASURY NOTES 0.25%	1.21%		

Credit Quality as of June 30, 2020		Maturities as of June 30, 2020		Top Countries as of June 30, 2020	
AAA	62.72%	1 to 3 Years	3.83%	United States	93.25%
AA	3.69%	3 to 5 Years	11.14%	United Kingdom	1.69%
A	8.35%	5 to 7 Years	5.98%	Germany	1.21%
BBB	18.63%	7 to 10 Years	9.63%	Netherlands	0.61%
BB	2.93%	10 to 15 Years	6.08%	Cayman Islands	0.59%
B	0.99%	15 to 20 Years	8.72%	Ireland	0.55%
Below B	2.69%	20 to 30 Years	35.69%	Mexico	0.52%
Not Rated	0.00%	Greater than 30 Years	12.68%	Belgium	0.41%
				Canada	0.23%
				Indonesia	0.16%

PIMCO Real Return vs. Bloomberg Barclays U.S. TIPS Index

Short-term (Rolling 12 Months Excess Performance)

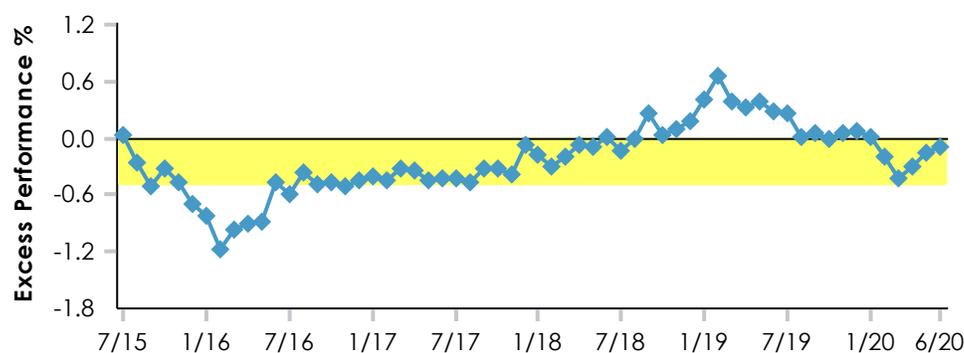


Short-Term Performance

Positive

Probationary Performance -1.00%

Medium-term (Rolling 36 Months Excess Performance)

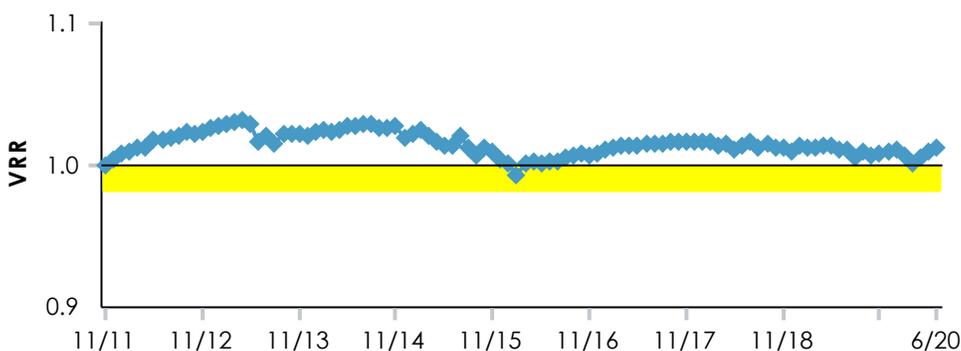


Medium-Term Performance

Acceptable

Probationary Performance -0.50%

Long-term (December 1, 2011 To June 30, 2020 VRR)



Long-Term Performance

Positive

Probationary Performance < 0.98

Annualized Performance Results (Net of management fees)

	Qtr	1 Year	3 Years	5 Years	Inception (12/2011)
PIMCO Real Return	5.4 (27)	8.4 (15)	4.9 (16)	3.7 (12)	2.5 (4)
Bloomberg Barclays U.S. TIPS Index	4.2 (67)	8.3 (18)	5.0 (13)	3.7 (11)	2.4 (7)
IM U.S. TIPS (MF) Median	5.0	6.5	4.0	2.9	1.6

Monitoring Status

Acceptable

Description:

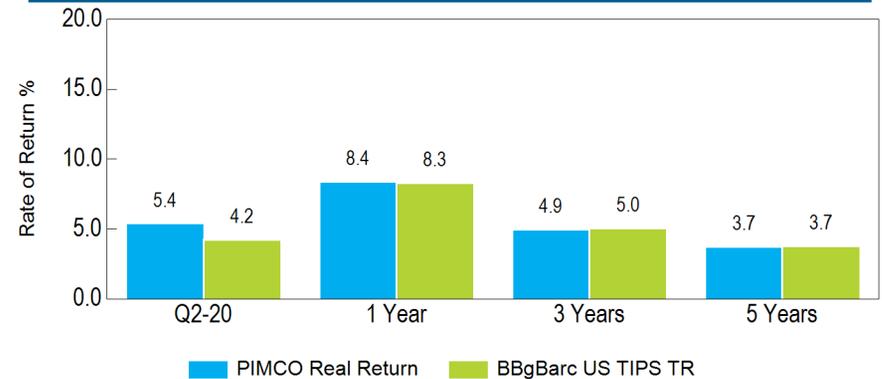
The investment seeks maximum real return, consistent with preservation of capital and prudent investment management.

The fund normally invests at least 80% of its net assets in inflation-indexed bonds of varying maturities issued by the U.S. and non-U.S. governments, their agencies or instrumentalities, and corporations, which may be represented by forwards or derivatives such as options, futures contracts or swap agreements.

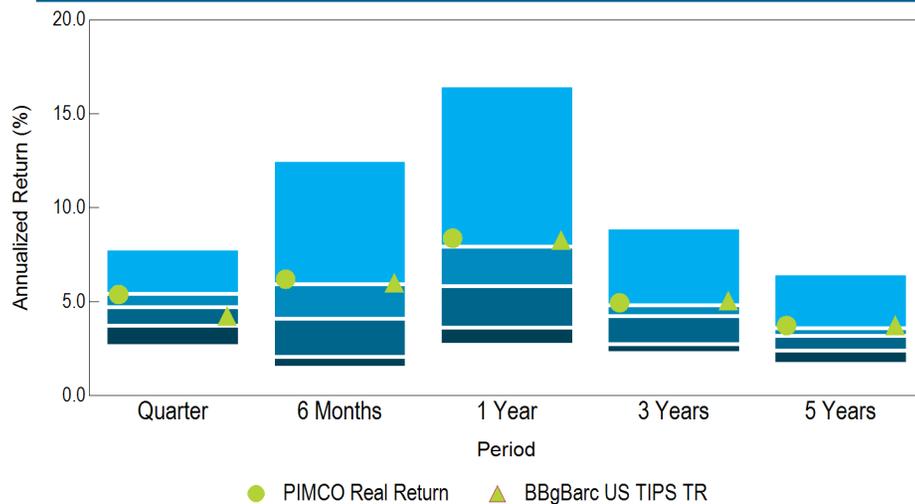
Portfolio Fund Information as of March 31, 2020

Ticker	PRRIX
Morningstar Category	Inflation-Protected Bond
Average Market Cap (\$mm)	
Net Assets (\$mm)	5,529.95
% Assets in Top 10 Holdings	134.72
Total Number of Holdings	765
Manager Name	Stephen A. Rodosky
Manager Tenure	2
Expense Ratio	0.98%
Closed to New Investors	No

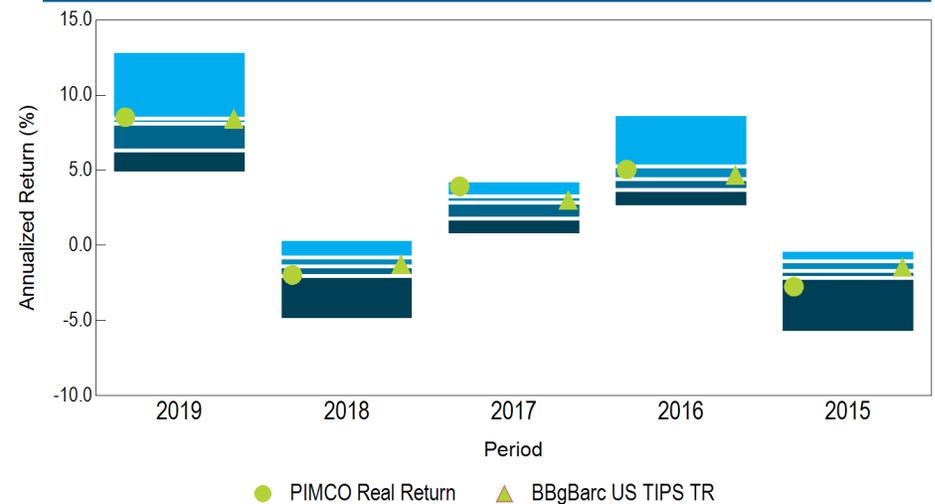
Return Summary



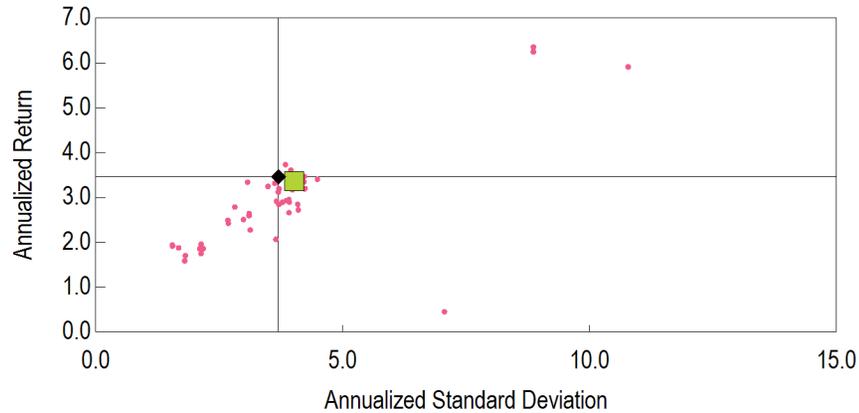
Inflation-Protected Bond MStar MF Return Comparison



Inflation-Protected Bond MStar MF Return Comparison

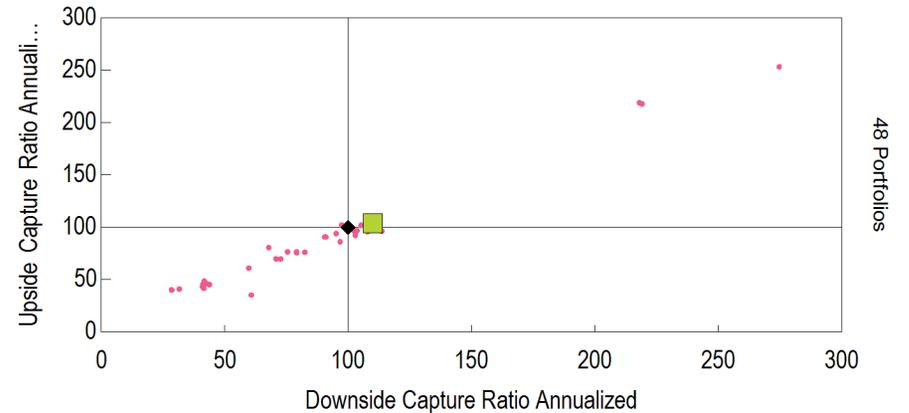


Annualized Return vs. Annualized Standard Deviation
5 Years 6 Months Ending June 30, 2020



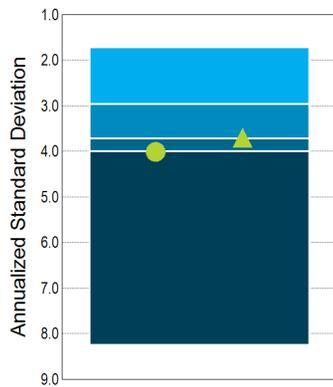
■ PIMCO Real Return ● Inflation-Protected Bond MStar MF
◆ BBgBarc US TIPS TR

Upside Capture Ratio Annualized vs. Downside Capture Ratio Annualized
5 Years 6 Months Ending June 30, 2020

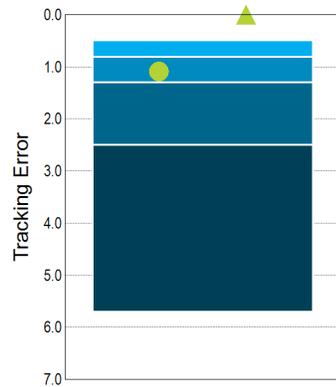


■ PIMCO Real Return ● Inflation-Protected Bond MStar MF
◆ BBgBarc US TIPS TR

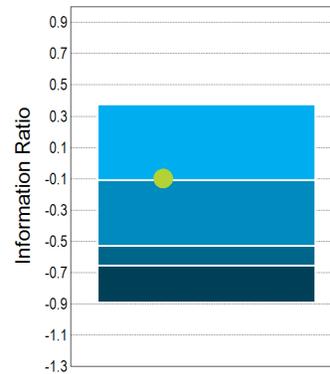
Annualized Standard Deviation



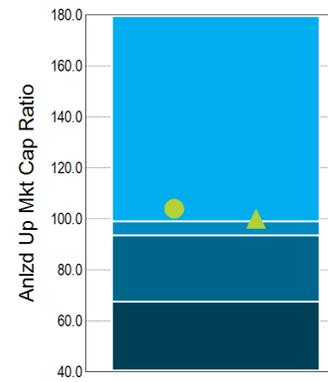
Tracking Error



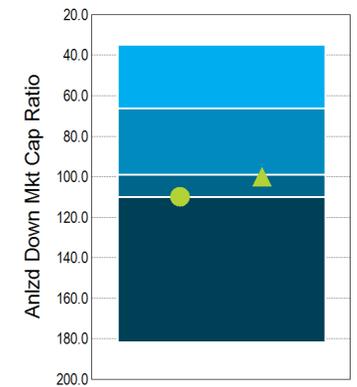
Information Ratio



Anlzd Up Mkt Cap Ratio



Anlzd Down Mkt Cap Ratio



● PIMCO Real Return ▲ BBgBarc US TIPS TR ■ 5th to 25th Percentile ■ 25th to Median ■ Median to 75th Percentile ■ 75th to 95th Percentile

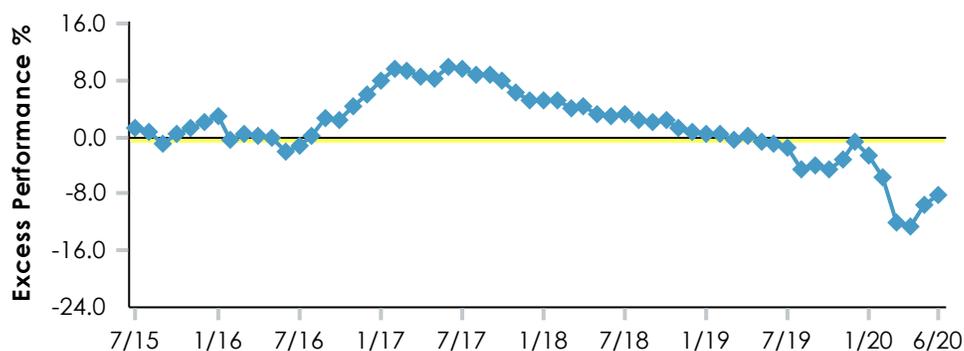
Fund Characteristics as of March 31, 2020		Top Holdings as of March 31, 2020		Fixed Income Sectors as of March 31, 2020	
Sharpe Ratio (3 Year)	0.38	IRS USD 1.25000 06/17/20-1Y (WHT) CME	27.64%	GOVERNMENT	64.97%
Average Duration	8.32	IRS USD 1.50000 03/12/20-1Y (WHT) CME	27.62%	MUNICIPAL	0.00%
Average Coupon	2.00%	FIN FUT EURO-SCHATZ 2YR EUX 06/08/20	18.69%	CORPORATE	0.98%
Average Effective Maturity	8.60	IRO USD 2Y C 1.06600 M 10/02/20 JPM	14.27%	SECURITIZED	13.07%
R-Squared (3 Year)	0.95	10 YEAR TREASURY NOTE FUTURE JUNE 20	10.54%	CASH & EQUIVALENTS	16.07%
Alpha (3 Year)	-0.02%	UNITED STATES TREASURY NOTES 0.25%	8.48%	DERIVATIVE	4.91%
Beta (3 Year)	0.96	UNITED STATES TREASURY BONDS 3.62%	8.12%		
		FEDERAL NATIONAL MORTGAGE ASSOCIATION 4%	6.75%		
		UNITED STATES TREASURY NOTES 0.62%	6.32%		
		UNITED STATES TREASURY BONDS 1.38%	6.29%		

Maturities as of March 31, 2020	
1 to 3 Years	7.07%
3 to 5 Years	7.22%
5 to 7 Years	11.20%
7 to 10 Years	20.17%
10 to 15 Years	2.60%
15 to 20 Years	3.30%
20 to 30 Years	13.08%
Greater than 30 Years	7.71%

Top Countries as of March 31, 2020	
United States	87.21%
United Kingdom	5.48%
Germany	2.15%
Denmark	1.19%
Japan	0.66%
Ireland	0.64%
France	0.47%
New Zealand	0.44%
Cayman Islands	0.35%
Australia	0.32%

PIMCO Income I vs. Blmbg. Barc. U.S. Aggregate Index

Short-term (Rolling 12 Months Excess Performance)

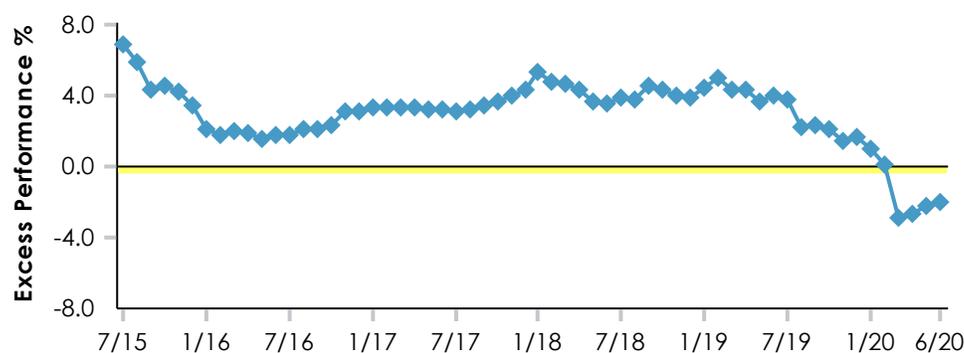


Short-Term Performance

Caution

Probationary Performance -1.00%

Medium-term (Rolling 36 Months Excess Performance)

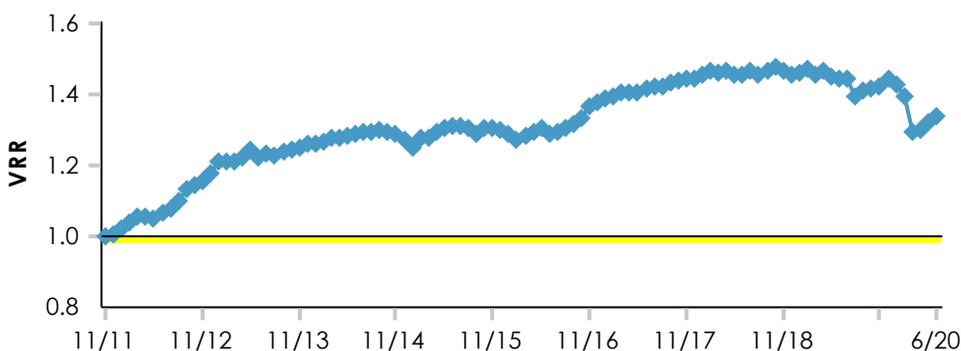


Medium-Term Performance

Caution

Probationary Performance -0.50%

Long-term (December 1, 2011 To June 30, 2020 VRR)



Long-Term Performance

Positive

Probationary Performance < 0.98

Annualized Performance Results (Net of management fees)

	Qtr	1 Year	3 Years	5 Years	Inception (12/2011)
PIMCO Income I	6.5 (70)	0.7 (67)	3.3 (42)	4.7 (12)	7.1 (2)
Blmbg. Barc. U.S. Aggregate Index	2.9 (92)	8.7 (7)	5.3 (10)	4.3 (23)	3.5 (74)
IM Multi-Sector General Bond (MF) Median	7.7	2.2	3.1	3.5	4.2

Monitoring Status

Caution

Description:

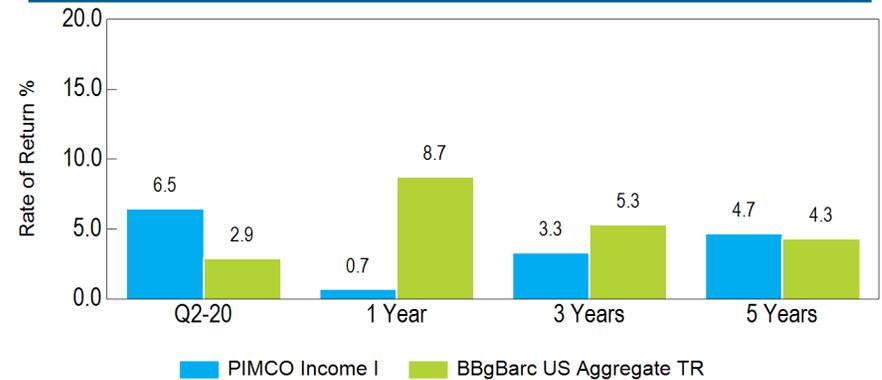
The investment seeks to maximize current income; long-term capital appreciation is a secondary objective.

The fund invests at least 65% of its total assets in a multi-sector portfolio of Fixed Income Instruments of varying maturities, which may be represented by forwards or derivatives such as options, futures contracts or swap agreements. It may invest up to 50% of its total assets in high yield securities rated below investment grade by Moody's, S&P or Fitch, or if unrated, as determined by PIMCO.

Portfolio Fund Information as of March 31, 2020

Ticker	PIMIX
Morningstar Category	Multisector Bond
Average Market Cap (\$mm)	3,201.93
Net Assets (\$mm)	59,195.92
% Assets in Top 10 Holdings	105.63
Total Number of Holdings	7,350
Manager Name	Daniel J. Ivascyn
Manager Tenure	13
Expense Ratio	1.05%
Closed to New Investors	No

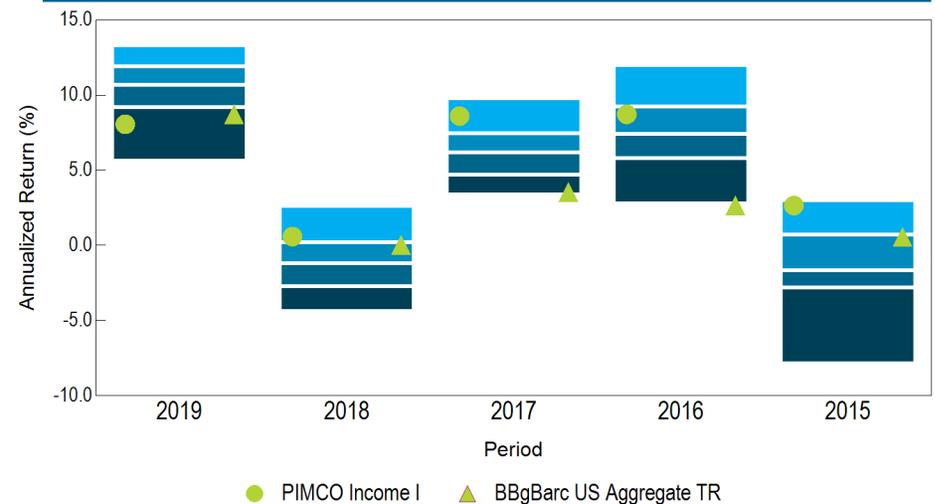
Return Summary



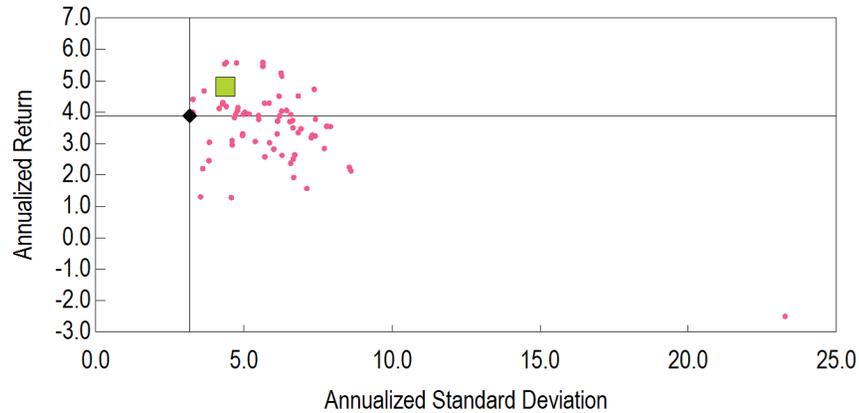
Multisector Bond MStar MF Return Comparison



Multisector Bond MStar MF Return Comparison

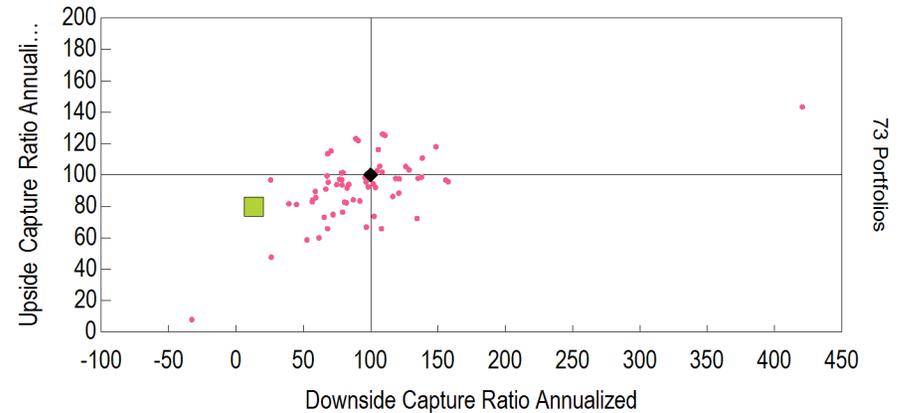


Annualized Return vs. Annualized Standard Deviation
5 Years 6 Months Ending June 30, 2020



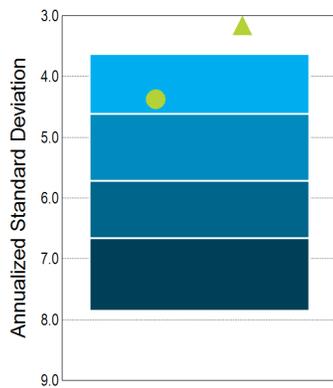
- PIMCO Income I
- ◆ Multisector Bond MStar MF
- ◆ BBgBarc US Aggregate TR

Upside Capture Ratio Annualized vs. Downside Capture Ratio Annualized
5 Years 6 Months Ending June 30, 2020



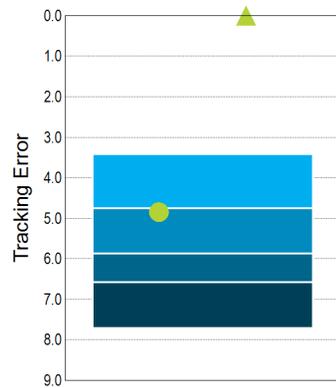
- PIMCO Income I
- ◆ Multisector Bond MStar MF
- ◆ BBgBarc US Aggregate TR

Annualized Standard Deviation



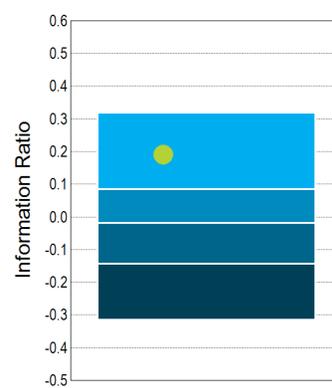
- PIMCO Income I

Tracking Error

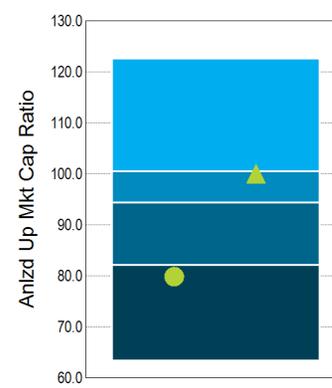


- ▲ BBgBarc US Aggregate TR

Information Ratio

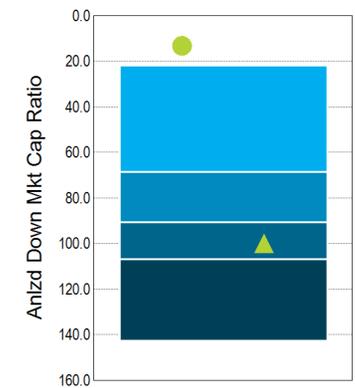


Anlzd Up Mkt Cap Ratio



- PIMCO Income I

Anlzd Down Mkt Cap Ratio



- ▲ BBgBarc US Aggregate TR

- 5th to 25th Percentile

- 25th to Median

- Median to 75th Percentile

- 75th to 95th Percentile

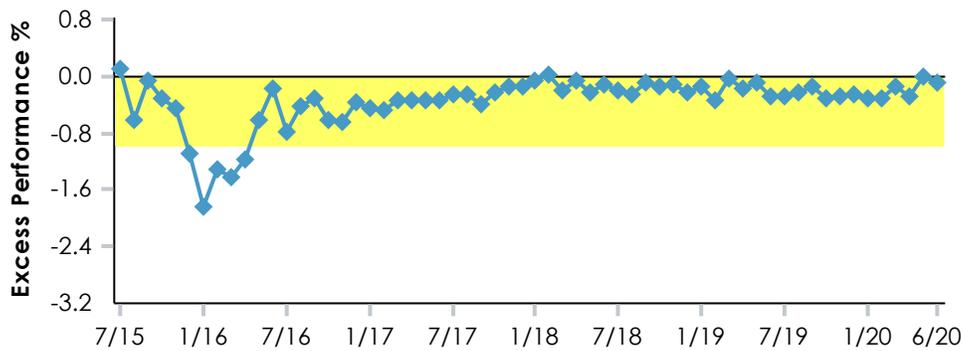
Fund Characteristics as of March 31, 2020		Top Holdings as of March 31, 2020		Fixed Income Sectors as of March 31, 2020	
Sharpe Ratio (3 Year)	0.04	IRS USD 1.40000 06/19/20-4Y CME	20.42%	GOVERNMENT	24.88%
Average Duration	0.77	IRS EUR -0.33000 03/18/20-2Y LCH	15.98%	MUNICIPAL	0.05%
Average Coupon	3.22%	IRS JPY 0.45000 03/20/19-10Y LCH	15.66%	CORPORATE	7.40%
Average Effective Maturity	3.45	FEDERAL NATIONAL MORTGAGE ASSOCIATION	10.28%	SECURITIZED	30.04%
R-Squared (3 Year)	0.05	3%		CASH & EQUIVALENTS	27.55%
Alpha (3 Year)	0.03%	CIRS USD 4Y MAT 3.85/2.00% M 7/2020 DUB	8.82%	DERIVATIVE	10.09%
Beta (3 Year)	0.35	CIRS USD 4Y MAT 3.82/2.00% M 6/2020 MYC	8.81%		
		CIRS USD 4Y MAT 3.82/2.00% M 7/2020 GLM	8.81%		
		IRS EUR 0.65000 02/26/19-10Y LCH	5.97%		
		FEDERAL NATIONAL MORTGAGE ASSOCIATION	5.84%		
		2.5%			
		IRS EUR 0.65000 03/04/19-10Y LCH	5.03%		

Maturities as of March 31, 2020	
1 to 3 Years	17.96%
3 to 5 Years	6.30%
5 to 7 Years	6.79%
7 to 10 Years	10.18%
10 to 15 Years	3.80%
15 to 20 Years	6.36%
20 to 30 Years	21.23%
Greater than 30 Years	23.70%

Top Countries as of March 31, 2020	
United States	79.57%
Mexico	3.73%
United Kingdom	3.54%
Australia	2.43%
Russia	1.56%
Ireland	1.16%
South Africa	0.83%
Turkey	0.77%
Japan	0.64%
Italy	0.62%

TIAA-CREF Inflation Link Bond I vs. Blmbg. Barc. U.S. TIPS 1-10 Year

Short-term (Rolling 12 Months Excess Performance)

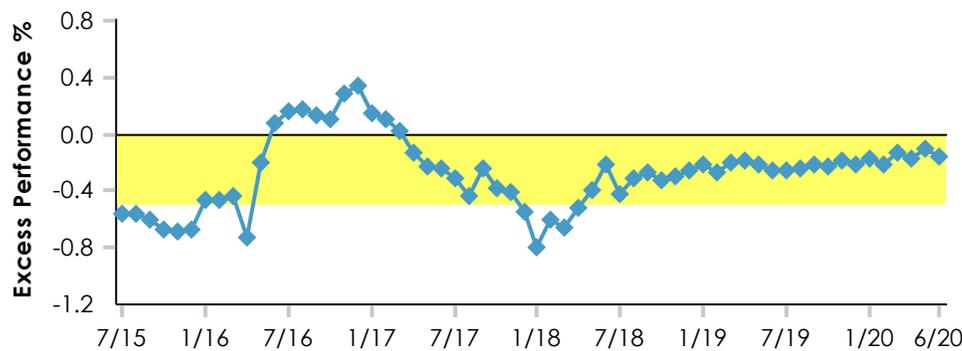


Short-Term Performance

Acceptable

Probationary Performance -1.00%

Medium-term (Rolling 36 Months Excess Performance)

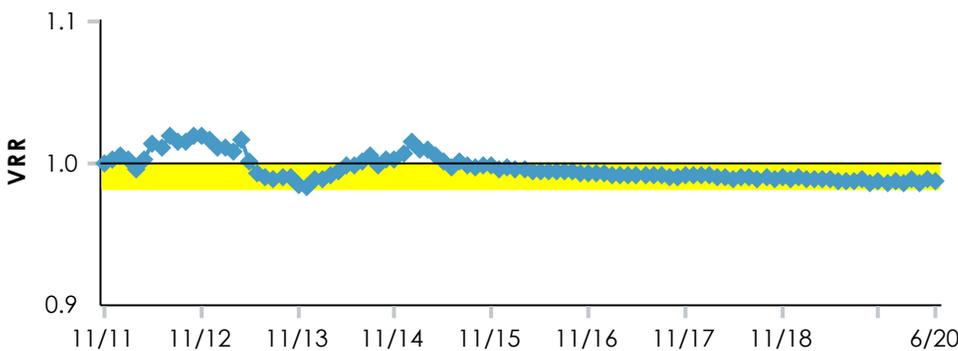


Medium-Term Performance

Acceptable

Probationary Performance -0.50%

Long-term (December 1, 2011 To June 30, 2020 VRR)



Long-Term Performance

Acceptable

Probationary Performance < 0.98

Annualized Performance Results (Net of management fees)

	Qtr	1 Year	3 Years	5 Years	Inception (12/2011)
TIAA-CREF Inflation Link Bond I	3.6 (84)	5.7 (57)	3.8 (56)	2.8 (55)	1.7 (49)
Blmbg. Barc. U.S. TIPS 1-10 Year	3.8 (81)	5.7 (55)	3.9 (53)	3.0 (48)	1.8 (39)
IM U.S. TIPS (MF) Median	5.0	6.5	4.0	2.9	1.6

Monitoring Status

Acceptable

Description:

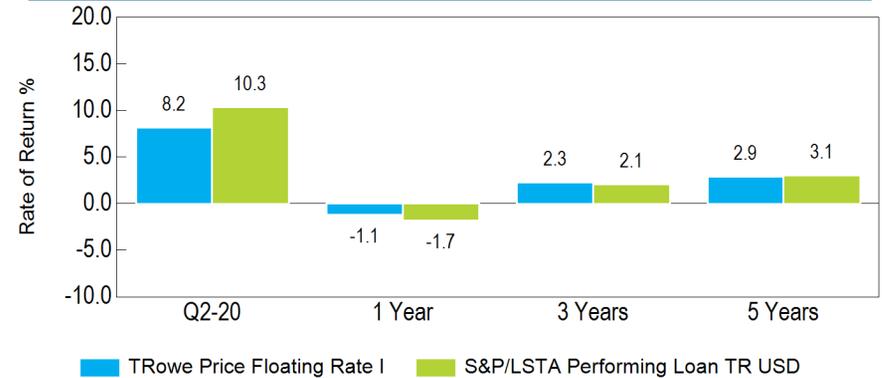
The investment seeks high current income and, secondarily, capital appreciation.

The fund invests at least 80% of its net assets (including any borrowings for investment purposes) in floating rate loans and floating rate debt securities. Floating rate loans represent amounts borrowed by companies or other entities from banks and other lenders. It may invest up to 20% of its net assets in fixed rate debt instruments. The fund may also invest up to 20% of its total assets in non-U.S. dollar-denominated loans and debt instruments (including instruments of issuers in emerging markets) in keeping with the fund's investment objective.

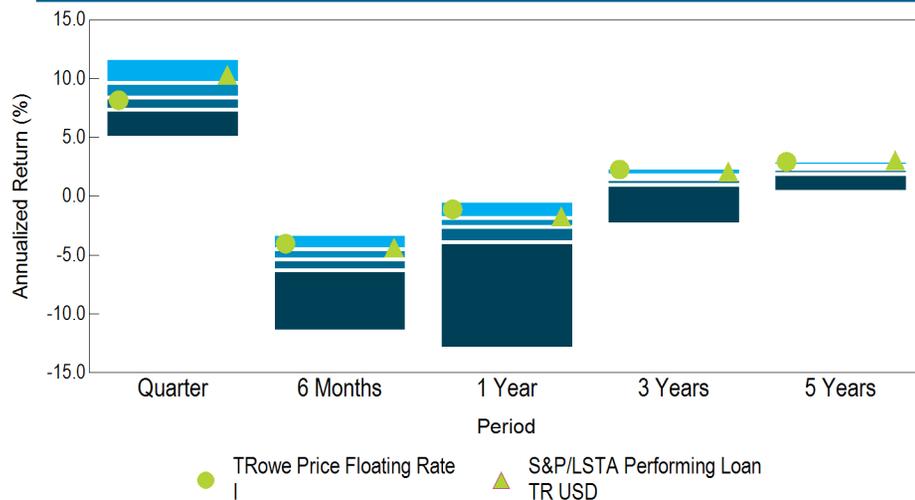
Portfolio Fund Information as of June 30, 2020

Ticker	RPIFX
Morningstar Category	Bank Loan
Average Market Cap (\$mm)	
Net Assets (\$mm)	1,736.17
% Assets in Top 10 Holdings	18.71
Total Number of Holdings	280
Manager Name	Paul M. Massaro
Manager Tenure	11
Expense Ratio	0.58%
Closed to New Investors	No

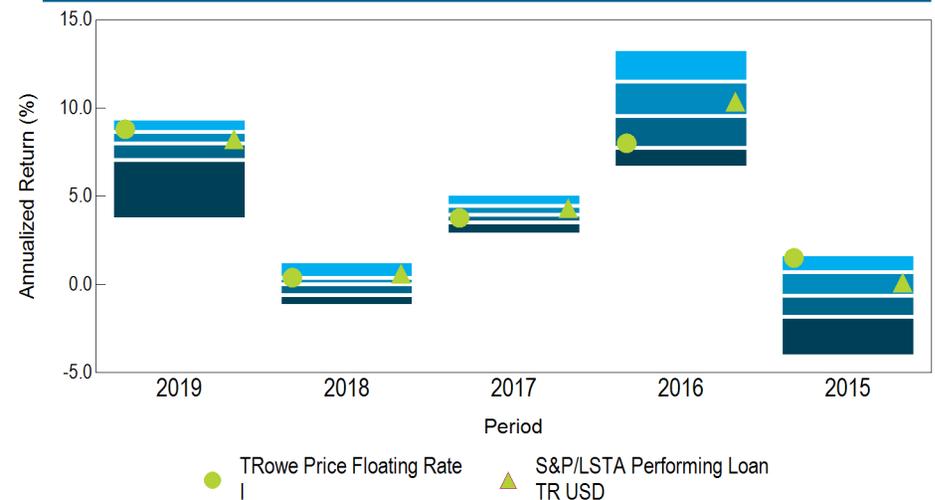
Return Summary



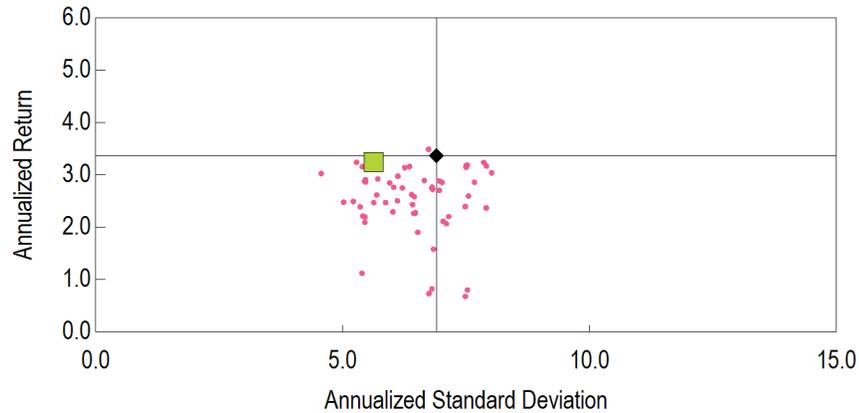
Bank Loan MStar MF Return Comparison



Bank Loan MStar MF Return Comparison

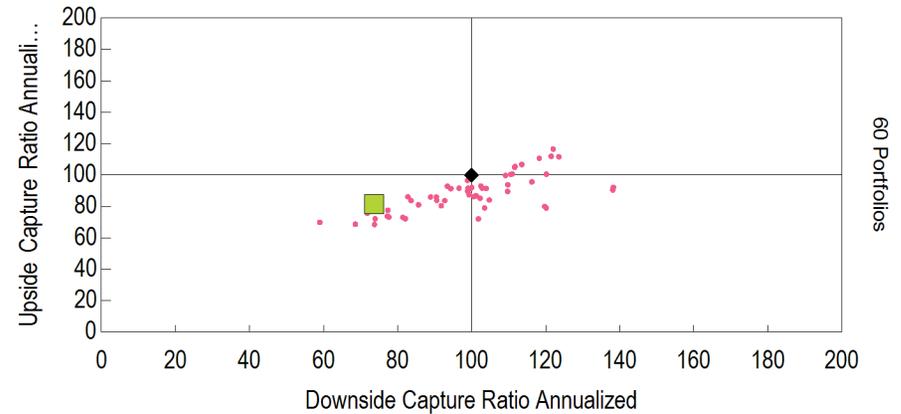


Annualized Return vs. Annualized Standard Deviation
5 Years 6 Months Ending June 30, 2020



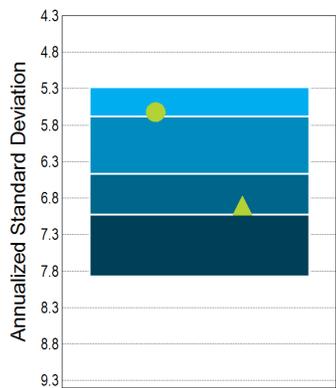
- TRowe Price Floating Rate I
- ◆ S&P/LSTA Performing Loan TR USD
- Bank Loan MStar MF

Upside Capture Ratio Annualized vs. Downside Capture Ratio Annualized
5 Years 6 Months Ending June 30, 2020



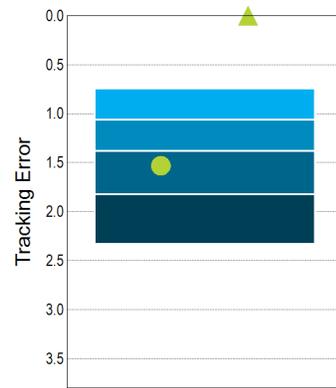
- TRowe Price Floating Rate I
- ◆ S&P/LSTA Performing Loan TR USD
- Bank Loan MStar MF

Annualized Standard Deviation



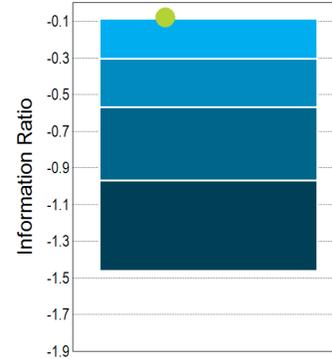
- TRowe Price Floating Rate I

Tracking Error

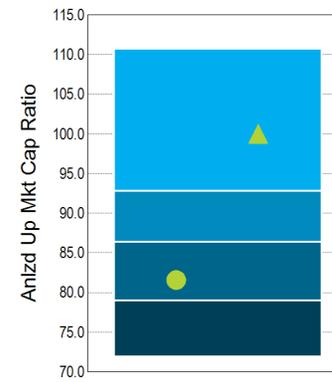


- ▲ S&P/LSTA Performing Loan TR USD

Information Ratio

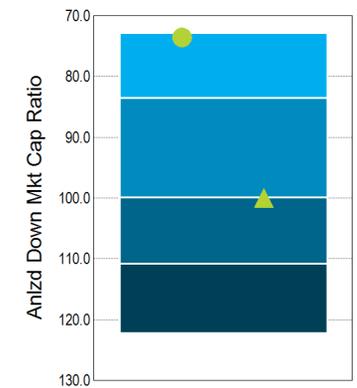


Anlzd Up Mkt Cap Ratio



- Median to 75th Percentile

Anlzd Down Mkt Cap Ratio



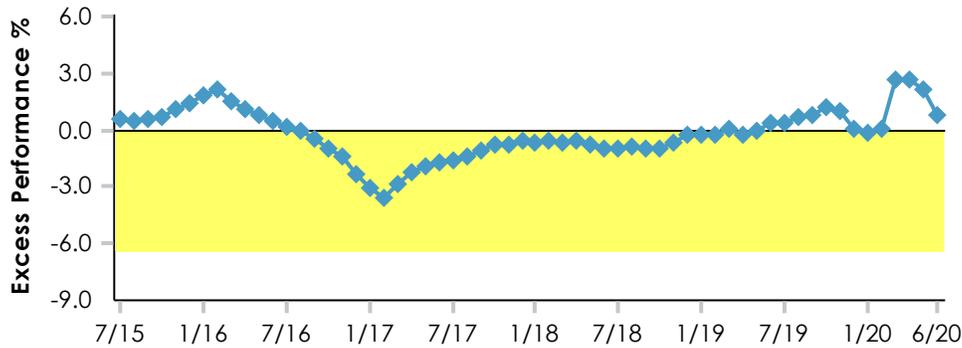
- 75th to 95th Percentile

Fund Characteristics as of June 30, 2020		Top Holdings as of June 30, 2020		Fixed Income Sectors as of June 30, 2020	
Sharpe Ratio (3 Year)	0.08	ASURION	2.56%	GOVERNMENT	0.00%
Average Duration	0.43	ULTIMATE SOFTWARE	2.34%	MUNICIPAL	0.00%
Average Coupon	4.65%	KRONOS INC/MA	2.29%	CORPORATE	91.42%
Average Effective Maturity	4.97	UFC HOLDINGS	2.20%	SECURITIZED	0.12%
R-Squared (3 Year)	0.98	KRONOS INC/MA	1.82%	CASH & EQUIVALENTS	8.46%
Alpha (3 Year)	0.04%	ULTIMATE SOFTWARE	1.80%	DERIVATIVE	0.00%
Beta (3 Year)	0.81	REFINITIV US HOLDINGS	1.72%		
		USI INC/NY	1.34%		
		CCC INFORMATION SERVICES	1.32%		
		HUB INTERNATIONAL	1.32%		

Credit Quality as of June 30, 2020		Maturities as of June 30, 2020		Top Countries as of June 30, 2020	
AAA	7.65%	1 to 3 Years	5.35%	United States	93.28%
AA	0.00%	3 to 5 Years	43.39%	United Kingdom	1.83%
A	0.39%	5 to 7 Years	49.19%	Canada	1.41%
BBB	1.73%	7 to 10 Years	1.76%	France	1.16%
BB	17.17%	10 to 15 Years	0.00%	Germany	1.03%
B	58.69%	15 to 20 Years	0.00%	Luxembourg	0.58%
Below B	11.69%	20 to 30 Years	0.13%	Finland	0.33%
Not Rated	2.69%	Greater than 30 Years	0.00%	Netherlands	0.22%
				Australia	0.16%

T. Rowe Price Floating Rate I vs. S&P/LSTA Performing Loans Index

Short-term (Rolling 12 Months Excess Performance)

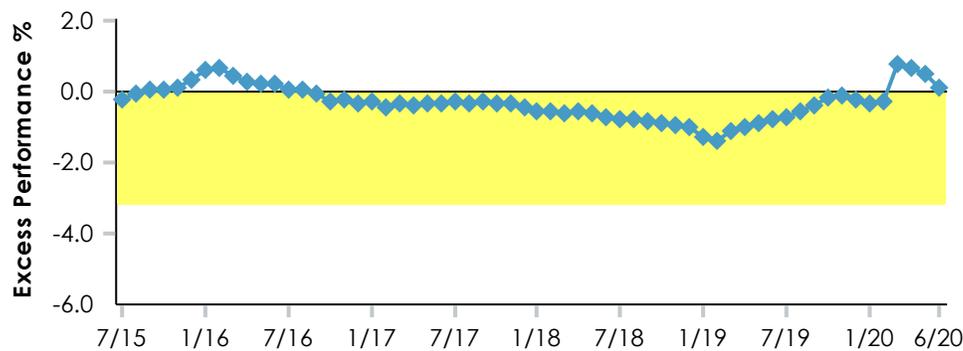


Short-Term Performance

Positive

Probationary Performance -6.50%

Medium-term (Rolling 36 Months Excess Performance)

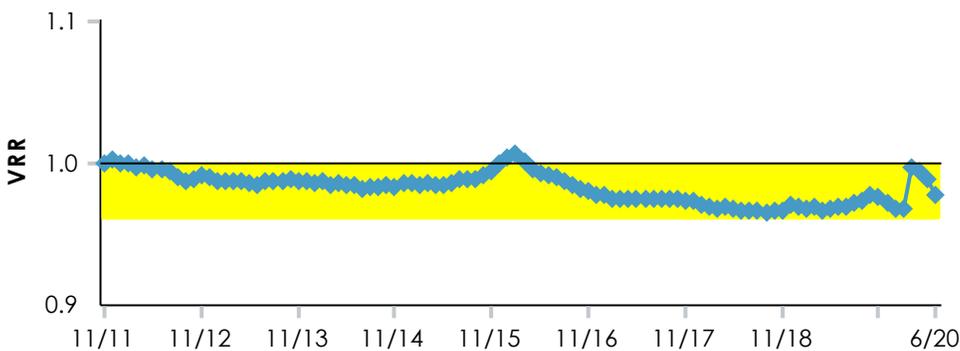


Medium-Term Performance

Positive

Probationary Performance -3.25%

Long-term (December 1, 2011 To June 30, 2020 VRR)



Long-Term Performance

Acceptable

Probationary Performance < 0.96

Annualized Performance Results (Net of management fees)

	Qtr	1 Year	3 Years	5 Years	Inception (12/2011)
T. Rowe Price Floating Rate I	8.2 (51)	-1.1 (5)	2.3 (5)	2.9 (5)	3.9 (7)
S&P/LSTA Performing Loans Index	10.3 (17)	-2.0 (19)	2.2 (6)	3.1 (1)	4.2 (2)
IM U.S. Bank Loans (MF) Median	8.2	-3.1	1.1	2.0	3.1

Monitoring Status

Acceptable

Description:

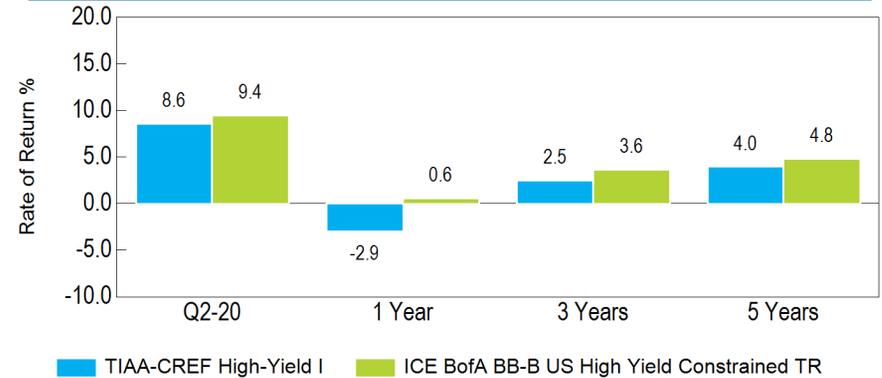
The investment seeks total return primarily through high current income and, when consistent with its primary objective, capital appreciation.

The fund invests primarily in lower-rated, higher-yielding fixed-income securities, such as domestic and foreign corporate bonds, debentures, loan participations and assignments and notes, as well as convertible and preferred securities. Under normal circumstances, it invests at least 80% of its assets in debt and other fixed-income securities rated lower than investment-grade (and their unrated equivalents) or other high-yielding debt securities.

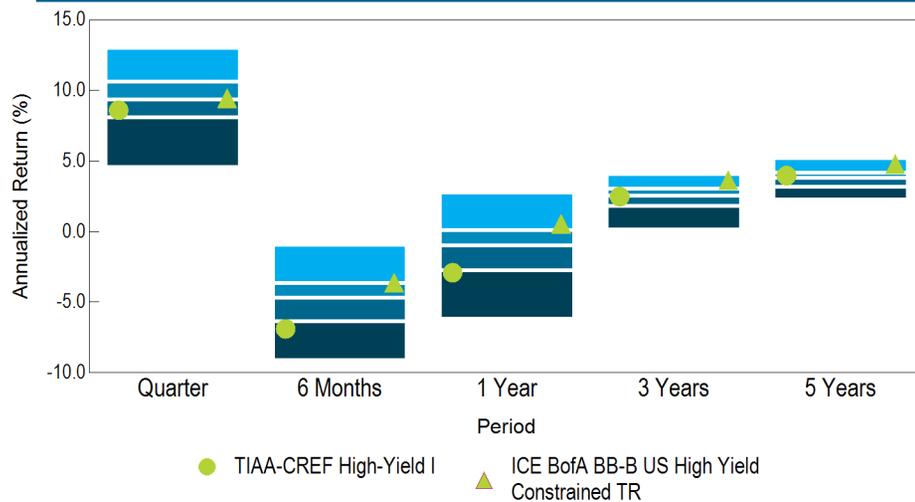
Portfolio Fund Information as of June 30, 2020

Ticker	TIHXY
Morningstar Category	High Yield Bond
Average Market Cap (\$mm)	240.20
Net Assets (\$mm)	2,367.02
% Assets in Top 10 Holdings	8.55
Total Number of Holdings	446
Manager Name	Kevin R. Lorenz
Manager Tenure	14
Expense Ratio	0.36%
Closed to New Investors	No

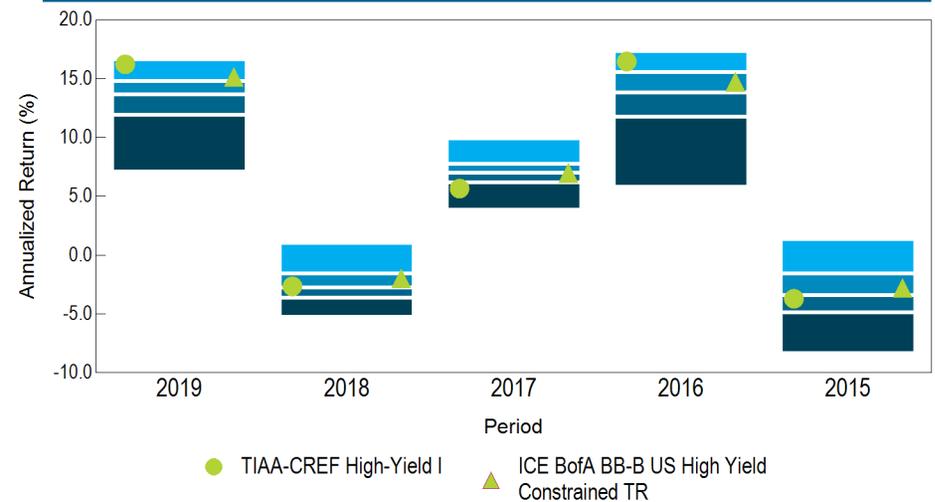
Return Summary



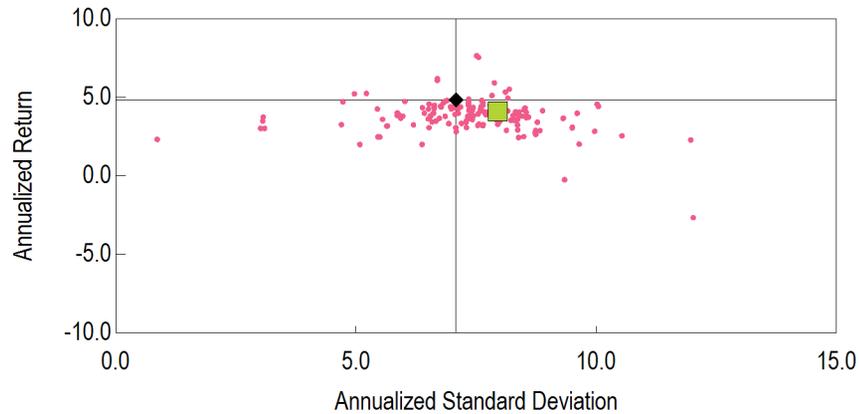
High Yield Bond MStar MF Return Comparison



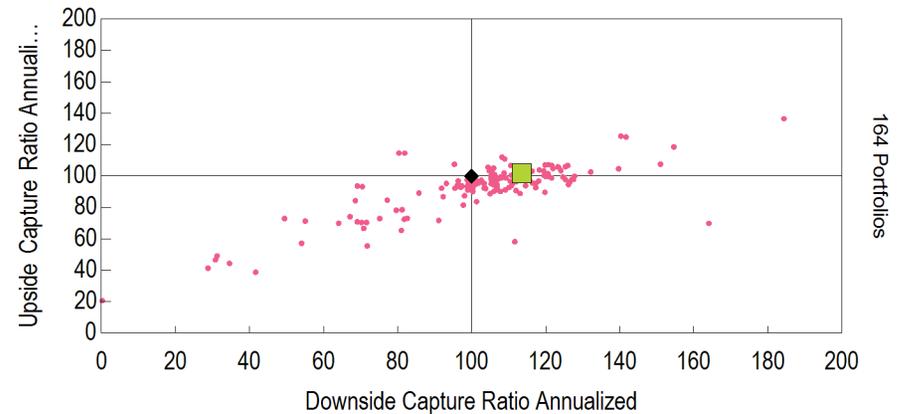
High Yield Bond MStar MF Return Comparison



Annualized Return vs. Annualized Standard Deviation
5 Years 6 Months Ending June 30, 2020



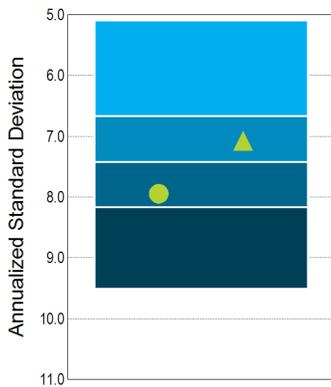
Upside Capture Ratio Annualized vs. Downside Capture Ratio Annualized
5 Years 6 Months Ending June 30, 2020



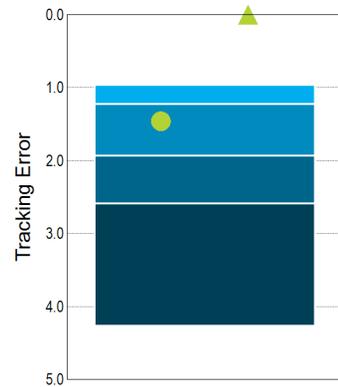
- TIAA-CREF High-Yield I
- ◆ ICE BofA BB-B US High Yield Constrained TR
- High Yield Bond MStar MF

- TIAA-CREF High-Yield I
- ◆ ICE BofA BB-B US High Yield Constrained TR
- High Yield Bond MStar MF

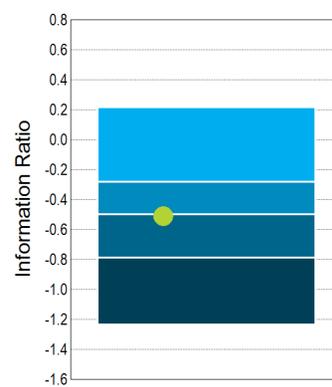
Annualized Standard Deviation



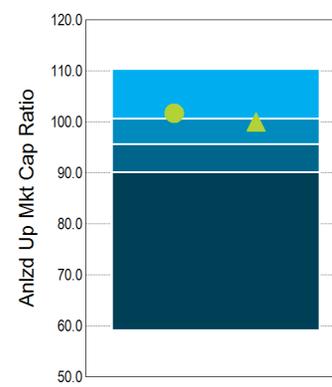
Tracking Error



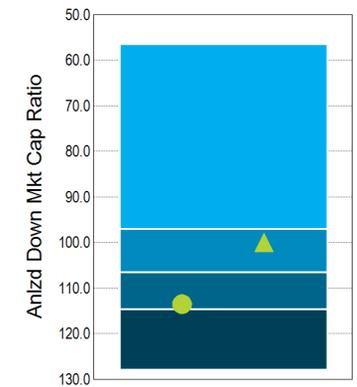
Information Ratio



Anlzd Up Mkt Cap Ratio



Anlzd Down Mkt Cap Ratio



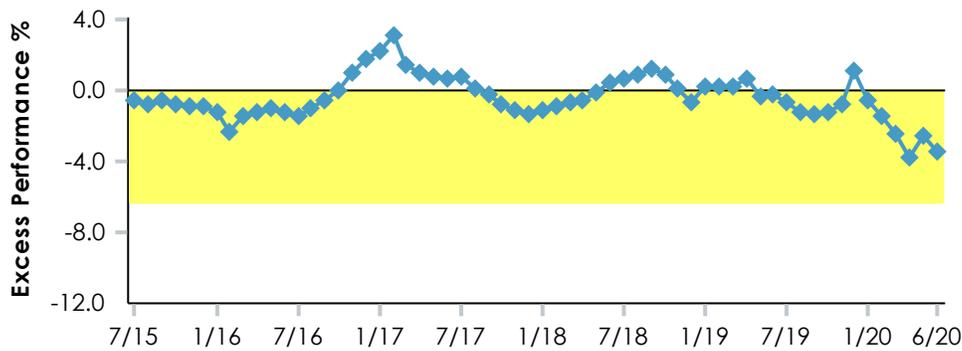
- TIAA-CREF High-Yield I
- ▲ ICE BofA BB-B US High Yield Constrained TR
- 5th to 25th Percentile
- 25th to Median
- Median to 75th Percentile
- 75th to 95th Percentile

Fund Characteristics as of June 30, 2020		Top Holdings as of June 30, 2020		Fixed Income Sectors as of June 30, 2020	
Sharpe Ratio (3 Year)	0.09	PACIFIC GAS AND ELECTRIC COMPANY 3.5%	1.14%	GOVERNMENT	0.32%
Average Duration	3.50	CCO HOLDINGS, LLC/ CCO HOLDINGS CAPITAL CORP. 5.88%	1.03%	MUNICIPAL	0.00%
Average Coupon	5.87%	HCA INC. 5.38%	1.03%	CORPORATE	97.73%
Average Effective Maturity	5.48	CSC HOLDINGS, LLC 7.5%	0.92%	SECURITIZED	0.00%
R-Squared (3 Year)	0.98	NOVA CHEMICALS CORPORATION 4.88%	0.87%	CASH & EQUIVALENTS	1.95%
Alpha (3 Year)	-0.12%	THE GOODYEAR TIRE & RUBBER COMPANY 9.5%	0.77%	DERIVATIVE	0.00%
Beta (3 Year)	1.11	PRIME SECURITIES SERVICES BORROWER, LLC AND PRIME FINANCE, INC. 5.75%	0.75%		
		FORD MOTOR CREDIT COMPANY LLC 4.06%	0.70%		
		KRAFT HEINZ FOODS COMPANY 3.88%	0.69%		
		TENET HEALTHCARE CORPORATION 4.62%	0.65%		

Credit Quality as of March 31, 2020		Maturities as of June 30, 2020		Top Countries as of June 30, 2020	
AAA	10.42%	1 to 3 Years	9.56%	United States	89.99%
AA	0.00%	3 to 5 Years	30.25%	Canada	4.32%
A	0.00%	5 to 7 Years	35.57%	France	1.22%
BBB	0.07%	7 to 10 Years	17.97%	Netherlands	0.74%
BB	39.46%	10 to 15 Years	2.72%	United Kingdom	0.70%
B	43.43%	15 to 20 Years	0.37%	Germany	0.67%
Below B	4.53%	20 to 30 Years	1.14%	Zambia	0.64%
Not Rated	2.09%	Greater than 30 Years	1.17%	Ireland	0.56%
				Sweden	0.44%
				Italy	0.38%

TIAA-CREF High-Yield I vs. ICE BofAML High Yield BB-B Constrained Index

Short-term (Rolling 12 Months Excess Performance)

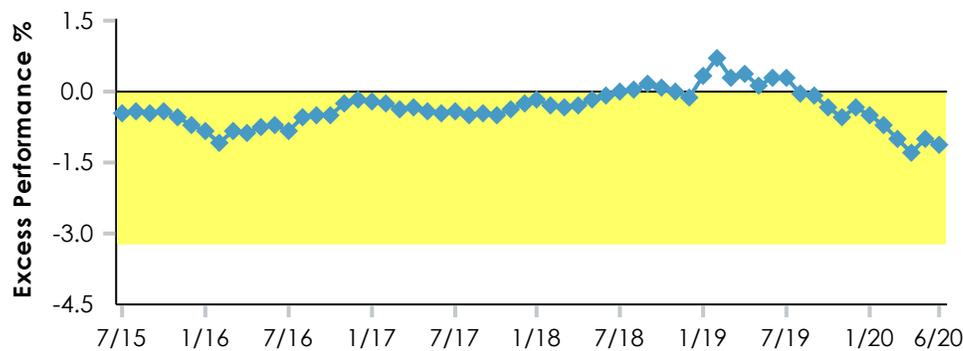


Short-Term Performance

Acceptable

Probationary Performance -6.50%

Medium-term (Rolling 36 Months Excess Performance)

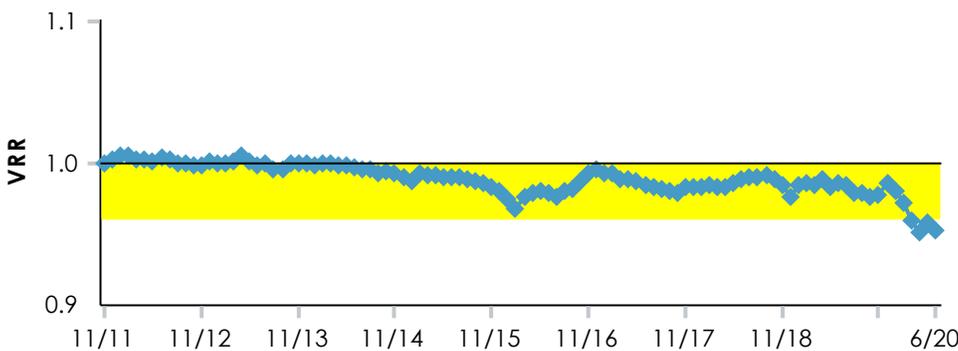


Medium-Term Performance

Acceptable

Probationary Performance -3.25%

Long-term (December 1, 2011 To June 30, 2020 VRR)



Long-Term Performance

Caution

Probationary Performance < 0.96

Annualized Performance Results (Net of management fees)

	Qtr	1 Year	3 Years	5 Years	Inception (12/2011)
TIAA-CREF High-Yield I	8.6 (64)	-2.9 (71)	2.5 (39)	4.0 (22)	5.6 (28)
ICE BofAML High Yield BB-B Constrained Index	9.4 (44)	0.5 (14)	3.6 (6)	4.8 (6)	6.2 (9)
IM U.S. High Yield Bonds (MF) Median	9.2	-1.4	2.2	3.4	5.2

Monitoring Status

Caution

Description:

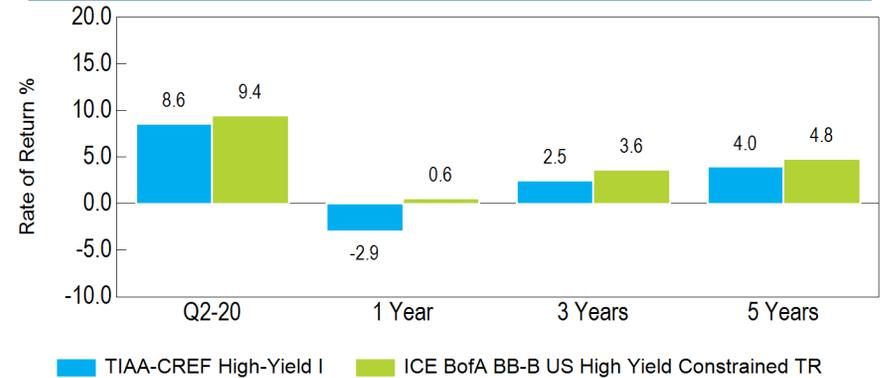
The investment seeks total return primarily through high current income and, when consistent with its primary objective, capital appreciation.

The fund invests primarily in lower-rated, higher-yielding fixed-income securities, such as domestic and foreign corporate bonds, debentures, loan participations and assignments and notes, as well as convertible and preferred securities. Under normal circumstances, it invests at least 80% of its assets in debt and other fixed-income securities rated lower than investment-grade (and their unrated equivalents) or other high-yielding debt securities.

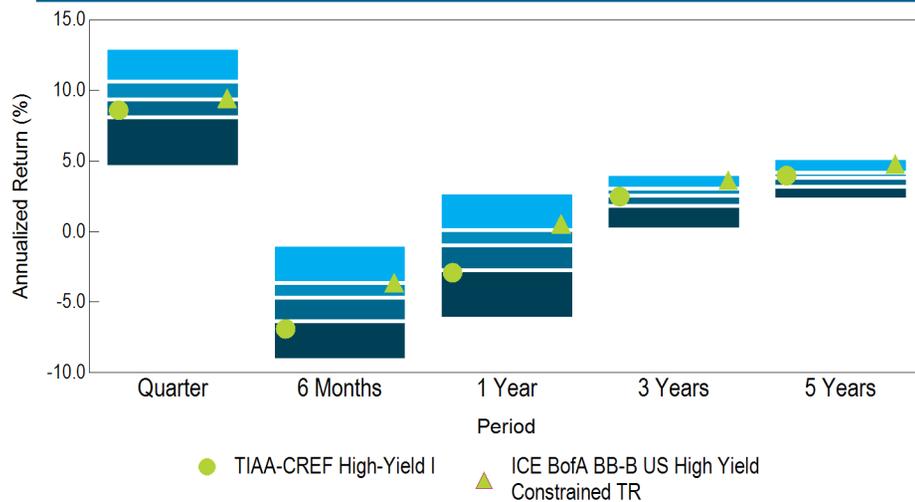
Portfolio Fund Information as of June 30, 2020

Ticker	TIHYX
Morningstar Category	High Yield Bond
Average Market Cap (\$mm)	240.20
Net Assets (\$mm)	2,367.02
% Assets in Top 10 Holdings	8.55
Total Number of Holdings	446
Manager Name	Kevin R. Lorenz
Manager Tenure	14
Expense Ratio	0.36%
Closed to New Investors	No

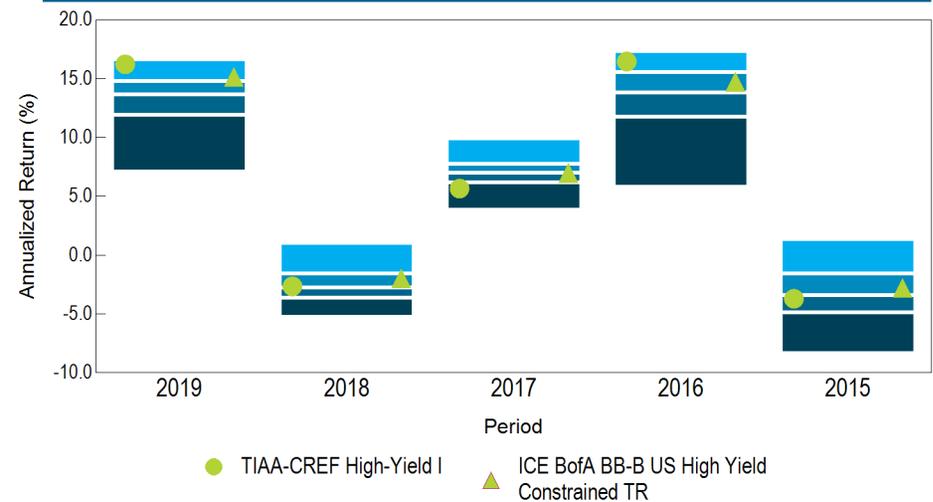
Return Summary



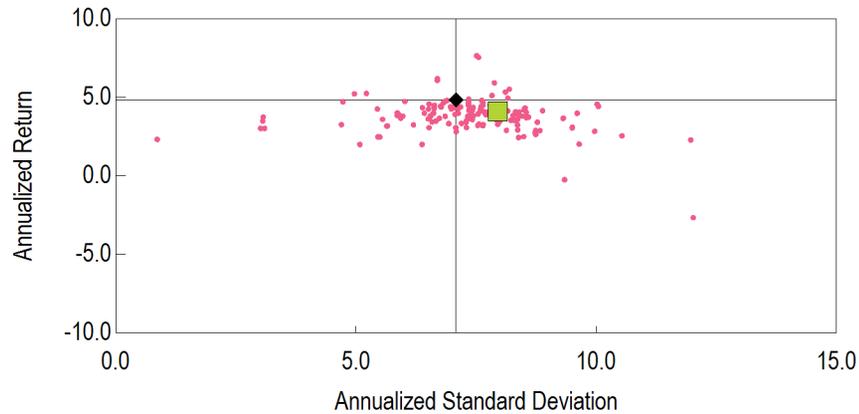
High Yield Bond MStar MF Return Comparison



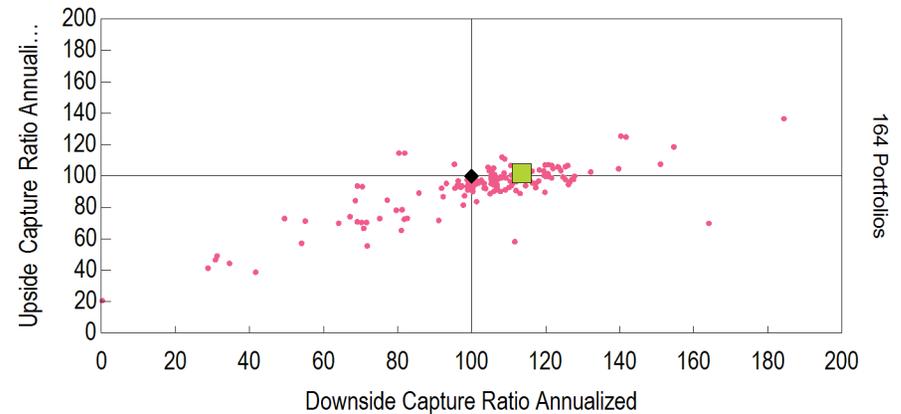
High Yield Bond MStar MF Return Comparison



Annualized Return vs. Annualized Standard Deviation
5 Years 6 Months Ending June 30, 2020



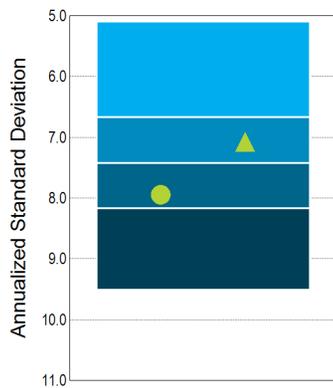
Upside Capture Ratio Annualized vs. Downside Capture Ratio Annualized
5 Years 6 Months Ending June 30, 2020



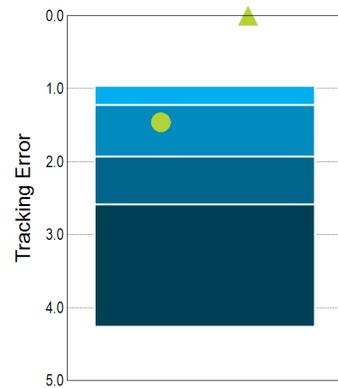
- TIAA-CREF High-Yield I
- ◆ ICE BofA BB-B US High Yield Constrained TR
- High Yield Bond MStar MF

- TIAA-CREF High-Yield I
- ◆ ICE BofA BB-B US High Yield Constrained TR
- High Yield Bond MStar MF

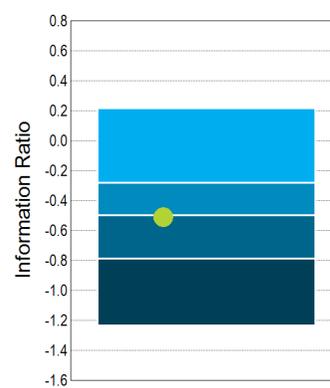
Annualized Standard Deviation



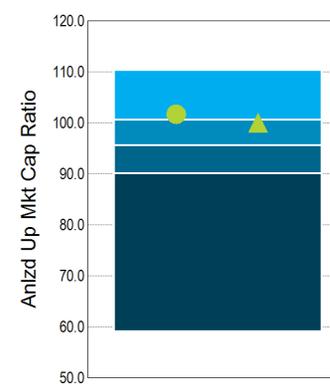
Tracking Error



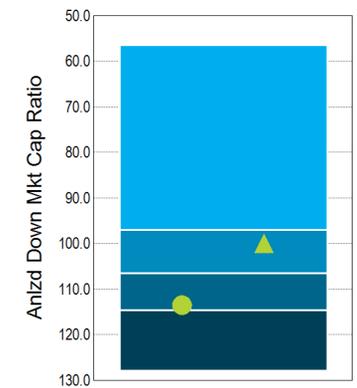
Information Ratio



Anlzd Up Mkt Cap Ratio



Anlzd Down Mkt Cap Ratio



● TIAA-CREF High-Yield I

▲ ICE BofA BB-B US High Yield Constrained TR

■ 5th to 25th Percentile

■ 25th to Median

■ Median to 75th Percentile

■ 75th to 95th Percentile

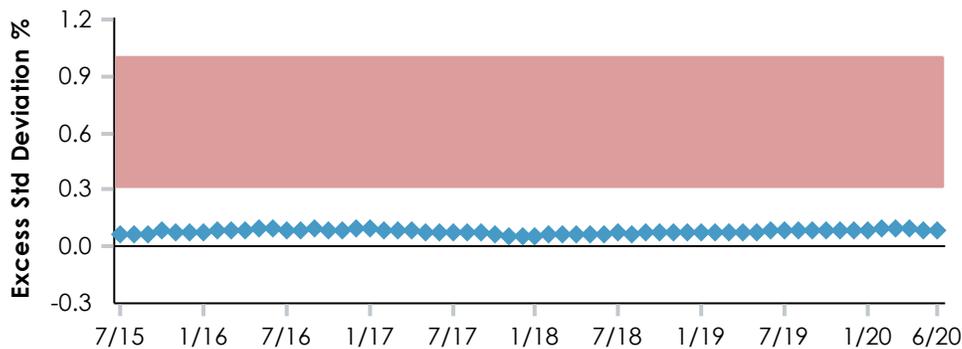
Fund Characteristics as of June 30, 2020		Top Holdings as of June 30, 2020		Fixed Income Sectors as of June 30, 2020	
Sharpe Ratio (3 Year)	0.09	PACIFIC GAS AND ELECTRIC COMPANY 3.5%	1.14%	GOVERNMENT	0.32%
Average Duration	3.50	CCO HOLDINGS, LLC/ CCO HOLDINGS CAPITAL CORP. 5.88%	1.03%	MUNICIPAL	0.00%
Average Coupon	5.87%	HCA INC. 5.38%	1.03%	CORPORATE	97.73%
Average Effective Maturity	5.48	CSC HOLDINGS, LLC 7.5%	0.92%	SECURITIZED	0.00%
R-Squared (3 Year)	0.98	NOVA CHEMICALS CORPORATION 4.88%	0.87%	CASH & EQUIVALENTS	1.95%
Alpha (3 Year)	-0.12%	THE GOODYEAR TIRE & RUBBER COMPANY 9.5%	0.77%	DERIVATIVE	0.00%
Beta (3 Year)	1.11	PRIME SECURITIES SERVICES BORROWER, LLC AND PRIME FINANCE, INC. 5.75%	0.75%		
		FORD MOTOR CREDIT COMPANY LLC 4.06%	0.70%		
		KRAFT HEINZ FOODS COMPANY 3.88%	0.69%		
		TENET HEALTHCARE CORPORATION 4.62%	0.65%		

Credit Quality as of March 31, 2020		Maturities as of June 30, 2020		Top Countries as of June 30, 2020	
AAA	10.42%	1 to 3 Years	9.56%	United States	89.99%
AA	0.00%	3 to 5 Years	30.25%	Canada	4.32%
A	0.00%	5 to 7 Years	35.57%	France	1.22%
BBB	0.07%	7 to 10 Years	17.97%	Netherlands	0.74%
BB	39.46%	10 to 15 Years	2.72%	United Kingdom	0.70%
B	43.43%	15 to 20 Years	0.37%	Germany	0.67%
Below B	4.53%	20 to 30 Years	1.14%	Zambia	0.64%
Not Rated	2.09%	Greater than 30 Years	1.17%	Ireland	0.56%
				Sweden	0.44%
				Italy	0.38%

Sensitivity Analyses: Passive Funds

TIAA-CREF Equity Index I vs. Russell 3000 Index

Short-term (Rolling 12 Months Tracking Error)

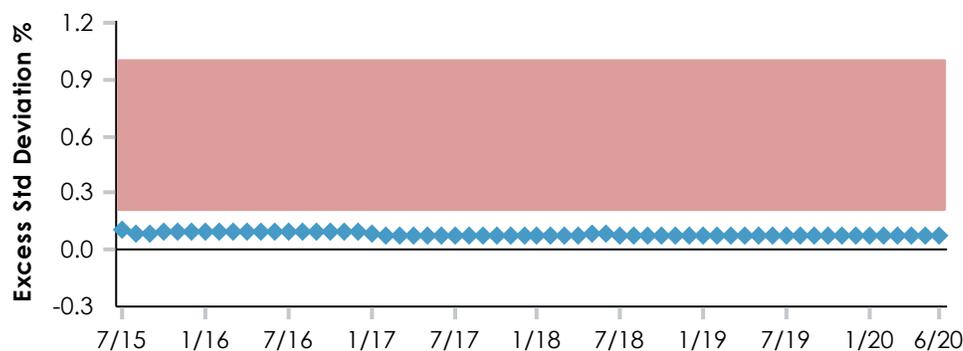


Short-Term Performance

Positive

Probationary Performance 0.30%

Medium-term (Rolling 36 Months Tracking Error)

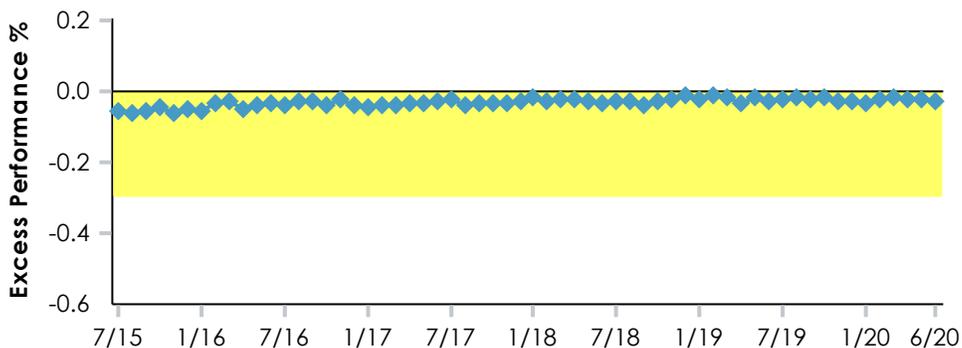


Medium-Term Performance

Positive

Probationary Performance 0.25%

Long-term (Rolling 60 Months Excess Performance)



Long-Term Performance

Acceptable

Probationary Performance -0.30%

Annualized Performance Results (Net of management fees)

	Qtr	1 Year	3 Years	5 Years	Inception (12/2011)
TIAA-CREF Equity Index I	22.0 (42)	6.5 (23)	10.0 (20)	10.0 (12)	13.2 (14)
Russell 3000 Index	22.0 (40)	6.5 (22)	10.0 (19)	10.0 (11)	13.2 (13)
IM U.S. Multi-Cap Core Equity (MF) Median	21.5	3.1	7.3	7.4	11.4

Monitoring Status

Acceptable

Description:

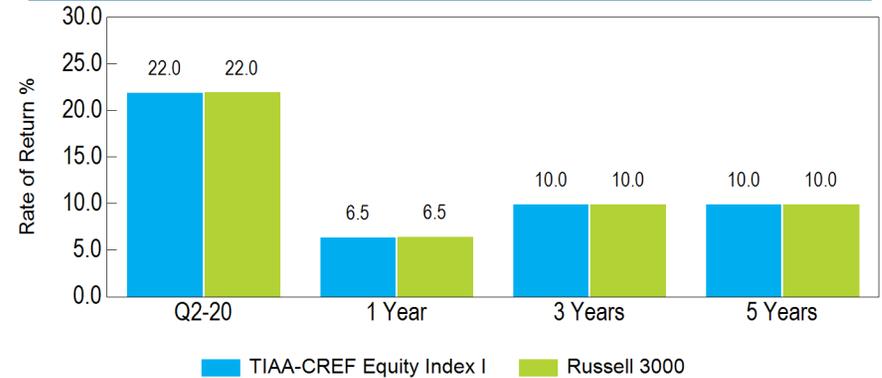
The investment seeks a favorable long-term total return, mainly through capital appreciation, by investing primarily in a portfolio of equity securities selected to track the overall U.S. equity markets based on a market index.

Under normal circumstances, the fund invests at least 80% of its assets in equity securities of its benchmark index, the Russell 3000® Index. It buys most, but not necessarily all, of the stocks in its benchmark index, and the advisor will attempt to closely match the overall investment characteristics of its benchmark index.

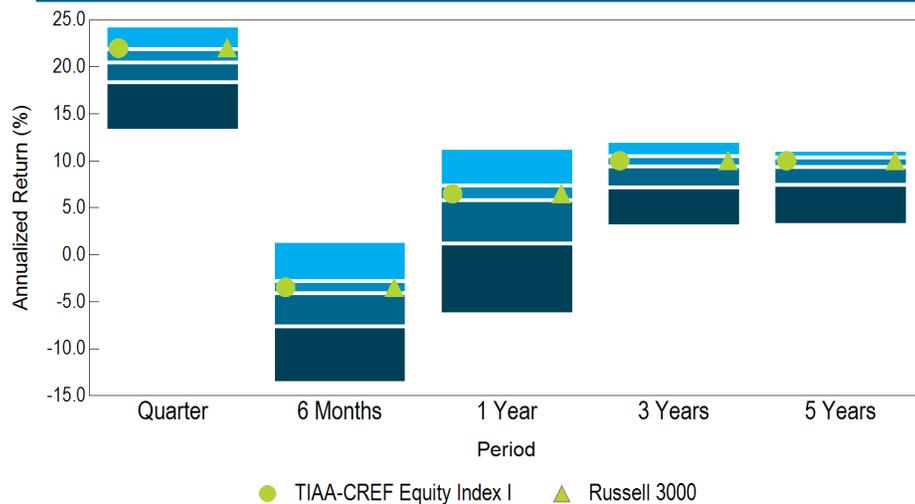
Portfolio Fund Information as of June 30, 2020

Ticker	TIEIX
Morningstar Category	Large Blend
Average Market Cap (\$mm)	82,355.29
Net Assets (\$mm)	9,658.50
% Assets in Top 10 Holdings	22.45
Total Number of Holdings	2,929
Manager Name	Philip James(Jim) Campagna
Manager Tenure	15
Expense Ratio	0.05%
Closed to New Investors	No

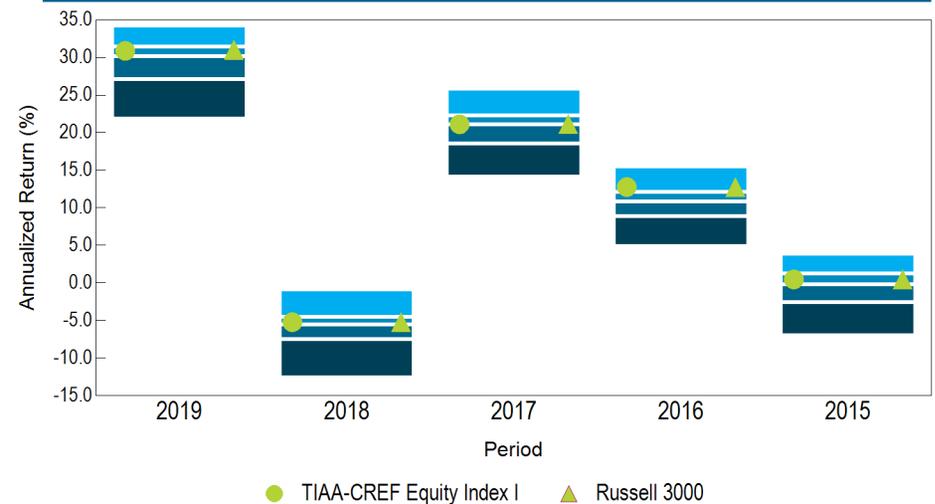
Return Summary



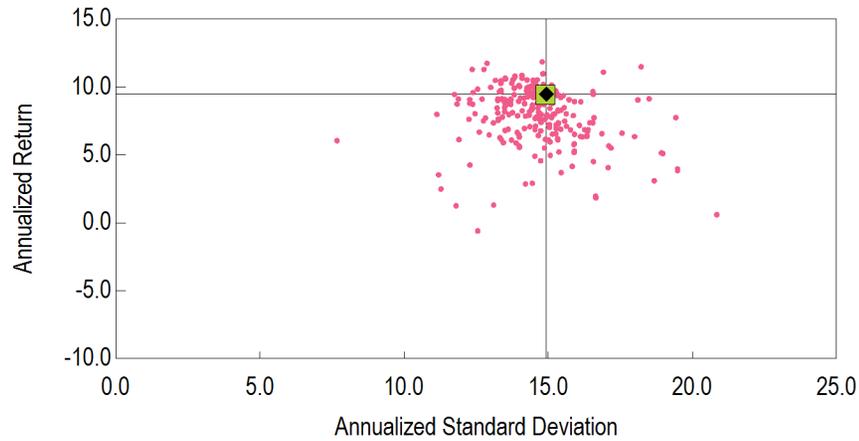
Large Blend MStar MF Return Comparison



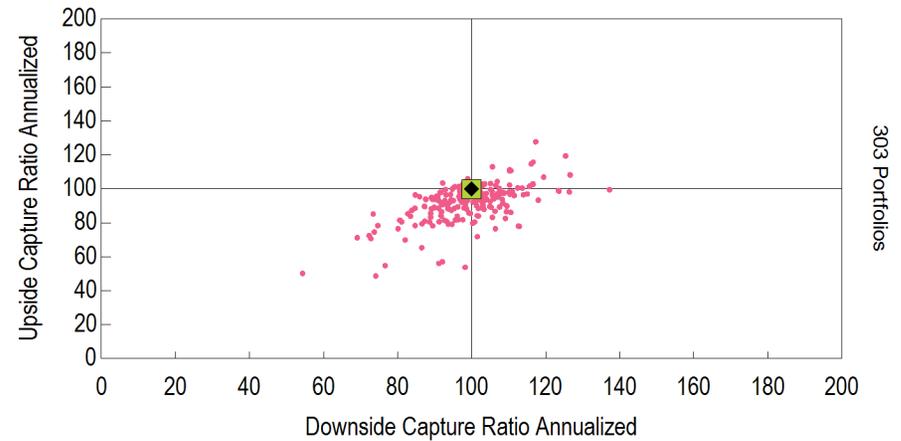
Large Blend MStar MF Return Comparison



Annualized Return vs. Annualized Standard Deviation
5 Years 6 Months Ending June 30, 2020



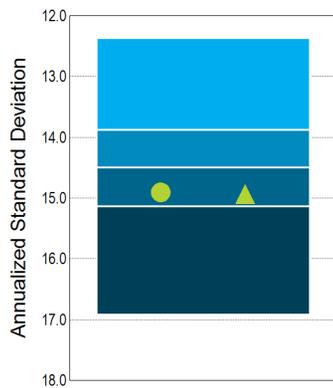
Upside Capture Ratio Annualized vs. Downside Capture Ratio Annualized
5 Years 6 Months Ending June 30, 2020



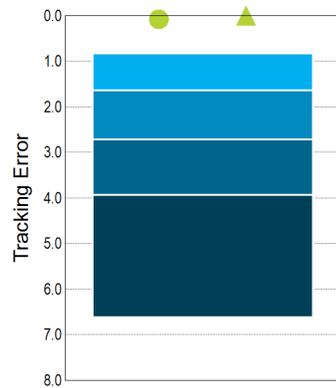
■ TIAA-CREF Equity Index I ◆ Russell 3000 ● Large Blend MStar MF

■ TIAA-CREF Equity Index I ◆ Russell 3000 ● Large Blend MStar MF

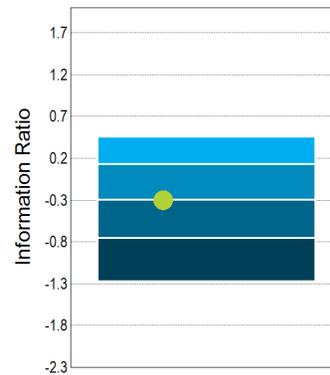
Annualized Standard Deviation



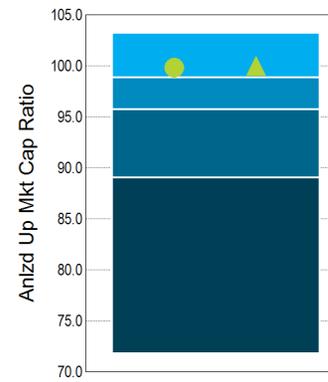
Tracking Error



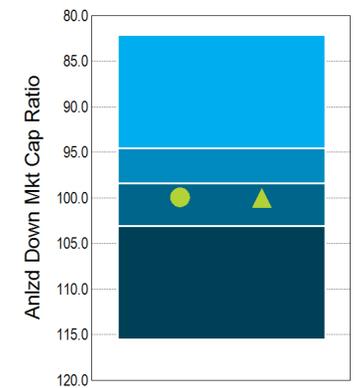
Information Ratio



Anlzd Up Mkt Cap Ratio



Anlzd Down Mkt Cap Ratio



● TIAA-CREF Equity Index I ▲ Russell 3000 ■ 5th to 25th Percentile ■ 25th to Median ■ Median to 75th Percentile ■ 75th to 95th Percentile

Fund Characteristics as of June 30, 2020

Sharpe Ratio (3 Year)	0.47
Average Market Cap (\$mm)	82,355.29
Price/Earnings	23.20
Price/Book	2.72
Price/Sales	1.93
Price/Cash Flow	10.80
Dividend Yield	2.01
Number of Equity Holdings	2,917
R-Squared (3 Year)	1.00
Alpha (3 Year)	0.00%

Sector Allocation as of June 30, 2020

BASIC MATERIALS	2.30%
COMMUNICATION SERVICES	10.01%
CONSUMER CYCLICAL	11.09%
CONSUMER DEFENSIVE	6.71%
ENERGY	2.64%
FINANCIAL SERVICES	13.05%
HEALTHCARE	15.00%
INDUSTRIALS	8.87%
REAL ESTATE	3.84%
TECHNOLOGY	23.57%
UTILITIES	2.93%

Top Holdings as of June 30, 2020

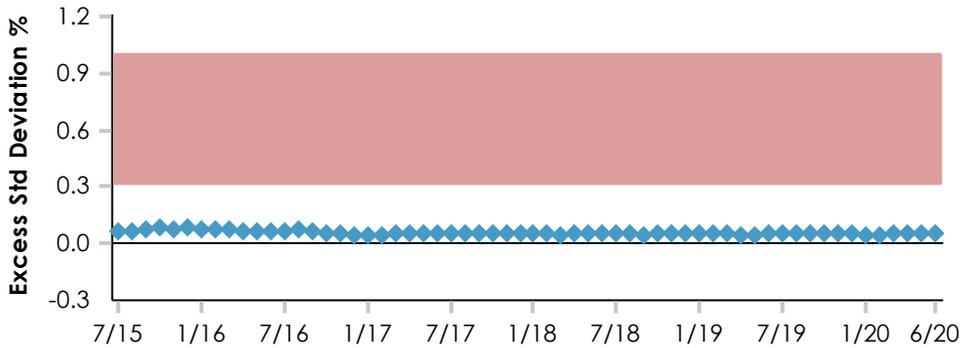
MICROSOFT CORP	4.95%
APPLE INC	4.84%
AMAZON.COM INC	3.80%
FACEBOOK INC A	1.77%
ALPHABET INC A	1.38%
ALPHABET INC CLASS C	1.36%
JOHNSON & JOHNSON	1.21%
BERKSHIRE HATHAWAY INC CLASS B	1.13%
VISA INC CLASS A	1.06%
PROCTER & GAMBLE CO	0.95%

Top Countries as of June 30, 2020

United States	99.02%
United Kingdom	0.55%
Switzerland	0.23%
China	0.13%
Brazil	0.02%
India	0.02%
Puerto Rico	0.02%
Canada	0.01%

TIAA-CREF S&P 500 Index I vs. S&P 500 Index

Short-term (Rolling 12 Months Tracking Error)

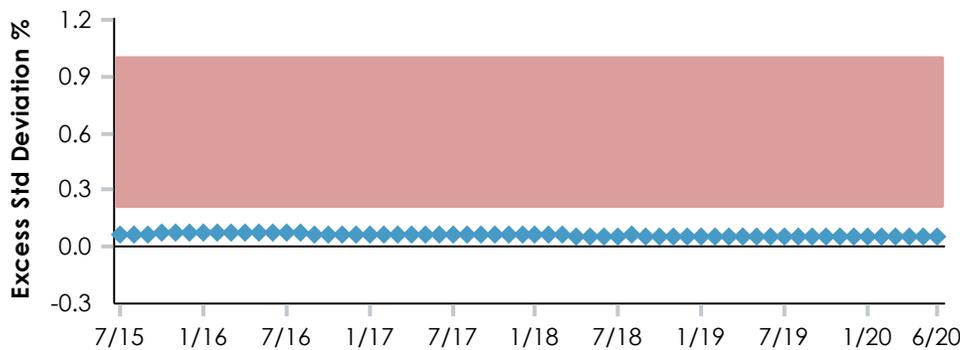


Short-Term Performance

Positive

Probationary Performance 0.30%

Medium-term (Rolling 36 Months Tracking Error)

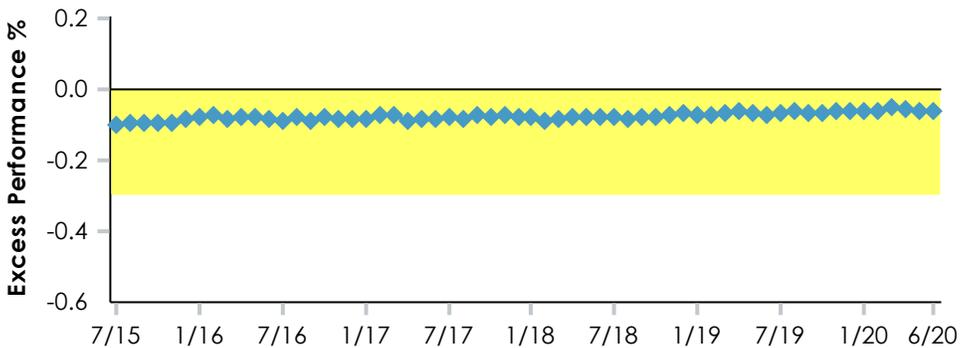


Medium-Term Performance

Positive

Probationary Performance 0.25%

Long-term (Rolling 60 Months Excess Performance)



Long-Term Performance

Acceptable

Probationary Performance -0.30%

Annualized Performance Results (Net of management fees)

	Qtr	1 Year	3 Years	5 Years	Inception (12/2011)
TIAA-CREF S&P 500 Index I	20.5 (20)	7.5 (13)	10.7 (17)	10.7 (13)	13.5 (12)
S&P 500 Index	20.5 (12)	7.5 (7)	10.7 (4)	10.7 (3)	13.5 (1)
IM S&P 500 Index (MF) Median	20.4	7.2	10.4	10.3	13.0

Monitoring Status

Acceptable

Description:

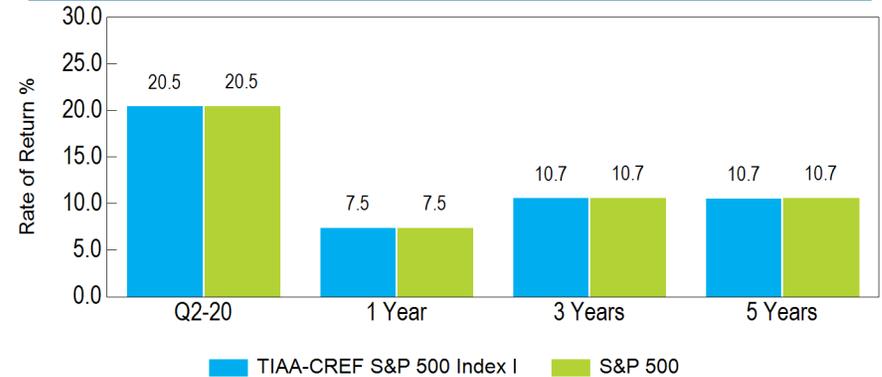
The investment seeks a favorable long-term total return, mainly through capital appreciation, by investing primarily in a portfolio of equity securities of large domestic companies selected to track U.S. equity markets based on a market index.

The fund invests at least 80% of its assets in securities of its benchmark index, the S&P 500® Index. It buys most, but not necessarily all, of the stocks in its benchmark index, and the advisor will attempt to closely match the overall investment characteristics of the fund's benchmark index.

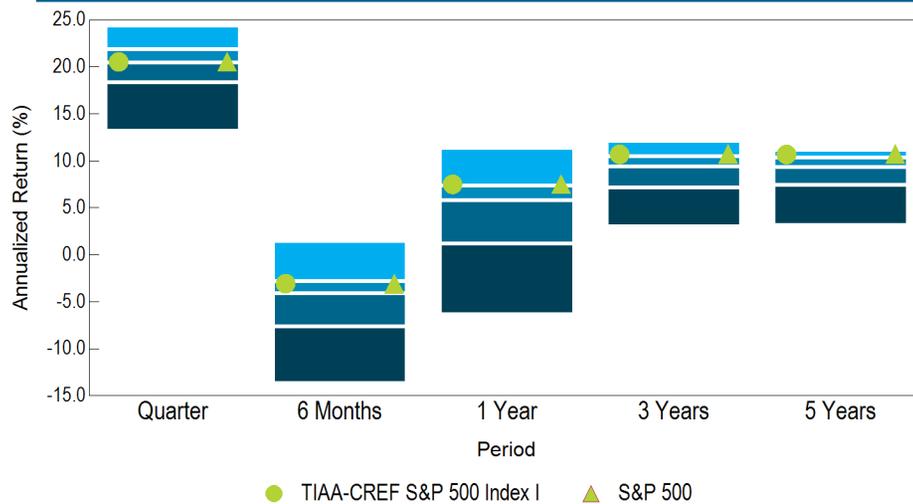
Portfolio Fund Information as of June 30, 2020

Ticker	TISPX
Morningstar Category	Large Blend
Average Market Cap (\$mm)	138,819.37
Net Assets (\$mm)	4,269.23
% Assets in Top 10 Holdings	26.83
Total Number of Holdings	509
Manager Name	Philip James(Jim) Campagna
Manager Tenure	15
Expense Ratio	0.05%
Closed to New Investors	No

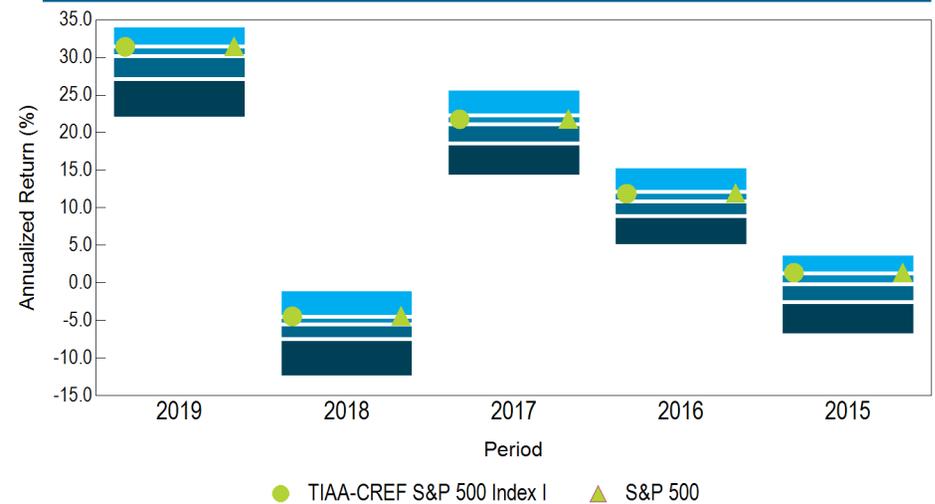
Return Summary



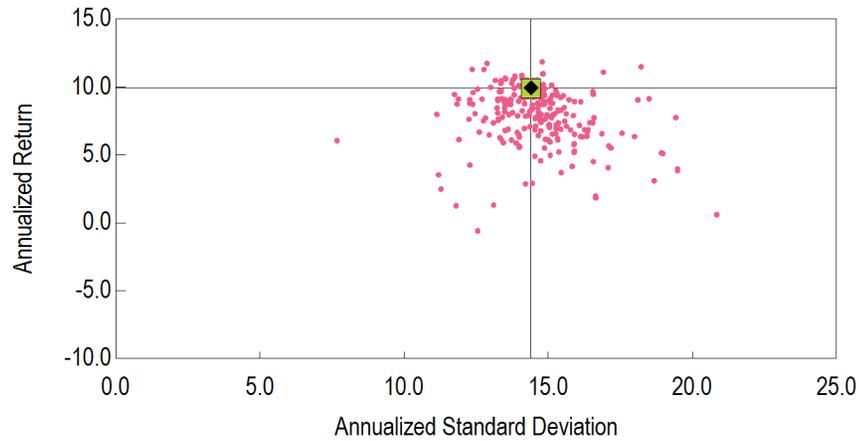
Large Blend MStar MF Return Comparison



Large Blend MStar MF Return Comparison

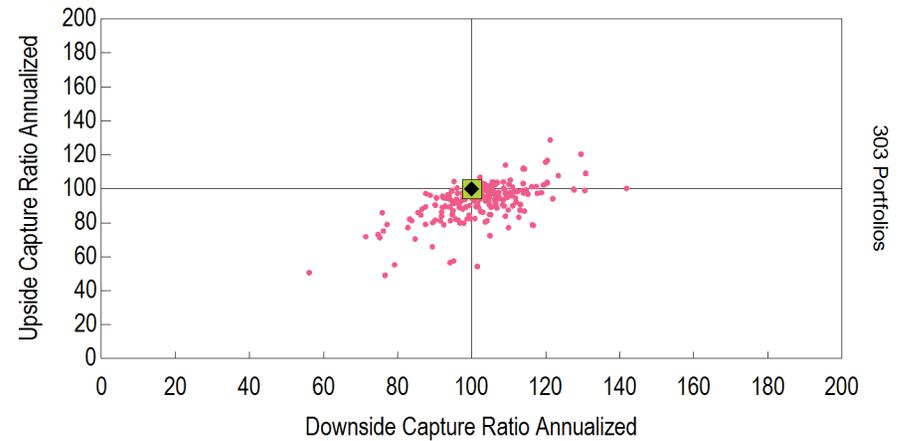


Annualized Return vs. Annualized Standard Deviation
5 Years 6 Months Ending June 30, 2020



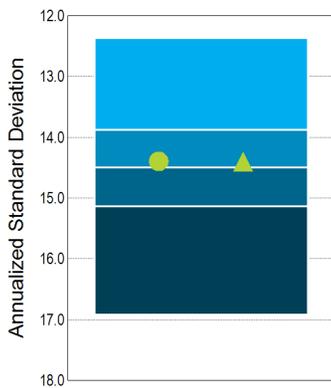
■ TIAA-CREF S&P 500 Index I ◆ S&P 500 ● Large Blend MStar MF

Upside Capture Ratio Annualized vs. Downside Capture Ratio Annualized
5 Years 6 Months Ending June 30, 2020



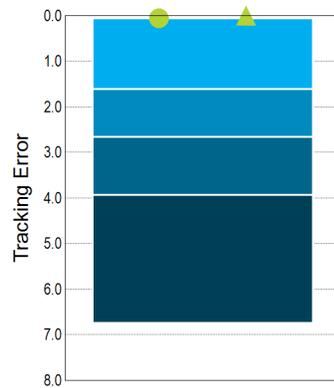
■ TIAA-CREF S&P 500 Index I ◆ S&P 500 ● Large Blend MStar MF

Annualized Standard Deviation



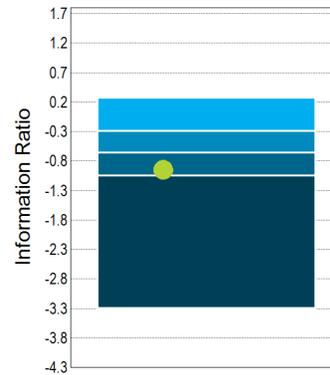
● TIAA-CREF S&P 500 Index I

Tracking Error



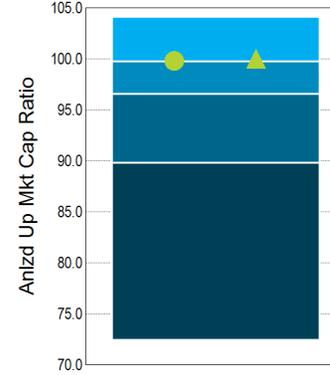
▲ S&P 500

Information Ratio



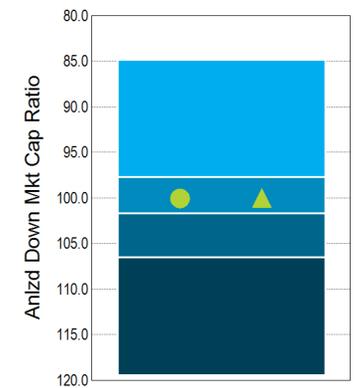
■ 5th to 25th Percentile

Anlzd Up Mkt Cap Ratio



■ Median to 75th Percentile

Anlzd Down Mkt Cap Ratio



■ 75th to 95th Percentile

Fund Characteristics as of June 30, 2020

Sharpe Ratio (3 Year)	0.53
Average Market Cap (\$mm)	138,819.37
Price/Earnings	23.17
Price/Book	2.92
Price/Sales	2.12
Price/Cash Flow	11.55
Dividend Yield	2.07
Number of Equity Holdings	506
R-Squared (3 Year)	1.00
Alpha (3 Year)	0.00%

Sector Allocation as of June 30, 2020

BASIC MATERIALS	2.20%
COMMUNICATION SERVICES	10.79%
CONSUMER CYCLICAL	10.58%
CONSUMER DEFENSIVE	7.37%
ENERGY	2.82%
FINANCIAL SERVICES	13.21%
HEALTHCARE	14.74%
INDUSTRIALS	8.39%
REAL ESTATE	2.84%
TECHNOLOGY	23.98%
UTILITIES	3.06%

Top Holdings as of June 30, 2020

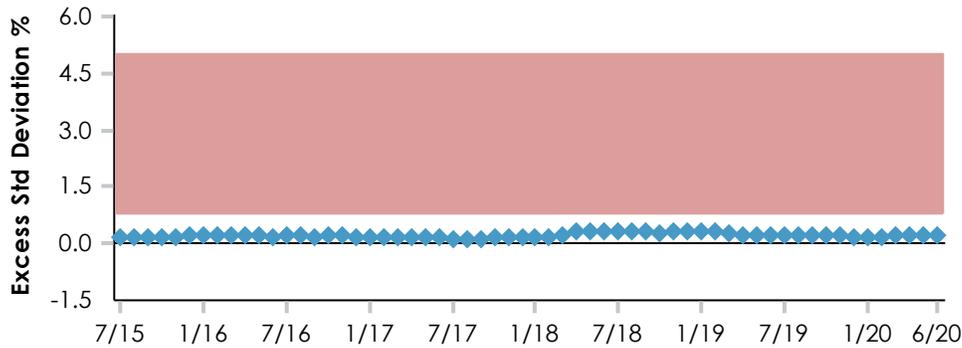
MICROSOFT CORP	5.99%
APPLE INC	5.77%
AMAZON.COM INC	4.49%
FACEBOOK INC A	2.12%
ALPHABET INC A	1.65%
ALPHABET INC CLASS C	1.61%
JOHNSON & JOHNSON	1.44%
BERKSHIRE HATHAWAY INC CLASS B	1.35%
VISA INC CLASS A	1.27%
PROCTER & GAMBLE CO	1.15%

Top Countries as of June 30, 2020

United States	99.04%
United Kingdom	0.63%
Switzerland	0.28%
Singapore	0.04%
Russia	0.01%

TIAA-CREF International Equity Index I vs. MSCI EAFE (Net) Index

Short-term (Rolling 12 Months Tracking Error)

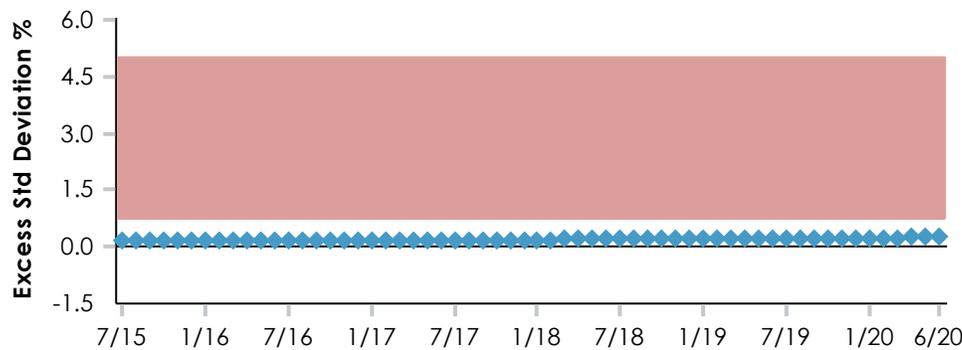


Short-Term Performance

Positive

Probationary Performance 0.75%

Medium-term (Rolling 36 Months Tracking Error)

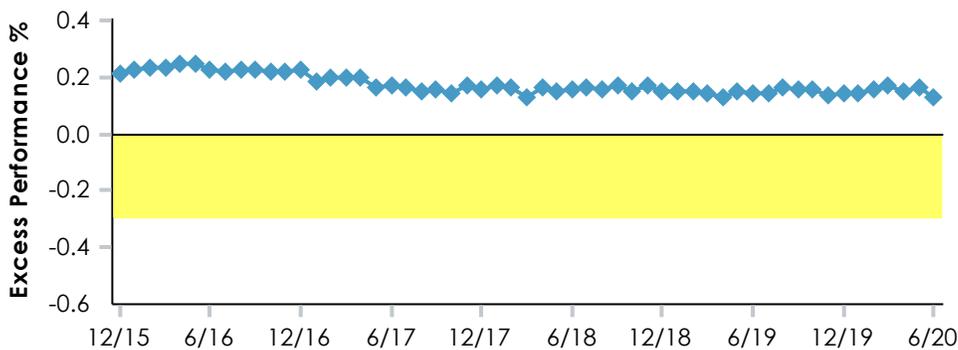


Medium-Term Performance

Positive

Probationary Performance 0.70%

Long-term (Rolling 60 Months Excess Performance)



Long-Term Performance

Positive

Probationary Performance -0.30%

Annualized Performance Results (Net of management fees)

	Qtr	1 Year	3 Years	5 Years	Inception (12/2011)
TIAA-CREF International Equity Index I (actual)	14.8 (73)	-5.0 (50)	0.9 (30)	2.2 (31)	5.7 (26)
MSCI EAFE (Net) Index	14.9 (72)	-5.1 (51)	0.8 (34)	2.1 (34)	5.5 (32)
IM International Multi-Cap Core Equity (MF) Median	16.2	-5.1	0.1	1.5	5.0

*Fund returns have been adjusted to remove Fair Value and F/X impacts.

Monitoring Status

Positive

TIAA-CREF International Equity Index | As of June 30, 2020

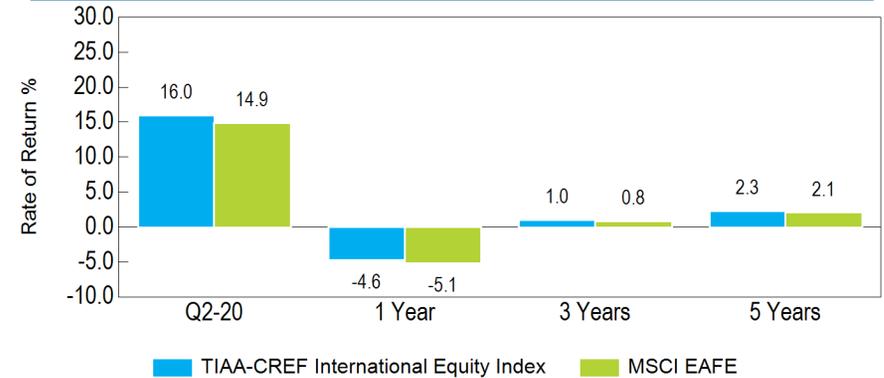
Description:

The investment seeks a favorable long-term total return, mainly through capital appreciation, by investing primarily in a portfolio of foreign equity investments based on a market index. Under normal circumstances, the fund invests at least 80% of its assets in securities of its benchmark index, the MSCI EAFE Index. It buys most, but not necessarily all, of the stocks included in its benchmark index, and the advisor will attempt to closely match the overall investment characteristics of the fund's benchmark index.

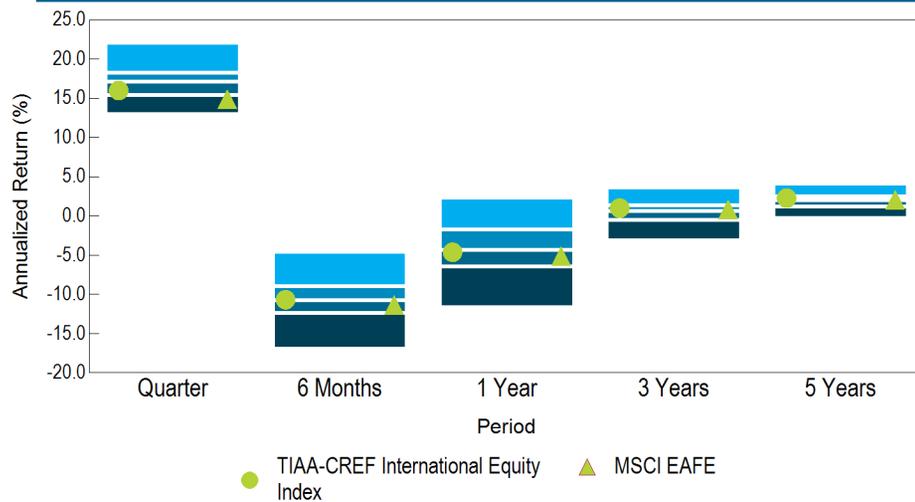
Portfolio Fund Information as of June 30, 2020

Ticker	TCIEX
Morningstar Category	Foreign Large Blend
Average Market Cap (\$mm)	34,806.67
Net Assets (\$mm)	7,721.93
% Assets in Top 10 Holdings	12.67
Total Number of Holdings	923
Manager Name	Philip James(Jim) Campagna
Manager Tenure	15
Expense Ratio	0.06%
Closed to New Investors	No

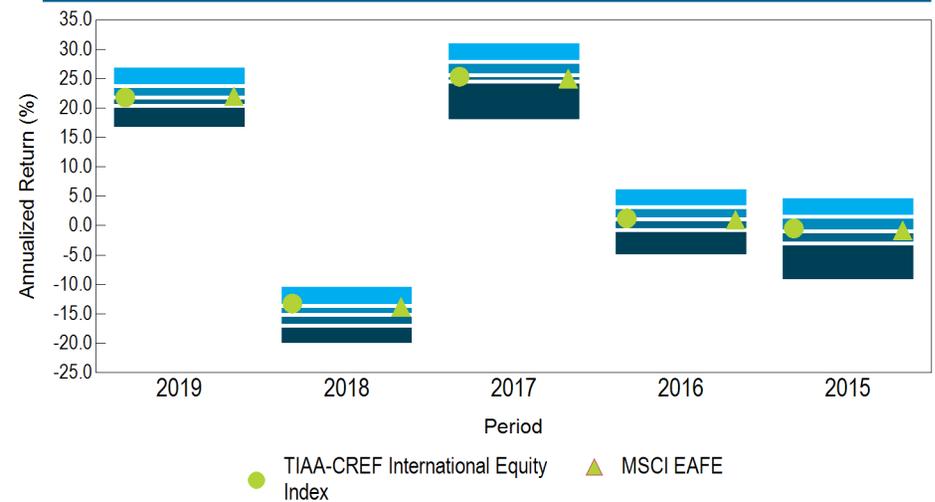
Return Summary



Foreign Large Blend MStar MF Return Comparison

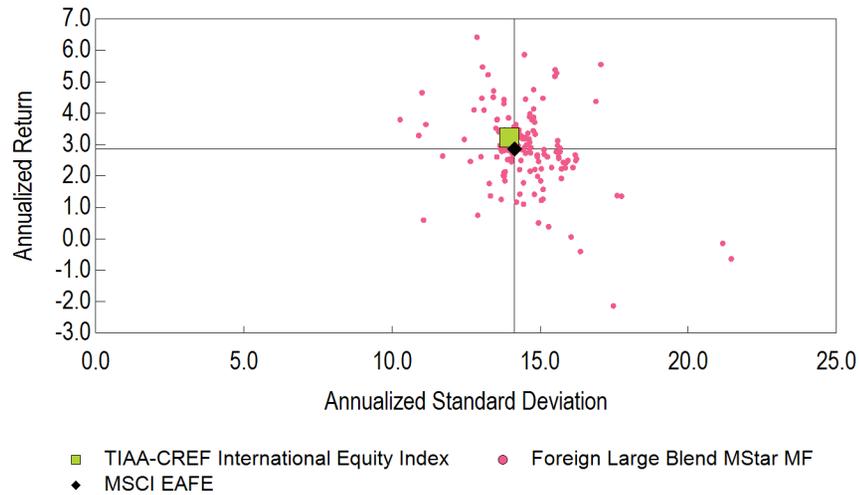


Foreign Large Blend MStar MF Return Comparison

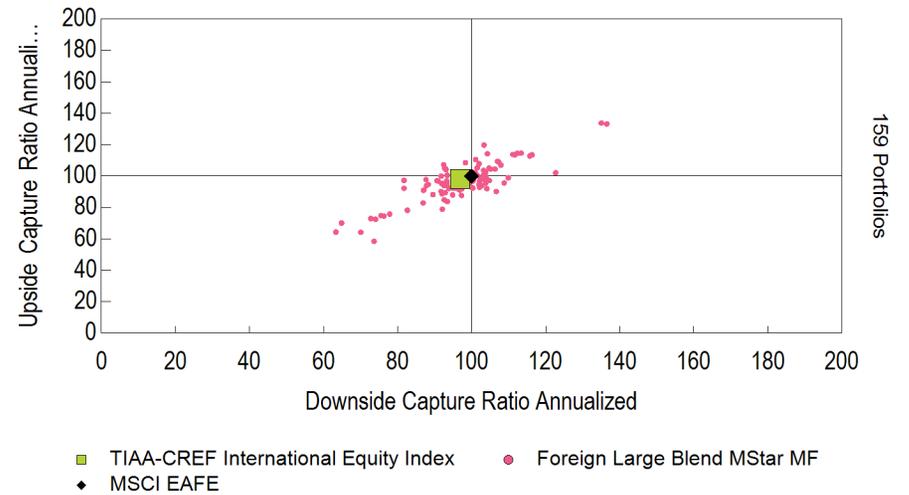


TIAA-CREF International Equity Index | As of June 30, 2020

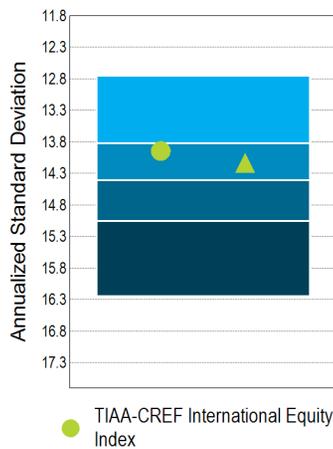
Annualized Return vs. Annualized Standard Deviation
5 Years 6 Months Ending June 30, 2020



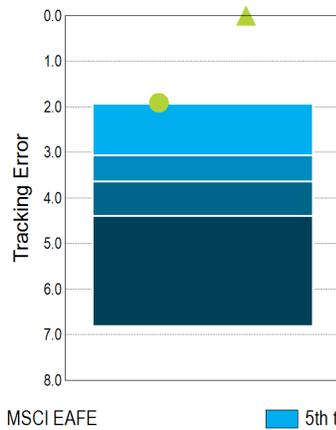
Upside Capture Ratio Annualized vs. Downside Capture Ratio Annualized
5 Years 6 Months Ending June 30, 2020



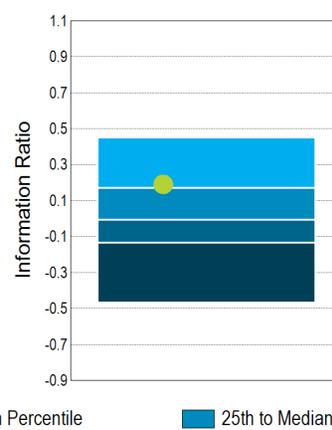
Annualized Standard Deviation



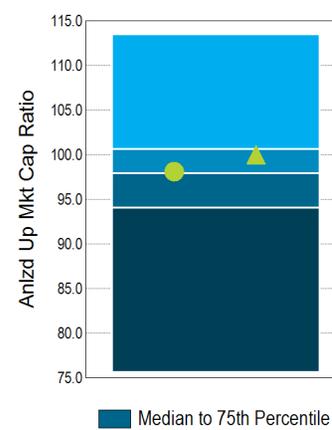
Tracking Error



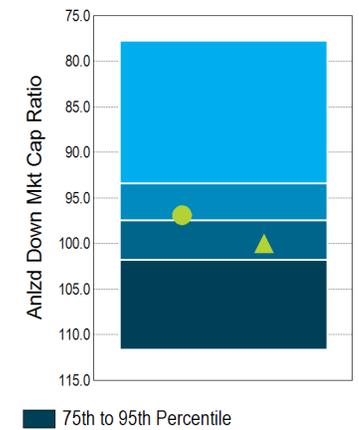
Information Ratio



Anlzd Up Mkt Cap Ratio



Anlzd Down Mkt Cap Ratio



TIAA-CREF International Equity Index | As of June 30, 2020

Fund Characteristics as of June 30, 2020

Sharpe Ratio (3 Year)	-0.04
Average Market Cap (\$mm)	34,806.67
Price/Earnings	18.88
Price/Book	1.39
Price/Sales	1.06
Price/Cash Flow	6.23
Dividend Yield	3.81
Number of Equity Holdings	908
R-Squared (3 Year)	0.99
Alpha (3 Year)	0.02%

Sector Allocation as of June 30, 2020

BASIC MATERIALS	7.27%
COMMUNICATION SERVICES	6.43%
CONSUMER CYCLICAL	9.71%
CONSUMER DEFENSIVE	11.92%
ENERGY	3.67%
FINANCIAL SERVICES	15.89%
HEALTHCARE	14.97%
INDUSTRIALS	14.34%
REAL ESTATE	3.15%
TECHNOLOGY	8.71%
UTILITIES	3.95%

Top Holdings as of June 30, 2020

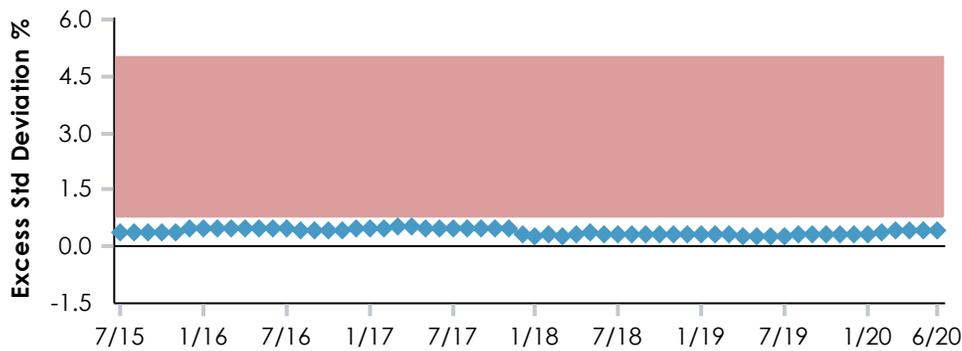
NESTLE SA	2.48%
ROCHE HOLDING AG DIVIDEND RIGHT CERT.	1.83%
NOVARTIS AG	1.41%
ASML HOLDING NV	1.17%
SAP SE	1.10%
ASTRAZENECA PLC	1.03%
TOYOTA MOTOR CORP	1.00%
LVMH MOET HENNESSY LOUIS VUITTON SE	0.92%
NOVO NORDISK A/S B	0.87%
SANOFI SA	0.87%

Top Countries as of June 30, 2020

Japan	25.35%
United Kingdom	14.39%
Switzerland	10.45%
France	10.36%
Germany	9.15%
Australia	6.74%
Netherlands	4.51%
Hong Kong	2.91%
Sweden	2.86%
Spain	2.39%

TIAA-CREF Emerging Markets Equity Index vs. MSCI Emerging Markets (Net)

Short-term (Rolling 12 Months Tracking Error)

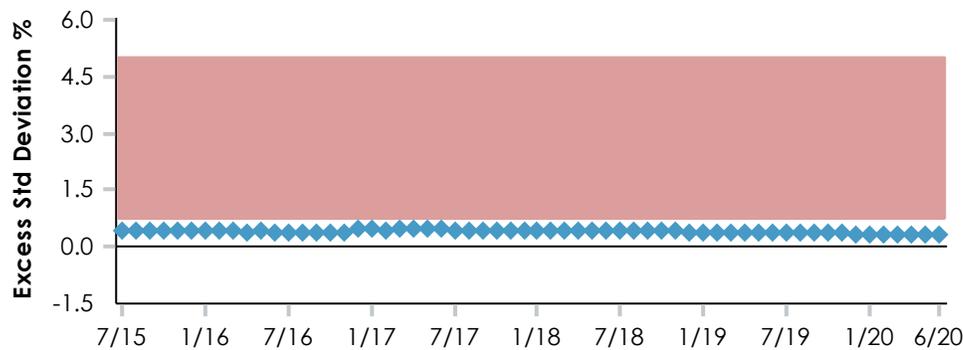


Short-Term Performance

Positive

Probationary Performance 0.75%

Medium-term (Rolling 36 Months Tracking Error)

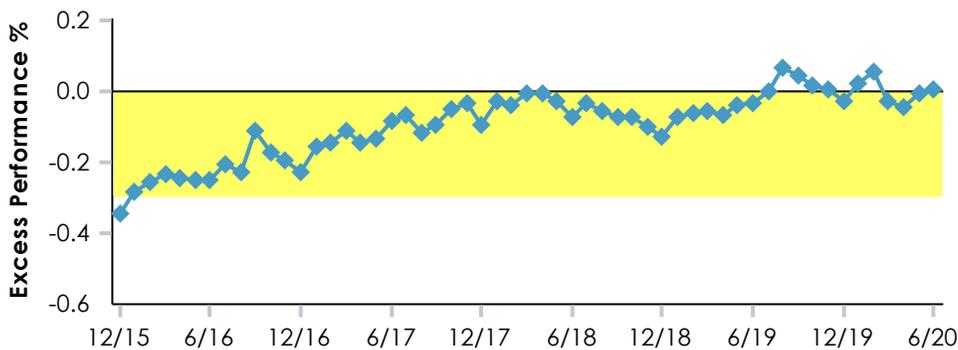


Medium-Term Performance

Positive

Probationary Performance 0.70%

Long-term (Rolling 60 Months Excess Performance)



Long-Term Performance

Positive

Probationary Performance -0.30%

Annualized Performance Results (Net of management fees)

	Qtr	1 Year	3 Years	5 Years	Inception (12/2011)
TIAA-CREF Emerging Markets Equity Index (actual)	18.3 (73)	-3.3 (52)	1.8 (45)	2.9 (46)	3.1 (47)
MSCI Emerging Markets (Net)	18.1 (75)	-3.4 (53)	1.9 (44)	2.9 (46)	3.3 (43)
IM Emerging Markets Equity (MF) Median	20.3	-3.0	1.2	2.6	3.0

*Fund returns have been adjusted to remove Fair Value and F/X impacts.

Monitoring Status

Positive

TIAA-CREF Emerging Markets Equity Index | As of June 30, 2020

Description:

The investment seeks a favorable long-term total return, mainly through capital appreciation, by investing primarily in a portfolio of emerging market equity investments based on a market index. Under normal circumstances, the fund invests at least 80% of its assets in equity securities that comprise its benchmark index, the MSCI Emerging Markets® Index ("MSCI EM Index"), or in instruments with economic characteristics similar to all or a portion of the MSCI EM Index. It buys most, but not necessarily all, of the stocks in its benchmark index, and the advisor will attempt to closely match the overall investment attributes of the fund's benchmark index.

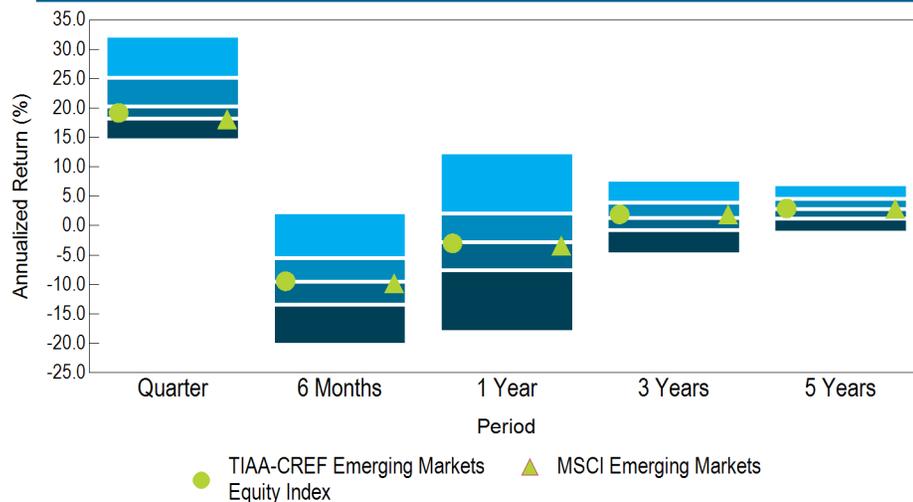
Portfolio Fund Information as of June 30, 2020

Ticker	TEQLX
Morningstar Category	Diversified Emerging Mkts
Average Market Cap (\$mm)	39,036.03
Net Assets (\$mm)	851.82
% Assets in Top 10 Holdings	28.54
Total Number of Holdings	1,395
Manager Name	Philip James(Jim) Campagna
Manager Tenure	10
Expense Ratio	0.20%
Closed to New Investors	No

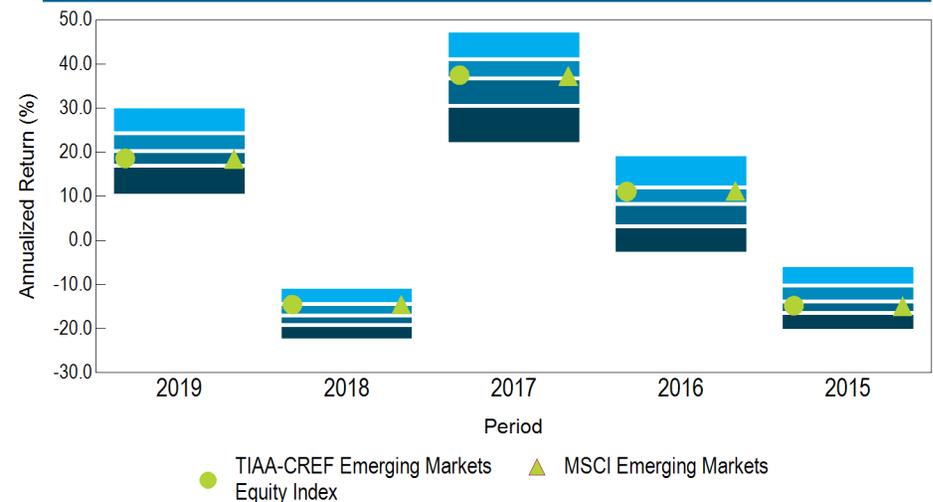
Return Summary



Diversified Emerging Mkts MStar MF Return Comparison

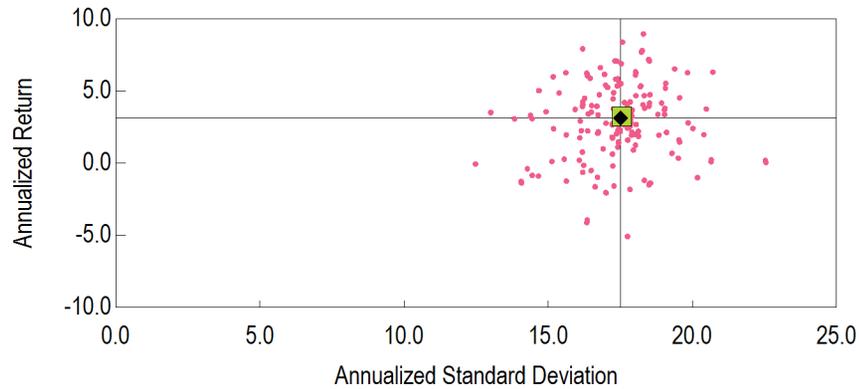


Diversified Emerging Mkts MStar MF Return Comparison

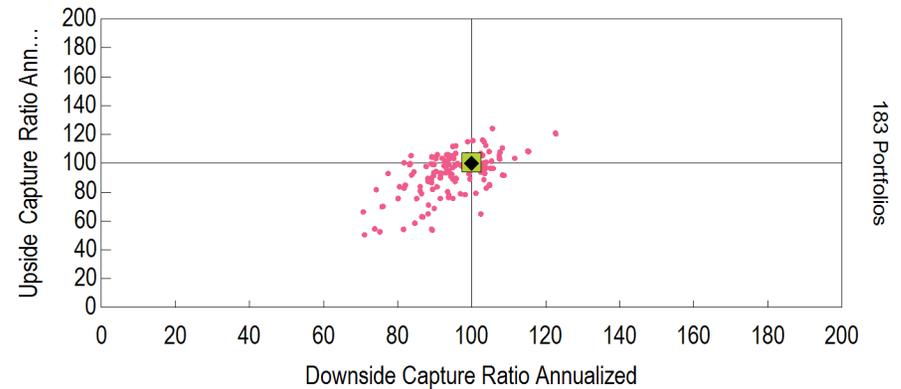


TIAA-CREF Emerging Markets Equity Index | As of June 30, 2020

Annualized Return vs. Annualized Standard Deviation
5 Years 6 Months Ending June 30, 2020



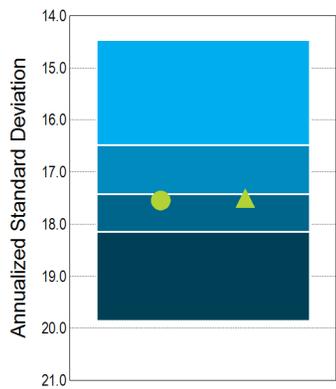
Upside Capture Ratio Annualized vs. Downside Capture Ratio Annualized
5 Years 6 Months Ending June 30, 2020



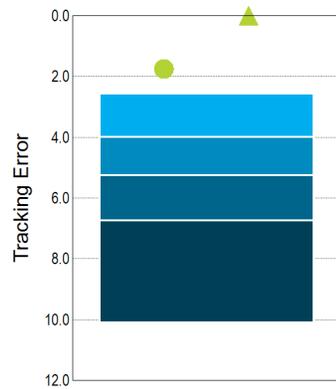
- TIAA-CREF Emerging Markets Equity Index
- ◆ MSCI Emerging Markets
- Diversified Emerging Mkts MStar MF

- TIAA-CREF Emerging Markets Equity Index
- ◆ MSCI Emerging Markets
- Diversified Emerging Mkts MStar MF

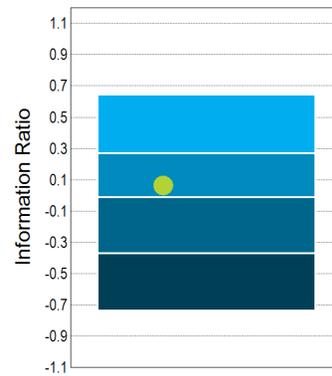
Annualized Standard Deviation



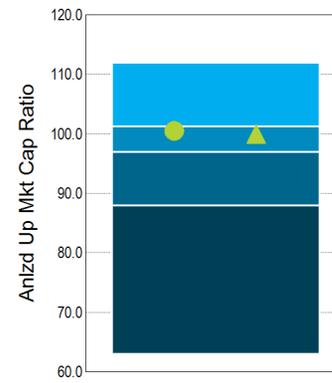
Tracking Error



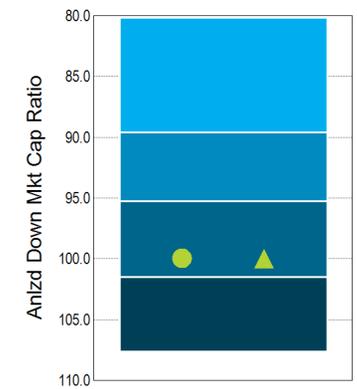
Information Ratio



Anlzd Up Mkt Cap Ratio



Anlzd Down Mkt Cap Ratio



- TIAA-CREF Emerging Markets Equity Index
- ▲ MSCI Emerging Markets

■ 5th to 25th Percentile

■ 25th to Median

■ Median to 75th Percentile

■ 75th to 95th Percentile

TIAA-CREF Emerging Markets Equity Index | As of June 30, 2020

Fund Characteristics as of June 30, 2020

Sharpe Ratio (3 Year)	0.01
Average Market Cap (\$mm)	39,036.03
Price/Earnings	14.72
Price/Book	1.38
Price/Sales	1.12
Price/Cash Flow	5.31
Dividend Yield	3.32
Number of Equity Holdings	1,379
R-Squared (3 Year)	0.99
Alpha (3 Year)	0.00%

Sector Allocation as of June 30, 2020

BASIC MATERIALS	6.96%
COMMUNICATION SERVICES	15.14%
CONSUMER CYCLICAL	15.31%
CONSUMER DEFENSIVE	6.79%
ENERGY	5.83%
FINANCIAL SERVICES	19.03%
HEALTHCARE	4.31%
INDUSTRIALS	4.29%
REAL ESTATE	2.78%
TECHNOLOGY	17.41%
UTILITIES	2.15%

Top Holdings as of June 30, 2020

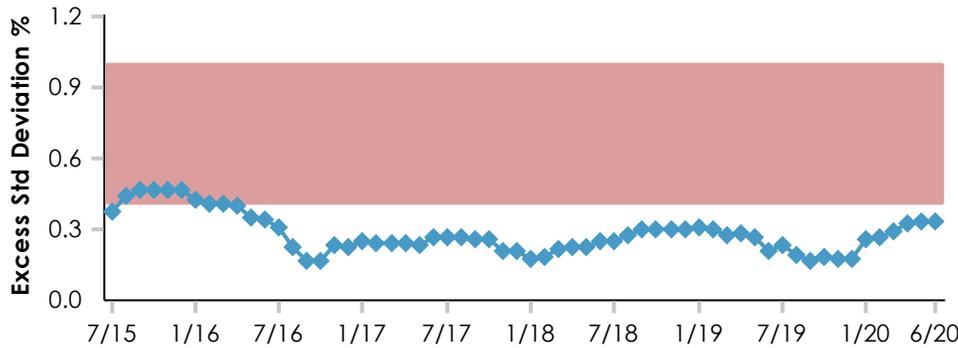
ALIBABA GROUP HOLDING LTD ADR	6.96%
TENCENT HOLDINGS LTD	6.31%
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	4.52%
SAMSUNG ELECTRONICS CO LTD	3.63%
NASPERS LTD CLASS N	1.40%
MEITUAN DIANPING	1.37%
CHINA CONSTRUCTION BANK CORP CLASS H	1.35%
RELIANCE INDUSTRIES LTD	1.12%
PING AN INSURANCE (GROUP) CO. OF CHINA LTD CLASS H	1.03%
JD.COM INC ADR	0.88%

Top Countries as of June 30, 2020

China	40.28%
Taiwan	12.31%
South Korea	11.76%
India	8.06%
Brazil	5.18%
South Africa	3.73%
Russia	3.22%
Saudi Arabia	2.56%
Thailand	2.25%
Malaysia	1.80%

TIAA-CREF Bond Index I vs. BBg BC U.S. Aggregate Index

Short-term (Rolling 12 Months Tracking Error)

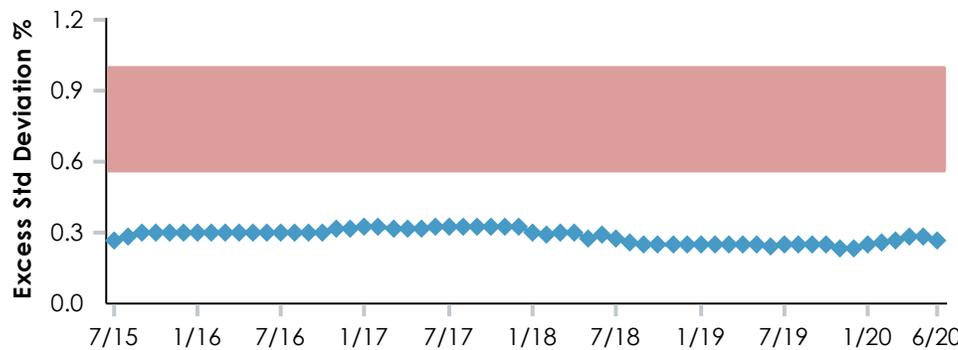


Short-Term Performance

Positive

Probationary Performance 0.40%

Medium-term (Rolling 36 Months Tracking Error)

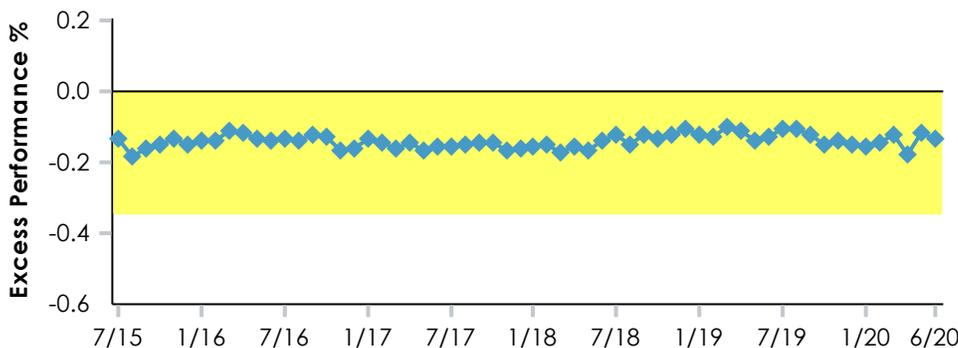


Medium-Term Performance

Positive

Probationary Performance 0.55%

Long-term (Rolling 60 Months Excess Performance)



Long-Term Performance

Acceptable

Probationary Performance -0.35%

Annualized Performance Results (Net of management fees)

	Qtr	1 Year	3 Years	5 Years	Inception (12/2011)
TIAA-CREF Bond Index I	2.8 (93)	8.7 (30)	5.2 (36)	4.2 (42)	3.4 (65)
BBg BC U.S. Aggregate Index	2.9 (90)	8.7 (28)	5.3 (24)	4.3 (30)	3.5 (52)
IM U.S. Broad Market Core Fixed Income (MF) Median	5.0	8.1	4.9	4.1	3.6

Monitoring Status

Acceptable

Description:

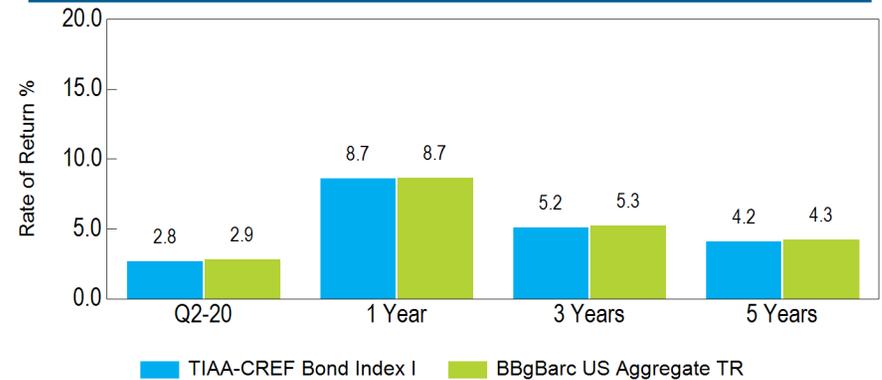
The investment seeks total return that corresponds with the total return of a broad U.S. investment-grade bond market index.

The fund invests at least 80% of its assets in bonds within its benchmark and portfolio tracking index, the Bloomberg Barclays U.S. Aggregate Bond Index. The securities purchased by the fund will mainly be high-quality instruments rated in the top four credit categories by Moody's or S&P or deemed to be of the same quality by the advisors using its own credit quality analysis.

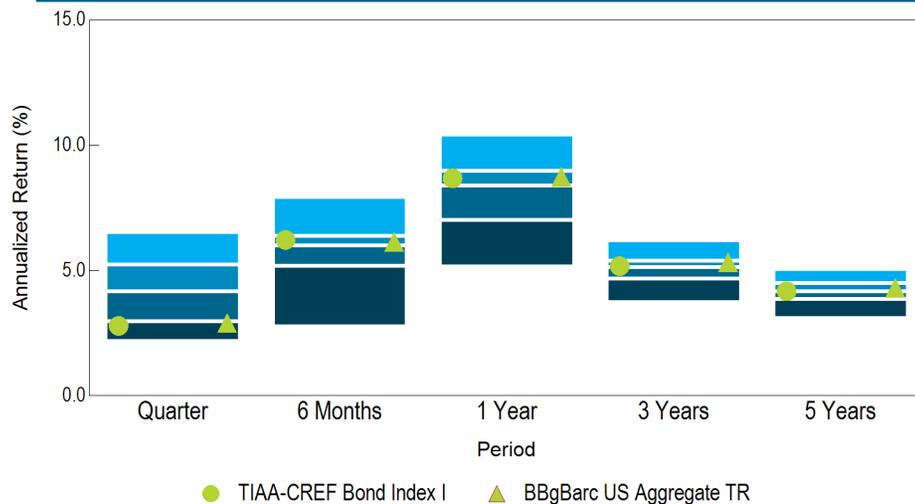
Portfolio Fund Information as of June 30, 2020

Ticker	TBIX
Morningstar Category	Intermediate Core Bond
Average Market Cap (\$mm)	
Net Assets (\$mm)	9,069.89
% Assets in Top 10 Holdings	10.86
Total Number of Holdings	7,427
Manager Name	Lijun (Kevin) Chen
Manager Tenure	11
Expense Ratio	0.11%
Closed to New Investors	No

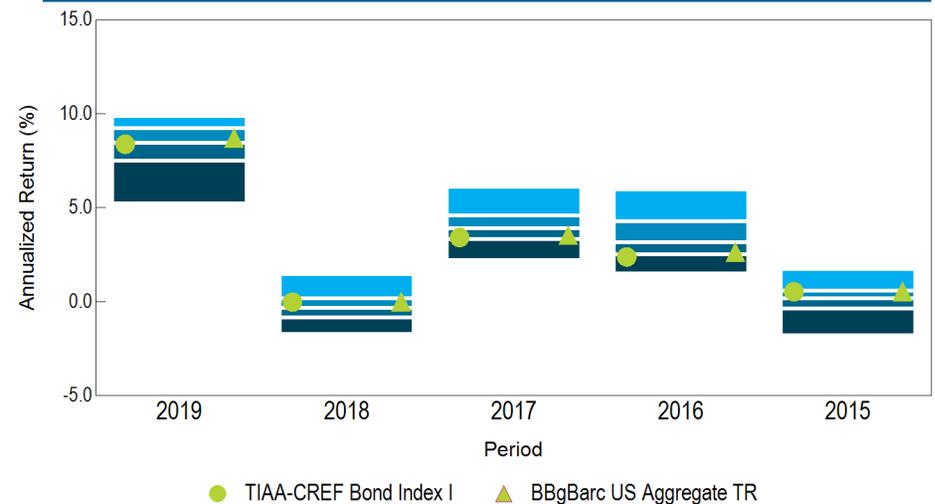
Return Summary



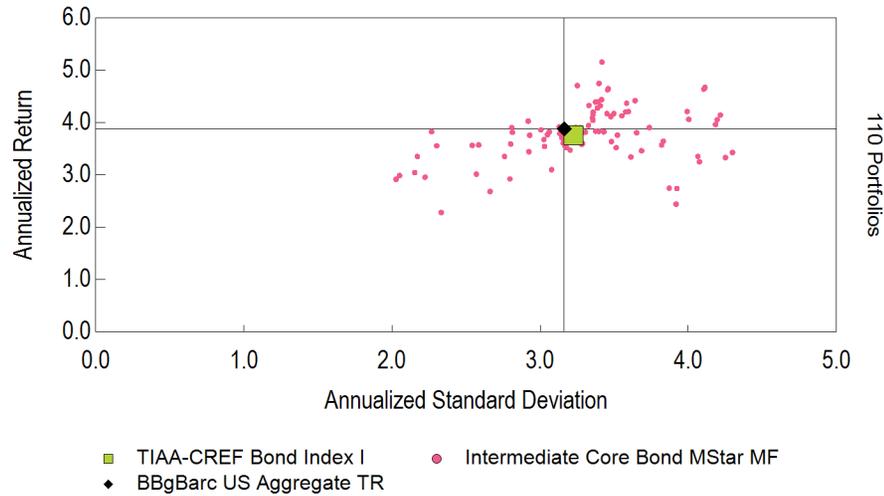
Intermediate Core Bond MStar MF Return Comparison



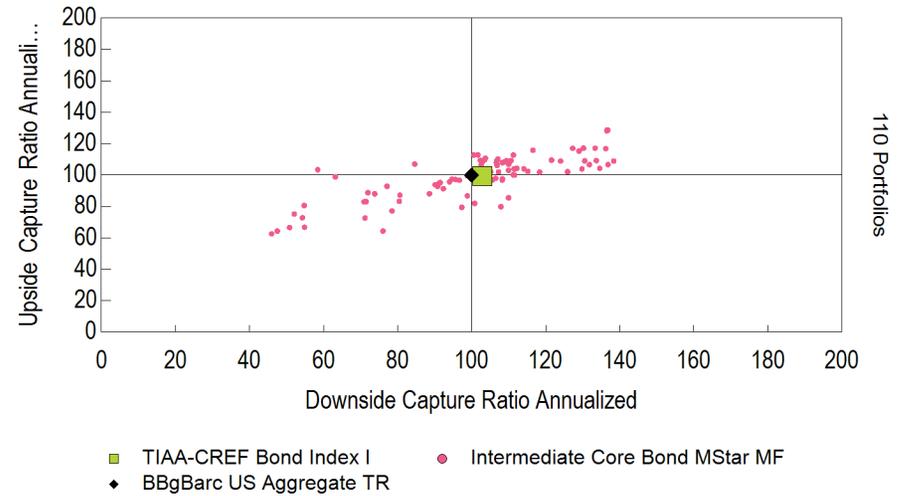
Intermediate Core Bond MStar MF Return Comparison



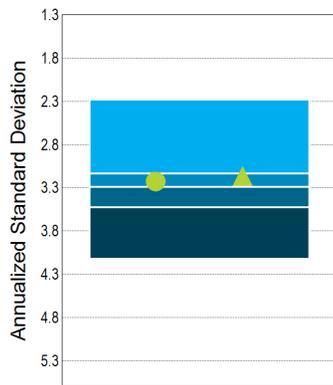
Annualized Return vs. Annualized Standard Deviation
5 Years 6 Months Ending June 30, 2020



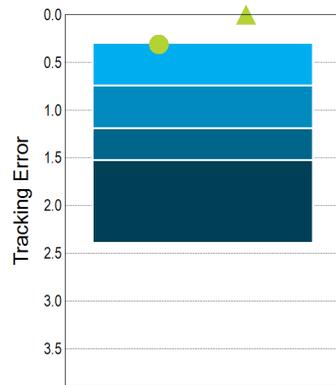
Upside Capture Ratio Annualized vs. Downside Capture Ratio Annualized
5 Years 6 Months Ending June 30, 2020



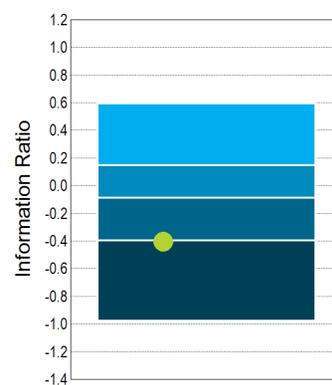
Annualized Standard Deviation



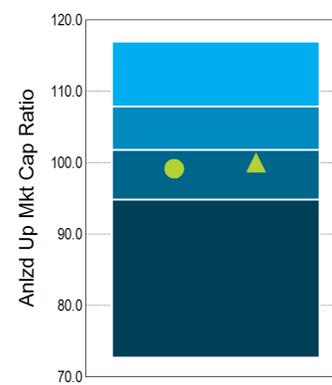
Tracking Error



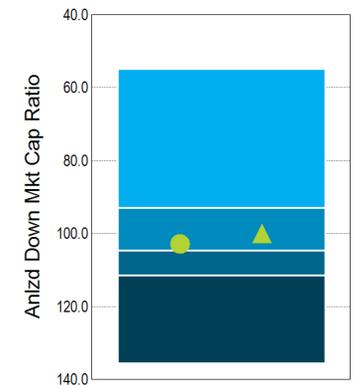
Information Ratio



Anlzd Up Mkt Cap Ratio



Anlzd Down Mkt Cap Ratio



● TIAA-CREF Bond Index I ▲ BBgBarc US Aggregate TR ■ 5th to 25th Percentile ■ 25th to Median ■ Median to 75th Percentile ■ 75th to 95th Percentile

Fund Characteristics as of June 30, 2020		Top Holdings as of June 30, 2020		Fixed Income Sectors as of June 30, 2020	
Sharpe Ratio (3 Year)	1.08	UNITED STATES TREASURY NOTES 2.12%	2.10%	GOVERNMENT	41.23%
Average Duration	5.80	UNITED STATES TREASURY BONDS 3.5%	1.53%	MUNICIPAL	0.79%
Average Coupon	3.09%	UNITED STATES TREASURY NOTES 1.75%	1.36%	CORPORATE	27.20%
Average Effective Maturity	8.17	UNITED STATES TREASURY NOTES 2.25%	1.13%	SECURITIZED	28.94%
R-Squared (3 Year)	0.99	UNITED STATES TREASURY NOTES 1.75%	0.97%	CASH & EQUIVALENTS	1.84%
Alpha (3 Year)	-0.01%	UNITED STATES TREASURY NOTES 2.5%	0.84%	DERIVATIVE	0.00%
Beta (3 Year)	0.99	UNITED STATES TREASURY NOTES 1.5%	0.76%		
		UNITED STATES TREASURY NOTES 2.75%	0.76%		
		UNITED STATES TREASURY NOTES 2%	0.72%		
		UNITED STATES TREASURY BONDS 3%	0.69%		

Credit Quality as of March 31, 2020		Maturities as of June 30, 2020		Top Countries as of June 30, 2020	
AAA	72.33%	1 to 3 Years	12.89%	United States	92.43%
AA	3.44%	3 to 5 Years	20.26%	Supranational	1.30%
A	11.34%	5 to 7 Years	7.30%	United Kingdom	1.04%
BBB	12.80%	7 to 10 Years	10.34%	Canada	1.01%
BB	0.05%	10 to 15 Years	3.53%	Japan	0.63%
B	0.00%	15 to 20 Years	5.41%	Netherlands	0.44%
Below B	0.00%	20 to 30 Years	36.93%	Germany	0.43%
Not Rated	0.04%	Greater than 30 Years	2.37%	Mexico	0.34%
				Belgium	0.32%
				Colombia	0.18%

Sensitivity Analyses: T-C Life Funding Agreements

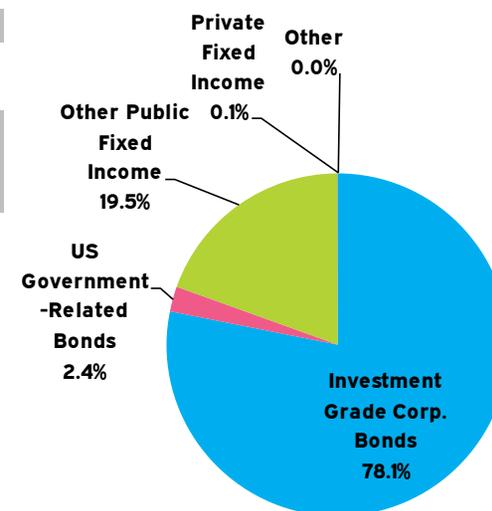
T-C Life Funding Agreements (based on non-investment performance criteria)

Criteria	Status as of 6/30/2020 ¹	Status as of 3/31/2020	Status as of 12/31/2019	Status as of 9/30/2019
Financial Strength	Moody's = Aa1	Moody's = Aa1	Moody's = Aa1	Moody's = Aa1
	Standard & Poor's = AA+			
	A.M. Best = A++			
	Fitch = AAA	Fitch = AAA	Fitch = AAA	Fitch = AAA
Mortgage Portfolio	100% in Good Standing*			
Bond Portfolio	99.4% in Investment Grade (at least 90%)	99.4% in Investment Grade (at least 90%)	99.7% in Investment Grade (at least 90%)	99.6% in Investment Grade (at least 90%)
Account Diversification	Portfolio is diversified across asset classes and types (see chart below)	Portfolio is diversified across asset classes and types (see chart below)	Portfolio is diversified across asset classes and types (see chart below)	Portfolio is diversified across asset classes and types (see chart below)

*Portfolio did not contain any commercial mortgages.

Note, prior-period investment status will shift to the right.

Source: TIAA-CREF



Monitoring Status

Positive

¹Portfolio allocation data as of 3/31/2020

Summary Points

	Criteria Utilized for Performance Watch Status			
	On Watch	Short-term	Medium-term	Long-term
T. Rowe Price Instl Large Cap Growth	No	---	---	---
T. Rowe Price Instl Large Cap Value	No	---	---	---
TIAA-CREF Small Cap Equity	No	---	---	---
TIAA-CREF Social Choice Equity	No	---	---	---
TIAA-CREF Real Estate Securities	No	---	---	---
DFA Large Cap International	No	---	---	---
DFA Emerging Markets Core Equity	No	---	---	---
Metropolitan West Total Return Bond	No	---	---	N/A
PIMCO Real Return	No	---	---	---
PIMCO Income	No	✓	---	---
TIAA-CREF Inflation-Linked Bond	No	---	---	---
T. Rowe Price Instl Floating Rate	No	---	---	---
TIAA-CREF High Yield Bond	No	---	---	---
TIAA-CREF Equity Index	No	---	---	---
TIAA-CREF S&P 500 Index	No	---	---	---
TIAA-CREF International Eq Index	No	---	---	---
TIAA-CREF Emerging Markets Eq Index	No	---	---	---
TIAA-CREF Bond Index	No	---	---	---
T-C Life Funding Agreements	No	N/A	N/A	N/A
Total	0 of 19	1 of 18 eligible portfolios	0 of 18 eligible portfolios	0 of 17 eligible portfolios

- Performance-based watch status criteria is on a relative basis
 - Absolute results may still be negative
- Criteria set up to evaluate managers over differing time periods

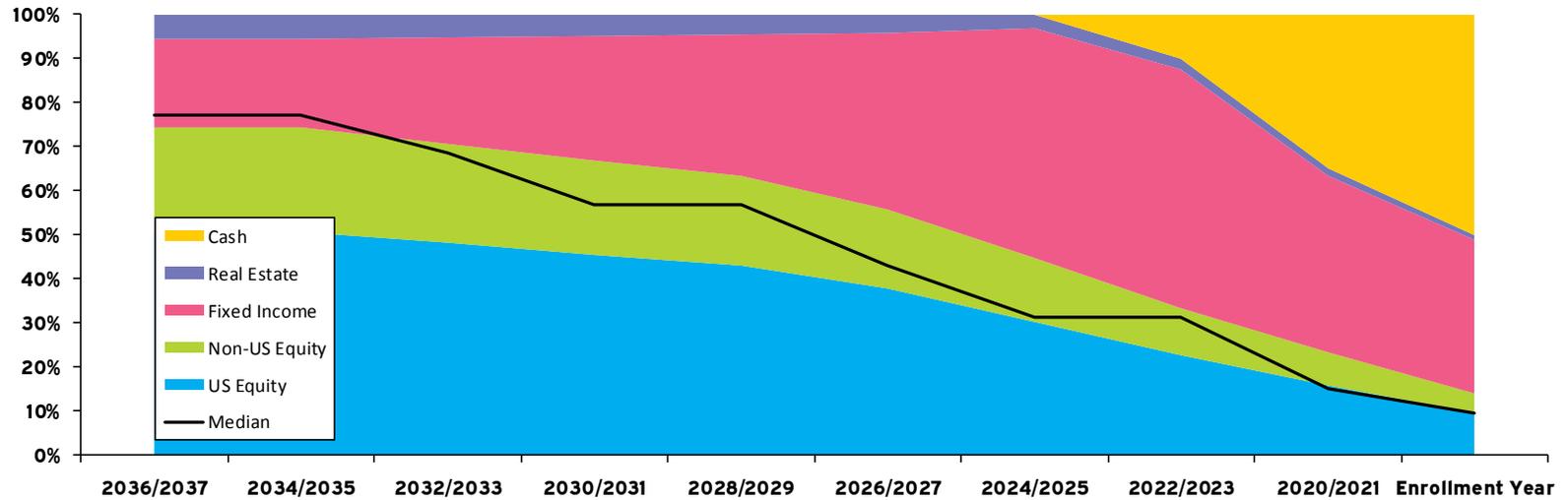
Enrollment Date Fund Analysis

Enrollment Date Portfolios Performance

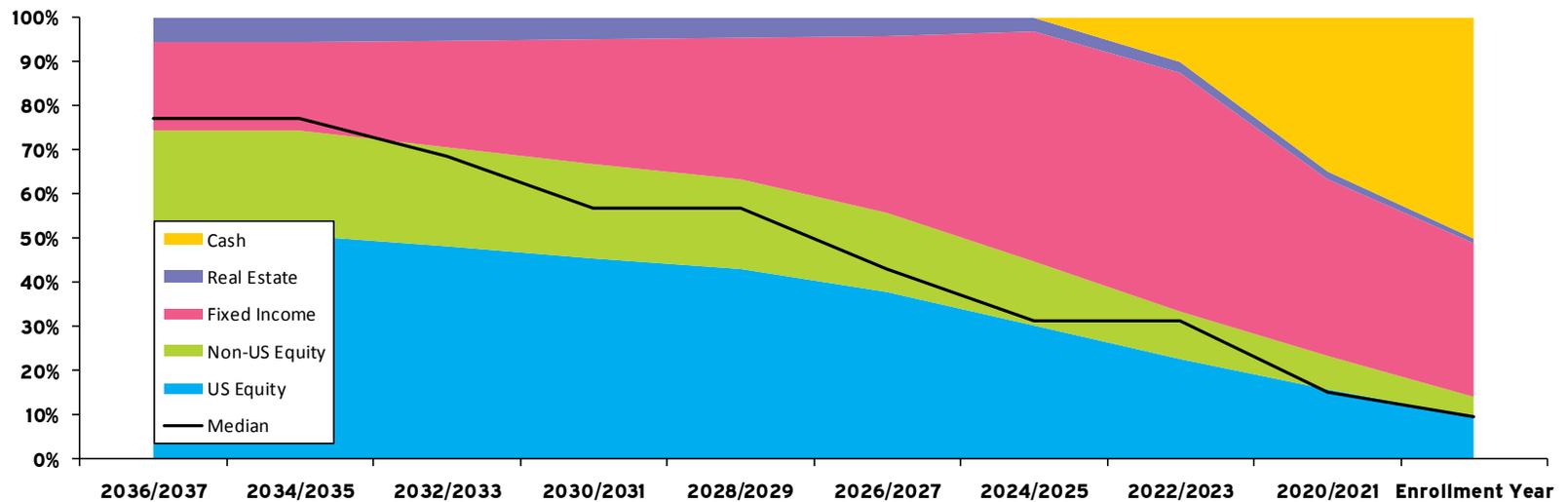
Trailing Period Performance Data not yet available for Enrollment Date portfolios.

Scholarshare Enrollment Date Glidepath

Active Enrollment Date Portfolio



Passive Enrollment Date Portfolio



Appendix

Glossary

Annualized Return – The average annual return of either the manager or its benchmark.

Excess Performance – Manager returns in excess of the benchmark returns.

Standard Deviation – A measure of dispersion of a set of data from its mean.

Excess Standard Deviation – A measure of the volatility of the average annual difference between the manager's return and the benchmark's return, same as tracking error.

VRR – Value Relative Ratio – Is calculated as: $\text{Manager Cumulative Return} / \text{Benchmark Cumulative Return}$.

Disclaimer

WE HAVE PREPARED THIS REPORT (THIS "REPORT") FOR THE SOLE BENEFIT OF THE INTENDED RECIPIENT (THE "RECIPIENT").

SIGNIFICANT EVENTS MAY OCCUR (OR HAVE OCCURRED) AFTER THE DATE OF THIS REPORT AND THAT IT IS NOT OUR FUNCTION OR RESPONSIBILITY TO UPDATE THIS REPORT. ANY OPINIONS OR RECOMMENDATIONS PRESENTED HEREIN REPRESENT OUR GOOD FAITH VIEWS AS OF THE DATE OF THIS REPORT AND ARE SUBJECT TO CHANGE AT ANY TIME. ALL INVESTMENTS INVOLVE RISK. THERE CAN BE NO GUARANTEE THAT THE STRATEGIES, TACTICS, AND METHODS DISCUSSED HERE WILL BE SUCCESSFUL.

INFORMATION USED TO PREPARE THIS REPORT WAS OBTAINED FROM INVESTMENT MANAGERS, CUSTODIANS, AND OTHER EXTERNAL SOURCES. WHILE WE HAVE EXERCISED REASONABLE CARE IN PREPARING THIS REPORT, WE CANNOT GUARANTEE THE ACCURACY OF ALL SOURCE INFORMATION CONTAINED HEREIN.

CERTAIN INFORMATION CONTAINED IN THIS REPORT MAY CONSTITUTE "FORWARD - LOOKING STATEMENTS," WHICH CAN BE IDENTIFIED BY THE USE OF TERMINOLOGY SUCH AS "MAY," "WILL," "SHOULD," "EXPECT," "AIM," "ANTICIPATE," "TARGET," "PROJECT," "ESTIMATE," "INTEND," "CONTINUE" OR "BELIEVE," OR THE NEGATIVES THEREOF OR OTHER VARIATIONS THEREON OR COMPARABLE TERMINOLOGY. ANY FORWARD-LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION ARE BASED UPON CURRENT ASSUMPTIONS. CHANGES TO ANY ASSUMPTIONS MAY HAVE A MATERIAL IMPACT ON FORWARD - LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS. ACTUAL RESULTS MAY THEREFORE BE MATERIALLY DIFFERENT FROM ANY FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION.

PERFORMANCE DATA CONTAINED HEREIN REPRESENT PAST PERFORMANCE. PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS.

MEMORANDUM

TO: ScholarShare Investment Board (SIB)
FROM: Eric White, Kay Ceserani, Kristen Chase
Meketa Investment Group
DATE: September 17, 2020
RE: Review of Underlying Funds Qualifying for "Watch" Status

Summary

Meketa Investment Group ("Meketa") has conducted a review of the underlying funds in the ScholarShare 529 Plan. The review included a quantitative analysis of the underlying funds based on specific performance criteria (as per the *Monitoring Procedures and Criteria*) as well as a qualitative analysis, including a review of organizational concerns, stability of personnel, changes in investment objectives, etc. This memo summarizes the period from April 1, 2020, through June 30, 2020.

At the end of the period, **one new fund qualifies for "Watch" status and one fund no longer qualifies for "Watch" status.** The PIMCO Income fund's short-term performance has placed in the "Caution" range for six consecutive months causing the fund to qualify for "Watch" status. At the May 2020 SIB meeting, the SIB elected not to place if the T. Rowe Price Large Cap fund on "Watch" status and instead wait to see if performance would improve. Over the recent quarter, the fund's short-term status improved from "Caution" to "Acceptable" and the fund no longer qualifies for "Watch" status.

Performance of Funds on Watch Status As of 6/30/2020

Funds on Watch Status	Board Action Date	Watch Status Start Date	No. Months Since Watch Began	Excess Perf. Since Watch Began
--	--	--	--	--

Background

New Funds Qualifying for “Watch” Status: Meketa has conducted a review of the underlying funds in the ScholarShare College Savings Plan (see also the 2Q2020 ScholarShare 529 Plan Investment Performance Status Report) and determined that the PIMCO Income Fund qualifies for “Watch” status based on its short-term performance.

Funds Currently on “Watch” Status: There are no funds on “Watch” status at this time.

PIMCO Income Fund

Investment Role in Program

The fund is a portfolio of a broad range of intermediate-duration bonds that is actively managed to maximize current income while maintaining a relatively low risk profile. It also has a secondary goal of capital appreciation. The strategy utilizes multiple sectors of the bond market in an effort to generate a competitive and consistent distribution yield. Managed to pursue efficient income generation, the strategy also focuses on PIMCO total-return ideas in an effort to maximize capital appreciation and risk-adjusted returns relative to its peers. This approach seeks to provide consistent income over the long term.

History and Organizational Structure

PIMCO (Pacific Investment Management Company) was founded in 1971 and started as a subsidiary of Pacific Life Insurance Company to manage separate accounts for institutional clients. In 2000, PIMCO was acquired by Allianz, a large global financial services company based in Germany. PIMCO currently operates as a separate and autonomous subsidiary of Allianz. PIMCO is currently one of the world’s largest fixed income managers with offices around the globe.

Investment Team

Daniel Ivascyn has been the lead portfolio manager of the fund since its inception in 2007. Mr. Ivascyn was named Group Chief Investment Officer in October 2014 upon the departure of the firm’s former CIO and founder, Bill Gross. He is also the head of the mortgage credit portfolio management team and a lead portfolio manager for PIMCO’s credit hedge fund and mortgage opportunistic strategies. Mr. Ivascyn is a member of PIMCO’s Executive Committee and a member of the Investment Committee. Morningstar named him Fixed-Income Fund Manager of the Year (US) for 2013.

Mr. Ivascyn is supported by Alfred Murata and Josh Anderson. Mr. Ivascyn who has been co-portfolio manager on the fund since March 2013 and is a Managing Director of PIMCO. Mr. Murata joined PIMCO in 2001. Mr. Anderson has managed the fund since July 2018 and is also a Managing Director of PIMCO.

Investment Philosophy and Approach

PIMCO's investment philosophy for the Income strategy revolves around the principle of diversification. By diversifying strategies, or relying on multiple sources of value, they are confident that they will be able to generate a solid track record with a high degree of consistency. They seek to add value through the use of "top-down" strategies such as exposure to interest rates, or duration, changing volatility, yield curve positioning and sector rotation. These strategies are deployed from a macro view of the portfolio that are driven by PIMCO's secular outlook of the forces likely to influence the economy and financial markets over the next three to five years and their cyclical views of two-to-four quarter trends. "Bottom-up" strategies drive PIMCO's security-selection process and help identify and analyze undervalued securities and securities that pay high income. Here, they employ advanced proprietary analytics and expertise in all major fixed-income sectors. By combining perspectives from both the portfolio and security levels, they attempt to add value consistently over time within acceptable levels of portfolio risk.

PIMCO's investment process starts with an annual Secular Forum at which their investment professionals from around the globe gather with industry experts for a discussion about the future of the global economy and financial markets. The goal of this Forum is to look beyond the current business cycle and determine how secular forces will play out over the next three to five years. Quarterly, PIMCO holds Economic Forums to evaluate growth and inflation over the next six to nine months.

Following the Secular and Economic Forums, the Investment Committee, comprised of senior portfolio managers as well as PIMCO's Chief Economist and headed by PIMCO's Group Chief Investment Officer and CIOs, develops key portfolio strategies. They consider both the "top-down" conclusions emanating from the Forum, as well as the "bottom-up" market intelligence provided by teams of sector specialist portfolio managers. Through an interactive series of meetings, the Investment Committee defines a set of consistent strategies that are then implemented across all PIMCO strategies.

Portfolios are then continuously monitored for adherence to the current model portfolio structure, and historical measures such as volatility (close to benchmark) and tracking error (moderate) affirm PIMCO's adherence to a diversified, moderate risk style.

Buy and sell decisions are executed in order to optimize the risk/return and the relative value characteristics of the portfolio. PIMCO does not employ automated or mechanical selling procedures. Securities are sold when the credit analysis indicates that a company or a particular issue will become fundamentally flawed. Current holdings are constantly re-evaluated for their relative attractiveness versus investments available in the marketplace. Securities are sold when they individually no longer represent good value, when superior risk/return potential exists in substitute positions (factoring in transaction costs), or when they no longer fit with the macroeconomic or structural strategies in the portfolio.

Performance

The fund outperformed the Bloomberg Barclays US Aggregate index over the most recent quarter by 3.6%, but underperformed over the trailing 1- and 3-year periods by (8.0%) and (2.0%), respectively. Peer relative performance is strong over the longer trailing periods, but the fund underperformed the Multi-Sector General Bond universe median over the recent quarter and trailing 1-year. Over the quarter, an emphasis on emerging market debt securities, a position in developed ex-US debt securities, exposure to commodities and holdings in emerging market bonds contributed to performance.

Trailing Performance Results, Net of Fees Ending June 30, 2020

Fund	Quarter	1 Year	3 Years	5 Years	Since Addition (12/2011)
PIMCO Income Fund	6.5	0.7	3.3	4.7	7.1
<i>BBg BC US Aggregate Bond</i>	2.9	8.7	5.3	4.3	3.5
Difference	3.6	(8.0)	(2.0)	0.4	3.6
Percentile Rank*	70	67	42	12	2

*IM US Multi-Sector General Bond Universe. 1 = Best, 100 = Worst.

The fund is being recommended for “Watch” status because over the last six months its rolling 12-month excess performance has fallen below the -1.0% threshold. The deterioration of short-term performance can be attributed to the fund’s performance in the second half of 2019 and in the first quarter of 2020. In 2019, exposure to emerging market debt and currency, a long US dollar bias versus the Japanese yen and short exposure to Eurozone and U.K. duration detracted from results. During the first quarter of 2020, performance was hurt by holdings of corporate credit, exposure to a basket of emerging market currencies, holdings of emerging market debt, and short exposure to non-US developed market duration.



Since being added to the Program in late 2011, on a calendar year basis, the fund has outperformed its benchmark over six of the last seven years. The portfolio generated positive returns and ranked in

the top 25 percent of the peer group from 2013 through 2018. In 2019, the fund underperformed the benchmark by (60) basis points and underperformed the peer group median. 2019 represents the fund’s weakest relative performance in the fund’s history with the Program.

**Calendar Year Performance Results, Net of Fees
Ending December 31, 2019**

Fund	2013	2014	2015	2016	2017	2018	2019
PIMCO Income Fund	4.8	7.2	2.6	8.7	8.6	0.6	8.1
<i>BBg BC US Aggregate Bond</i>	(2.0)	6.0	0.5	2.6	3.5	0.0	8.7
Difference	6.8	1.2	2.1	6.1	5.1	0.6	(0.6)
Percentile Rank*	15	8	3	25	12	17	74

*IM Multi-Sector General Bond Universe. 1 = Best, 100 = Worst.

Recommendation

Meketa recommends that the SIB place the PIMCO Income fund on “Watch” status as it has underperformed the Short-Term monitoring criteria for six consecutive months.

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