

**Fund Objective and Investment Approach**

The TIAA Traditional Annuity, a guaranteed annuity account, is backed by the claims-paying ability of Teachers Insurance and Annuity Association of America (TIAA) and is supported by the TIAA General Account, an insurance company account. The Annuity guarantees principal and a contractually specified minimum interest rate. In addition, it offers the opportunity for additional amounts in excess of the guaranteed rate. The additional amounts are declared by the TIAA Board of Trustees on a year-by-year basis and are not guaranteed for future years. When declared, additional amounts remain in effect for the twelve-month period that begins each March 1. TIAA is one of only three insurance groups in the United States to currently hold the highest possible rating from three of the four leading insurance company rating agencies: Standard & Poor's, Fitch Ratings, and A.M. Best. TIAA currently holds the second highest possible rating from Moody's Investors Service.

TIAA invests for the long term and has a very low turnover rate relative to peers. The TIAA Traditional Annuity is supported by the TIAA General Account portfolio. Holdings are selected by specialized teams based on relative value considerations targeting different sectors of the marketplace. Investment team responsibilities are organized into the primary groups of Global Public Markets, Global Private Markets and Global Real Estate. The Account is primarily comprised of fixed income investments, with some exposure to real estate, equities and alternative investments such as timber, agriculture and commodities. Teams manage the assets by sector and industry, by credit quality (investment grade and below investment grade) and for real estate by property type and geographic location. Quality limits restrict below investment grade assets to 10%. Duration of the assets held within the TIAA General Account is focused on a consideration of policyholder liabilities. Plan participants do not participate in, and do not receive the earnings of, the assets in the General Account.

The TIAA Traditional Annuity is a guaranteed insurance contract and not an investment for federal securities law purposes. The Annuity provides participants crediting rates for accumulating and payout rates, and guarantees are supported by the TIAA General Account. Withdrawals from the Annuity may be made in a lump sum, subject to a 2.5% surrender charge, within 120 days after termination of employment. At all other times, withdrawals and transfers from the Annuity must be spread over an 84-month period in monthly installments from Retirement Choice (RC) contracts or a 120-month period from Group Retirement Account (GRA) contracts. Monthly installment arrangements are not subject to a surrender charge.

**Performance Commentary**

The TIAA Traditional Annuity is designed to preserve principal and provide a contractually specified minimum interest rate with the potential for additional amounts in excess of the guaranteed rate. The Annuity is supported by the TIAA General Account which holds reserves that may be accessed to offset possible future losses within the Annuity. The Annuity limits withdrawals to avoid excessive outflows that could require the General Account to sell assets and, as a result, exhaust the Account.

The TIAA Traditional Annuity consistently outperformed the benchmark in each of the past ten years and in all longer time periods presented. The Annuity return of 4.41% in 2016 exceeded by 414 basis points the custom Traditional Annuity index return of 0.27%. The Annuity eclipsed the benchmark return by 437, 430 and 274 basis points for the 3-, 5- and 10-year periods, respectively.

<b>Fund Characteristics</b>	<b>TIAA Traditional Annuity</b>																				
Total Fund Assets	\$238.9 billion																				
Average Maturity	15.30 years																				
Average Duration	7.65 years (option-adjusted)																				
Composition	<table> <tbody> <tr> <td>Corporate Bonds</td> <td>30.66%</td> </tr> <tr> <td>Mortgage Backed Securities</td> <td>14.32</td> </tr> <tr> <td>Commercial Mortgages</td> <td>8.68</td> </tr> <tr> <td>Treasury/Agency Securities</td> <td>7.94</td> </tr> <tr> <td>Private Placement</td> <td>5.59</td> </tr> <tr> <td>High Yield Corporates</td> <td>5.09</td> </tr> <tr> <td>Commercial MBS</td> <td>4.30</td> </tr> <tr> <td>Asset Backed Securities</td> <td>2.84</td> </tr> <tr> <td>Cash (within the wrap)</td> <td>0.25</td> </tr> <tr> <td>Other (Municipals, Real Estate, Misc)</td> <td>20.33</td> </tr> </tbody> </table>	Corporate Bonds	30.66%	Mortgage Backed Securities	14.32	Commercial Mortgages	8.68	Treasury/Agency Securities	7.94	Private Placement	5.59	High Yield Corporates	5.09	Commercial MBS	4.30	Asset Backed Securities	2.84	Cash (within the wrap)	0.25	Other (Municipals, Real Estate, Misc)	20.33
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Cash (within the wrap)	0.25																				
Other (Municipals, Real Estate, Misc)	20.33																				
Fees (expense ratio)	n/a																				
Portfolio Manager (tenure)	David Brown (10 years)																				

#### Historical Returns

	TIAA Traditional Annuity	Custom Traditional Annuity*	Return Difference
	Return	Return	
2007	5.3	4.6	0.7
2008	5.3	4.7	0.6
2009	4.5	4.5	0.0
2010	4.0	3.7	0.3
2011	3.4	0.1	3.3
2012	3.0	0.1	3.0
2013	3.3	0.1	3.2
2014	4.1	0.0	4.1
2015	4.3	0.0	4.3
2016	4.4	0.3	4.1
Trailing 3-Year	4.4%	0.1%	4.4
Trailing 5-Year	4.4	0.1	4.3
Trailing 10-Year	4.5	1.8	2.7

\* EK&A Guaranteed Investment Contract Index through December 31, 2010; Citigroup 3 Month Treasury Bill Index as of January 1, 2011.

#### Assessment

The TIAA Traditional Annuity is a diversified and stable insurance product that offers guaranteed principal and a contractually specified rate of interest that may be enhanced by additional amounts as declared by the TIAA Board of Trustees. The Annuity has had consistent relative outperformance for all time periods presented. We recommend retention of this option.

**Fund Objective and Investment Approach**

The CREF Money Market Account is a variable annuity account seeking high current income consistent with preserving capital and maintaining liquidity. The Account portfolio consists of securities or other high-quality instruments maturing in 397 days or less. The Account maintains a dollar-weighted average maturity of 60 days or less and a dollar-weighted average life to maturity of 120 days or less.

To help provide greater protection for investors, the Securities and Exchange Commission (SEC) adopted rule changes to money market funds that became effective October 14, 2016. In response, the CREF Money Market Account converted to a government money market fund. The Account is required to invest at least 99.5% of its total assets in cash, U.S. Government securities and/or repurchase agreements that are collateralized fully by cash or U.S. Government securities. The Account's investments are limited to U.S. Government securities or securities that present minimal credit risks and are of eligible quality. Returns on the underlying investments held in a government type fund will likely result in lower yields than in other types of money market funds.

CREF has been voluntarily waiving fees for the Money Market Account since July 2009 to avoid negative yields for the Account in the persistent low-interest-rate environment. CREF will end the voluntary fee waiver by April 14, 2017. Unless interest rates rise sufficiently, the Account may experience negative returns.

Any amounts waived within the three-year period prior to termination of the waiver may be subject to recoupment. CREF will recover a portion of the amounts waived when the daily yield of the Account's share class is positive, absent the effect of the waiver. The amount of recovery on any day will be approximately 25% of the share class's yield (net of all expenses) on that day, reducing the performance of the Account by 25% of the net yield.

**Performance Commentary**

In 2016, the CREF Money Market Account 0.13% return trailed the iMoneyNet Money Fund return of 0.46% by 33 basis points. The Account consistently lagged the trailing 3-, 5- and 10-year periods, underperforming by 21, 20 and 12 basis points, respectively. At December 31, 2016, the Account held 99.96% of its assets in U.S. Government money market securities, reflecting CREF's decision to designate the Account as a government type money market fund.

<b>Fund Characteristics</b>	<b>CREF Money Market Account</b>	
Total Fund Assets	\$10.9 billion	
30 Day Current Yield	0.22%	
Portfolio Composition	U.S. Govt Agency Securities	58.64%
	U.S. Treasury Bills/Notes	21.05
	Floating Rate Securities, Govt	20.27
	Other Assets and Liabilities	0.04
Fees (expense ratio)	0.27% Annually	
Portfolio Manager (tenure)	Michael Ferraro (18 years) Joseph Rolston (6 years)	

### Historical Returns

	CREF Money Market	iMoneyNet Money Fund	Return Difference
	Return	Return	
2006	4.7	3.8	0.9
2007	4.9	4.9	0.0
2008	2.4	2.0	0.4
2009	0.1	0.2	-0.1
2010	0.0	0.4	-0.4
2011	0.0	0.2	-0.2
2012	0.0	0.2	-0.2
2013	0.0	0.2	-0.2
2014	0.0	0.1	-0.1
2015	0.0	0.2	-0.2
Trailing 3-Year	0.0%	0.2%	-0.2
Trailing 5-Year	0.0	0.2	-0.2
Trailing 10-Year	1.2	1.3	-0.1

### Assessment

The CREF Money Market Account experienced relative underperformance, primarily due to fees, annually since 2009 and over all longer time periods presented. The Account converted in 2016 to a government type money market fund in response to SEC rule changes and will end its voluntary fee waiver by April 14, 2017. Waived fees, subject to recoupment for a 36-month period following the end of the waiver, will be recovered when the daily yield of the Account is positive. Investment option alternatives to the Account are under consideration as a result of these changes. At this time, we recommend retention of this option.

### Fund Objective and Investment Approach

The CREF Inflation-Linked Bond Account is a variable annuity account pursuing a long-term rate of return that outpaces inflation, typically through investment in inflation-indexed bonds, which are fixed income securities with returns designed to track a prescribed inflation index, the Bloomberg Barclays U.S. Treasury Inflation-Protected Securities (TIPS) 1-10 Year Index, over the life of the bond.

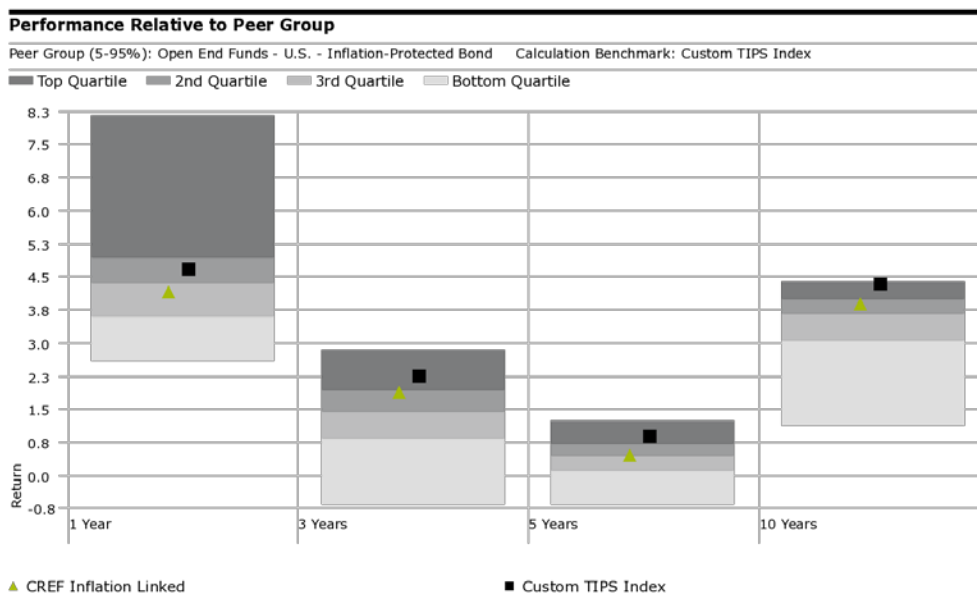
The Account generally invests a minimum of 80% of its assets in U.S. Treasury Inflation-Indexed Securities. Additionally, the Account is permitted to invest in other inflation-indexed bonds issued or guaranteed by the U.S. government or its agencies, by corporations and other U.S. domiciled issuers, as well as foreign governments. The Account is allowed to invest in money market instruments or other short-term securities and may invest a maximum of 25% of its assets in inflation-indexed bonds issued or guaranteed by foreign governments and their agencies, as well as other foreign issuers. The portfolio is constructed to correspond to the performance and risk characteristics of the Account's benchmark.

### Performance Commentary

In 2016, the CREF Inflation-Linked Bond Account returned 4.23%, trailing the Barclays Capital U.S. Treasury Inflation-Protected Securities (TIPS) Index return of 4.68% by 45 basis points. The Account has consistently underperformed the benchmark, by approximately the amount of fees, in nine of the ten most recent calendar years and over the longer time periods. The Account return is reduced by the amount of fees, although expenses are not deducted from the benchmark return.

<b>Fund Characteristics</b>	<b>CREF Inflation-Linked Bond Account</b>
Total Fund Assets	\$6.7 billion
Average Maturity	5.56 years
Average Duration	5.24 years (option-adjusted)
Turnover	6.0%
Number of Holdings	44
Fees	0.28% Annually
Portfolio Manager (tenure)	John Cerra (13 years) Nicholas Travagalino (1 year)

The historical returns of this fund have been compared to a broad universe of competing funds beginning in 2013.



**Trailing Returns**

	1 Year	Rank	3 Years	Rank	5 Years	Rank	10 Years	Rank
CREF Inflation Linked	4.2	53	1.9	28	0.5	45	3.9	34
Custom TIPS Index	4.7	35	2.3	12	0.9	16	4.4	6
Count	230		211		181		139	
5th Percentile	8.2		2.8		1.2		4.4	
25th Percentile	4.9		1.9		0.7		4.0	
50th Percentile	4.3		1.4		0.4		3.7	
75th Percentile	3.6		0.8		0.1		3.1	
95th Percentile	2.6		-0.6		-0.6		1.1	

**Historical Returns**

	CREF Inflation-Linked Bond		US Treasury Inflation Notes		Return Difference
	Return	Rank *	Return	Rank *	
2007	11.0		11.6		-0.6
2008	-1.8		-2.4		0.6
2009	9.6		11.4		-1.8
2010	5.9		6.3		-0.4
2011	13.2		13.6		-0.4
2012	6.4		7.0		-0.6
2013	-9.0	60	-8.6	40	-0.4
2014	3.3	20	3.6	14	-0.3
2015	-1.7	37	-1.4	26	-0.3
2016	4.2	53	4.7	35	-0.5
Trailing 3-Year	1.9%	28	2.3%	12	-0.3
Trailing 5-Year	0.5	45	0.9	16	-0.4
Trailing 10-Year	3.9	34	4.4	6	-0.5

\* Rank of 1 is best and 100 is worst.

**Assessment**

The CREF Inflation-Linked Bond Account is designed to conceivably provide a real rate of return in excess of the inflation rate by holding a portfolio of fixed income securities with fixed-rate coupon payments adjusted for inflation, as measured by the Consumer Price Index for All Urban Consumers (CPI-U). The Account portfolio was comprised of 99.1% U.S. securities and 0.1% international securities as of December 31, 2016. The level of underperformance by the Account is due primarily to fees. We recommend retention of this option.

### Fund Objective and Investment Approach

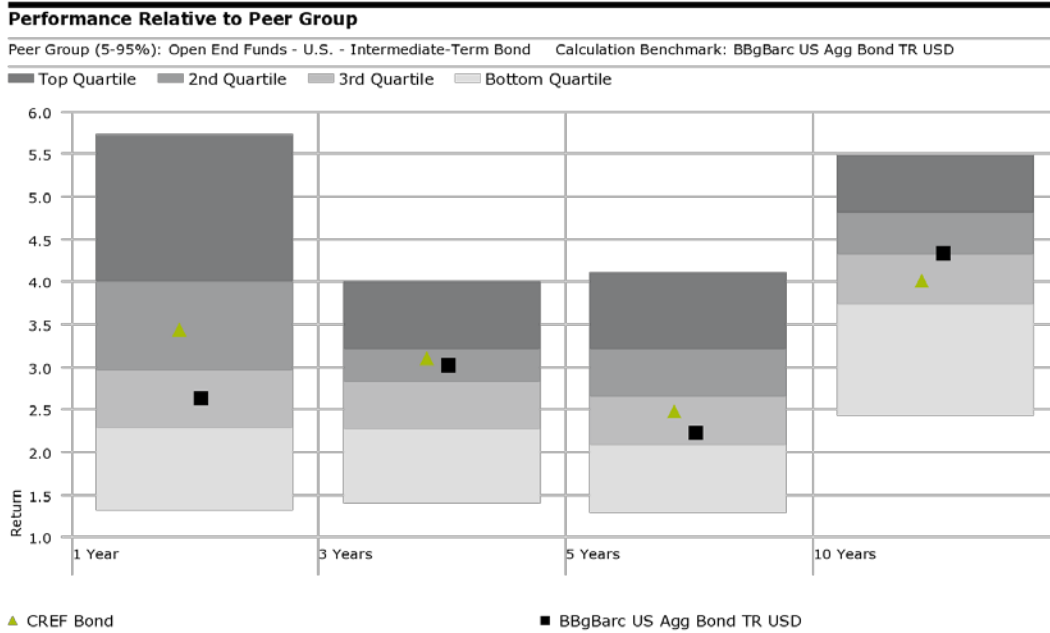
The CREF Bond Market Account is a variable annuity account that seeks a favorable long-term rate of return, typically through high current income consistent with preserving capital.

The Account normally invests a minimum of 80% of its assets in a broad range of fixed income securities. The majority of the Account assets are held in U.S. Treasury and other governmental agency securities, corporate bonds and mortgage-backed or other asset-backed securities. The Account may invest a maximum of 20% of its assets in below-investment-grade securities, foreign debt securities and unrated issues. The Account will overweight or underweight positions in individual securities or sectors when undervalued, overlooked or misunderstood issues appear to offer the potential for superior returns compared to the benchmark index.

### Performance Commentary

In 2016, the CREF Bond Market Account returned 3.47%, exceeding the Bloomberg Barclays U.S. Aggregate Bond Index return of 2.65% by 82 basis points. The Account outperformed on a relative basis for the trailing three- and five-year time periods by 11 and 28 basis points, respectively. The Account trailed the benchmark for the ten-year period by 32 basis points as a result of fees.

<b>Fund Characteristics</b>	<b>CREF Bond Market Account</b>	
Total Fund Assets	\$13.5 billion	
Average Maturity	7.88 years	
Average Duration	5.66 years (option-adjusted)	
Turnover	293.0%	
Number of Holdings	1,799	
Portfolio Composition	Corporate Bonds	26.78%
	Mortgage Backed Securities	20.72
	Foreign Govt & Corp Bonds in USD	14.65
	U.S. Treasury Securities	14.21
	Commercial Mortgage Backed Securities	9.92
	Asset Backed Securities	5.22
	Municipal Bonds	2.89
	U.S. Agency Securities	1.93
	Short Term/Other	3.67
Fees	0.35% Annually	
Portfolio Manager (tenure)	John Cerra (14 years) Joseph Higgins (5 years)	



**Trailing Returns**

	1 Year	Rank	3 Years	Rank	5 Years	Rank	10 Years	Rank
CREF Bond	3.4	38	3.1	30	2.5	58	4.0	64
BBgBarc US Agg Bond TR USD	2.6	61	3.0	35	2.2	69	4.3	49
Count	980		934		889		789	
5th Percentile	5.7		4.0		4.1		5.5	
25th Percentile	4.0		3.2		3.2		4.8	
50th Percentile	3.0		2.8		2.7		4.3	
75th Percentile	2.3		2.3		2.1		3.7	
95th Percentile	1.3		1.4		1.3		2.4	

**Historical Returns**

	CREF Bond Market		Aggregate Bond Index		Return
	Return	Rank *	Return	Rank *	Difference
2007	6.0	68	7.0	42	-1.0
2008	1.2	75	5.2	33	-4.0
2009	7.0	64	5.9	77	1.1
2010	6.7	41	6.5	46	0.2
2011	7.0	41	7.8	25	-0.9
2012	5.3	77	4.2	86	1.1
2013	-2.0	63	-2.0	64	0.0
2014	5.5	49	6.0	28	-0.4
2015	0.4	25	0.5	19	-0.1
2016	3.5	38	2.6	61	0.8
<b>Trailing 3-Year</b>	3.1%	30	3.0%	35	0.1
<b>Trailing 5-Year</b>	2.5	58	2.2	69	0.3
<b>Trailing 10-Year</b>	4.0	64	4.3	49	-0.3

\* Rank of 1 is best and 100 is worst.

### Assessment

The Bond Market Account is a well-diversified portfolio with assets comprised of approximately 80% U.S. fixed income securities and 15% international fixed income securities. The Account consistently ranks at or slightly below median versus a group of peers. Fees primarily account for the relative underperformance of the Account. We recommend retention of this option.



### Fund Objective and Investment Approach

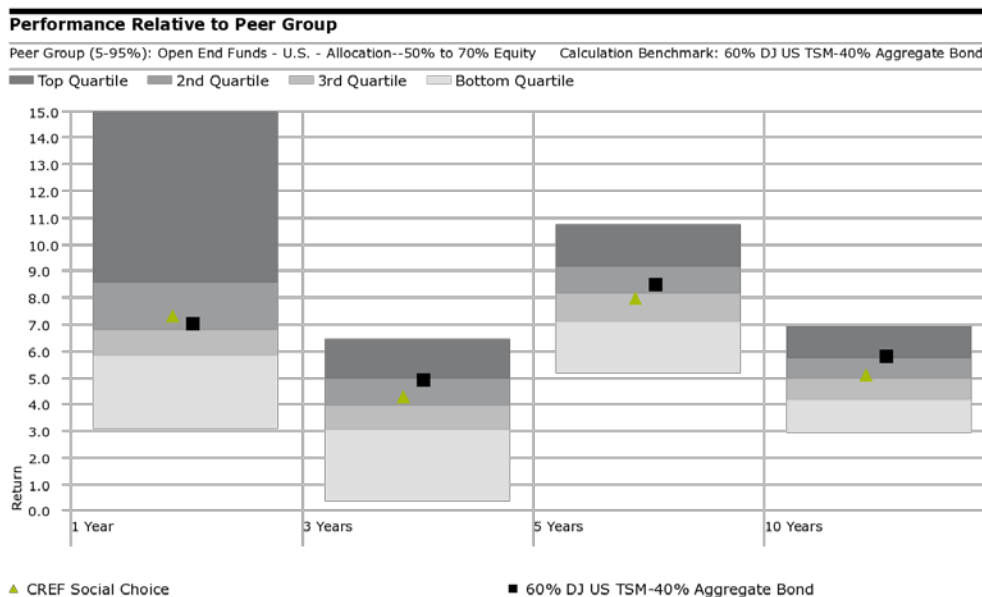
The CREF Social Choice Account is a variable annuity account striving to attain a favorable long-term rate of return that reflects the investment performance of the financial markets while giving special consideration to certain social criteria.

The Account maintains a balanced portfolio, with assets consisting of approximately 60% domestic and foreign stocks and other equity securities and approximately 40% fixed income securities, including money market instruments. The domestic equity portion of the Account's portfolio is designed to closely track the return of the U.S. stock market, applying the Russell 3000 Index as the benchmark, while the foreign equity component portion seeks to match the return of developed international markets, employing the MSCI EAFE + Canada Index as the benchmark. The fixed income section pursues a favorable long term total return consistent with preserving capital, typically from investment-grade fixed income securities. Potential holdings are comprehensively screened for environmental, social and governance (ESG) criteria to construct a portfolio offering broadly diversified exposure to socially screened securities. To compensate for securities that do not meet the ESG criteria and are excluded from the Account, quantitative modeling and other techniques are applied in an effort to match the overall risk characteristics of the portfolio with those of the composite benchmark.

### Performance Commentary

The CREF Social Choice Account returned 7.40% in 2016, surpassing the composite benchmark return of 7.02% by 38 basis points. Performance of the Account trailed the benchmark in the three-, five- and ten-year periods by 56, 46 and 68 basis points, respectively.

<b>Fund Characteristics</b>	<b>CREF Social Choice Account</b>	
Total Fund Assets	\$13.5 billion	
Target Allocation	Stocks	50-70%
	Bonds	30-50
Actual Allocation	Domestic Stocks	41.87%
	Foreign Stocks	18.05
	Bonds	38.36
	Short Term Investments/Other	1.72
Number of Holdings	Stocks	1,249
	Bonds	770
Average Maturity	8.76 years	
Average Duration	5.69 years (option-adjusted)	
Turnover	115% (as of 12/31/15)	
Fees	0.32% Annually	
Portfolio Manager (tenure)	Philip James (Jim) Campagna (11 years) Stephen Liberatore (12 years) Lei Liao (2 years)	



**Trailing Returns**

	1 Year	Rank	3 Years	Rank	5 Years	Rank	10 Years	Rank
CREF Social Choice	7.4	41	4.3	39	8.0	54	5.1	45
60% DJ US TSM-40% Aggregate Bond	7.0	46	4.9	25	8.5	40	5.8	24
Count	842		792		716		561	
5th Percentile	15.0		6.4		10.7		7.0	
25th Percentile	8.6		5.0		9.2		5.7	
50th Percentile	6.8		4.0		8.2		5.0	
75th Percentile	5.8		3.1		7.1		4.2	
95th Percentile	3.1		0.4		5.2		2.9	

**Historical Returns**

	CREF Social Choice		Custom Social Choice**		Return Difference
	Return	Rank *	Return	Rank *	
2007	4.8	67	6.3	46	-1.5
2008	-23.5	13	-22.2	8	-1.3
2009	22.4	61	19.6	81	2.8
2010	12.0	47	13.6	15	-1.6
2011	1.8	20	4.1	2	-2.3
2012	11.0	66	11.5	54	-0.5
2013	16.7	54	16.7	54	0.0
2014	6.8	38	7.7	31	-0.9
2015	-0.9	43	0.3	16	-1.2
2016	7.4	41	7.0	46	0.4
Trailing 3-Year	4.4%	39	4.9%	25	-0.6
Trailing 5-Year	8.1	54	8.5	40	-0.5
Trailing 10-Year	5.1	45	5.8	24	-0.7

\* Rank of 1 is best and 100 is worst.

\*\* 60% Dow Jones US Total Stock Market / 40% Barclays Capital Aggregate Bond through December 31, 2012. 47% Russell 3000 / 13% MSCI EAFE + Canada / 40% Barclays Capital Aggregate Bond since January 1, 2013.

**Assessment**

The CREF Social Choice Account is a balanced strategy consisting of domestic and international equities and fixed income securities screened on environmental, social and governance (ESG) criteria. The Account has lagged the custom benchmark in seven of the most recent ten calendar years and in all longer time periods presented, partially attributable to fees, and ranks slightly above or near the median in a group of peers. We recommend retention of this option.

### Fund Objective and Investment Approach

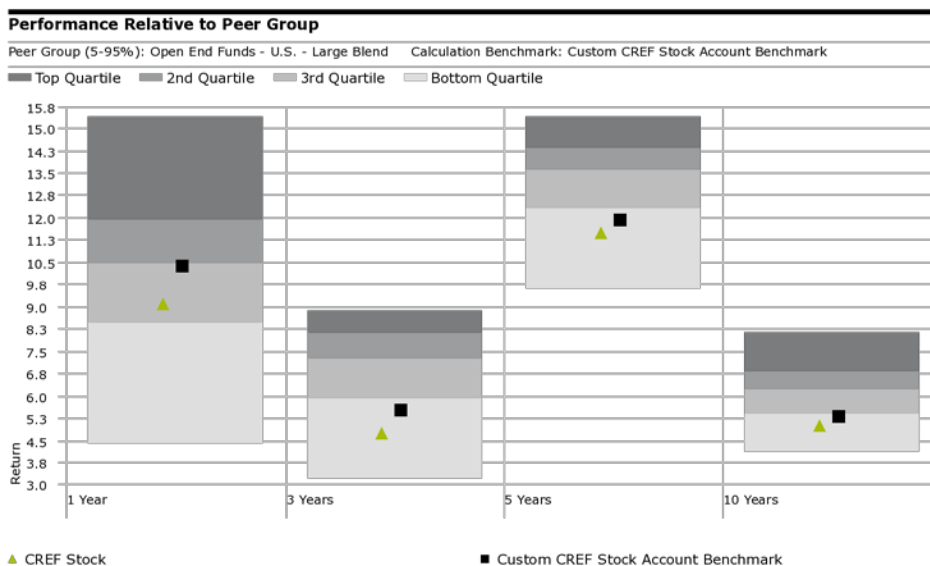
The CREF Stock Account is a variable annuity account striving to attain a favorable long-term rate of return through capital appreciation and investment income by investing typically in a broadly diversified portfolio of common stocks.

The Account normally invests a minimum of 80% of its assets in equity securities of foreign and domestic companies while employing a combination of three different investment strategies in the management of the Account: active security selection, enhanced indexing and pure indexing. Stocks under consideration for inclusion in the Account must be viewed as attractively priced, based on a detailed analysis of their prospects for growth in earnings, cash flow, revenues and other relevant measures. Companies whose assets appear undervalued in the market also are sought for inclusion in the portfolio. Stock of domestic companies of any market capitalization size and stock of foreign companies in developed and emerging markets may be held in the Account. Target weightings of the Account holdings are approximately 70-75% domestic equity and 25-30% foreign equities, with a maximum 5% allocation to emerging market investments. Allocation decisions among underlying portfolio segments is determined in relation to benchmark sector and industry weightings and in relation to long-term allocation guidelines established by senior investment managers who provide general oversight in the management of the Account.

### Performance Commentary

In 2016, CREF Stock Account returned 9.17%, lagging the 10.41% composite benchmark return by 124 basis points. The Account underperformed the benchmark in the trailing three-, five- and ten-year periods by 75, 42 and 31 basis points, respectively, due primarily to fees.

<b>Fund Characteristics</b>	<b>CREF Stock Account</b>
Total Fund Assets	\$113.2 billion
Style Characteristics	Core
Capitalization Focus	Large
Level of Diversification	Diversified
Market Risk (Beta)	1.00 (3-year)
Composition	U.S. Stocks 69.32% Non-U.S. Stocks 30.07 Short Term Invest 0.61
Number of Holdings	9,470
Turnover	52% (as of 12/31/15)
Fees	0.38% Annually
Portfolio Manager (tenure)	Hans Erickson (20 years) William Riegel (17 years) Saira Malik (8 years) Thomas Franks (6 years)



**Trailing Returns**

	1 Year	Rank	3 Years	Rank	5 Years	Rank	10 Years	Rank
CREF Stock	9.1	67	4.8	84	11.5	82	5.0	84
Custom CREF Stock Account Benchmark	10.4	51	5.5	79	11.9	78	5.3	77
Count	1,376		1,307		1,230		1,088	
5th Percentile	15.4		8.8		15.4		8.1	
25th Percentile	12.0		8.1		14.4		6.9	
50th Percentile	10.5		7.3		13.6		6.2	
75th Percentile	8.5		5.9		12.3		5.4	
95th Percentile	4.4		3.2		9.6		4.2	

**Historical Returns**

	CREF Stock		Custom Stock *		Return Difference
	Return	Rank *	Return	Rank *	
2007	8.0	29	7.0	40	1.0
2008	-39.7	92	-38.5	85	-1.2
2009	32.0	16	29.7	25	2.4
2010	15.8	27	15.8	26	-0.1
2011	-4.9	97	-3.2	91	-1.7
2012	17.3	18	16.6	26	0.7
2013	27.8	83	28.2	82	-0.4
2014	6.4	90	7.5	84	-1.1
2015	-0.9	55	-0.9	55	0.0
2016	9.2	67	10.4	51	-1.2
Trailing 3-Year	4.8%	84	5.6%	79	-0.7
Trailing 5-Year	11.6	82	12.0	78	-0.4
Trailing 10-Year	5.0	84	5.3	77	-0.3

\* Rank of 1 is best and 100 is worst.

\* 80% Dow Jones US Total Stock Market / 20% MSCI EAFE + Canada through June 30, 2011.

69% Russell 3000 / 25% MSCI EAFE + Canada / 6% MSCI Emerging Markets through December 31,

2012. 70% Russell 3000 / 30% MSCI ACWI ex-US Investable Market since January 1, 2013.

**Assessment**

The CREF Stock Account is a broadly diversified strategy offering exposure across all major equity market segments, including domestic large-, mid- and small-cap stocks, and stocks in foreign developed and emerging markets. The multi-manager team approach utilizes a variety of management techniques. Underperformance versus the benchmark over trailing multi-year periods is largely due to fees. Ranking within a group of peers continues to struggle. We recommend retention of this option.

### Fund Objective and Investment Approach

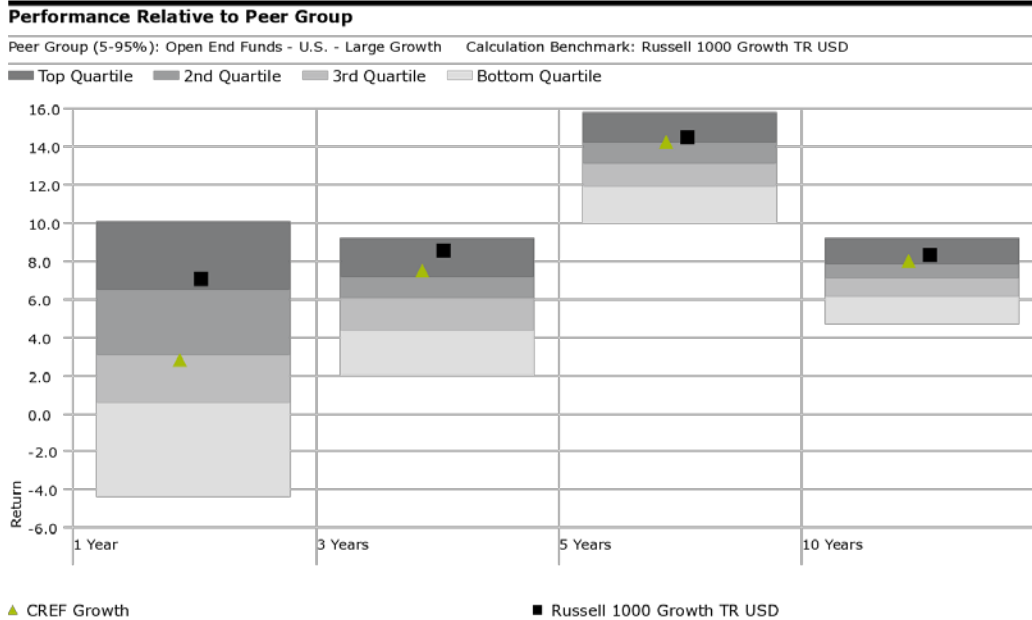
The CREF Growth Account is a variable annuity account pursuing a favorable long-term rate of return mainly through capital appreciation by utilizing a diversified portfolio of common stocks offering the opportunity for exceptional growth.

The Account normally invests a minimum of 80% of its assets in common stocks and other equity securities, typically in large, well-known, established companies, notably those with new or innovative products, services or processes that may enrich future earnings prospects. The Account is allowed to invest in smaller companies exhibiting higher growth potential and in companies within new and emerging areas of the economy. The Account also is permitted to invest in companies as a means to benefit from prospective acquisitions, reorganizations or corporate restructurings. The Account may invest a maximum of 20% of its assets in foreign securities. The Account employs a multi-manager approach through which five individual sub-segments of the portfolio are actively run by fundamental active, quantitative active, and index portfolio managers. Allocation decisions among underlying portfolio segments are established by senior investment managers who provide general oversight.

### Performance Commentary

The CREF Growth Account returned 2.92% in 2016, lagging by 416 basis points the Russell 1000 Growth Index return of 7.08%. Relative to the benchmark, performance of the Account trailed in the three- and five- and ten-year periods by 96, 23 and 25 basis points, respectively.

<b>Fund Characteristics</b>	<b>CREF Growth Account</b>
Total Fund Assets	\$20.9 billion
Style Characteristics	Growth
Capitalization Focus	Large
Level of Diversification	Diversified
Number of Holdings	678
Turnover	47.0% (as of 12/31/15)
Fees	0.31% Annually
Portfolio Manager (tenure)	Susan Hirsch (11 years) Andrea Mitroff (10 years) Terrence Kontos (3 years)



**Trailing Returns**

	1 Year	Rank	3 Years	Rank	5 Years	Rank	10 Years	Rank
CREF Growth	2.9	51	7.6	20	14.2	24	8.1	19
Russell 1000 Growth TR USD	7.1	21	8.6	9	14.5	20	8.3	13
Count	1,476		1,433		1,358		1,157	
5th Percentile	10.0		9.1		15.8		9.1	
25th Percentile	6.5		7.2		14.2		7.8	
50th Percentile	3.1		6.0		13.1		7.1	
75th Percentile	0.5		4.3		11.9		6.1	
95th Percentile	-4.4		2.1		10.0		4.7	

**Historical Returns**

	CREF Growth		Russell 1000 Growth		Return Difference
	Return	Rank *	Return	Rank *	
2007	16.7	28	11.8	59	4.9
2008	-39.8	43	-38.4	31	-1.3
2009	36.5	37	37.2	34	-0.7
2010	15.0	53	16.7	34	-1.7
2011	1.2	16	2.6	4	-1.5
2012	15.9	41	15.3	47	0.6
2013	35.0	38	33.5	52	1.5
2014	13.7	14	13.0	20	0.6
2015	6.4	28	5.7	35	0.7
2016	2.9	51	7.1	21	-4.2
Trailing 3-Year	7.6%	20	8.6%	9	-1.0
Trailing 5-Year	14.3	24	14.5	20	-0.2
Trailing 10-Year	8.1	19	8.3	13	-0.3

\* Rank of 1 is best and 100 is worst.

**Assessment**

The CREF Growth Account was terminated as an SMP investment option during July 2004. Twelve participants remain invested in the account.

### Fund Objective and Investment Approach

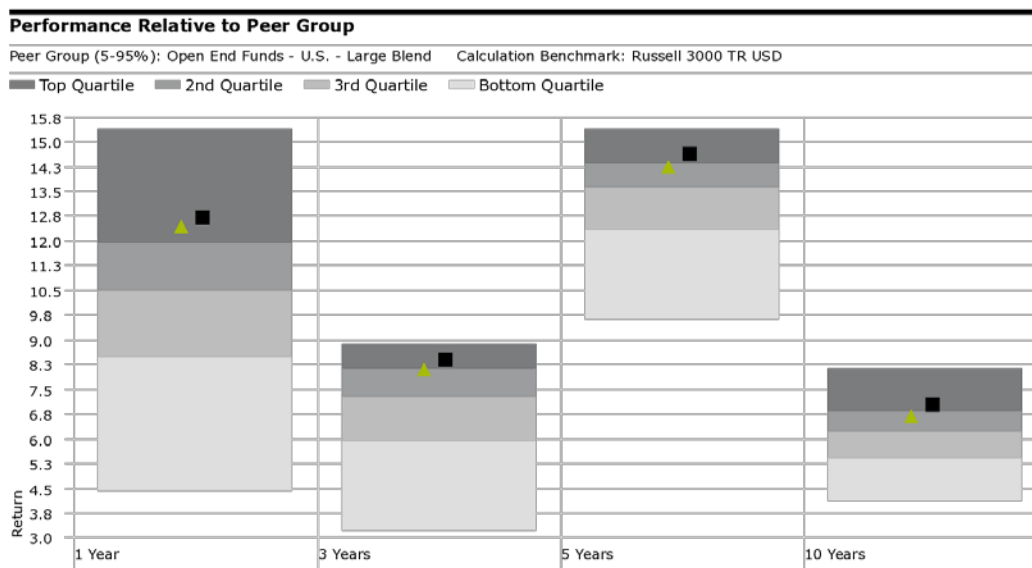
The CREF Equity Index Account is a variable annuity account seeking a favorable long-term rate of return through the use of a diversified portfolio selected to closely track the overall market for common stocks publicly traded in the United States, as represented by a broad stock market index, the Russell 3000 Index. Changes are made to the Account holdings to reflect changes in the Index.

The Account employs a quantitative portfolio method designed to closely track the characteristics and return of the Russell 3000 Index. The method allows the managers to attempt to replicate the performance of the benchmark index by purchasing or selling a subset of the securities within the index that are representative of the entire index. The Account maintains a portfolio of securities with proportional weightings across sectors and industries to closely match the overall investment characteristics of the index. In addition, the Account's portfolio management teams utilize proprietary optimization techniques to evaluate and control portfolio risk, with a goal of maintaining tracking error within very close range of the index while effectively managing trading costs and other Account expenses.

### Performance Commentary

In 2016, the CREF Equity Index Account 12.49% return lagged the Russell 300 Index 12.74% return by 25 basis points due to fees. The Account return is reduced for expenses, while the benchmark return is not. The Account results trailed the benchmark for the three-, five- and ten-year periods by 28, 37 and 36 basis points, respectively, as a result of fees.

<b>Fund Characteristics</b>	<b>CREF Equity Index Account</b>
Total Fund Assets	\$17.5 billion
Style Characteristics	Core
Capitalization Focus	Large
Level of Diversification	Diversified
Market Risk (Beta)	1.00 (3-year)
Number of Holdings	2,935
Turnover	5.0% (as of 12/31/15)
Fees	0.26% Annually
Portfolio Manager (tenure)	Philip James (Jim) Campagna (11 years) Lei Liao (2 years)



▲ CREF Equity Index      ■ Russell 3000 TR USD

**Trailing Returns**

	1 Year	Rank	3 Years	Rank	5 Years	Rank	10 Years	Rank
CREF Equity Index	12.5	22	8.1	25	14.3	28	6.7	32
Russell 3000 TR USD	12.7	18	8.4	15	14.7	14	7.1	18
Count	1,376		1,307		1,230		1,088	
5th Percentile	15.4		8.8		15.4		8.1	
25th Percentile	12.0		8.1		14.4		6.9	
50th Percentile	10.5		7.3		13.6		6.2	
75th Percentile	8.5		5.9		12.3		5.4	
95th Percentile	4.4		3.2		9.6		4.2	

**Historical Returns**

	CREF Equity Index		Russell 3000 Index		Return Difference
	Return	Rank *	Return	Rank *	
2007	4.7	73	5.1	70	-0.4
2008	-37.5	74	-37.3	72	-0.2
2009	27.8	33	28.3	30	-0.5
2010	16.4	19	16.9	14	-0.5
2011	0.7	65	1.0	61	-0.3
2012	16.0	39	16.4	29	-0.4
2013	33.0	35	33.6	30	-0.6
2014	12.2	43	12.6	37	-0.4
2015	0.2	42	0.5	37	-0.3
2016	12.5	22	12.7	18	-0.2
Trailing 3-Year	8.2%	25	8.4%	15	-0.3
Trailing 5-Year	14.3	28	14.7	14	-0.4
Trailing 10-Year	6.7	67	7.1	18	-0.4

\* Rank of 1 is best and 100 is worst.

**Assessment**

The CREF Equity Index Account is a passive strategy with a portfolio of securities designed to represent the overall investment characteristics of, and closely track the return of, the Russell 3000 Index through full replication. Consistent annual underperformance is attributable to fees. We recommend retention of this option.



### Fund Objective and Investment Approach

The CREF Global Equities Account is a variable annuity account pursuing a favorable long-term rate of return through capital appreciation and income by utilizing a broadly diversified portfolio consisting typically of foreign and domestic common stocks.

The Account normally invests at least 80% of its assets in foreign and domestic company equity securities. Typically, the portfolio holds a minimum of 40% of the assets in foreign securities and at least 25% in domestic securities, with the remainder of investments distributed between foreign and domestic securities. The Account employs a combination of three different investment strategies in the management of the Account: active security selection, enhanced indexing and pure indexing. The Account investment management team seeks attractively priced companies, of any capitalization size, considered undervalued based on the company's prospects for growth in earnings, cash flow, revenues and other relevant measures. Particular focus is given to companies with shareholder-oriented management teams dedicated to creating shareholder value.

### Performance Commentary

The CREF Global Equities Account returned 5.11% in 2016 and trailed by 240 basis points the MSCI World Index 7.51% return. The Account exceeded the benchmark for the trailing five-year period by 6 basis points and lagged in the three- and ten-year periods by 85 and 13 basis points, respectively.

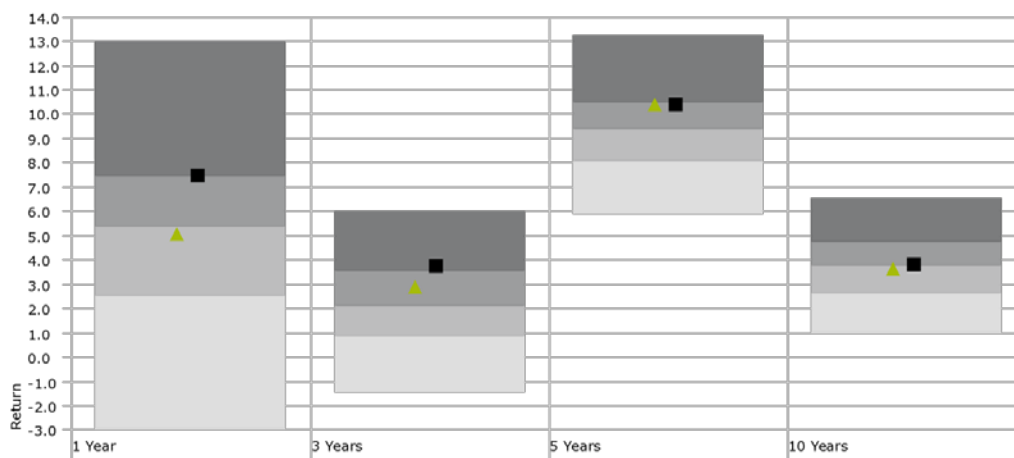
<b>Fund Characteristics</b>	<b>CREF Global Equities Account</b>								
Total Fund Assets	\$18.1 billion								
Composition	<table> <tr> <td>US Stocks</td> <td>60.7%</td> </tr> <tr> <td>Non-U.S. Stocks</td> <td>38.4</td> </tr> <tr> <td>Short Term/Other</td> <td>0.9</td> </tr> </table>	US Stocks	60.7%	Non-U.S. Stocks	38.4	Short Term/Other	0.9		
US Stocks	60.7%								
Non-U.S. Stocks	38.4								
Short Term/Other	0.9								
Market Risk (Beta)	0.99 (3-year)								
Number of Holdings	2,027								
Turnover	49.0%								
Fees	0.37% Annually								
Portfolio Manager (tenure)	<table> <tr> <td>Tom Franks</td> <td>(9 years)</td> </tr> <tr> <td>Saira Malik</td> <td>(6 years)</td> </tr> <tr> <td>Andrea Mitroff</td> <td>(6 years)</td> </tr> <tr> <td>John Tribolet</td> <td>(10 years)</td> </tr> </table>	Tom Franks	(9 years)	Saira Malik	(6 years)	Andrea Mitroff	(6 years)	John Tribolet	(10 years)
Tom Franks	(9 years)								
Saira Malik	(6 years)								
Andrea Mitroff	(6 years)								
John Tribolet	(10 years)								

The historical returns of this fund have been compared to a broad universe of competing funds beginning in 2013.

**Performance Relative to Peer Group**

Peer Group (5-95%): Open End Funds - U.S. - World Stock Calculation Benchmark: MSCI World NR USD

■ Top Quartile ■ 2nd Quartile ■ 3rd Quartile ■ Bottom Quartile



▲ CREF Global Equity

■ MSCI World NR USD

**Trailing Returns**

	1 Year	Rank	3 Years	Rank	5 Years	Rank	10 Years	Rank
CREF Global Equity	5.1	53	2.9	34	10.5	27	3.7	52
MSCI World NR USD	7.5	25	3.8	21	10.4	27	3.8	49
Count	1,008		918		764		536	
5th Percentile	13.0		6.0		13.3		6.5	
25th Percentile	7.4		3.6		10.5		4.8	
50th Percentile	5.4		2.1		9.4		3.8	
75th Percentile	2.5		0.9		8.1		2.7	
95th Percentile	-2.9		-1.4		5.9		1.0	

**Historical Returns**

	CREF Global Equities		MSCI World Index		Return Difference
	Return	Rank *	Return	Rank *	
2007	10.1		9.0		1.0
2008	-42.3		-40.7		-1.6
2009	32.9		30.0		2.9
2010	12.2		11.8		0.5
2011	-7.7		-5.5		-2.2
2012	18.5		15.8		2.7
2013	27.3	38	26.7	42	0.7
2014	4.2	32	4.9	25	-0.8
2015	-0.4	42	-0.9	47	0.5
2016	5.1	53	7.5	25	-2.4
Trailing 3-Year	3.0%	34	3.8%	21	-0.8
Trailing 5-Year	10.5	27	10.4	27	0.1
Trailing 10-Year	3.7	52	3.8	49	-0.1

\* Rank of 1 is best and 100 is worst.

**Assessment**

The CREF Global Equities Account offers exposure to a broadly diversified portfolio of domestic and foreign equity securities consisting of mega-, large- and mid-cap common stocks across value, growth and core investment styles. The Account is available at a reasonable cost, maintains low relative risk, and has demonstrated good relative performance, surpassing the benchmark return in six of the past ten calendar years and in the five-year longer period. The Account ranks slightly above or at median in a group of peer funds. We recommend retention of this option.

### Fund Objective and Investment Approach

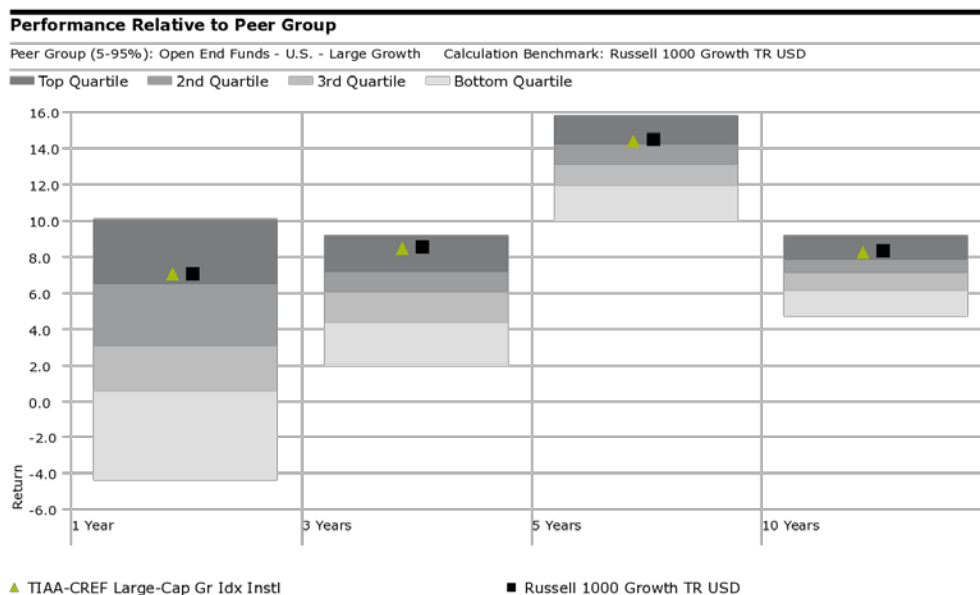
The TIAA-CREF Large-Cap Growth Index Fund is a passively-managed mutual fund striving to attain a favorable long-term total return, mainly through capital appreciation, by investing primarily in a portfolio of equity securities of large domestic growth companies based on the Russell 1000 Growth Index.

The Fund normally invests at least 80% of its assets in equity securities within its benchmark, the Russell 1000 Growth Index. The Fund attempts to closely track the Index and changes are made to the Fund holdings to reflect changes in the Index. Utilizing a proprietary quantitative model, the Fund approaches full replication of the Index and generally maintains holdings with proportional weightings across industries and sectors and individual securities to create and maintain a portfolio closely matching the overall investment characteristics of the Index.

### Performance Commentary

In 2016, the TIAA-CREF Large-Cap Growth Index Fund 7.05% return lagged by 3 basis points the Russell 1000 Growth Index 7.08% return. Relative underperformance of the Fund was the result of fees for each of the past ten years and for all longer time periods presented. The Fund return is reduced for expenses, while the benchmark return is not.

<b>Fund Characteristics</b>	<b>TIAA-CREF Large-Cap Growth Index Fund</b>
Total Fund Assets	\$3.7 billion
Style Characteristics	Growth
Capitalization Focus	Large
Level of Diversification	Diversified
Market Risk (Beta)	1.00 (3-year)
Number of Holdings	610
Turnover	22.0% (as of 10/31/16)
Fees: Institutional Share Class	0.06% Annually
Portfolio Manager (tenure)	Philip James (Jim) Campagna (11 years) Lei Liao (2 years)



**Trailing Returns**

	1 Year	Rank	3 Years	Rank	5 Years	Rank	10 Years	Rank
TIAA-CREF Large-Cap Gr Idx Instl	7.0	21	8.5	9	14.4	21	8.3	15
Russell 1000 Growth TR USD	7.1	21	8.6	9	14.5	20	8.3	13
Count	1,476		1,433		1,358		1,157	
5th Percentile	10.0		9.1		15.8		9.1	
25th Percentile	6.5		7.2		14.2		7.8	
50th Percentile	3.1		6.0		13.1		7.1	
75th Percentile	0.5		4.3		11.9		6.1	
95th Percentile	-4.4		2.1		10.0		4.7	

**Historical Returns**

	TIAA-CREF Large-Cap Growth Index Fund		Russell 1000 Growth Index		Return Difference
	Return	Rank *	Return	Rank *	
2007	11.4	62	11.8	59	-0.4
2008	-38.7	33	-38.4	31	-0.2
2009	36.9	36	37.2	34	-0.3
2010	16.3	39	16.7	34	-0.4
2011	2.3	6	2.6	4	-0.3
2012	14.9	48	15.3	47	-0.4
2013	33.2	55	33.5	52	-0.3
2014	13.0	20	13.0	20	0.0
2015	5.6	36	5.7	35	-0.1
2016	7.1	21	7.1	21	0.0
Trailing 3-Year	8.5%	9	8.6%	9	-0.1
Trailing 5-Year	14.4	21	14.5	20	-0.1
Trailing 10-Year	8.3	15	8.3	13	-0.1

\* Rank of 1 is best and 100 is worst.

**Assessment**

The TIAA-CREF Large-Cap Growth Index Fund attempts to closely match the overall investment characteristics and performance of the Russell 1000 Growth Index. The Fund has achieved its objective by performing in line with the Index, with consistent slight underperformance due to fees. We recommend retention of this fund.

### Fund Objective and Investment Approach

The TIAA Real Estate Account is a variable annuity account seeking favorable long-term returns primarily through real estate rental income and appreciation that are enhanced by results of real estate-related investments owned by the Account. In addition, the Account invests in non-real estate-related publicly traded securities and short-term higher quality liquid investments easily converted to cash to facilitate participant redemption requests, purchase or improve of properties, or cover other expense needs.

The Account intends to hold between 70% and 95% of its assets directly in real estate or real estate-related assets with the objective of producing returns through the purchase of direct ownership interests in income-producing real estate, including office, industrial, retail, and multi-family residential properties. The Account may hold other real estate or real estate-related investments through joint ventures, real estate partnerships or real estate investment trust (REITs), and in conventional mortgage loans, participating mortgage loans, common or preferred stock of companies whose operations involve real estate and mortgage-backed securities.

The Account also may invest in foreign real estate investments. The Account investment guidelines confine investments in direct foreign real estate, together with foreign real estate-related securities and foreign non-real estate-related liquid investments, to a maximum of 25% of net assets. The remaining assets, targeted between 15% and 25%, are held in publicly traded, liquid investments.

Due to the relatively low level of liquidity and high transaction costs associated with markets for directly-owned real estate, properties are normally purchased on a buy and hold basis. Purchase decisions typically are based on a discounted cash flow valuation of a property's potential to generate lease income or other cash flow. Sales are infrequent and are made on a selective basis depending upon a property's characteristics and prevailing market conditions. All properties in the Account portfolio are independently appraised quarterly. Investor transfers in to the Account and out of the Account are limited to avoid excessive transactions that could negatively impact performance of the Account.

### Performance Commentary

The TIAA Real Estate Account returned 5.59% in 2016, reported one quarter in arrears, and lagged by 411 basis points the NCREIF Fund Index – ODCE return of 9.7%. The allocation of short-term liquid investments in the Account consistently detracts from performance. The Account underperformed the real estate benchmark in seven of the ten most recent calendar years and by 298, 209 and 144 basis points in the trailing three-, five- and ten-year periods, respectively.

Fund Characteristics	TIAA Real Estate Account
Total Fund Assets	\$24.3 billion
Composition	Real Estate Assets 77.7% Non-Real Estate-Related Assets 22.3
Number of Holdings	129
Fees	0.89% Annually
Portfolio Manager (tenure)	Gerald Casimir (2 years)

There is no universe comparison graph for the TIAA Real Estate Account because there is not a broad universe of competing funds.

### Historical Returns

	TIAA Real Estate Account *	Real Estate Index * / **	Return
	Return	Return	Difference
2007	13.7	13.4	0.3
2008	1.0	10.8	-9.8
2009	-33.8	0.7	-34.5
2010	1.8	-2.6	4.4
2011	16.4	-2.4	18.8
2012	10.6	10.7	-0.1
2013	10.1	11.5	-1.4
2014	9.9	11.4	-1.5
2015	10.4	13.8	-3.4
2016	5.6	9.7	-4.1
Trailing 3-Year	8.6%	11.6%	-3.0
Trailing 5-Year	9.3	11.4	-2.1
Trailing 10-Year	3.5	4.9	-1.4

\* Performance is reported one quarter in arrears.

\*\* REA Composite Index through December 31, 2011; NCREIF Fund Index - ODCE as of January 1, 2012.

The TIAA Real Estate Account provides exposure to a portfolio of income-producing real estate assets as an investment option. Given the unique features of the Account, including its liquidity guarantee feature, there are relatively few sources of returns that can be used as a direct comparison for assessing the performance of the Account. The NCREIF Fund Index – Open End Diversified Core Equity (ODCE) is an equal-weighted index of the investment returns from a collection of 30 open-ended commingled funds which focus on a core real estate investment strategy. The Index, included in the table above, has held cash reserves within a range of approximately 3.0% to 6.5% in recent years. Since inception, the Account has typically maintained, and on a long-term basis intends to maintain, an allocation to cash, cash equivalents and marketable securities of between 15% and 25% of total net assets to accommodate significant inflows into the Account and to hold when the market lacks available, attractive real estate-related investments.

### Assessment

The TIAA Real Estate Account is a diversified portfolio of directly-held income-producing real estate assets of multiple property types located across several geographic regions. Investors are allowed one redemption from the Account per calendar quarter to avoid crippling the Account's efforts to pursue investment opportunities or complete transactions and to avert unnecessary sales of assets to generate liquidity. The Account has produced positive absolute returns in nine of the most recent ten calendar years while experiencing weak results versus the benchmark. We recommend retention of this fund.

**Fund Objective and Investment Approach**

The TIAA-CREF Lifecycle Index Fund Series is a series of mutual funds pursuing high total return over time through a combination of capital appreciation and income. The TIAA-CREF Lifecycle Index Retirement Income Fund seeks high total return over time typically through income, with a secondary focus on capital appreciation.

Each fund within the lifecycle index series is constructed as a single diversified investment portfolio and managed toward the target retirement date of the fund, the approximate date when investors expect to begin withdrawing money from the fund. Each fund is comprised of a portfolio of underlying passively-managed TIAA-CREF equity and fixed income funds. Lifecycle funds designed for investors retiring sooner have larger positions in fixed income funds and smaller positions in equity funds, while funds intended for investors retiring later have a more aggressive portfolio, with larger allocations to equity funds and smaller allocations to fixed income funds. The portfolios are fully invested at all times.

The glide path for each fund within the lifecycle index series maintains strategic target allocations to major asset classes. The initial portfolio allocation for a newly-introduced lifecycle index fund is 95% equity and 5% fixed income. When the fund is within 25 years of its target retirement date, the glide path commences and annually increases the fixed income allocation by 1.5% and decreases exposure to equity by 1.5%. Upon achieving the target date of the fund, the asset allocation is 50% equity and 50% fixed income. The glide path continues to adjust after attaining the target retirement date, annually decreasing the equity exposure by 1.0% and increasing the fixed income exposure by the same amount until an allocation of 40% equity and 60% fixed income allocation is realized ten years after the target retirement year. At this time, when the matured target date fund reaches the same allocation as the Lifecycle Index Retirement Income Fund, the two funds may merge. Each fund may vary by a maximum of 10% from its target allocation, based upon current market conditions and outlook.

The net expense ratios, after waivers, affiliated with each of the lifecycle index funds are determined based on several factors, including actual fund expenses, expense levels in relation to comparable funds in the marketplace, and projected levels of assets each fund is estimated to acquire over time. The target net expense ratio of each fund is reviewed annually in relation to competitive fund offerings. Fee waivers generally are retained until a fund has achieved the level of assets necessary to generate adequate revenue to completely offset fund expenses, at which time no further extension of fee waivers is provided.

**Performance Commentary**

Calendar year 2016 returns of the target date funds within the TIAA-CREF lifecycle index series were equal to or slightly below the returns of their respective composite benchmarks and reflected results of the underlying equity and fixed income funds held within each fund's portfolio. Every fund slightly underperformed its corresponding composite benchmark return in the trailing three- and five-year periods as a result of fees.

**Assessment**

The TIAA-CREF Lifecycle Index Fund Series offers a passively-managed diversified investment portfolio with annual asset reallocations between underlying equity and fixed income funds when the lifecycle fund is within 25 years of its target retirement date. Each target dated fund eventually realizes the asset allocation of the retirement income fund, at which time the two funds may merge. Performance results of each fund closely resemble the returns of the corresponding composite benchmarks, with slight underperformance attributable to fees. The TIAA-CREF Lifecycle Index Fund Series became available to participants as an approved investment option in the Self-Managed Plan (SMP) when it replaced the TIAA-CREF Lifecycle Fund Series as of April 29, 2016.





**Lifecycle Index - Institutional  
Return Summary  
Ending December 31, 2016**

	<b>1 Year</b>	<b>3 Year</b>	<b>5 Year</b>	<b>10 Year</b>
<b>2010 Fund</b>	5.7%	4.0%	6.6%	N/A
<i>Custom Benchmark</i>	5.9	4.1	6.7	N/A
<b>2015 Fund</b>	6.1	4.1	7.2	N/A
<i>Custom Benchmark</i>	6.3	4.2	7.4	N/A
<b>2020 Fund</b>	6.7	4.3	8.0	N/A
<i>Custom Benchmark</i>	6.8	4.4	8.2	N/A
<b>2025 Fund</b>	7.3	4.5	8.9	N/A
<i>Custom Benchmark</i>	7.4	4.6	9.0	N/A
<b>2030 Fund</b>	7.8	4.7	9.7	N/A
<i>Custom Benchmark</i>	7.9	4.8	9.8	N/A
<b>2035 Fund</b>	8.5	4.8	10.4	N/A
<i>Custom Benchmark</i>	8.5	5.0	10.6	N/A
<b>2040 Fund</b>	9.0	5.0	10.9	N/A
<i>Custom Benchmark</i>	9.0	5.1	11.0	N/A
<b>2045 Fund</b>	9.3	5.1	10.9	N/A
<i>Custom Benchmark</i>	9.4	5.2	11.1	N/A
<b>2050 Fund</b>	9.5	5.1	11.0	N/A
<i>Custom Benchmark</i>	9.6	5.3	11.1	N/A
<b>2055 Fund</b>	9.7	5.2	11.0	N/A
<i>Custom Benchmark</i>	9.8	5.3	11.1	N/A
<b>2060 Fund</b>	9.8	N/A	N/A	N/A
<i>Custom Benchmark</i>	9.9	N/A	N/A	N/A
<b>Retirement Income Fund</b>	5.5	3.8	5.9	N/A
<i>Custom Benchmark</i>	5.7	4.0	6.0	N/A