

# Retirement Plan Review

## 3<sup>rd</sup> Quarter 2016

State of Rhode Island

Presented by: David Iden  
Larry Brown



## **David Iden**

Relationship Manager, Institutional Relationships

## **Larry Brown**

Sr. Director, Investment Product & Strategy

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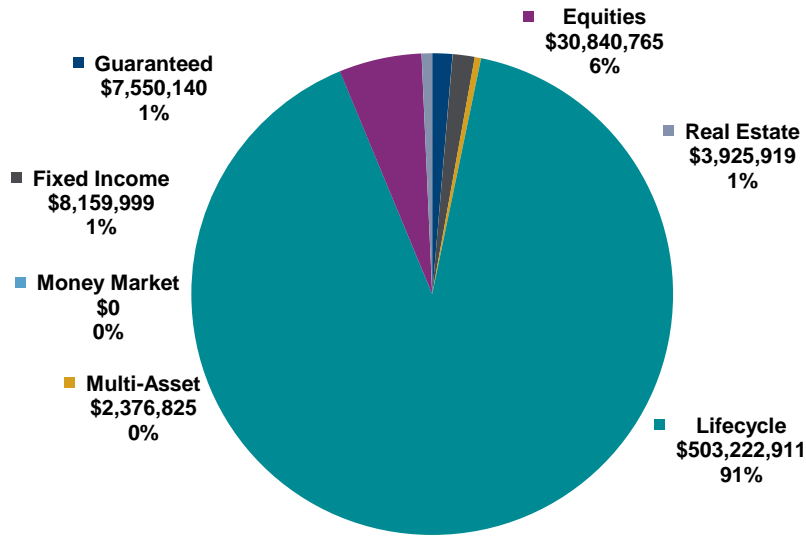
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## Plan Data Summary - All Plans

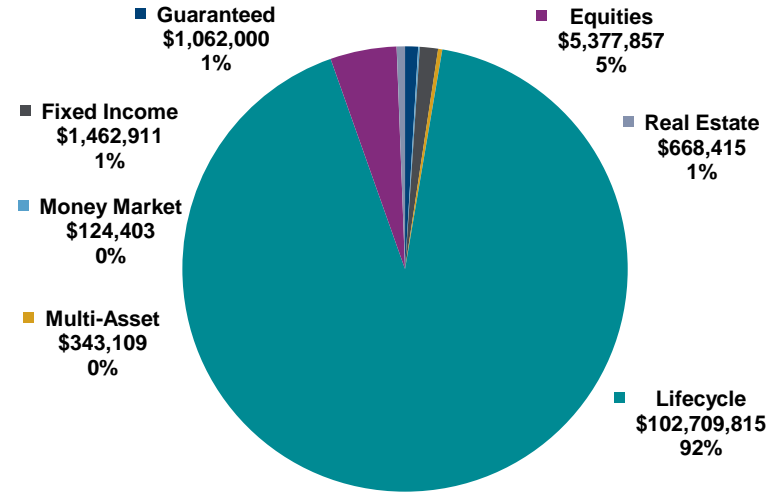
Roughly **91%** of assets are in Vanguard Lifecycle Trusts

Plan Assets - By Category Class



Total Plan Assets: \$556,076,560

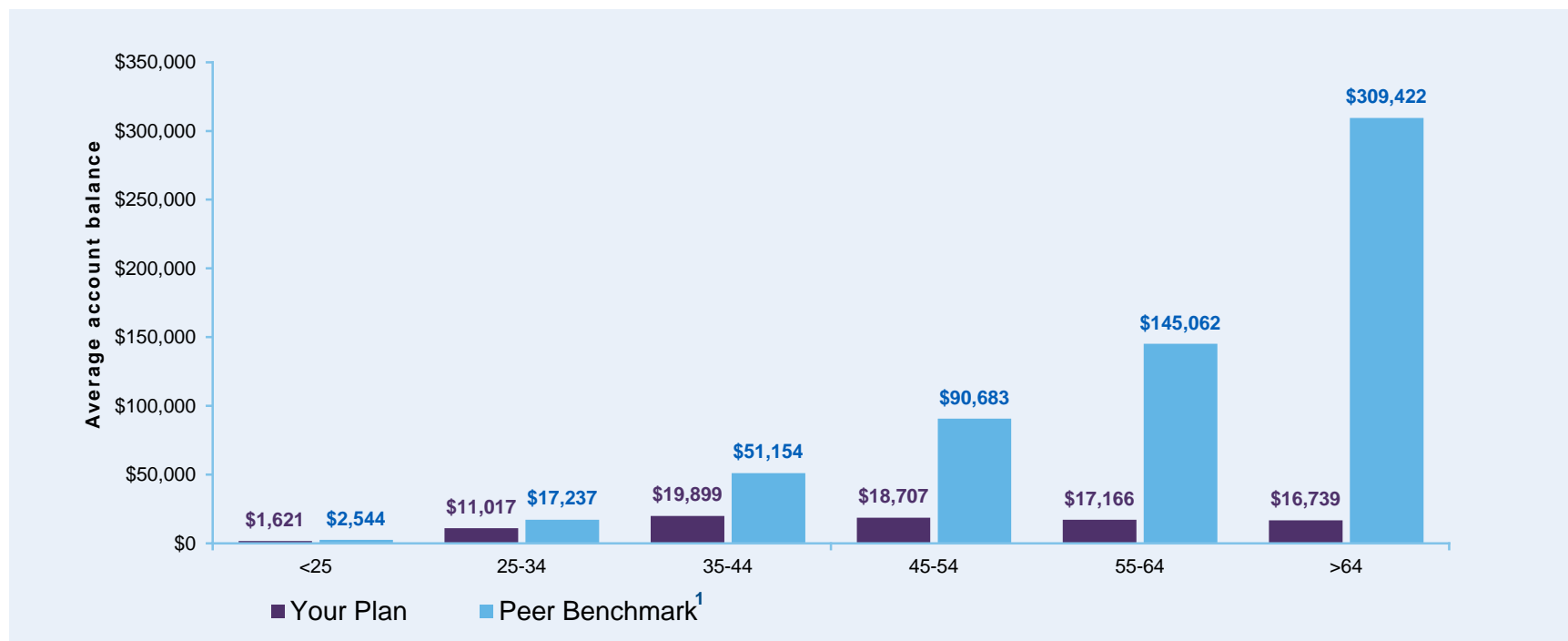
Contributions - By Category Class



Total Contributions: \$111,748,511  
(rolling 12 months)

## Active Participants

# Average account balance by age



	<25	25-34	35-44	45-54	55-64	>64	Total
# of Active Participants	897	4,286	6,621	7,684	5,729	1,024	26,241
% of Total Active Participants	3%	16%	25%	29%	22%	4%	100%
Total Active Assets	\$1,454,469	\$47,217,834	\$131,751,119	\$143,743,380	\$98,346,235	\$17,141,078	\$439,654,114
% of Total Active Assets	0%	11%	30%	33%	22%	4%	100%

This report is as of the period ending 09/30/2016 and reflects the trailing 12 months of activity unless otherwise noted. The report includes all TIAA plans except 457(f), 457(b) Private, Nonqualified Deferred Compensation, and Retirement Healthcare plans. 1. The peer benchmark represents a group of institutions with TIAA recordkept assets in the not-for-profit market with total plan assets between 100M and 500M.

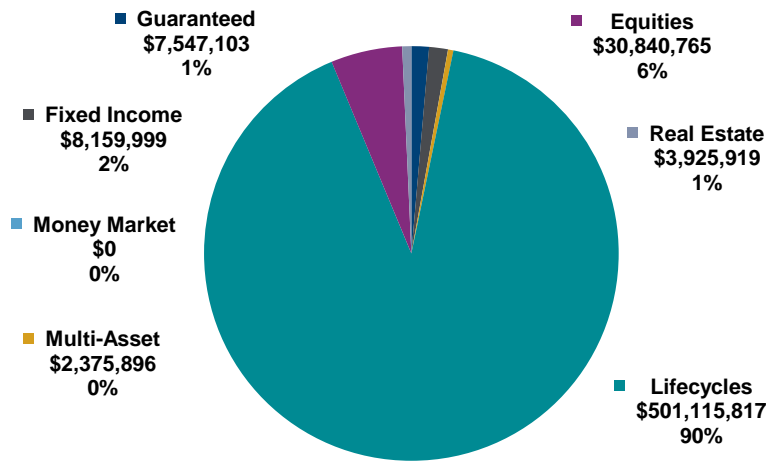
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# Plan Data Summary – 401(a) Defined Contribution Plan

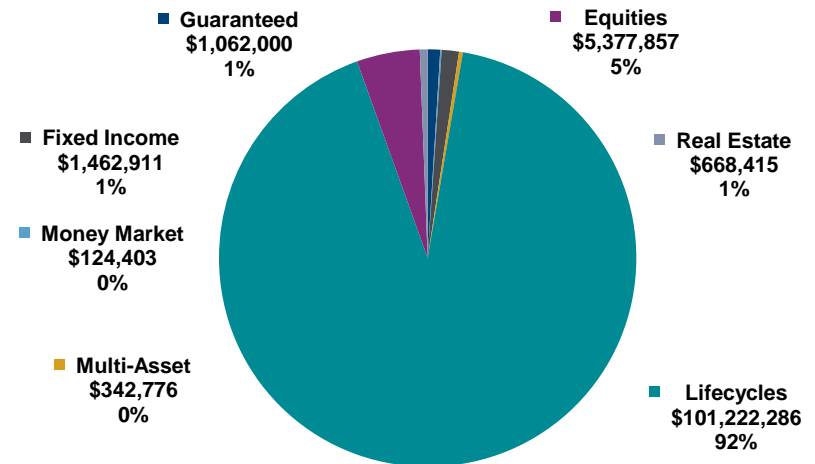
Roughly **91%** of assets are in Vanguard Lifecycle Trusts

Plan Assets - By Category Class



Total Plan Assets: \$553,965,500

Contributions - By Category Class



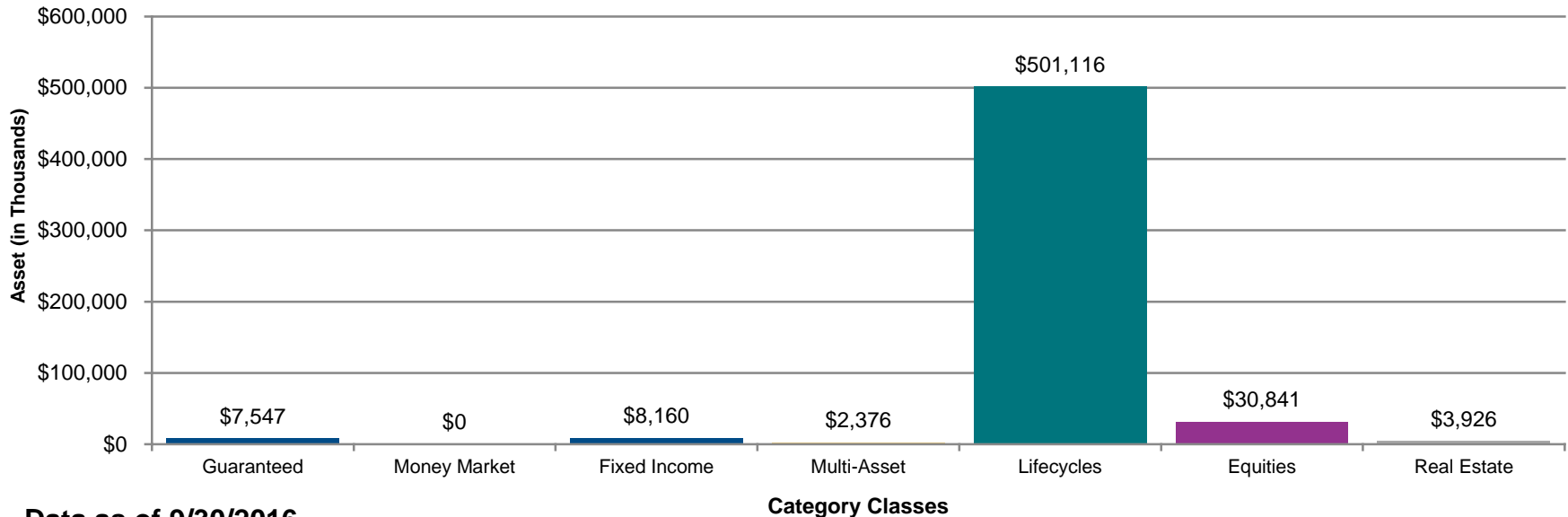
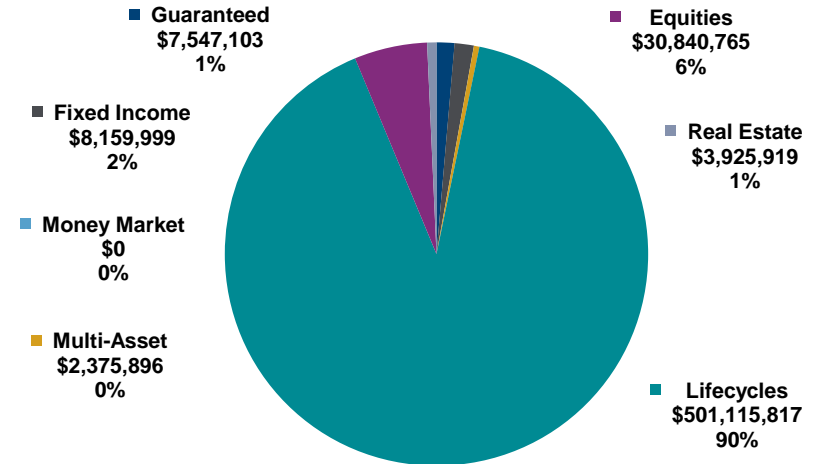
Total Contributions: \$110,260,649  
(rolling 12 months)

# Defined Contribution Plan Plan Assets - By Category Class



**Total Plan Assets:** \$553,965,500

**Default Fund:** Vanguard Lifecycle Collective Investment Trust



Data as of 9/30/2016



# Plan Assets by Investment Option Where Those Contributions are Invested



	Asset amount	Asset percentage of total
<b>GUARANTEED</b>		
TIAA Stable Value	\$7,547,103	1.36%
<b>Guaranteed Total</b>	<b>\$7,547,103</b>	<b>1.36%</b>
<b>MONEY MARKET</b>		
Vanguard Prime Money Mkt Inv	\$0	0.00%
<b>Money Market Total</b>	<b>\$0</b>	<b>0.00%</b>
<b>FIXED INCOME</b>		
PIMCO Real Return Inst Class	\$4,104,290	0.74%
Vanguard Ttl Bd Mkt Idx Adm	\$4,055,709	0.73%
<b>Fixed Income Total</b>	<b>\$8,159,999</b>	<b>1.47%</b>
<b>MULTI-ASSET</b>		
Vanguard Tgt Ret Inc Trust II	\$2,375,896	0.43%
<b>Multi-Asset Total</b>	<b>\$2,375,896</b>	<b>0.43%</b>
<b>LIFECYCLES</b>		
Vanguard Tgt Ret 2010 Trust II	\$7,950,313	1.44%
Vanguard Tgt Ret 2015 Trust II	\$34,972,671	6.31%
Vanguard Tgt Ret 2020 Trust II	\$70,215,139	12.68%
Vanguard Tgt Ret 2025 Trust II	\$79,118,953	14.28%
Vanguard Tgt Ret 2030 Trust II	\$81,300,970	14.68%
Vanguard Tgt Ret 2035 Trust II	\$81,212,570	14.66%

	Asset amount	Asset percentage of total
<b>LIFECYCLES - cont</b>		
Vanguard Tgt Ret 2040 Trust II	\$63,995,615	11.55%
Vanguard Tgt Ret 2045 Trust II	\$47,194,737	8.52%
Vanguard Tgt Ret 2050 Trust II	\$26,508,469	4.79%
Vanguard Tgt Ret 2055 Trust II	\$8,050,503	1.45%
Vanguard Tgt Ret 2060 Trust II	\$595,876	0.11%
<b>Multi-Asset Total</b>	<b>\$501,115,817</b>	<b>90.46%</b>
<b>EQUITIES</b>		
TIAA-CREF Intl Eq Idx-Inst	\$3,083,336	0.56%
TIAA-CREF Social Ch Eq-Inst	\$599,797	0.11%
Vanguard Emr Mkts Stk Idx Adm	\$2,501,914	0.45%
Vanguard Inst Idx Inst	\$13,581,267	2.45%
Vanguard Mid-Cap Idx Adm	\$5,902,037	1.07%
Vanguard Small-Cap Idx Adm	\$5,172,414	0.93%
<b>Equities Total</b>	<b>\$30,840,765</b>	<b>5.57%</b>
<b>REAL ESTATE</b>		
TIAA Real Estate	\$3,925,919	0.71%
<b>Real Estate Total</b>	<b>\$3,925,919</b>	<b>0.71%</b>

Data as of 9/30/2016

## TIAA-CREF Financial Essentials Seminars

TIAA-CREF’s comprehensive, financial education program is designed to help every employee address their financial needs.

- Focus on education for individuals – financial well-being is defined by them
- Offer material relevant to where they are in life/career
- Give them the confidence to help take control of their financial future

Q3 2016 Benefits Fairs, Seminars and Workshops	Attendees
Town of Johnston	2
RI Department of Education (RIDE)	40
Davies Vocational Tech School	26
City of Central Falls	2
Cumberland Schools	15

### Webinars

Interactive webinars keep you up-to-date on topics to help you fulfill fiduciary responsibilities, enhance plan administration and engage your employees.

For the most current list go to <https://www.tiaa-cref.org/public/plansponsors/news/webinars/index.html>

### Benefits Fairs, Seminars and Workshops

Year	Attendees
2013	1785
2014	402
2015	718
As of 9/30/16	873

### Other Resources

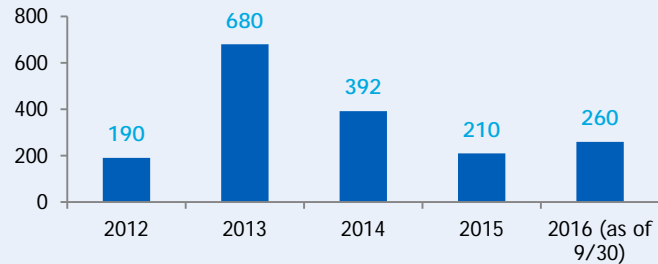
- [Retirement Readiness Center](#)
- [Annuities 101](#)

### Additional Communications & Resources

- PlanFocus® Matters Quarterly e-newsletter
- Top Picks: Monthly Administrator Bulletin
- Monthly Webinar invitation
- Highlights from the TIAA-CREF Institute Research
- Employee engagement checklist

## Individual Session Breakdown

### Individual Sessions<sup>1</sup> (Field Consulting Group)



<sup>1</sup> Numbers show total sessions held and may include employees who had multiple sessions.

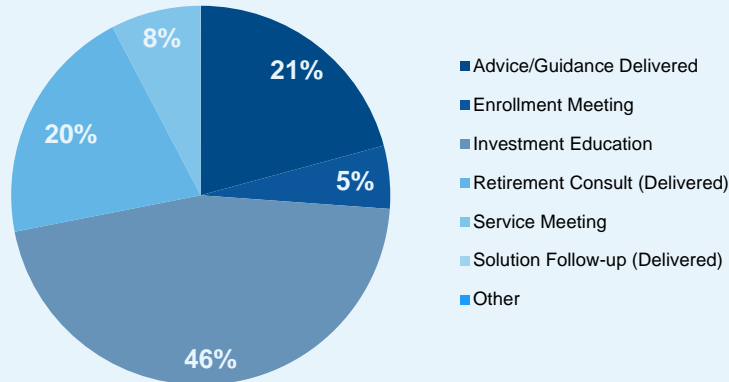
### Employees Participating in Sessions 2016

Gender	Count <sup>2</sup>	Average Age	Average Balance <sup>3</sup>
Female	160	54.83	\$39,958
Male	78	51.20	\$28,958
Unknown	0	0	0
<b>Overall</b>	<b>238</b>	<b>53.64</b>	<b>\$36,353</b>

<sup>2</sup> Employees who had multiple sessions are only counted once.

<sup>3</sup> Reflects employee's total TIAA-CREF balance.

## Topic Summary - Individual Sessions 2016 YTD



## Results YTD through September 30, 2016\*

**97%**  
AGREED

### Objectivity & Integrity

Employees responding to surveys agreed/strongly agreed that the Consultant put their interests first.

**93%**  
AGREED

### Overall Client Experience

Composite score, based on employees' responses to 5 attribute questions. Respondents strongly agreed/agreed that the consultant:

1. Put their interests first
2. Provided quality advice
3. Understood their needs and goals
4. Exhibited financial expertise
5. Anticipated additional financial issues and brought them to attention

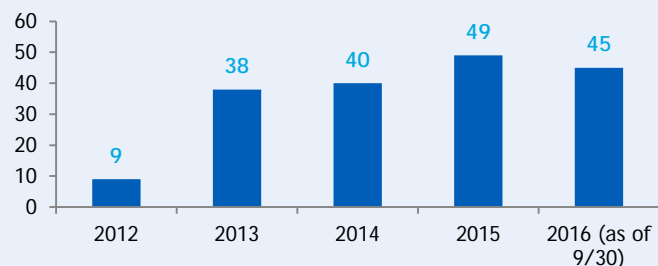
These statistics are meant to reflect customer satisfaction with services provided through TIAA-CREF Financial Consultants. Results experienced may not be typical of all participants, and are not indicative of future performance or success. Individual results will vary

# Individual Advisory Services as of 09/30/16



## Financial Planning Session Breakdown

### Meetings<sup>1</sup> Held (Individual Advisory Services)



<sup>1</sup> Numbers show total meetings held and may include employees who had multiple meetings.

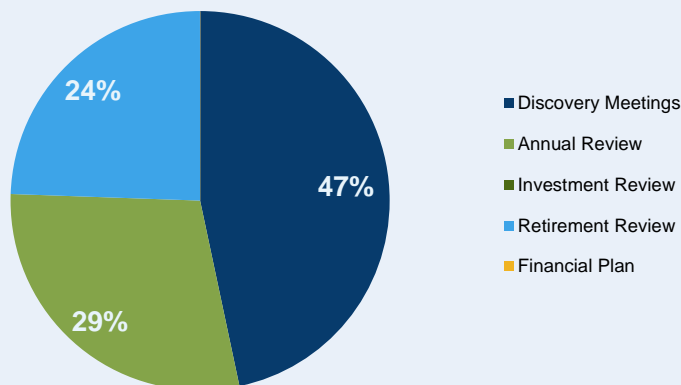
### Employees Participating in Meetings in 2016

Gender	Count <sup>2</sup>	Average Age	Average Balance <sup>3</sup>
Female	25	61.00	\$136,645
Male	9	60.70	\$434,365
Unknown	0	0	0
<b>Overall</b>	<b>34</b>	<b>60.92</b>	<b>\$215,453</b>

<sup>2</sup> Employees who had multiple meetings are only counted once.

<sup>3</sup> Reflects employee's total TIAA balance.

## Individual Advisory Services Group Activity 2016 YTD



## Results YTD through September 30, 2016\*

**95%**  
AGREED

### Considers Employee's Interests First

Agreed/strongly agreed that advisor considers employee's interests first.

\*Customer Insights Corporate Scorecard

## Executive Financial Planning Service Offerings

- Investment Management & Planning
- Estate and Gift Planning
- Charitable Planning
- Education Planning
- Cash Flow Analysis
- Stock Options Review
- Asset Protection Planning
- Investment Review
- Executive Compensation & Benefits Analysis
- Life Insurance Analysis
- Career Transition Financial Planning
- Mobile capabilities providing direct linkage to advisors

TIAA and its employees do not offer tax or legal advice, or create and prepare legal documents associated with estate plans

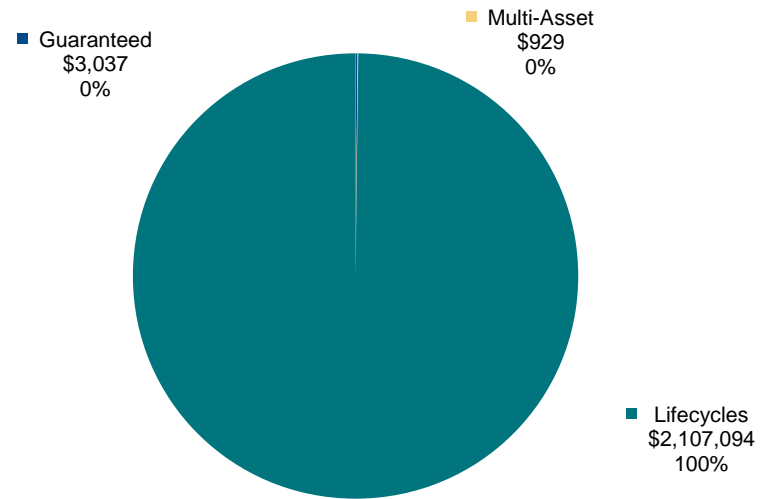


# Plan Data Summary – FICA Alternative Retirement Income Security Program

# FICA Alternative Retirement Income Security Program Plan Assets - By Category Class



**Total Plan Assets:** **\$2,111,060**  
**Default Fund:** **Vanguard Lifecycle Collective Investment Trust**



# Plan Assets by Investment Option Where Those Contributions are Invested



	Asset amount	Asset percentage of total
<b>GUARANTEED</b>		
TIAA Stable Value	\$3,037	0.14%
<b>Guaranteed Total</b>	<b>\$3,037</b>	<b>0.14%</b>
<b>MULTI-ASSET</b>		
Vanguard Tgt Ret Inc Trust II	\$929	0.04%
<b>Multi-Asset Total</b>	<b>\$929</b>	<b>0.04%</b>
<b>LIFECYCLES</b>		
Vanguard Tgt Ret 2010 Trust II	\$9,934	0.47%
Vanguard Tgt Ret 2015 Trust II	\$8,161	0.39%
Vanguard Tgt Ret 2020 Trust II	\$1,208,783	57.26%
Vanguard Tgt Ret 2025 Trust II	\$66,591	3.15%
Vanguard Tgt Ret 2030 Trust II	\$91,180	4.32%
Vanguard Tgt Ret 2035 Trust II	\$54,418	2.58%
Vanguard Tgt Ret 2040 Trust II	\$35,882	1.70%
Vanguard Tgt Ret 2045 Trust II	\$52,157	2.47%
Vanguard Tgt Ret 2050 Trust II	\$68,590	3.25%
Vanguard Tgt Ret 2055 Trust II	\$158,517	7.51%
Vanguard Tgt Ret 2060 Trust II	\$352,880	16.72%
<b>Multi-Asset Total</b>	<b>\$2,107,094</b>	<b>99.81%</b>

Data as of 9/30/2016



## Investment performance





# 2016 YTD Performance Summary

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	
As of 9/30/16	Mgr.	AUM	Gross	Net	Net	Rev	Recent Returns			Annualized Total Returns as of 9/30/2016							Since		
Ticker	Tenure	\$ Millions	ER	ER	%-ile	Share	1mo.	3mo.	YTD	1 Year	%-ile	3 Year	%-ile	5 Year	%-ile	10 Year	%-ile	Incep.	
TIAA Stable Value****	Current crediting rate = 1.80						0.15	0.47	1.42	1.88		1.89						1.87	
<b>FIXED INCOME</b>																			
<b>Intermediate-Term Bond</b>																			
Vanguard Total Bond Market Index Adm	VBTLX	3.67	174,847.91	0.06	0.06	2	0.00	(0.06)	0.41	5.95	5.31	47	3.98	38	3.00	70	4.77	44	4.54
<i>Barclays U.S. Aggregate Float Adjusted Index</i>								(0.06)	0.45	5.99	5.34		4.04		3.11		4.81		
<i>Intermediate-Term Bond Median</i>				0.87	0.75			0.03	0.92	5.88	5.26		3.79		3.48		4.74		
<i>Intermediate-Term Bond Number of Funds</i>				1,128	1,128							1101		1054		1009		877	
<b>Inflation-Linked Bond</b>																			
PIMCO Real Return Instl	PRRIX	8.83		0.58	0.45	22	0.00	0.80	1.41	7.57	6.69	22	1.94	24	1.99	5	4.69	3	
<i>Barclays US Treasury US TIPS TR USD</i>								0.55	0.96	7.27	6.58		2.40		1.93		4.48		
<i>Inflation-Protected Bond Median</i>				0.87	0.73			0.74	1.00	6.68	5.75		1.53		1.21		3.77		
<i>Inflation-Protected Bond Number of Funds</i>				262	262							258		242		207		155	
<b>Equity</b>																			
<b>Large Cap Blend</b>																			
Vanguard Institutional Index I	VINIX	15.83	208,758.42	0.04	0.04	1	0.00	0.02	3.85	7.81	15.41	11	11.13	5	16.35	11	7.24	20	9.44
<i>S&amp;P 500 TR USD</i>								0.02	3.85	7.84	15.43		11.16		16.37		7.24		
TIAA-CREF Social Choice Eq Instl	TISCX	10.83	2,344.15	0.18	0.18	4	0.00	0.00	4.70	9.09	15.27	12	9.04	53	15.22	49	7.04	27	
<i>Russell 3000 TR USD</i>								0.16	4.40	8.18	14.96		10.44		16.36		7.37		
<i>Large Blend Median</i>				1.10	1.00			(0.02)	3.87	6.43	12.61		9.22		15.21		6.51		
<i>Large Blend Number of Funds</i>				1,624	1,624							1,578		1,504		1,377		1,213	
<b>Mid Cap Blend</b>																			
Vanguard Mid Cap Index Adm	VIMAX	18.42	73,636.12	0.08	0.08	2	0.00	0.36	5.18	8.89	12.64	40	9.90	6	16.52	14	8.20	26	9.49
<i>Spliced Mid Cap Index *</i>								0.38	5.21	8.92	12.68		9.96		16.58		8.24		
<i>CRSP US Mid Cap TR USD</i>								0.38	5.21	8.92	12.68		9.96		16.54		8.22		
<i>Mid-Cap Blend Median</i>				1.23	1.15			(0.12)	4.46	8.90	11.89		7.50		15.06		7.07		
<i>Mid-Cap Blend Number of Funds</i>				480	480							440		414		382		328	
<b>Small Cap Blend</b>																			
Vanguard Small Cap Index Adm	VSMAX	0.50	63,296.59	0.08	0.08	1	0.00	0.41	6.17	11.50	14.97	36	7.92	18	16.70	21	8.42	12	8.74
<i>Spliced Small Cap Index **</i>								0.41	6.15	11.47	14.93		7.91		16.68		8.35		
<i>CRSP US Small Cap TR USD</i>								0.41	6.15	11.47	14.93		7.91		16.75		8.84		
<i>Small Blend Median</i>				1.36	1.22			0.59	6.90	10.35	13.69		6.25		15.19		6.54		
<i>Small Blend Number of Funds</i>				879	879							856		755		696		589	



# 2016 YTD Performance Summary

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	
As of 9/30/16	Ticker	Mgr. Tenure	AUM \$ Millions	Gross ER	Net ER	Net %ile	Rev Share	Recent Returns			Annualized Total Returns as of 9/30/2016							Since Incep.	
								1mo.	3mo.	YTD	1 Year	%ile	3 Year	%ile	5 Year	%ile	10 Year	%ile	
<b>Foreign Large Blend</b>																			
TIAA-CREF International Eq Idx Instl	TCIEX	11.17	7,639.90	0.06	0.06	1	0.00	1.35	6.14	2.73	6.57	43	0.72	46	7.85	30	2.00	36	
								1.23	6.43	1.73	6.52		0.48		7.39		1.82		
								1.32	6.19	2.52	6.07		0.61		7.25		1.61		
												879		779		722		544	
<b>Diversified Emerging Markets</b>																			
Vanguard Emerging Mkts Stock Idx Adm	VEMAX	8.17	60,976.29	0.15	0.15	1	0.00	1.27	7.79	16.20	15.84	47	0.19	40	3.44	55	3.91	40	4.85
								0.79	7.78	15.24	15.67		0.07		3.13		3.99		
								1.00	7.95	16.45	16.75		0.37		3.20		4.34		
								1.29	9.03	16.02	16.78		(0.56)		3.03		3.95		
								1.67	7.93	14.06	15.54		(0.43)		3.70		3.56		
												894		657		528		275	
<b>Miscellaneous Sector</b>																			
TIAA Real Estate Account	VA	1.17	24,003.73	0.89	0.89		0.24	0.28	0.68	3.90	5.59		8.62		9.31		3.46		
<b>Lifecycle</b>																			
Vanguard Target Retirement Income Trust II				0.07	0.07		0.00	0.32	1.93	6.36	7.63		4.75		5.99				4.99
								0.28	1.98	6.31	7.79		4.89		6.11				
								0.29	2.08	5.99	7.06		3.68		5.34		4.19		
												199		178		162		90	
Vanguard Target Retirement 2010 Trust II				0.07	0.07		0.00	0.34	2.06	6.38	7.91		5.13		7.32				5.16
								0.29	2.09	6.34	8.08		5.28		7.42				
								0.36	2.53	6.35	8.24		4.55		7.17		4.03		
												123		110		98		50	
Vanguard Target Retirement 2015 Trust II				0.07	0.07		0.00	0.38	2.78	6.83	9.19		5.79		8.67				5.54
								0.35	2.80	6.77	9.36		5.92		8.76				
								0.37	2.73	6.59	8.76		4.72		7.95		4.86		
												138		114		102		30	
Vanguard Target Retirement 2020 Trust II				0.07	0.07		0.00	0.38	3.29	7.24	10.14		6.32		9.71				5.75
								0.37	3.37	7.18	10.40		6.46		9.85				
								0.38	2.92	6.61	8.71		4.78		7.93		4.32		
												255		230		195		91	



# 2016 YTD Performance Summary

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)
As of 9/30/16	Mgr.	AUM	Gross	Net	Net	Rev	Recent Returns			Annualized Total Returns as of 9/30/2016							Since	
Ticker	Tenure	\$ Millions	ER	ER	%-ile	Share	1mo.	3mo.	YTD	1 Year	%-ile	3 Year	%-ile	5 Year	%-ile	10 Year	%-ile	Incep.
Vanguard Target Retirement 2025 Trust II			0.07	0.07		0.00	0.43	3.70	7.39	10.75		6.55		10.47				5.83
<i>Vanguard Target Retirement 2025 Composite Lx</i>							0.42	3.77	7.32	11.01		6.68		10.60				
<i>Target Date 2021-2025 Median</i>			1.08	0.86			0.41	3.39	6.80	9.75		5.23		9.23		4.76		
<i>Target Date 2021-2025 Number of Funds</i>			237	237							217		189		156		42	
Vanguard Target Retirement 2030 Trust II			0.07	0.07		0.00	0.47	4.03	7.42	11.22		6.70		11.19				5.86
<i>Vanguard Target Retirement 2030 Composite Lx</i>							0.47	4.14	7.39	11.52		6.86		11.32				
<i>Target Date 2026-2030 Median</i>			1.12	0.91			0.44	3.70	6.88	10.31		5.47		9.77		4.43		
<i>Target Date 2026-2030 Number of Funds</i>			275	275							255		230		195		91	
Vanguard Target Retirement 2035 Trust II			0.07	0.07		0.00	0.55	4.38	7.51	11.73	7	6.88		11.90				6.02
<i>Vanguard Target Retirement 2035 Composite Lx</i>							0.52	4.51	7.45	12.02		7.04		12.03				
<i>Target Date 2031-2035 Median</i>			1.12	0.88			0.51	4.17	6.94	10.97		5.72		10.59		4.79		
<i>Target Date 2031-2035 Number of Funds</i>			237	237							217		189		156		42	
Vanguard Target Retirement 2040 Trust II			0.07	0.07		0.00	0.57	4.75	7.56	12.16		6.94		12.22				6.18
<i>Vanguard Target Retirement 2040 Composite Lx</i>							0.57	4.87	7.50	12.51		7.13		12.37				
<i>Target Date 2036-2040 Median</i>			1.19	0.95			0.54	4.41	6.94	11.28		5.79		10.81		4.52		
<i>Target Date 2036-2040 Number of Funds</i>			275	275							255		230		195		91	
Vanguard Target Retirement 2045 Trust II			0.07	0.07		0.00	0.61	4.87	7.60	12.26		6.94		12.23				6.15
<i>Vanguard Target Retirement 2045 Composite Lx</i>							0.58	4.97	7.53	12.59		7.14		12.38				
<i>Target Date 2041-2045 Median</i>			1.20	0.90			0.57	4.60	6.96	11.48		5.93		11.34		4.68		
<i>Target Date 2041-2045 Number of Funds</i>			237	237							217		189		149		37	
Vanguard Target Retirement 2050 Trust II			0.07	0.07		0.00	0.61	4.84	7.61	12.25		6.92		12.19				6.17
<i>Vanguard Target Retirement 2050 Composite Lx</i>							0.58	4.97	7.53	12.59		7.14		12.38				
<i>Target Date 2046-2050 Median</i>			1.31	0.95			0.55	4.55	6.96	11.48		5.98		11.37		4.60		
<i>Target Date 2046-2050 Number of Funds</i>			265	265							245		220		183		24	
Vanguard Target Retirement 2055 Trust II			0.07	0.07		0.00	0.59	4.84	7.62	12.27		6.88						11.12
<i>Vanguard Target Retirement 2055 Composite Lx</i>							0.58	4.97	7.53	12.59		7.14						
<i>Target Date 2051-2055 Median</i>			1.38	0.90			0.57	4.67	6.97	11.56		6.02						
<i>Target Date 2051-2055 Number of Funds</i>			235	235							214		156					
Vanguard Target Retirement 2060 Trust II			0.07	0.07		0.00	0.61	4.83	7.64	12.28		6.90						8.39
<i>Vanguard Target Retirement 2060 Composite Lx</i>							0.58	4.97	7.53	12.59		7.14						
<i>Target Date 2060+ Median</i>			1.82	0.87			0.57	4.76	6.82	11.71		5.62						
<i>Target Date 2060+ Number of Funds</i>			164	164							91		9					



# 2016 YTD Performance Summary

	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)
As of 9/30/16	Mgr.	AUM	Gross	Net	Net	Rev	Recent Returns			Annualized Total Returns as of 9/30/2016							Since		
	Ticker	Tenure	\$ Millions	ER	ER	%-ile	Share	1mo.	3mo.	YTD	1 Year	%-ile	3 Year	%-ile	5 Year	%-ile	10 Year	%-ile	Incep.

Source: Morningstar & TIAA-CREF

Morningstar Analyst Assigned Benchmark"

Data for 1-month and YTD return as of 9/30/2016. All other data as of 9/30/2016

**VA = Variable Annuity**

Since Incep. = Since Inception Date      Incep. Date = Inception Date

Vanguard Index Information from available at <http://www.vanguard.com>

\* = S&P MidCap 400 Index through May 16, 2003; the MSCI US Mid Cap 450 Index through January 30, 2013; and the CRSP US Mid Cap Index thereafter

\*\* = Russell 2000 Index through May 16, 2003; the MSCI US Small Cap 1750 Index through January 30, 2013; and the CRSP US Small Cap Index thereafter

\*\*\* = Spliced Emerging Markets Index reflects performance of the Select Emerging Markets Index through August 23, 2006; the MSCI Emerging Markets Index through January 9, 2013; FTSE Emerging Transition Index through June 27, 2013;

FTSE Emerging Index; As of November 2, 2105 FTSE Emerging Markets ALL Cap China A Transition Index thereafter.

\*\*\*\* = The TIAA Stable Value Inception Date represents the date that the plan's TIAA Stable Value record was initiated on TIAA-CREF's recordkeeping system which may be earlier than the date of first deposit to the contract.

"Since Inception" performance is calculated from this date.

\*\*\*\*\* = For definitions please visit [www.tiaa-cref.org/public/assetmanagement](http://www.tiaa-cref.org/public/assetmanagement)

Note: Rankings shown for returns are calculated by Morningstar. Rankings for expense ratio, Sharpe ratio and standard deviation are calculated by TIAA-CREF and may differ based on calculation methods

**Fee Disclosures: 1 The net expense ratio reflects total annual fund operating expenses excluding interest expense. If interest expense was included, returns would have been lower.**

2 Accumulations in mutual funds not managed by TIAA-CREF may be subject to administrative charges. These charges are subject to change. Please review current documents related to your plan.

· %-ile --> Percentile Ranking in Morningstar Category.

**The performance data quoted represents past performance and is no guarantee of future results. Your returns and the principal value of your investments will fluctuate so that your shares or accumulation units, when redeemed, may be worth more or less than their original cost. Current performance may be lower or higher than the performance quoted below. For performance current to the most recent month-end, visit the TIAACREF Website at [www.tiaa-cref.org](http://www.tiaa-cref.org), or call 877 518-9161.**

Annuity account options are available through annuity contracts issued by TIAA or CREF. These contracts are designed for retirement or other long-term goals, and offer a variety of income options, including lifetime income. Payments from the variable annuity accounts are not guaranteed and will rise or fall based on investment performance.

For the variable annuity accounts, we estimate expenses for the plan year based on projected expense and asset levels. Differences between estimated and actual expenses are adjusted quarterly and reflected in current investment results. Historically, the adjusting payments have resulted in both upward and downward adjustments.

Investing in non-investment grade securities presents special risks, including significantly higher interest-rate and credit risk.

Small-cap and mid-cap stocks may have limited marketability and may be subject to more abrupt or erratic market movements than large-cap stocks.

The risks associated with foreign investments are often magnified in emerging markets where there is greater potential for political, currency, and economic volatility.

Funds that invest in fixed-income securities are not guaranteed and are subject to interest-rate, inflation and credit risks.

Funds that invest in foreign securities are subject to special risks, including currency fluctuation and political and economic instability.

Real estate securities are subject to various risks, including fluctuations in property values, higher expenses or lower income than expected, and potential environmental problems and liability.

Any guarantees under annuities issued by TIAA are subject to TIAA's claims-paying ability. TIAA Stable Value is guaranteed insurance contract and not an investment for Federal Securities Law purposes.

Target Date Funds share the risks associated with the types of securities held by each of the underlying funds in which they invest. In addition to the fees and expenses associated with the Target Date Funds, there is exposure to the fees and expenses associated with the underlying mutual funds as well.

TIAA-CREF Individual & Institutional Services, LLC, Teachers Personal Investors Services, Inc., and Nuveen Securities, LLC, Members FINRA and SIPC, distribute securities products. Annuity contracts and certificates are issued by Teachers Insurance and Annuity Association of America (TIAA) and College Retirement Equities Fund (CREF), New York, NY. Each is solely responsible for its own financial condition and contractual obligations.

**Investment, insurance and annuity products are not FDIC insured, are not bank guaranteed, are not deposits, are not insured by any federal government agency, are not a condition to any banking service or activity, and may lose value.**

**You should consider the investment objectives, risks, charges and expenses carefully before investing. Please call 877 518-9161 or log on to [tiaacref.org](http://tiaacref.org) for product and fund prospectuses that contains this and other information. Please read the prospectuses carefully before investing.**

Morningstar is an independent service that rates mutual funds and variable annuities, based on risk-adjusted returns. Although Morningstar data is gathered from reliable sources, neither Morningstar nor TIAA-CREF can guarantee its completeness and accuracy. Morningstar does not rate money market accounts, and the other TIAA-CREF mutual fund accounts are too new to be rated. Past performance does not guarantee future results. Accumulation net asset values and returns will vary.

For each fund/account with at least a three-year history, Morningstar calculates a Morningstar Rating™ based on a Morningstar Risk-Adjusted Return measure that accounts for variation in a fund's/account's monthly performance (including the effects of sales charges, loads, and redemption fees), placing more emphasis on downward variations and rewarding consistent performance. Where applicable, Morningstar's performance rankings are based on linked performance that considers the differences in expense ratios, while actual performance data shown does not reflect such differences. The top 10 percent of funds/accounts in a category receive five stars, the next 22.5 percent receive four stars, and the next 35 percent receive three stars, the next 22.5 percent receive two stars and the bottom 10 percent receive one star. (Each share class is counted as a fraction of one fund/account within this scale and rated separately, which may cause slight variations in the distribution percentages.) Morningstar proprietary ratings on U.S.-domiciled funds/accounts reflect historical risk-adjusted performance, are subject to change every month. They are derived from a weighted average of the performance figures associated with its three-, five- and ten-year (if applicable) Morningstar Rating metrics. Please note, Morningstar now rates group variable annuities within the open-end mutual fund universe.

## **Prospectus Gross Expense Ratio**

The percentage of fund assets used to pay for operating expenses and management fees, including 12b-1 fees, administrative fees, and all other asset-based costs incurred by the fund, except brokerage costs. Fund expenses are reflected in the fund's NAV. Sales charges are not included in the expense ratio.

--The expense ratio for fund of funds is the aggregate expense ratio as defined as the sum of the wrap or sponsor fees plus the estimated weighted average of the underlying fund fees.

--Often referred to as the Annual Operating Expense, the Prospectus Gross Expense Ratio is collected annually from a fund's prospectus.

## **Prospectus Net Expense Ratio**

The percentage of fund assets, net of reimbursements, used to pay for operating expenses and management fees, including 12b-1 fees, administrative fees, and all other asset-based costs incurred by the fund, except brokerage costs. Fund expenses are reflected in the fund's NAV. Sales charges are not included in the expense ratio.

--The expense ratio for fund of funds is the aggregate expense ratio as defined as the sum of the wrap or sponsor fees plus the estimated weighted average of the underlying fund fees.

--Net reimbursements, the Prospectus Net Expense Ratio is collected annually from a fund's prospectus.

--TIAA-CREF, unless noted, does not charge additional fees for record keeping a fund. 12b-1, revenue share and admin fees are all included in the Prospectus fees.

-- Prospectus Net Expense Ratio % - ile rank is the percentile rank for the fund. The better the expense ratio (lower) the lower the ranking out of 100.

## **Sharpe Ratio (Source: Morningstar Direct)**

A risk-adjusted measure developed by Nobel Laureate William Sharpe. It is calculated by using standard deviation and excess return to determine reward per unit of risk. The higher the Sharpe Ratio, the better the portfolio's historical risk-adjusted performance. The Sharpe Ratio can be used to compare two portfolios directly with regard to how much excess return each portfolio achieved for a certain level of risk. Morningstar first calculates a monthly Sharpe Ratio and then annualizes it to put the number in a more useful one-year context.

**Standard Deviation (Source: Morningstar Direct)** The statistical measurement of dispersion about an average, which depicts how widely a stock or portfolio's returns varied over a certain period of time. Investors use the standard deviation of historical performance to try to predict the range of returns that is most likely for a given investment. When a stock or portfolio has a high standard deviation, the predicted range of performance is wide, implying greater volatility.

## **Information Ratio (Source: Morningstar Direct) Benchmark Specific**

Information ratio is a risk-adjusted performance measure. The information ratio is a special version of the Sharpe Ratio in that the benchmark doesn't have to be the risk-free rate.

**Beta** (Source: Morningstar Direct) **Benchmark Specific**

Beta is a measure of a portfolio's sensitivity to market movements. The beta of the market is 1.00 by definition.

**Alpha** (Source: Morningstar Direct) **Benchmark Specific**

A measure of the difference between a portfolio's actual returns and its expected performance, given its level of risk as measured by beta. A positive Alpha figure indicates the portfolio has performed better than its beta would predict. In contrast, a negative Alpha indicates the portfolio has underperformed, given the expectations established by beta.

**Tracking Error** (Source: Morningstar Direct) **Benchmark Specific**

Tracking error is a measure of the volatility of excess returns relative to a benchmark.

**Upside** (Source: Morningstar Direct) **Benchmark Specific**

Upside Capture Ratio measures a manager's performance in up markets relative to the market (benchmark) itself. It is calculated by taking the security's upside capture return and dividing it by the benchmark's upside capture return.

**Downside** (Source: Morningstar Direct) **Benchmark Specific**

Downside Capture Ratio measures a manager's performance in down markets relative to the market (benchmark) itself. It is calculated by taking the security's downside capture return and dividing it by the benchmark's downside capture return.

**R-Square** (Source: Morningstar Direct) **Benchmark Specific**

Reflects the percentage of a portfolio's movements that can be explained by movements in its benchmark.  
You cannot invest directly in index.

TIAA-CREF reported performance may differ from Morningstar source returns for the same option over the same time period. We would expect an occasional one to two basis point difference. Morningstar Direct calculates returns by one share owned by a hypothetical investor over the requested time period. So the return for one year is calculated using the same formula as one month. TIAA-CREF calculates returns by \$1,000 owned by hypothetical investor for one month then links returns for requested time period. Both set of returns include dividends and capital gains.