



Retirement Plan Review

as of

August 31, 2015

State of Rhode Island

Presented by: David Iden
Laurence Brown



Today's Discussion



Laurence Brown

Director, Investment Product & Strategy

David Iden

Relationship Manager, Institutional Relationships

I. Plan Data Summary

- All Plans
- 401(a) Defined Contribution Plan
- FICA Alternative Retirement Income Security Program

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Plan Data Summary - All Plans

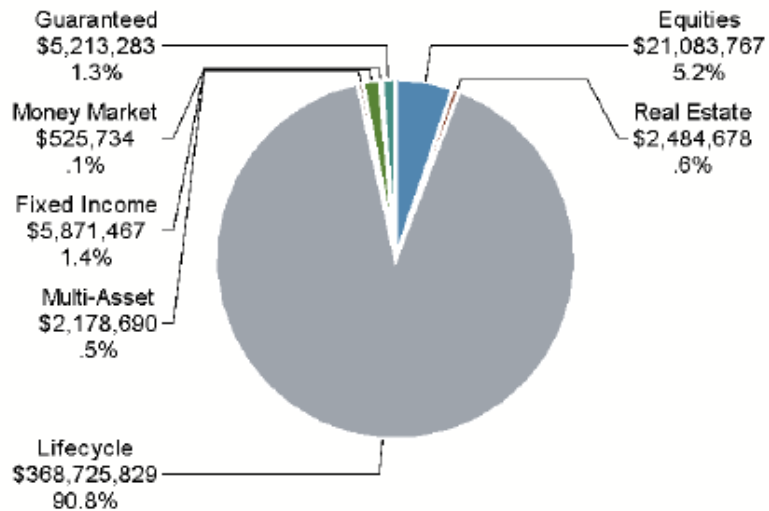


Financial Services

Summary of All Plans

Roughly **91%** of assets are in Vanguard Lifecycle trusts.

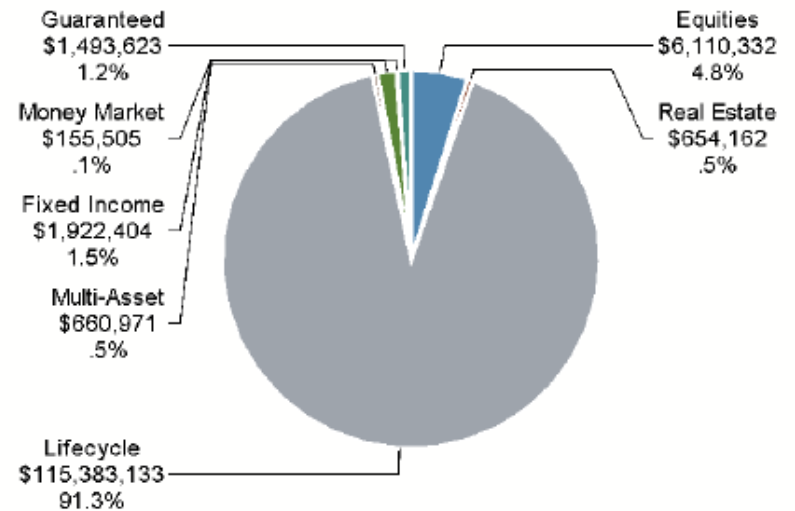
Plan Assets - By Category Class



Total Plan Assets: \$406,083,447

Forfeiture plan assets of \$70,854.75 are included in the total above.

Contributions - By Category Class



Total Contributions: \$126,380,129

Plan Data Summary – 401(a) Defined Contribution Plan

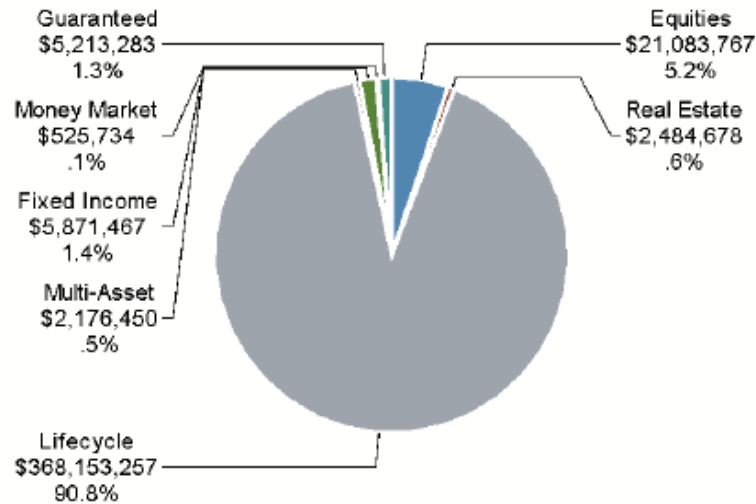


Financial Services

Summary of Defined Contribution Plan

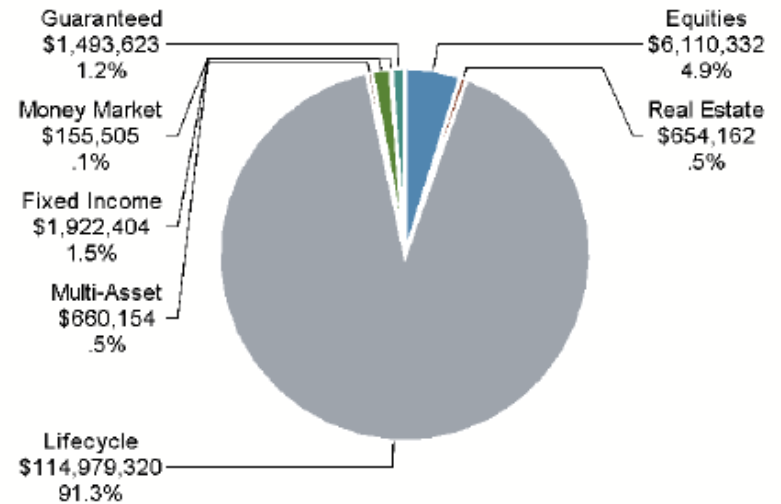
Roughly **91%** of assets are in Vanguard Lifecycle trusts.

Plan Assets - By Category Class



Total Plan Assets: \$405,508,634

Contributions - By Category Class



Total Contributions: \$125,975,499

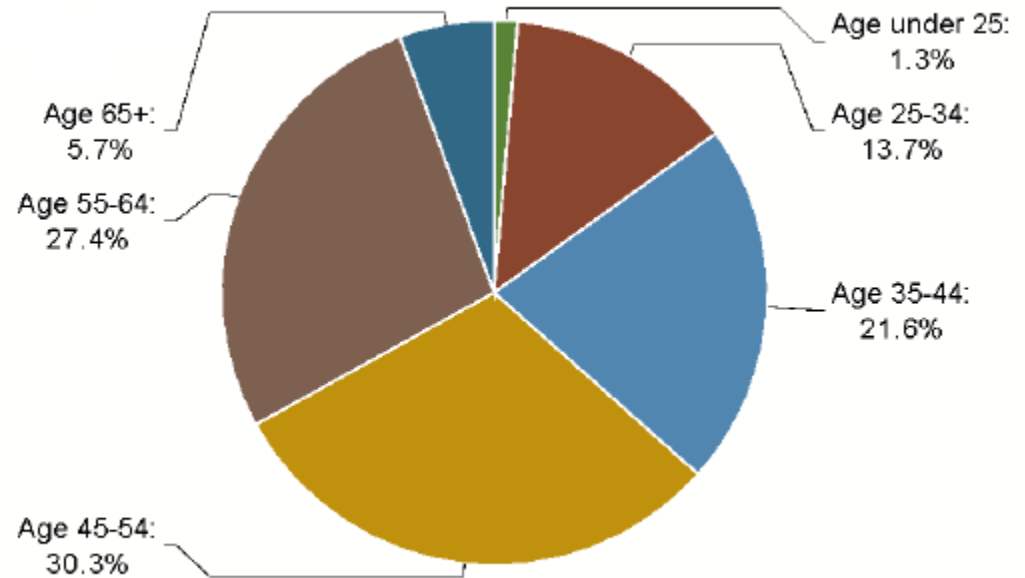
Forfeiture plan assets of \$70,854.75 are included in the total above.

Participant Demographics

Participant Count - By Age

58% of your participants are between mid-career and retirement age.

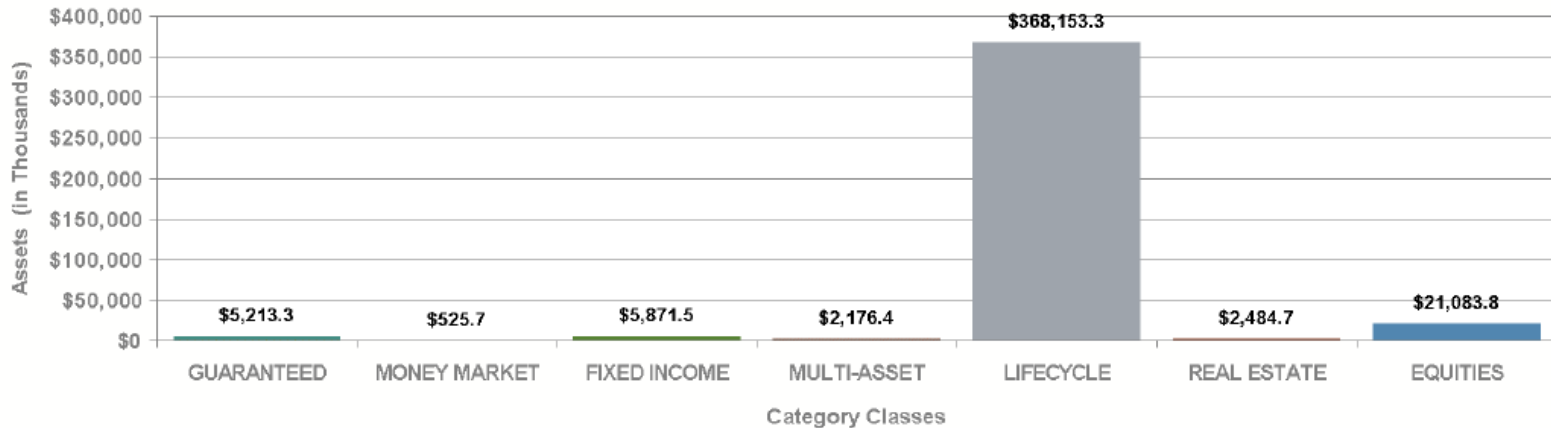
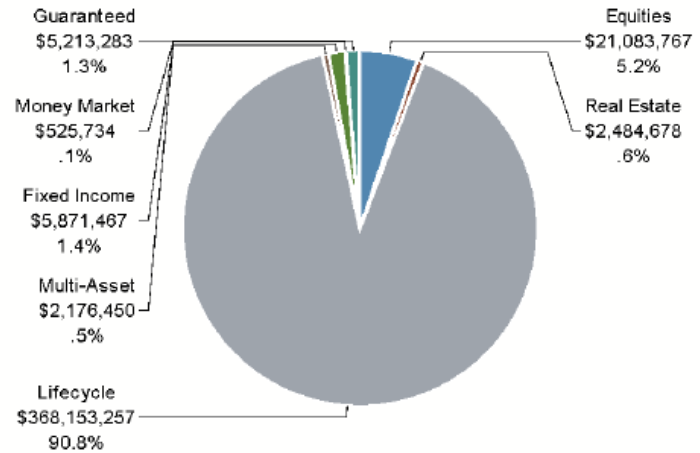
Under 25:	436
25 to 34:	4,515
35 to 44:	7,087
45 to 54:	9,976
55 to 64:	9,007
65 and over:	1,862
Average Age*:	48



Plan Assets By Category Class

Approximately \$37M is invested outside of the Lifecycle product..

Total Plan Assets:	\$405,508,634
Average Account Balance:	\$12,329
Default Fund:	VANGUARD TGT RET 2010 TRUST II



Forfeiture plan assets of \$70,854.75 are included in the total above.

Data as of 8/31/2015

Plan Assets by Investment Option

Where Those Contributions are Invested



FUND/ACCOUNT	ASSETS	PERCENTAGE of TOTAL
Guaranteed		
TIAA STABLE VALUE	\$5,213,283	1.29%
Guaranteed Total	\$5,213,283	1.29%
Money Market		
VANGUARD PRIME MM INV	\$525,734	.13%
Money Market Total	\$525,734	.13%
Fixed Income		
PIMCO REAL RETURN INST CLASS	\$3,157,714	.78%
VAN TOTAL BOND MKT IDX ADMIRAL	\$2,713,753	.67%
Fixed Income Total	\$5,871,467	1.45%
Multi-Asset		
VANGUARD TGT RET INC TRUST II	\$2,176,450	.54%
Multi-Asset Total	\$2,176,450	.54%
Lifecycle		
VANGUARD TGT RET 2010 TRUST II	\$7,203,712	1.78%
VANGUARD TGT RET 2015 TRUST II	\$29,840,669	7.36%
VANGUARD TGT RET 2020 TRUST II	\$56,024,462	13.82%
VANGUARD TGT RET 2025 TRUST II	\$60,364,209	14.89%
VANGUARD TGT RET 2030 TRUST II	\$60,130,641	14.83%
VANGUARD TGT RET 2035 TRUST II	\$56,151,019	13.85%
VANGUARD TGT RET 2040 TRUST II	\$43,889,994	10.82%
VANGUARD TGT RET 2045 TRUST II	\$32,208,331	7.94%
VANGUARD TGT RET 2050 TRUST II	\$17,399,465	4.29%
VANGUARD TGT RET 2055 TRUST II	\$4,501,889	1.11%
VANGUARD TGT RET 2060 TRUST II	\$438,866	.11%

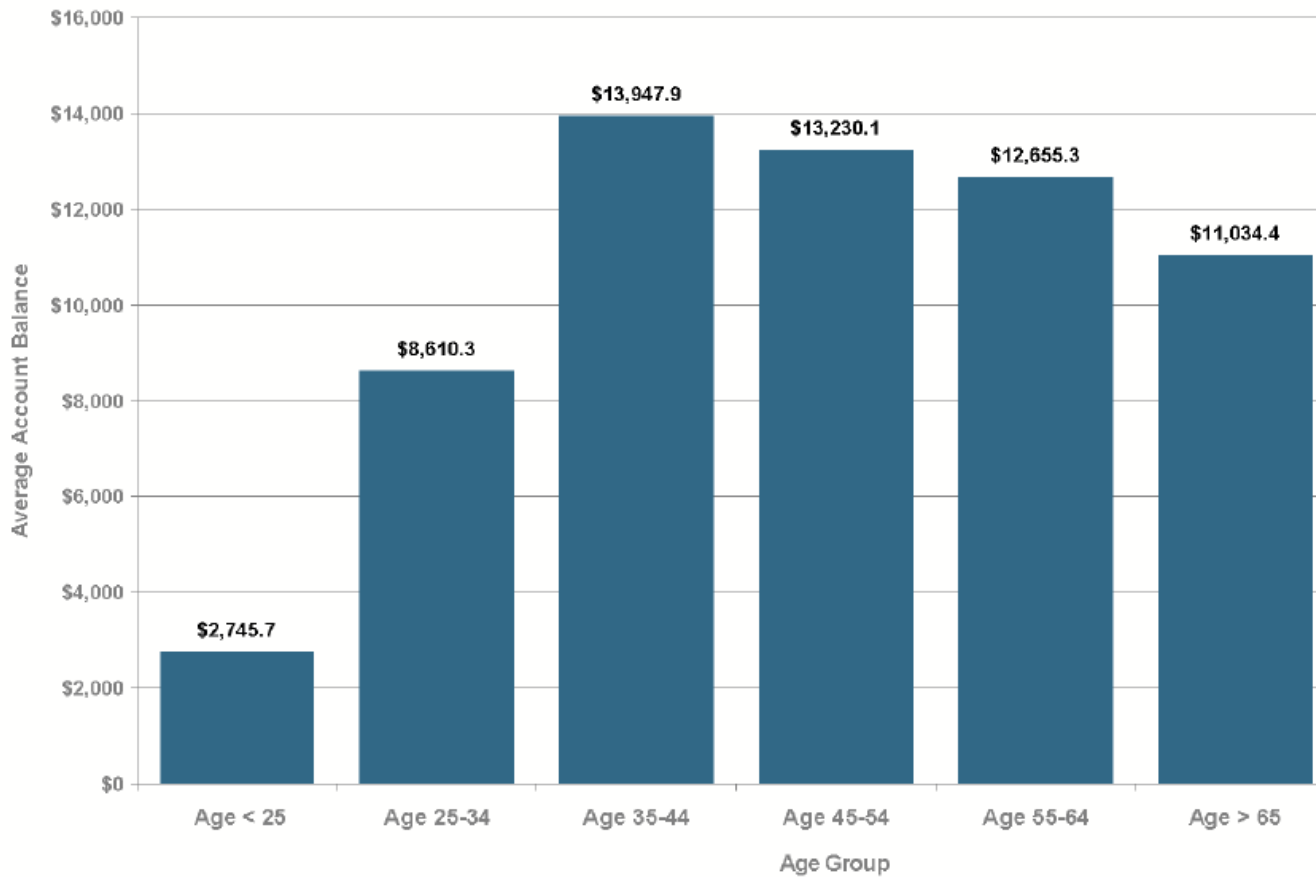
FUND/ACCOUNT	ASSETS	PERCENTAGE of TOTAL
Lifecycle (cont'd)		
Lifecycle Total	\$368,153,257	90.79%
Real Estate		
TIAA REAL ESTATE	\$2,484,678	.61%
Real Estate Total	\$2,484,678	.61%
Equities		
TIAA-CREF INTL EQ IDX-INST	\$2,210,638	.55%
TIAA-CREF SOCIAL CH EQ-INST	\$348,716	.09%
VAN MID CAPITALIZTN IDX ADMIRAL	\$4,183,908	1.03%
VAN SMALL CAP INDEX ADMIRAL	\$3,555,166	.88%
VANGUARD EMERG MKTS STK ID ADM	\$1,621,085	.40%
VANGUARD INSTITUTIONAL INDEX I	\$9,164,253	2.26%
Equities Total	\$21,083,767	5.20%
Total	\$405,508,634	100%

Data as of 8/31/2015

Participant Demographics

Average Asset Balance by Age Group

Average Account Balance: \$12,329



Data as of 8/31/2015

Employee Engagement Channel Engagement Snapshot



Web Activity	2014		2015 YTD	
	Total Contacts	# of Unique Participants	Total Contacts	# of Unique Participants
Participants with Secure Web ID's	n/a	11,386	n/a	12,081
Participants with Secure Web Logins	73,365	5,638	16,899	3,784
Online Advice Sessions	200	170	112	97
In-Bound Phone Call Contacts by Call Type	Total Contacts	# of Unique Participants	Total Contacts	# of Unique Participants
Total Calls	5,599	3,133	2,508	1,541
Advice/Guidance ¹	157	144	59	52
Transaction	1,740	1,047	715	487
Other ²	3,702	2,461	1,734	1,208

¹ Online Advice Sessions and Advice/Guidance In-bound Phone Calls represent both contributing and non-contributing participants.

² "Other" includes calls related to general services, education, products and specific communications.

Data as of 6/30/2015

Field Consulting Group Activity

FCG YTD 2015 - as of 8/31/2015							
	FC1	FC2	FC3	FC4	Other	Total	# of Attendees
Counseling Days	22	4				26	
Counseling Sessions							
<i>Offered</i>	132	13				145	
<i>Taken</i>	115	8					123
Benefit Fairs & Info Desks	1	2	1			4	250
Seminars & Workshops		1				1	13
							386

FCG 2014							
	FC1	FC2	FC3	FC4	Other	Total	# of Attendees
Counseling Days	109	28	20	9		166	
Counseling Sessions							
<i>Offered</i>	438	137	116	16		707	
<i>Taken</i>	261	103	96	16			476
Benefit Fairs				3	2	5	208
Seminars & Workshops				11	1	12	194
							878

FCG 2013							
	FC1	FC2	FC3	FC4	Other	Total	# of Attendees
Counseling Days	61	59	33	10	1	164	
Counseling Sessions							
<i>Offered</i>	372	347	178	66	6	969	
<i>Taken</i>	234	294	166	48	5		747
Benefit Fairs	1		1	29		31	803
Seminars & Workshops		2	2	25		29	982
							2532

Data as of 8/31/2015

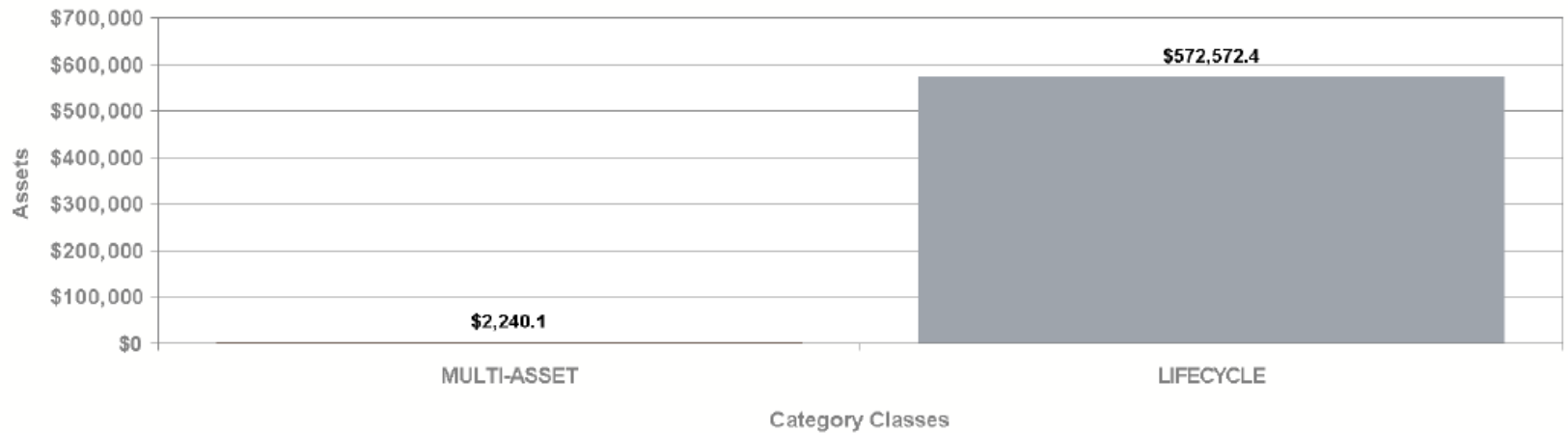
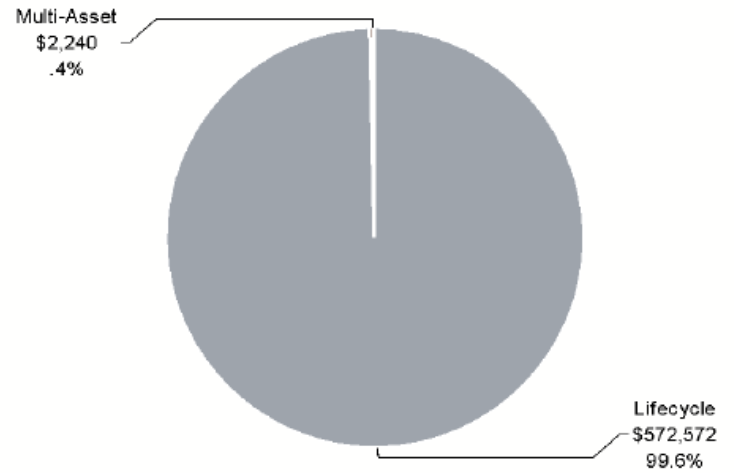
Plan Data Summary – FICA Alternative Retirement Income Security Program



Financial Services

Plan Assets By Category Class

Total Plan Assets:	\$574,813
Average Account Balance:	\$488
Default Fund:	VANGUARD TGT RET 2010 TRUST II



Plan Assets by Investment Option Where Those Contributions are Invested

FUND/ACCOUNT	ASSETS	PERCENTAGE of TOTAL
Multi-Asset		
VANGUARD TGT RET INC TRUST II	\$2,240	.39%
Multi-Asset Total	\$2,240	.39%
Lifecycle		
VANGUARD TGT RET 2010 TRUST II	\$10,359	1.80%
VANGUARD TGT RET 2015 TRUST II	\$8,565	1.49%
VANGUARD TGT RET 2020 TRUST II	\$20,881	3.63%
VANGUARD TGT RET 2025 TRUST II	\$43,662	7.60%
VANGUARD TGT RET 2030 TRUST II	\$46,222	8.04%
VANGUARD TGT RET 2035 TRUST II	\$27,003	4.70%
VANGUARD TGT RET 2040 TRUST II	\$18,537	3.22%
VANGUARD TGT RET 2045 TRUST II	\$26,562	4.62%
VANGUARD TGT RET 2050 TRUST II	\$45,955	7.99%
VANGUARD TGT RET 2055 TRUST II	\$113,136	19.68%
VANGUARD TGT RET 2060 TRUST II	\$211,691	36.83%
Lifecycle Total	\$572,572	99.61%
Total	\$574,813	100%

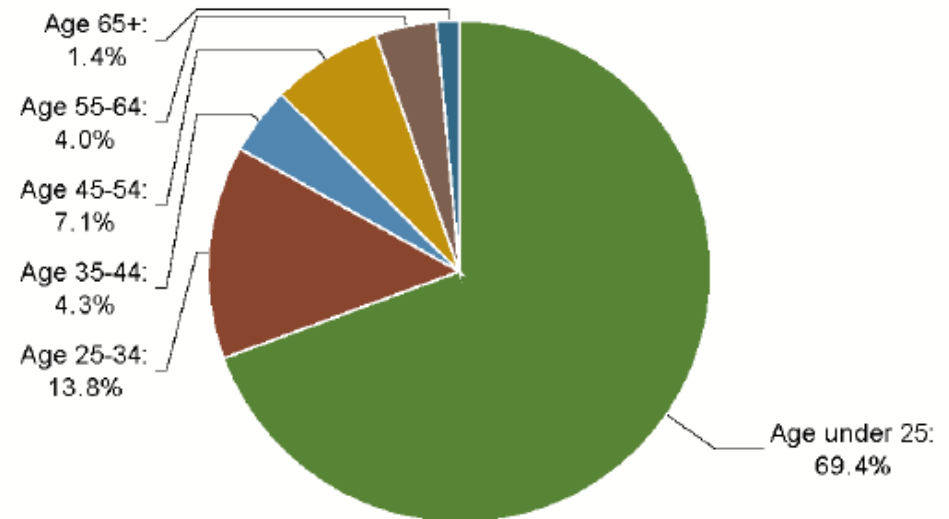
Data as of 8/31/2015

Participant Demographics

Participant Count - By Age

81% of your participants are under the age of 35.

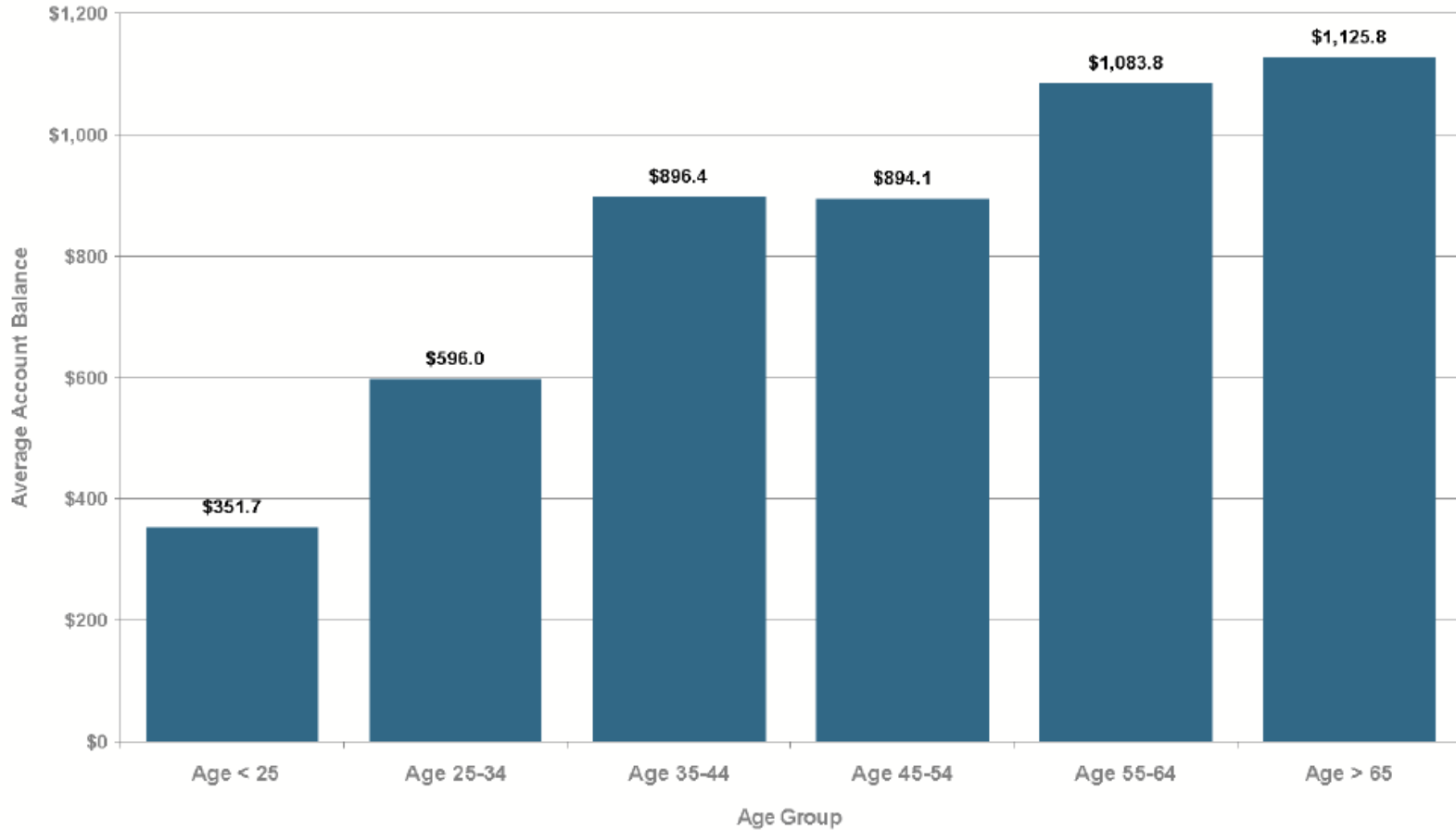
Under 25:	817
25 to 34:	162
35 to 44:	51
45 to 54:	84
55 to 64:	47
65 and over:	17
Average Age:	27



Participant Demographics

Average Asset Balance by Age Group

Average Account Balance: \$488



Data as of 8/31/2015

Investment Performance



Financial Services

2015 YTD Performance Summary

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(T)	(U)	(V)	(W)	(X)	(Y)
TIAA-CREF	Manager	AUM	Gross	Net	Net	Rev	Recent Returns			Annualized Total Returns as of 6/30/15						Since	Incep.	Sharpe Ratio		Std. Deviation		Tracking Error		
As of 8/31/15	Ticker	Tenure	\$ Millions	ER	ER	%-ile	Share	1 Month	YTD	1 Year	%-ile	3 Year	%-ile	5 Year	%-ile	10 Year	%-ile	Incep.	Date	3 Year	%-ile	3 Year	%-ile	3 Year
Stable Value/Guaranteed & Money Market																								
Stable Value/Guaranteed																								
TIAA Stable Value****	Current crediting rate = 1.80							0.15	1.24	1.88		1.84						1.87	03/31/12					
Money Market																								
Vanguard Prime Money Market Inv	VMMOXX	12.00	134,844.52	0.16	0.16		0.00	0.00	0.01	0.01		0.02		0.03		1.51		5.30	06/04/75	(3.24)		0.01		0.01
Current 7-day Yield: 0.01																								
Citi 3-Month Treasury Bill																								
								-	0.01	0.02		0.05		0.06		1.43								
FIXED INCOME																								
Intermediate-Term Bond																								
Vanguard Total Bond Market Index Ad	VBTLX	2.42	144,211.79	0.07	0.07	1	0.00	(0.35)	0.25	1.73	22	1.70	71	3.24	70	4.40	46	4.48	11/12/01	0.56	71	3.03	49	0.24
Bardays U.S. Aggregate Float Adjusted Index																								
								(0.17)	0.38	1.78		1.82		3.38						0.60		2.98		
Intermediate-Term Bond Median																								
				0.89	0.79			(0.38)	0.16	1.21		2.24		3.75		4.36				0.73		3.05		0.86
Intermediate-Term Bond Number of Funds																								
				1,116	1,116						1087		1040		971		861			1040		1040		
Inflation-Linked Bond																								
PIMCO Real Return Instl	PRRIX	7.58	13,045.38	0.47	0.45	17	0.00	(1.48)	(0.82)	(3.05)	68	(0.91)	29	3.25	3	4.40	4	6.38	01/29/97	(0.13)	18	6.02	97	1.15
Bardays US Treasury US TIPS TR USD																								
								(0.76)	(0.22)	(1.73)		(0.76)		3.29		4.13				(0.13)		5.23		
Inflation-Protected Bond Median																								
				0.87	0.76			(0.87)	(0.61)	(2.57)		(1.20)		2.47		3.43				(0.23)		5.06		0.52
Inflation-Protected Bond Number of Funds																								
				260	260						256		218		202		140				219		219	
Equity																								
Large Cap Blend																								
Vanguard Institutional Index I	VINIX	14.58	195,289.45	0.04	0.04	-	0.00	(6.03)	(2.89)	7.41	24	17.28	37	17.31	20	7.90	25	9.60	07/31/90	1.91	19	8.55	25	0.01
S&P 500 TR USD																								
								(6.03)	(2.88)	7.42		17.31		17.34		7.89				1.91		8.55		
TIAA-CREF Social Choice Eq Instl	TISCX	9.58	2,727.07	0.18	0.18	4	0.00	(5.89)	(4.83)	3.37	77	16.86	48	15.86	55	7.85	26	4.82	07/01/99	1.78	54	9.02	61	1.35
Russell 3000 TR USD																								
								(6.04)	(2.61)	7.29		17.73		17.54		8.15				1.92		8.71		
Large Blend Median																								
				1.16	1.06			(6.10)	(3.32)	6.23		16.78		16.14		7.35				1.81		8.86		2.27
Large Blend Number of Funds																								
				1,708	1,708						1,659		1,505		1,410		1,181				1,515		1,515	
Mid Cap Blend																								
Vanguard Mid Cap Index Adm	VIMAX	17.17	65,730.24	0.09	0.09	1	0.00	(5.12)	(1.00)	8.63	9	19.68	17	18.24	15	9.37	19	10.30	11/12/01	1.98	4	9.34	17	0.17
Spliced Mid Cap Index *																								
								(5.12)	(0.95)	8.68		19.74		18.31		9.41								
CRSP US Mid Cap TR USD																								
								(5.12)	(0.95)	8.68		19.66		18.51		9.41				1.97		9.36		
Mid-Cap Blend Median																								
				1.22	1.17			(5.26)	(2.22)	5.37		18.03		16.59		8.39				1.67		10.24		3.58
Mid-Cap Blend Number of Funds																								
				411	411						408		378		337		249				380		380	
Small Cap Blend																								
Vanguard Small Cap Index Adm	VSMAX	23.58	56,426.73	0.09	0.09	-	0.00	(5.82)	(2.14)	5.24	48	18.73	25	18.15	19	9.49	12	9.30	11/13/00	1.62	8	11.01	14	0.40
Spliced Small Cap Index **																								
								(5.83)	(2.18)	5.21		18.71		18.11		9.41								
CRSP US Small Cap TR USD																								
								(5.83)	(2.18)	5.21		19.11		18.56		9.98				1.65		11.03		
Small Blend Median																								
				1.36	1.25			(5.36)	(3.24)	5.02		17.47		16.54		7.98				1.41		11.94		3.31
Small Blend Number of Funds																								
				836	836						811		723		678		543				728		728	

2015 YTD Performance Summary

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(T)	(U)	(V)	(W)	(X)	(Y)				
TIAA-CREF	Manager	AUM	Gross	Net	Net	Rev	Recent Returns	Annualized Total Returns as of 6/30/15										Since	Incep.	Sharpe Ratio	Std. Deviation		Tracking Error					
As of 8/31/15	Ticker	Tenure	\$ Millions	ER	ER	%-ile	Share	1 Month	YTD	1 Year	%-ile	3 Year	%-ile	5 Year	%-ile	10 Year	%-ile	Incep.	Date	3 Year	%-ile	3 Year	%-ile	3 Year				
Foreign Large Blend																												
TIAA-CREF International Eq Idx Instl	TCIEX	9.92	6,426.99	0.06	0.06	-	0.00	(7.20)	0.46	(3.98)	58	12.03	27	9.94	25	5.28	43	8.70	10/01/02	1.11	38	10.75	80	1.69				
								MSCI EAFE NR USD	(7.36)	(0.21)	(4.22)			11.97			9.54			5.12			1.13			10.52		
				Foreign Large Blend Median				1.33	1.18	(7.09)	(0.51)	(3.47)			10.84			9.19			5.05			1.06			10.34	2.97
				Foreign Large Blend Number of Funds				865	865			804			742			676			503			745			745	
Diversified Emerging Markets																												
Vanguard Emerging Mkts Stock Idx Ad	VEMAX	6.92	65,437.60	0.15	0.15	-	0.00	(9.33)	(12.22)	(2.43)	17	4.14	40	4.14	39	7.94	36	6.18	06/23/06	0.37	42	13.13	77	2.27				
								Spliced Emerging Markets Index ***	(9.44)	(12.46)	(2.15)			4.59			4.21											
				FTSE Emerging NR USD				(9.44)	(12.47)	(2.18)			4.75			4.00			8.80			0.42			12.89			
								MSCI EM NR USD	(9.04)	(12.85)	(5.12)			3.71			3.68			8.11			0.35			12.46		
				Diversified Emerging Mkts Median				1.82	1.52	(8.75)	(12.54)	(6.83)			3.18			3.60			7.43			0.32			12.28	4.33
				Diversified Emerging Mkts Number of Funds				924	924			827			614			435			259			624			624	
Miscellaneous Sector																												
TIAA Real Estate Account	Variable Annuity	10.58	21,090.46	0.71	0.71		0.24	0.12	5.72	10.75		10.11		12.05		4.61		6.48	10/02/95	6.98		1.38						
Lifecycle																												
Vanguard Target Retirement Income Trust II				0.11	0.11		0.00	(2.19)	(0.74)	2.01		5.42		6.80				5.12	02/29/08									
								Vanguard Target Retirement Income Compos. Lx	(2.12)	(0.56)	2.13			5.57			6.91											
				Retirement Income Median				1.14	0.88	(2.44)	(1.13)	0.68			4.84			5.86			4.15							
				Retirement Income Number of Funds				193	193			173			163			160			80							
Vanguard Target Retirement 2010 Trust II				0.11	0.11		0.00	(2.50)	(0.84)	2.17		6.99		8.40				5.35	02/29/08									
								Vanguard Target Retirement 2010 Compos. Lx	(2.44)	(0.69)	2.33			7.14			8.47											
				Target Date 2000-2010 Median				1.11	0.85	(3.05)	(1.38)	0.85			6.96			7.81			4.45							
				Target Date 2000-2010 Number of Funds				162	162			153			135			131			51							
Vanguard Target Retirement 2015 Trust II				0.11	0.11		0.00	(3.38)	(1.31)	2.69		8.88		9.73				5.83	02/29/08									
								Vanguard Target Retirement 2015 Compos. Lx	(3.33)	(1.17)	2.82			9.02			9.80											
				Target Date 2011-2015 Median				1.15	0.88	(3.41)	(1.53)	1.14			7.73			8.46			4.54							
				Target Date 2011-2015 Number of Funds				198	198			182			156			153			33			33				
Vanguard Target Retirement 2020 Trust II				0.11	0.11		0.00	(3.96)	(1.59)	3.07		10.25		10.75				6.07	02/29/08									
								Vanguard Target Retirement 2020 Compos. Lx	(3.97)	(1.54)	3.23			10.46			10.94											
				Target Date 2016-2020 Median				1.17	0.91	(3.68)	(1.77)	1.42			8.38			9.15			4.88							
				Target Date 2016-2020 Number of Funds				263	263			243			216			195			76							
Vanguard Target Retirement 2025 Trust II				0.11	0.11		0.00	(4.43)	(1.81)	3.20		11.27		11.57				6.20	02/29/08									
								Vanguard Target Retirement 2025 Composite Lx	(4.44)	(1.81)	3.32			11.48			11.77											
				Target Date 2021-2025 Median				1.16	0.91	(4.38)	(1.97)	1.89			10.02			10.43			5.72							
				Target Date 2021-2025 Number of Funds				224	224			204			176			156			34							

2015 YTD Performance Summary

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)	(R)	(S)	(T)	(U)	(V)	(W)	(X)	(Y)
TIAA-CREF	Manager	AUM	Gross	Net	Net	Rev	Recent Returns	Annualized Total Returns as of 6/30/15							Since	Incep.	Sharpe Ratio	Std. Deviation		Tracking Error				
As of 8/31/15	Ticker	Tenure	\$ Millions	ER	ER	%-ile	Share	1 Month	YTD	1 Year	%-ile	3 Year	%-ile	5 Year	%-ile	10 Year	%-ile	Incep.	Date	3 Year	%-ile	3 Year	%-ile	3 Year
Vanguard Target Retirement 2030 Trust II			0.11	0.11			0.00	(4.90)	(2.08)	3.27		12.27		12.40				6.29	02/29/08					
Vanguard Target Retirement 2030 Composite Lx								(4.91)	(2.09)	3.41		12.49		12.58										
Target Date 2026-2030 Median			1.24	0.98				(4.84)	(2.23)	2.07		11.02		10.91		5.18								
Target Date 2026-2030 Number of Funds			263	263							243		216		195		76							
Vanguard Target Retirement 2035 Trust II			0.11	0.11			0.00	(5.37)	(2.31)	3.30		13.26		13.21				6.53	02/29/08					
Vanguard Target Retirement 2035 Composite Lx								(5.39)	(2.38)	3.50		13.50		13.39										
Target Date 2031-2035 Median			1.20	0.95				(5.46)	(2.40)	2.37		12.11		11.93		5.97								
Target Date 2031-2035 Number of Funds			224	224							204		176		156		34							
Vanguard Target Retirement 2040 Trust II			0.11	0.11			0.00	(5.85)	(2.72)	3.35		13.89		13.56				6.79	02/29/08					
Vanguard Target Retirement 2040 Composite Lx								(5.86)	(2.68)	3.59		14.14		13.76										
Target Date 2036-2040 Median			1.30	1.00				(5.71)	(2.56)	2.40		12.41		12.04		5.56								
Target Date 2036-2040 Number of Funds			262	262							242		215		194		71							
Vanguard Target Retirement 2045 Trust II			0.11	0.11			0.00	(5.89)	(2.72)	3.36		13.88		13.58				6.76	02/29/08					
Vanguard Target Retirement 2045 Composite Lx								(5.88)	(2.70)	3.59		14.14		13.76										
Target Date 2041-2045 Median			1.25	0.96				(5.92)	(2.60)	2.47		13.00		12.61		6.24								
Target Date 2041-2045 Number of Funds			224	224							204		175		155		22							
Vanguard Target Retirement 2050 Trust II			0.11	0.11			0.00	(5.90)	(2.79)	3.38		13.87		13.55				6.79	02/29/08					
Vanguard Target Retirement 2050 Composite Lx								(5.88)	(2.70)	3.59		14.14		13.76										
Target Date 2046-2050 Median			1.42	1.01				(5.91)	(2.64)	2.56		13.09		12.57		6.02								
Target Date 2046-2050 Number of Funds			247	247							227		197		151		16							
Vanguard Target Retirement 2055 Trust II			0.11	0.11			0.00	(5.91)	(2.92)	3.25		13.85						13.43	08/31/10					
Vanguard Target Retirement 2055 Composite Lx								(5.88)	(2.70)	3.59		14.14												
Vanguard Target Retirement 2060 Trust II			0.11	0.11			0.00	(5.87)	(2.85)	3.30		13.82						11.54	03/01/12					
Vanguard Target Retirement 2060 Composite Lx								(5.88)	(2.70)	3.59		14.14												
Target Date 2051+ Median			1.35	0.96				(5.95)	(2.61)	2.64		13.36		12.75										
Target Date 2051+ Number of Funds			291	291							197		126		60		0							

Source: Morningstar & TIAA-CREF -Tracking error calculated using "Morningstar Analyst Assigned Benchmark" Data for 1-month and YTD return as of 8/31/2015. All other data as of 6/30/2015
 Since Incep. = Since Inception Dat Incep. Date = Inception Date

2015 YTD Performance Summary

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; and FTSE Emerging 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

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.

Disclosures

%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 TIAA-CREF Website at 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.

Disclosure

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 for product and fund prospectuses that contains this and other information. Please read the prospectuses carefully before investing.

Disclosure

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.

Disclosure

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.

Disclosure

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.