Quarterly Investment Update



MACOMB COMMUNITY COLLEGE OPTIONAL RETIREMENT PLAN

Investment Performance as of 3/31/2025

The performance data quoted represents past performance, and is no guarantee of future results. Your returns and the principal value of your investment will fluctuate so that your mutual fund shares and annuity account 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. For performance current to the most recent month-end, call 800-842-2252 or visit TIAA.org/planinvestmentoptions and enter your plan ID. Performance may reflect waivers or reimbursements of certain expenses. Absent these waivers or reimbursements, performance results would have been lower. Since Inception performance shown is cumulative for periods less than one year.

			Total Re	eturns	Avera	ige Annua	l Total Ret	urns	Total Annual Op Expenses (%/Pe			
Equities - Variable Annuity	Morningstar Category	Inception Date	3 Month	YTD	1 Year	3 Year	5 Year	10 Year/ Since Inception	Gross	Net	Fee Waiver Expiration	Shareholder Fees & Restrictions*
CREF Equity Index Account (R1) (QCEQRX) ^{1,2,3,4}	Large Blend	04/24/15 04/29/94		-4.81%	6.79%	7.82%	17.74%	11.32%	0.42% \$4.20	0.42% \$4.20	-	Round Trip: If a round trip is made within 60 calendar days, exchanges into the
Benchmark: Russell 3000 TR USD		1	-4.72%	-4.72%	7.22%	8.22%	18.18%	11.80%				same account will be restricted for 90 calendar days.
CREF Global Equities Account (R1) (QCGLRX) ^{1,2,3,4}	Global Large- Stock Blend	04/24/15 05/01/92		-2.79%	5.59%	7.47%	15.99%	8.75%	0.48% \$4.80	0.48% \$4.80	-	Round Trip: If a round trip is made within 60 calendar days, exchanges into the
Benchmark: MSCI ACWI NR USD		1	-1.32%	-1.32%	7.15%	6.91%	15.18%	8.84%				same account will be restricted for 90 calendar days.

Total Annual Operating 00)

		rotal Annual Operating
Total Returns	Average Annual Total Returns	Expenses (%/Per \$1000

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Equities - Variable Annuity	Morningstar Category	Inception Date	3 Month	YTD	1 Year	3 Year	5 Year	10 Year/ Since Inception	Gross N	Fee Waiver et Expiration	Shareholder Fees & Restrictions*
CREF Growth Account (R1) (QCGRRX) ^{1,2,3,4,5}	Large Growth	04/24/15 04/29/94	-11.20%	-11.20%	3.28%	9.18%	17.65%	13.04%	0.46% 0.46 \$4.60 \$4.6		Round Trip: If a round trip is made within 60 calendar days, exchanges into the
Benchmark: Russell 1000 Growth TR USD			-9.97%	-9.97%	7.76%	10.10%	20.09%	15.12%			same account will be restricted for 90 calendar days.
CREF Stock Account (R1) (QCSTRX) ^{1,2,3,4,6}	Aggressive Allocation	04/24/15 07/31/52	-1.91%	-1.91%	5.29%	6.53%	15.35%	8.87%	0.49% 0.49 \$4.90 \$4.9		Round Trip: If a round trip is made within 60 calendar days, exchanges into the
Benchmark: CREF Stock Account Composite Index			-1.51%	-1.51%	6.78%	6.85%	15.87%	9.70%			same account will be restricted for 90 calendar days.
Benchmark: Morningstar Aggressive Target Risk TR USD			0.69%	0.69%	6.30%	5.80%	14.14%	8.39%			
TIAA Access Nuveen Core Equity Fund T2 (Level 2) ^{1,7,8,9}	Large Blend	02/01/07 07/01/99	-6.60%	-6.60%	4.27%	9.65%	18.79%	11.59%	0.70% 0.70 \$7.00 \$7.0	, , ,	transfer into the account
Benchmark: S&P 500 TR USD			-4.27%	-4.27%	8.25%	9.06%	18.59%	12.50%			within 30 calendar days of transferring out.
TIAA Access Nuveen Equity Index Fund T2 (Level 2) ^{17,8,9}	Large Blend	02/01/07 07/01/99	-4.80%	-4.80%	6.81%	7.86%	17.78%	11.43%	0.35% 0.35 \$3.50 \$3.5	, , ,	transfer into the account
Benchmark: Russell 3000 TR USD			-4.72%	-4.72%	7.22%	8.22%	18.18%	11.80%			within 30 calendar days of transferring out.
TIAA Access Nuveen International Equity Fund T2 (Level 2) ^{1,7,8,9,10}	Foreign Large Blend	02/01/07 07/01/99	6.59%	6.59%	2.41%	5.96%	12.52%	4.47%	0.76% 0.76 \$7.60 \$7.6	, , ,	transfer into the account
Benchmark: MSCI EAFE NR USD			6.86%	6.86%	4.88%	6.05%	11.77%	5.40%			within 30 calendar days of transferring out.
TIAA Access Nuveen International Equity Index Fund T2 (Level 2) ^{1,7,8,9,10}	Foreign Large Blend	02/01/07 10/01/02	7.92%	7.92%	5.52%	6.49%	11.83%	5.31%	0.35% 0.35 \$3.50 \$3.5	, , ,	transfer into the account
Benchmark: MSCI EAFE NR USD			6.86%	6.86%	4.88%	6.05%	11.77%	5.40%	1 1 1 1 1		within 30 calendar days of transferring out.
TIAA Access Nuveen Large Cap Growth Index FundT2 (Level 2) ^{1,5,7,8,9}	Large Growth	02/01/07 10/01/02	-10.04%	-10.04%	7.40%	9.72%	19.66%	14.71%	0.35% 0.35 \$3.50 \$3.5		Round Trip: You cannot transfer into the account
Benchmark: Russell 1000 Growth TR USD			-9.97%	-9.97%	7.76%	10.10%	20.09%	15.12%	1 1 1 1 1		within 30 calendar days of transferring out.
TIAA Access Nuveen Large Cap Responsible Equity Fund T2 (Level 2) ^{1,7,8,9}	Large Blend	02/01/07 07/01/99	-3.23%	-3.23%	3.69%	6.96%	16.81%	10.90%	0.47% 0.47 \$4.70 \$4.7		transfer into the account
Benchmark: S&P 500 TR USD			-4.27%	-4.27%	8.25%	9.06%	18.59%	12.50%			within 30 calendar days of transferring out.
Benchmark: Russell 3000 TR USD			-	-	-	-	-	-			

Total Annual Operating
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Total Returns	Average Annual Total Returns	Expenses (%/

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Equities - Variable Annuity	Morningstar Category	Inception Date	3 Month	YTD	1 Year	3 Year	5 Year	10 Year/ Since Inception	Gross	Net	Fee Waiver Expiration	Shareholder Fees & Restrictions*
TIAA Access Nuveen Large Cap Value Fund T2 (Level 2) ^{1,7,8,9,11}	Large Value	02/01/07 10/01/02	2.64%	2.64%	7.01%	8.11%	17.26%	8.32%	0.71% \$7.10	0.71% \$7.10	02/28/26	transfer into the account
Benchmark: Russell 1000 Value TR USD			2.14%	2.14%	7.18%	6.64%	16.15%	8.79%	1			within 30 calendar days of transferring out.
TIAA Access Nuveen Large Cap Value Index Fund T2 (Level 2) ^{1,7,8,9,11}	Large Value	02/01/07 10/01/02	2.07%	2.07%	6.82%	6.30%	15.75%	8.43%	0.35% \$3.50	0.35% \$3.50	02/28/26	transfer into the account
Benchmark: Russell 1000 Value TR USD			2.14%	2.14%	7.18%	6.64%	16.15%	8.79%	! ! !			within 30 calendar days of transferring out.
TIAA Access Nuveen Mid Cap Value Fund T2 (Level 2) ^{1,7,8,9,11,12}	Mid-Cap Value	02/01/07 10/01/02	-3.58%	-3.58%	1.39%	4.30%	15.97%	5.91%	0.76% \$7.60	0.76% \$7.60	02/28/26	transfer into the account
Benchmark: Russell Mid Cap Value TR USD		1	-2.11%	-2.11%	2.27%	3.78%	16.70%	7.62%	1 1 1 1 1			within 30 calendar days of transferring out.
TIAA Access Nuveen Quant Mid Cap Growth Fund T2 (Level 2) ^{1,5,7,8,9,12}	Mid-Cap Growth	02/01/07 10/01/02	-10.91%	-10.91%	-10.49%	-3.56%	7.94%	5.40%	0.80% \$8.00	0.80% \$8.00	02/28/26	transfer into the account
Benchmark: Russell Mid Cap Growth TR USD			-7.12%	-7.12%	3.57%	6.16%	14.86%	10.14%	! ! !			within 30 calendar days of transferring out.
TIAA Access Nuveen Quant Small Cap Equity Fund T2 (Level 2) ^{1,7,8,9,12}	Small Blend	02/01/07 10/01/02	-8.67%	-8.67%	-1.56%	3.85%	17.53%	7.66%	0.71% \$7.10	0.71% \$7.10	02/28/26	transfer into the account
Benchmark: Russell 2000 TR USD		1 1 1 1	-9.48%	-9.48%	-4.01%	0.52%	13.27%	6.30%	1 1 1 1 1			within 30 calendar days of transferring out.
TIAA Access Nuveen Real Estate Securities Select Fund T2 (Level 2) ^{1,7,8,9,13}	Real Estate	02/01/07 10/01/02	1.06%	1.06%	7.62%	-3.51%	8.07%	5.53%	0.80% \$8.00	0.80% \$8.00	07/31/25	Round Trip: You cannot transfer into the account
Benchmark: FTSE Nareit All Equity REITs TR USD			2.75%	2.75%	9.23%	-1.66%	9.55%	5.70%				within 30 calendar days of transferring out.
TIAA Access Nuveen S&P 500 Index Fund T2 (Level 2) ^{1,7,8,9}	Large Blend	02/01/07 10/01/02	-4.35%	-4.35%	7.88%	8.68%	18.18%	12.11%	0.35% \$3.50	0.35% \$3.50	02/28/26	transfer into the account
Benchmark: S&P 500 TR USD			-4.27%	-4.27%	8.25%	9.06%	18.59%	12.50%	! ! !			within 30 calendar days of transferring out.
TIAA Access Nuveen Small Cap Blend Index Fund T2 (Level 2) ^{1,7,8,9,12}	Small Blend	02/01/07 10/01/02	-9.51%	-9.51%	-4.21%	0.34%	13.04%	6.12%	0.36% \$3.60	0.36% \$3.60	02/28/26	transfer into the account
Benchmark: Russell 2000 TR USD		1	-9.48%	-9.48%	-4.01%	0.52%	13.27%	6.30%	1 1 1 1 1			within 30 calendar days of transferring out.
TIAA Access T. Rowe Price Large-Cap Growth T2 (Level 2) ^{5,7,8}	Large Growth	02/01/07 10/31/01	-7.96%	-7.96%	6.47%	9.31%	17.59%	14.23%	0.86% \$8.60	0.86% \$8.60	-	Round Trip: You cannot transfer into the account
Benchmark: Russell 1000 Growth Index			-9.97%	-9.97%	7.76%	10.10%	20.09%	15.12%	! ! ! !			within 30 calendar days of transferring out.

Total Annual Operating Expenses (%/Per \$1000)

Average Annual Total Returns

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Total	Returns
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	Morningstar							10 Year/ Since			Fee Waiver	Shareholder Fees &
Real Estate - Variable Annuity	Category	Inception Date	3 Month	YTD	1 Year	3 Year	5 Year	Inception	Gross	Net	Expiration	Restrictions*
TIAA Real Estate Account (QREARX) ^{3,14,15}	Miscellaneous Sector	10/02/95	0.98%	0.98%	-0.55%	-4.97%	1.10%	3.04%	1.02% \$10.20	1.02% \$10.20	-	Transfers out: Limit 1 per quarter. Limitations may apply to any transaction resulting in a balance > \$150,000.

Total Annual
Operating Expenses

			Total Re	eturns	Aver	age Annual	Total Retu	ırns	(%/Per \$	31000)		
Fixed Income - Variable Annuity	Morningstar Category	Inception Date	3 Month	YTD	1 Year	3 Year	5 Year	10 Year/ Since Inception	Gross	Net	Fee Waiver Expiration	Shareholder Fees & Restrictions*
CREF Core Bond Account (R1) (QCBMRX) ^{1,2,3,4}	Intermediate Core Bond	04/24/15 03/01/90	2.75%	2.75%	5.10%	0.84%	0.45%	1.58%	0.48% \$4.80	0.48% \$4.80	-	Round Trip: If a round trip is made within 60 calendar days,
Benchmark: Bloomberg US Aggregate Bond TR USD			2.78%	2.78%	4.88%	0.52%	-0.40%	1.46%		1		exchanges into the same account will be restricted for 90 calendar days.
CREF Inflation-Linked Bond Account (R1) (QCILRX) ^{1,2,3,4}	Inflation- Protected Bond	04/24/15 05/01/97	3.73%	3.73%	6.62%	1.94%	3.32%	2.43%	0.45% \$4.50	0.45% \$4.50	-	Round Trip: If a round trip is made within 60 calendar days,
Benchmark: Bloomberg US Treasury Inflation Notes 1-10 Yr TR USD			4.00%	4.00%	6.94%	1.81%	3.44%	2.81%				exchanges into the same account will be restricted for 90 calendar days.
TIAA Access Nuveen Core Plus Bond Fund T2 (Level 2) ^{1.7,8,9}	Intermediate Core-Plus Bond	02/01/07 03/31/06	2.63%	2.63%	5.44%	1.08%	1.28%	1.94%	0.60% \$6.00	0.60% \$6.00	07/31/25	into the account within 30
Benchmark: Bloomberg US Aggregate Bond TR USD			2.78%	2.78%	4.88%	0.52%	-0.40%	1.46%				calendar days of transferring out.
TIAA Access Nuveen High Yield Fund T2 (Level 2) ^{1,7,8,9,16}	•	02/01/07 03/31/06	0.65%	0.65%	6.54%	4.51%	6.39%	4.14%	0.67% \$6.70	0.67% \$6.70	07/31/25	Round Trip: You cannot transfer into the account within 30
Benchmark: ICE BofA BB-B US Cash Pay High Yield Constrained TR USD			1.16%	1.16%	6.68%	4.45%	6.53%	4.71%				calendar days of transferring out.
TIAA Access Nuveen Short Term Bond Fund T2 (Level 2) ^{1,7,8,9}	Short-Term Bond	02/01/07 03/31/06	1.62%	1.62%	5.79%	3.50%	2.46%	1.99%	0.57% \$5.70	0.57% \$5.70	07/31/25	into the account within 30
Benchmark: Bloomberg US Government/Credit 1-3 Yr TR USD			1.63%	1.63%	5.61%	3.10%	1.56%	1.73%				calendar days of transferring out.
TIAA Access WA Core Plus Bond T2 (Level 2) ^{7,8,17}	Intermediate Core-Plus Bond	02/01/07 08/04/08	2.88%	2.88%	3.09%	-1.22%	-0.81%	1.30%	0.72% \$7.20	0.72% \$7.20	12/31/25	into the account within 30
Benchmark: Bloomberg U.S. Aggregate Bond Index			2.78%	2.78%	4.88%	0.52%	-0.40%	1.46%				calendar days of transferring out.

Total Annual
Operating Expenses

			Total Re	eturns	Aver	age Annua	l Total Reti	urns	Operating Expenses (%/Per \$1000)					
Multi Asset - Variable Annuity	Morningstar Category	Inception Date	3 Month	YTD	1 Year	3 Year	5 Year	10 Year/ Since Inception	Gross	Net	Fee Waiver Expiration	Shareholder Fees & Restrictions*		
CREF Social Choice Account (R1) (QCSCRX) ^{1,2,3,4}	Moderate Allocation	04/24/15 03/01/90	0.84%	0.84%	4.43%	4.12%	9.22%	6.26%	0.45% \$4.50	0.45% \$4.50	-	Round Trip: If a round trip is made within 60 calendar days,		
Benchmark: CREF Social Choice Account Composite Index			0.53%	0.53%	6.28%	4.93%	9.67%	6.74%				exchanges into the same account will be restricted for 90 calendar days.		
Benchmark: Morningstar Moderate Target Risk TR USD			1.69%	1.69%	5.95%	3.87%	8.80%	6.09%				,		
TIAA Access Nuveen Lifecycle 2010 Fund T2 (Level 2) ^{1,7,8,9,18,19}	Target-Date 2000-2010	02/01/07 10/15/04	0.83%	0.83%	4.91%	3.25%	6.48%	4.70%	0.82% \$8.20	0.67% \$6.70	09/30/25	Round Trip: You cannot transfer into the account within 30 calendar days of transferring out.		
Benchmark: Lifecycle 2010 Fund Composite Index			1.24%	1.24%	5.98%	3.42%	6.54%	5.09%						
Benchmark: S&P Target Date 2010 TR USD			1.60%	1.60%	5.87%	3.66%	6.20%	4.63%						
TIAA Access Nuveen Lifecycle 2015 Fund T2 (Level 2) ^{1,7,8,9,18,19}	Target-Date 2015	02/01/07 10/15/04	0.70%	0.70%	4.67%	3.21%	6.95%	4.95%	0.83% \$8.30	0.68% \$6.80	09/30/25	Round Trip: You cannot transfer into the account within 30 calendar days of transferring out.		
Benchmark: Lifecycle 2015 Fund Composite Index			1.08%	1.08%	6.03%	3.64%	7.22%	5.47%						
Benchmark: S&P Target Date 2015 TR USD			1.33%	1.33%	5.81%	3.67%	6.87%	5.03%						
TIAA Access Nuveen Lifecycle 2020 Fund T2 (Level 2) ^{1,7,8,9,18,19}	Target-Date 2020	02/01/07 10/15/04	0.56%	0.56%	4.57%	3.42%	7.59%	5.32%	0.83% \$8.30	0.69% \$6.90	09/30/25	into the account within 30		
Benchmark: Lifecycle 2020 Fund Composite Index			0.86%	0.86%	6.07%	3.88%	7.91%	5.89%				calendar days of transferring out.		
Benchmark: S&P Target Date 2020 TR USD		1	1.05%	1.05%	5.84%	3.93%	7.47%	5.38%						
TIAA Access Nuveen Lifecycle 2025 Fund T2 (Level 2) ^{1,7,8,9,18,19}	Target-Date 2025	02/01/07 10/15/04	0.23%	0.23%	4.46%	3.66%	8.60%	5.81%	0.85% \$8.50	0.70% \$7.00	09/30/25	into the account within 30		
Benchmark: Lifecycle 2025 Fund Composite Index			0.64%	0.64%	6.14%	4.16%	8.98%	6.45%				calendar days of transferring out.		
Benchmark: S&P Target Date 2025 TR USD			0.94%	0.94%	5.83%	4.13%	8.72%	5.98%						
TIAA Access Nuveen Lifecycle 2030 Fund T2 (Level 2) 1,7,8,9,18,19	Target-Date 2030	02/01/07 10/15/04	-0.17%	-0.17%	4.26%	4.05%	9.74%	6.36%	0.87% \$8.70	0.71% \$7.10	09/30/25	into the account within 30		
Benchmark: Lifecycle 2030 Fund Composite Index			0.29%	0.29%	6.23%	4.58%	10.16%	7.06%				calendar days of transferring out.		

0.50% 0.50% 5.94% 4.69% 10.19% 6.65%

Benchmark: S&P Target Date 2030 TR USD

Total Annual
Operating Expenses

			Total R	eturns	Aver	age Annua	l Total Ret	urns	(%/Per			
Multi Asset - Variable Annuity	Morningstar Category	Inception Date	3 Month	YTD	1 Year	3 Year	5 Year	10 Year/ Since Inception	Gross	Net	Fee Waiver Expiration	Shareholder Fees & Restrictions*
TIAA Access Nuveen Lifecycle 2035 Fund T2 (Level 2) ^{1,7,8,9,18,19}	Target-Date 2035	02/01/07 10/15/04	-0.54%	-0.54%	4.17%	4.61%	10.98%	6.95%	0.90% \$9.00	0.72% \$7.20	09/30/25	Round Trip: You cannot transfer into the account within 30
Benchmark: Lifecycle 2035 Fund Composite Index			-0.06%	-0.06%	6.35%	5.17%	11.45%	7.71%		: : : : :		calendar days of transferring out.
Benchmark: S&P Target Date 2035 TR USD			0.15%	0.15%	6.01%	5.21%	11.74%	7.33%				1 1 1 1
TIAA Access Nuveen Lifecycle 2040 Fund T2 (Level 2) ^{1,7,8,9,18,19}	Target-Date 2040	02/01/07 10/15/04	-1.16%	-1.16%	3.84%	5.22%	12.27%	7.53%	0.93% \$9.30	0.73% \$7.30	09/30/25	into the account within 30
Benchmark: Lifecycle 2040 Fund Composite Index			-0.57%	-0.57%	6.48%	5.87%	12.89%	8.39%				calendar days of transferring out.
Benchmark: S&P Target Date 2040 TR USD			-0.32%	-0.32%	6.11%	5.73%	12.93%	7.86%				
TIAA Access Nuveen Lifecycle 2045 Fund T2 (Level 2) ^{1,7,8,9,18,19}	Target-Date 2045	05/01/08 11/30/07	-1.57%	-1.57%	3.61%	5.48%	13.34%	7.95%	0.95% \$9.50	0.74% \$7.40	09/30/25	into the account within 30
Benchmark: Lifecycle 2045 Fund Composite Index			-0.91%	-0.91%	6.58%	6.16%	14.08%	8.87%				calendar days of transferring out.
Benchmark: S&P Target Date 2045 TR USD			-0.44%	-0.44%	6.12%	6.08%	13.66%	8.19%				
TIAA Access Nuveen Lifecycle 2050 Fund T2 (Level 2) ^{1,7,8,9,18,19}	Target-Date 2050	05/01/08 11/30/07	-1.79%	-1.79%	3.51%	5.61%	13.59%	8.08%	0.96% \$9.60	0.75% \$7.50	09/30/25	Round Trip: You cannot transfer into the account within 30
Benchmark: Lifecycle 2050 Fund Composite Index			-1.08%	-1.08%	6.63%	6.28%	14.38%	9.03%				calendar days of transferring out.
Benchmark: S&P Target Date 2050 TR USD			-0.75%	-0.75%	6.20%	6.27%	14.03%	8.38%				
TIAA Access Nuveen Lifecycle 2055 Fund T2 (Level 2) ^{1,7,8,9,18,19}	Target-Date 2055	05/01/12 04/29/11	-1.87%	-1.87%	3.48%	5.66%	13.75%	8.17%	0.97% \$9.70	0.75% \$7.50	09/30/25	into the account within 30
Benchmark: Lifecycle 2055 Fund Composite Index			-1.13%	-1.13%	6.65%	6.35%	14.59%	9.14%				calendar days of transferring out.
Benchmark: S&P Target Date 2055 TR USD			-0.76%	-0.76%	6.19%	6.28%	14.16%	8.45%				
TIAA Access Nuveen Lifecycle 2060 Fund T2 (Level 2) ^{1,7,8,9,18,19}	Target-Date 2060	05/01/15 09/26/14	-1.87%	-1.87%	3.53%	5.72%	13.92%	8.26%	0.99% \$9.90	0.75% \$7.50	09/30/25	into the account within 30
Benchmark: Lifecycle 2060 Fund Composite Index			-1.19%	-1.19%	6.67%	6.42%	14.79%	9.25%				calendar days of transferring out.
Benchmark: S&P Target Date 2060 TR USD		1	-0.89%	-0.89%	6.16%	6.30%	14.17%	8.50%				

Total Annual Operating Expenses

		Operating Expens
Total Returns	Average Annual Total Returns	(%/Per \$1000)

Multi Asset - Variable Annuity	Morningstar Category	Inception Date	3 Month	YTD	1 Year	3 Year		10 Year/ Since nception	Gross	Net	Fee Waiver Expiration	Shareholder Fees & Restrictions*
TIAA Access Nuveen Lifecycle Retirement Income Fund T2 (Level 2) ^{1,7,8,9,18,19,20}	Moderately Conservative Allocation	05/01/08 11/30/07	0.79%	0.79%	4.73%	3.16%	6.44%	4.59%	0.86% \$8.60	0.67% \$6.70	09/30/25	Round Trip: You cannot transfer into the account within 30 calendar days of transferring
Benchmark: Lifecycle Retirement Income Fund Composite Index			1.09%	1.09%	6.00%	3.60%	6.67%	5.08%				out.
Benchmark: S&P Target Date Retirement Income TR USD		1	1.61%	1.61%	5.80%	3.58%	5.40%	4.14%		1		

Total Annual
Operating Expenses
(%/Per \$1000)

				lotal Re	eturns	Avera	age Annuai	iotai Retu	rns	(%/Per \$	1000)		
Money Market - Variable Annuity	Morningstar Category	Inception Date	7-Day Yield**	3 Month	YTD	1 Year	3 Year		10 Year/ Since Inception	Gross	Net	Fee Waiver Expiration	Shareholder Fees & Restrictions*
CREF Money Market Account (R1) (QCMMRX) ^{1,2,3,4,21,22}	Money Market- Taxable	04/24/15 04/01/88		1.01%	1.01%	4.69%	3.79%	2.25%	1.43%	0.42% \$4.20	0.42% \$4.20	-	-
Benchmark: iMoneyNet Money Fund AveragesTM-All Government				0.99%	0.99%	4.67%	4.00%	2.39%	1.59%				

You could lose money by investing in the CREF Money Market Account. Because the accumulation unit value of the Account will fluctuate, the value of your investment may increase or decrease. An investment in the Account is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The Account's sponsor has no legal obligation to provide support to the Account, and you should not expect that the sponsor will provide financial support to the Account at any time.

^{**}The current yield more closely reflects the earnings of this investment choice.

	Total Returns			Average Annual Total Returns			Current Rates			
Guaranteed - Fixed Annuity	Inception Date	3 Month	YTD	1 Year	3 Year	5 Year	10 Year	Since Inception	Rate	Guaranteed Minimum Rate
TIAA Traditional Annuity - Group Retirement Annuity 23,24,25	-	1.06%	1.06%	4.38%	4.38%	4.03%	3.95%	-	5.00%	3.00%

Additional Information:

The current rate shown applies to premiums remitted during the month of January 2025 and will be credited through 2/28/2025. This rate is subject to change in subsequent months. Up-to-date rate of return information is available on your plan-specific website noted above or at 800-842-2733.TIAA Traditional guarantees your principal and a minimum annual interest rate. The guaranteed minimum interest rate is 3.00%, and is effective while the funds remain in the contract. The account also offers the opportunity for additional amounts in excess of the guaranteed minimum interest rate. When declared, additional amounts remain in effect for the twelve-month period that begins each March 1 for accumulating annuities and January 1 for payout annuities. Additional amounts are not guaranteed for the future years. All guarantees are subject to TIAA's claims paying ability.TIAA Traditional is designed primarily to help meet your long-term retirement income needs; it is not a short-term savings vehicle. Therefore, some contracts require that benefits are paid in installments over time and/or may impose surrender charges on certain withdrawals. TIAA has rewarded participants who save in contracts where benefits are paid in installments over time instead of in an immediate lump-sum by crediting higher interest rates, typically 0.50% to 0.75% higher. Higher rates will lead to higher account balances and more retirement income for you. For Group Retirement Annuity (GRA) contracts, and subject to the terms of your employer's plan, lump-sum withdrawals are available from the TIAA Traditional account only within 120 days after termination of employment and are subject to a 2.5% surrender charge. All other withdrawals and transfers from the account must be paid in ten annual installments. After termination of employment additional income options may be available including income for life, income for a fixed period, interest-only payments and IRS required minimum distributions.

	Total Returns			Average Annual Total Returns					Current	Rates
								Since		Guaranteed Minimum
Guaranteed - Fixed Annuity	Inception Date	3 Month	YTD	1 Year	3 Year	5 Year	10 Year	Inception	Rate	Rate
TIAA Traditional Annuity - Retirement Annuity 23,24,25	-	1.06%	1.06%	4.38%	4.38%	4.03%	3.95%	-	5.00%	3.00%

Additional Information:

The current rate shown applies to premiums remitted during the month of January 2025 and will be credited through 2/28/2025. This rate is subject to change in subsequent months. Up-to-date rate of return information is available on your plan-specific website noted above or at 800-842-2733.TIAA Traditional guarantees your principal and a minimum annual interest rate. The guaranteed minimum interest rate is 3.00%, and is effective while the funds remain in the contract. The account also offers the opportunity for additional amounts in excess of the guaranteed minimum interest rate. When declared, additional amounts remain in effect for the twelve-month period that begins each March 1 for accumulating annuities and January 1 for payout annuities. Additional amounts are not guaranteed for the future years. All guarantees are subject to TIAA's claims paying ability.TIAA Traditional is designed primarily to help meet your long-term retirement income needs; it is not a short-term savings vehicle. Therefore, some contracts require that benefits are paid in installments over time and/or may impose surrender charges on certain withdrawals. TIAA has rewarded participants who save in contracts where benefits are paid in installments over time instead of in an immediate lump-sum by crediting higher interest rates, typically 0.50% to 0.75% higher. Higher rates will lead to higher account balances and more retirement income for you. For Retirement Annuity (RA) contracts, lump-sum withdrawals are not available from the TIAA Traditional account. Subject to the terms of your plan, all withdrawals and transfers from the account must be paid in ten annual installments. After termination of employment additional income options may be available including income for life, interest-only payments, and IRS required minimum distribution payments.

	Total Returns			Average Annual Total Returns				Сі		Current Rates	
Guaranteed - Fixed Annuity	Inception Date	3 Month	YTD	1 Year	3 Year	5 Year	10 Year	Since Inception	Rate	Guaranteed Minimum Rate	
addidition Titled Title	mooption bate	O Monar		1 1001	O TOUT		10 1001	mooption	riaco	riato	
TIAA Traditional Annuity - Retirement Choice 23,24,25	08/01/05	1.11%	1.11%	4.59%	4.61%	4.26%	4.21%	4.39%	5.25%	3.00%	

Additional Information:

The current rate shown applies to premiums remitted during the month of January 2025 and will be credited through 2/28/2025. This rate is subject to change in subsequent months. Up-to-date rate of return information is available on your plan-specific website noted above or at 800-842-2733. TIAA Traditional guarantees your principal and a minimum annual interest rate. The current guaranteed minimum interest rate for premiums remitted in 2024 is 3.00%, and is effective through 2033. The account also offers the opportunity for additional amounts in excess of the minimum interest rate. When declared, additional amounts remain in effect for the twelve-month period that begins each March 1 for accumulating annuities and January 1 for payout annuities. Additional amounts are not guaranteed for the future years. All guarantees are subject to TIAA's claims paying ability.TIAA Traditional is designed primarily to help meet your long-term retirement income needs; it is not a short-term savings vehicle. Therefore, some contracts require that benefits are paid in installments over time and/or may impose surrender charges on certain withdrawals. TIAA has rewarded participants who save in contracts where benefits are paid in installments over time instead of in an immediate lump-sum by crediting higher interest rates, typically 0.50% to 0.75% higher. Higher rates will lead to higher account balances and more retirement income for you.For Retirement Choice (RC) contracts, and subject to the terms of your employer's plan, lump-sum withdrawals are available from the TIAA Traditional account only within 120 days after termination of employment and are subject to a 2.5% surrender charge. All other withdrawals and transfers from the account must be paid in 84 monthly installments (7 years). If the Contractholder elects to remove TIAA Traditional, the contract's entire TIAA Traditional accumulation will be paid out in 60 monthly installments without any surrender charge.

A Note About Risk

Equity risk refers to the risk of loss due to the market price of shares falling. Equity funds and variable annuity accounts generally carry a higher degree of risk than fixed income funds and accounts. Fixed income funds and variable annuity accounts are not guaranteed and are subject to interest rate, inflation and credit risks.

Variable annuity accounts that invest in real estate securities are subject to various risks, including fluctuation in property values, higher expenses or lower income than expected, and potential environmental problems and liability.

Guaranteed investments offer a guaranteed rate of return but such guarantees are subject to the claims-paying ability of the issuing insurance company.

More detailed information on risks applicable to a particular investment option can be found in the prospectus or other product literature.

Fees and Expenses

*Some Plans may allocate plan costs to participants to offset the cost of recordkeeping and other plan services. When the Plan allocates these costs at the investment-level there may be a plan services fee or credit displayed in the ""Shareholder fees & restrictions"" column. If the costs are allocated at the plan-level (regardless of investment) it is not displayed on the Quarterly Investment Update. Fee and expense information for the variable return investment options include the Total Annual Operating Expenses expressed as a percentage and a dollar amount based upon a \$1,000 accumulation both as net (after) and gross (before) of expenses. Total Annual Operating Expenses is a measure of what it costs to operate an investment, expressed as a percentage of its assets, as a dollar amount or in basis points. These are costs the investor pays through a reduction in the investment's rate of return. Expense information shown is based on the most recent information available, but may not reflect all updates and may differ slightly from the prospectus due to rounding. Please consult the most recent prospectus or offering document for more detailed information.

For more information on the impact of fees and expenses associated with your plan, please visit TIAA.org/fees. Fees are only one of many factors to consider when making an investment decision.

About the Benchmark

A benchmark provides an investor with a point of reference to evaluate an investment's performance. One common type of benchmark used to compare investment performance is called an index. Indexes are unmanaged portfolios of securities designed to track the performance of a particular segment of the market. For example, a large cap stock fund or account will usually be compared to an index that tracks a portfolio of large-cap stocks. Conversely, a bond fund or account is typically compared to an index that tracks a portfolio of bonds that is comparable to the fund or account's portfolio in terms of credit quality, maturity and liquidity. Each mutual fund or account shown in the table includes performance information for an index that the advisor determined provides a fair comparison of the fund or account's investment performance. Indexes are for comparison purposes only. You cannot invest directly in any index. Index returns do not reflect a deduction for fees or expenses.

Data Providers

Unless otherwise noted, data on nonproprietary investment products, including performance, Morningstar Category and expenses, is provided by Morningstar, Inc. All other data provided by Teachers Insurance and Annuity Association of America - College Retirement Equities Fund. Benchmark performance shown across proprietary and nonproprietary funds/accounts is provided by TIAA with the exception of Since Inception periods calculated using a nonproprietary fund's inception date. TIAA reserves the rights to all proprietary data herein, and is not responsible for any damages or losses arising from any use of this information.

The Morningstar Category classifies a fund based on its investment style as measured by underlying portfolio holdings (portfolio statistics and compositions over the past three years). If the fund is new and has no portfolio, Morningstar estimates where it will fall before assigning a more permanent category. When necessary, Morningstar may change a category assignment based on current information.

Important Information

- 1 When more than one inception date is shown, the performance displayed for periods prior to the investment's inception date is hypothetical. The second inception date is that of the fund/account to which such performance is based. Please refer to the investment's performance disclosure for more details.
- 2 Total annual expense deductions, which include investment advisory, administrative, and distribution (12b-1) expenses, and mortality and expense risk charges, are estimated each year based on projected expense and asset levels. Differences between actual expenses and the estimate are adjusted quarterly and are reflected in current investment results. Historically, adjustments have been small.
- 3 The Account's total annual expense deduction appears in the Account's prospectus, and may be different than that shown herein due to rounding. Please refer to the prospectus for further details.
- 4 The performance shown for Classes R1, R2, and R4 that is prior to their respective inception dates is based on the performance of the Accounts' Class R3. The performance for Classes R1 and R2 for periods prior to their inception has not been restated to reflect the current expenses of Classes R1 and R2, which may be higher or lower than Class R3 for the same period. The performance for Class R4 for the periods prior to its inception has not been restated to reflect the lower expenses of Class R4. Class R3 is now considered the oldest share class for CREF, previously it was R1.
- 5 Due to their relatively high valuations which are generally a function of expected earnings growth, growth stocks will be more volatile than value stocks and such earnings growth may not occur or be sustained.
- 6 The "inception date" of the CREF Stock Account, July 31, 1952, is the date as of which the first unit value was determined for the Account. The Account did, however, commence some operations on July 1, 1952.
- 7 Please note that with respect to variable annuities, your contributions will be allocated to the underlying investments.
- 8 Performance "Since Inception" is based upon the underlying fund account inclusion date. Performance for periods prior to the date the Underlying Investment was first included in the TIAA Access variable annuity is based upon the performance of the underlying fund investment. Such performance was not available in the variable annuity prior to the fund's inclusion in the variable annuity. Account performance above is net of all annuity contract recurring costs such as mortality and expense risk charges and annual administrative fees. Pre-inclusion fund performance is also adjusted for these costs.
- 9 The net expense ratio reflects a contractual arrangement that has the effect of reducing or limiting the fund's expenses. Without such an arrangement, currently or in the past, returns would have been lower. The arrangement will remain in effect until terminated. Please see the prospectus for details.
- 10 Securities of foreign issuers may lose value because of erratic market conditions, economic and political instability or fluctuations in currency exchange rates, which may be magnified in emerging markets.
- 11. Value stocks may perform differently from the market as a whole and may be undervalued by the market for a long period of time.
- 12 Securities of smaller companies may be more volatile than those of larger ones, and they are also often less liquid than those of larger companies because there is a limited market for them.
- 13 Funds that focus their investments in real estate are subject to the risks associated with real estate ownership, including fluctuations in property values, higher expenses or lower income than expected, and potential environmental problems and liability.

- 14 Funds that focus their investments in a specific sector (such as health care or technology) are more vulnerable to developments that affect those industries or sectors than more broadly diversified funds.
- 15 The total annual expense deduction, which includes investment management, administration, and distribution expenses, mortality and expense risk charges, and the liquidity guarantee, is estimated each year based on projected expense and asset levels. Differences between actual expenses and the estimate are adjusted quarterly and are reflected in current investment results. Historically, adjustments have been small.
- 16 Investments in high-yield bonds (commonly known as junk bonds) are subject to greater risk of loss of principal and interest and an increased risk of default in comparison to higher-rated bonds.
- 17 Performance "Since Inception" is based upon the underlying fund account inclusion date. Performance for periods prior to the date the Underlying Investment was first included in the TIAA Access variable annuity is based upon the performance of the underlying fund investment. Such performance was not available in the variable annuity prior to the fund's inclusion in the variable annuity. The performance of the underlying fund reflects the performance of the I share class from its inception to 6/30/2017, and IS share class performance thereafter. Account performance above is net of all annuity contract recurring costs such as mortality and expense risk charges and annual administrative fees. Pre-inclusion fund performance is also adjusted for these costs.
- 18 Target-date variable annuity accounts are actively managed, so their asset allocations are subject to change and may vary from those shown. The underlying target-date fund invests in many other funds, which exposes the target-date variable annuity account to the risks of different areas of the market. Please note that, as with all target-date variable annuity accounts, the principal value of a Target Retirement variable annuity account is not guaranteed. The higher an account's allocation to stocks, the greater the risk. After the target date has been reached, some of these accounts may be merged into an account with a more stable asset allocation. The expense charge may include fees for the underlying target-date fund and its investments; in general, a target-date variable annuity account's underlying fund indirectly bears its pro rata share of the fees and expenses incurred by the funds in which it invests.
- 19 As Target Retirement Date variable annuity accounts are actively managed, their asset allocations are subject to change and may vary from those indicated. They invest in many underlying funds and are exposed to the risks of different areas of the market. Please note that, as with all variable annuity accounts, the principal value of a Target Retirement Date variable annuity account is not guaranteed. The higher an account's allocation to stocks, the greater the risk. After the target date has been reached, some of these variable annuity accounts may be merged into an account with a more stable asset allocation. In addition to the account level expenses, these variable annuity accounts are also subject to the expenses of their underlying investments. Please consult the prospectus for more complete information.
- 20 Please note that performance represents returns during the accumulation phase of this investment account. If you choose to annuitize, different charges and performance calculations will apply so the performance results will differ.

- 21 You could lose money by investing in the CREF Money Market Account (the "Account"). Because the accumulation unit value of the Account will fluctuate, the value of your investment may increase or decrease. An investment in the Account is not insured or guaranteed by the Federal Deposit Insurance Corporation or any other government agency. The Account's sponsor has no legal obligation to provide support to the Account, and you should not expect that the sponsor will provide financial support to the Account at any time, Between July 16, 2009 and March 7, 2017, TIAA withheld ("waived") a portion of the Rule 12b-1 distribution and/or administrative expenses for each class of the Account when a class s yield was less than zero. Without this waiver, the total returns of the Account would have been lower. For a period of three years after the date an amount was waived, it was eligible for recoupment by TIAA, under certain conditions. All eligible expenses for this waiver were recouped by July 2018 for Class R3, September 2018 for Class R2 and June 2019 for Class R1. Beginning in 2020, TIAA agreed to a new waiver of a portion of the Rule 12b-1 distribution and/or administrative expenses for each class of the Account when a class's yield is less than zero. This waiver of expenses expired as of December 31, 2021. Without this waiver, the total returns of each class of the Account would have been lower, and could be negative. TIAA may, for a period of three years after the date an amount was waived, recover from the Account a portion of the amounts waived at such time as the class's daily yield would be positive absent the effect of the waiver and, in such event, the amount of recovery on any day will be approximately 25% of the class's yield (net of all other expenses) on that day.
- 22 iMoneyNet reports yields as of the last Tuesday of the month. Yields for the iMoneyNet Money Fund Report Averages-All Taxable and the annuity account(s) that track this industry average are calculated based on this date.
- 23 The TIAA Traditional Annuity guarantees principal and a specified interest rate (based on TIAA's claims paying ability). It also offers the potential for greater growth through additional amounts, which may be declared on a year-by-year basis by the TIAA Board of Trustees. These additional amounts, when declared, remain in effect for the "declaration year" which begins each March 1. Additional amounts are not guaranteed. For more up to date information please visit your employer's microsite or TIAA.org. TIAA Traditional is a guaranteed insurance contract and not an investment for federal securities law purposes.
- 24 Accumulations are credited with interest based on when contributions and transfers are received, and your performance will reflect your pattern of contributions. The returns shown in the table reasonably represent what an individual making level monthly premiums would have historically earned over the time periods. Returns for different time periods are calculated in two steps: monthly performance returns are calculated from an accumulation created by a series of level monthly premiums over the prior 10 years (or the inception date of the product if later), and those monthly returns are linked together to determine historical performance for each of the return periods shown.
- 25 The Current Rates, Minimum Guaranteed Rates and Fees (if applicable) shown for guaranteed annuities are the rates in effect as of the first day of the month following quarter end. Depending upon the contract, these may apply to new money only or to both new money and existing accumulations. See your annuity contract or certificate for details.



BUILT TO PERFORM.

CREATED TO SERVE.

Mutual funds are offered through your plan sponsor's retirement plan, which is recordkept by TIAA. Funds are offered at that day's net asset value (NAV), and the performance is displayed accordingly. Performance at NAV does not reflect sales charges, which are waived through your retirement plan. If included, the sales charges would have reduced the performance as quoted.

Before making your investment choices and completing your enrollment form, you should consider the investment objectives, risks, charges and expenses carefully. Please call 877-518-9161 for paper copies of the product and fund prospectuses that contain this and other information. Please read the prospectuses carefully before investing.

Unless otherwise noted, annuity contracts and certificates are issued by Teachers Insurance and Annuity Association of America (TIAA) and College Retirement Equities Fund (CREF), New York, NY. TIAA-CREF Individual & Institutional Services, LLC and Nuveen Securities, LLC, Members FINRA and SIPC, distribute securities products.

2025 Teachers Insurance and Annuity Association of America-College Retirement Equities Fund, 730 Third Avenue, New York, NY 10017.

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