

PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY  
 THE UNIVERSITY OF NORTH CAROLINA  
 FOR THE PERIOD ENDING 12/31/2021

INVESTMENT NAME	PROVIDER	Q4'21	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*	Exp Ratio	
<b>MONEY MARKET</b>								
Fidelity Government Money Market	Fidelity	0.00%	0.01%	0.70%	0.82%	0.42%	0.42	
CREF Money Market R3	TIAA-CREF	4.63%	12.64%	15.60%	11.06%	-	0.21	
Vanguard Federal Money Market	TIAA-CREF	0.00%	0.01%	0.86%	1.04%	0.55%	0.11	
BofA Merrill Lynch 3-month U.S. T-Bill	Benchmark	0.01%	0.05%	0.99%	1.14%	0.63%		
<b>STABLE VALUE</b>								
Fidelity Managed Income Portfolio	Fidelity	0.20%	0.90%	1.44%	1.44%	1.28%	0.7	
Lincoln Fixed Account*	Fidelity	0.37%	1.50%	1.82%	1.89%	2.08%	0.35	
TIAA Traditional Annuity - GRA	TIAA-CREF	Current Rate is 4.25%						
TIAA Traditional Annuity - GSRA	TIAA-CREF	Current Rate is 3.50%						
Hueler Stable Value Index (gross)	Peer Group	0.42%	1.74%	2.17%	2.15%	2.01%		
ICE BofA ML US Treasury Bill 3-mon USD	Benchmark	0.01%	0.05%	0.99%	1.14%	0.63%		
<b>SHORT TERM BOND</b>								
Vanguard Short Term Bond Index In Pl	Fidelity/TIAA-CREF	-0.68%	-0.96%	2.85%	2.22%	1.72%	0.03	
Short Term Bond Universe	Peer Group	-0.50%	-0.02%	2.91%	2.28%	1.92%		
Barclays Government/Credit 1-3 Yr	Benchmark	-0.56%	-0.47%	2.28%	1.85%	1.39%		
<b>INTERMEDIATE TERM BOND</b>								
JPMorgan Core Bond R5	Fidelity	-0.03%	-0.97%	5.12%	3.86%	3.12%	0.44	
Vanguard Total Bond Mkt Index Inst Pl	TIAA-CREF/Fidelity	-0.08%	-1.65%	4.84%	3.60%	2.88%	0.03	
JPMorgan Core Bond R6	TIAA-CREF	-0.08%	-0.95%	5.21%	3.95%	3.21%	0.34	
Intermediate Core Bond Universe	Peer Group	-0.25%	-1.48%	4.90%	3.51%	2.98%		
Barclays Aggregate Bond Index	Benchmark	0.01%	-1.54%	4.79%	3.57%	2.90%		
<b>INTERMEDIATE CORE-PLUS BOND</b>								
MetWest Total Return Bond	TIAA-CREF/Fidelity	-0.10%	-1.11%	5.65%	4.12%	4.11%	0.37	
Intermediate Core Plus Bond Universe	Peer Group	-0.22%	-0.76%	5.48%	3.98%	3.57%		
Barclays Aggregate Bond Index	Benchmark	0.01%	-1.54%	4.79%	3.57%	2.90%		
<b>ALLOCATION--50% TO 70% EQUITY</b>								
Fidelity Balanced K	Fidelity	6.71%	18.41%	21.77%	15.12%	12.62%	0.45	
Allocation-50% to 70% Equity Universe	Peer Group	4.71%	13.55%	15.03%	10.42%	9.39%		
60% S&P 500 40% BC Agg	Benchmark	6.62%	15.96%	17.77%	12.78%	11.22%		
<b>WORLD ALLOCATION</b>								
CREF Social Choice Account R3	TIAA-CREF	4.63%	12.64%	15.60%	11.06%	-	0.2	
World Allocation Universe	Peer Group	3.85%	11.45%	11.72%	8.06%	6.92%		
60% MSCI World 40% BC Agg Index	Benchmark	4.72%	12.34%	15.42%	10.97%	9.28%		
<b>ALLOCATION--85%+ EQUITY</b>								
CREF Stock R3	TIAA-CREF	6.23%	18.92%	21.35%	14.79%	-	0.24	
Allocation--85%+ Equity Universe	Peer Group	5.80%	18.16%	20.18%	13.64%	11.82%		
85% S&P 500, 15% BBgBarc Agg	Benchmark	9.35%	23.77%	22.88%	16.30%	14.53%		
<b>LARGE COMPANY VALUE</b>								
JHancock Disciplined Value R6	TIAA-CREF/ Fidelity	9.35%	30.24%	17.62%	11.94%	13.22%	0.66	
Large Value Universe	Peer Group	8.25%	26.05%	17.72%	11.55%	12.37%		
Russell 1000 Value	Benchmark	7.77%	25.16%	17.64%	11.16%	12.97%		
<b>LARGE COMPANY BLEND</b>								
Vanguard Instl Index Pl Fund	TIAA-CREF/Fidelity	11.02%	28.69%	26.06%	18.46%	16.54%	0.02	
Vanguard FTSE Social Index I	Fidelity	10.85%	27.77%	28.05%	20.29%	18.08%	0.12	
Large Blend Universe	Peer Group	9.57%	26.01%	23.84%	16.54%	14.98%		
S&P 500 Index	Benchmark	11.03%	28.71%	26.07%	18.47%	16.55%		
<b>LARGE COMPANY GROWTH</b>								
Fidelity Contrafund K	Fidelity	8.22%	24.41%	29.04%	22.73%	18.07%	0.78	
T Rowe Price Instl Large Cap Gr	TIAA-CREF/Fidelity	6.14%	23.18%	30.24%	26.00%	20.84%	0.56	
Large Growth Universe	Peer Group	6.65%	20.14%	29.95%	22.79%	17.86%		
Russell 1000 Growth	Benchmark	11.64%	27.60%	34.08%	25.32%	19.79%		
<b>MEDIUM COMPANY VALUE</b>								
MFS Mid Cap Value R4	Fidelity	10.17%	30.82%	21.31%	12.43%	13.77%	0.82	
MFS Mid Cap Value R6	TIAA-CREF	10.22%	31.00%	21.48%	12.60%	13.87%	0.64	
Mid Value Universe	Peer Group	7.98%	28.13%	18.65%	10.36%	12.17%		
Russell MidCap Value	Benchmark	8.54%	28.34%	19.62%	11.22%	13.44%		

Shading highlights performance at or above median for peer group if available, otherwise at or above benchmark.

\*403(b) Plan only

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<b>MEDIUM COMPANY BLEND</b>							
<b>Vanguard Ext Mkt Idx Instl Plus</b>	<b>TIAA-CREF/Fidelity</b>	<b>0.70%</b>	<b>12.48%</b>	<b>23.96%</b>	<b>15.32%</b>	<b>15.01%</b>	0.04
Mid Blend Universe	Peer Group	7.24%	23.05%	21.14%	12.76%	13.14%	
Russell MidCap	Benchmark	6.44%	22.58%	23.29%	15.10%	14.91%	
<b>MEDIUM COMPANY GROWTH</b>							
<b>MassMutual Sel Mid Cap Gr Eq II</b>	<b>TIAA-CREF/Fidelity</b>	<b>4.07%</b>	<b>15.01%</b>	<b>24.27%</b>	<b>18.31%</b>	<b>16.51%</b>	0.7
Mid Growth Universe	Peer Group	2.45%	12.25%	27.92%	19.99%	15.96%	
Russell MidCap Growth	Benchmark	2.85%	12.73%	27.46%	19.83%	16.63%	
<b>FOREIGN LARGE BLEND</b>							
<b>Amer Funds EuroPac R6</b>	<b>TIAA-CREF</b>	<b>-1.13%</b>	<b>2.84%</b>	<b>17.95%</b>	<b>12.87%</b>	<b>10.01%</b>	0.46
<b>Amer Funds EuroPac R4</b>	<b>Fidelity</b>	<b>-1.22%</b>	<b>2.49%</b>	<b>17.55%</b>	<b>12.47%</b>	<b>9.62%</b>	0.81
<b>Vanguard Total Intl Stock Index Inst</b>	<b>TIAA-CREF/Fidelity</b>	<b>2.12%</b>	<b>8.68%</b>	<b>13.71%</b>	<b>9.94%</b>	<b>7.72%</b>	0.07
<b>MFS International Intrinsic Value R4</b>	<b>Fidelity</b>	<b>6.88%</b>	<b>10.58%</b>	<b>18.80%</b>	<b>14.17%</b>	<b>12.50%</b>	0.72
<b>MFS International Intrinsic Value R6</b>	<b>TIAA-CREF</b>	<b>6.92%</b>	<b>10.72%</b>	<b>18.92%</b>	<b>14.29%</b>	<b>12.60%</b>	0.62
Foreign Large Blend Universe	Peer Group	2.54%	9.43%	14.21%	9.58%	7.89%	
MSCI EAFE	Benchmark	2.74%	11.78%	14.08%	10.07%	8.53%	
<b>FOREIGN SMALL/MID GROWTH</b>							
<b>T Rowe Price International Discovery</b>	<b>Fidelity</b>	<b>-0.01%</b>	<b>7.41%</b>	<b>22.91%</b>	<b>16.33%</b>	<b>13.94%</b>	1.19
<b>T Rowe Price International Discovery I</b>	<b>TIAA-CREF</b>	<b>0.03%</b>	<b>7.55%</b>	<b>23.07%</b>	<b>16.48%</b>	<b>14.03%</b>	1.05
Foreign Small/Mid Growth Universe	Peer Group	0.81%	9.65%	19.90%	14.21%	11.50%	
MSCI World ex USA Smid Cap USD	Benchmark	0.88%	9.95%	15.48%	10.65%	9.65%	
<b>SMALL COMPANY VALUE</b>							
<b>Goldman Sachs Small Value Inst</b>	<b>Fidelity</b>	<b>6.95%</b>	<b>26.71%</b>	<b>16.77%</b>	<b>8.99%</b>	<b>12.15%</b>	0.96
<b>Goldman Sachs Small Value R6</b>	<b>TIAA-CREF</b>	<b>6.93%</b>	<b>26.70%</b>	<b>16.79%</b>	<b>9.00%</b>	<b>12.00%</b>	0.95
Small Value Universe	Peer Group	6.17%	31.09%	18.48%	9.01%	11.48%	
Russell 2000 Value	Benchmark	4.36%	28.27%	17.99%	9.07%	12.03%	
<b>SMALL COMPANY GROWTH</b>							
<b>T Rowe Price QM US Small-Cap Gr Eq I</b>	<b>TIAA-CREF/Fidelity</b>	<b>3.94%</b>	<b>11.47%</b>	<b>22.48%</b>	<b>15.95%</b>	<b>15.55%</b>	0.65
Small Growth Universe	Peer Group	1.29%	9.96%	25.78%	18.43%	15.33%	
Russell 2000 Growth	Benchmark	0.01%	2.83%	21.17%	14.53%	14.14%	
<b>SPECIALTY-REAL ESTATE</b>							
<b>Cohen &amp; Steers Realty Shares L</b>	<b>Fidelity</b>	<b>16.03%</b>	<b>42.61%</b>	<b>22.55%</b>	<b>13.56%</b>	<b>12.52%</b>	0.88
<b>Cohen &amp; Steers Instl Realty Shares</b>	<b>TIAA-CREF</b>	<b>15.96%</b>	<b>42.47%</b>	<b>22.68%</b>	<b>13.75%</b>	<b>12.73%</b>	0.75
Specialty-Real Estate Universe	Peer Group	14.93%	39.98%	19.95%	11.42%	11.19%	
Dow Jones US Select REIT	Benchmark	17.22%	45.91%	16.84%	9.65%	10.70%	
<b>SPECIALTY-REAL ESTATE</b>							
<b>TIAA Real Estate Account</b>	<b>TIAA-CREF</b>	<b>5.96%</b>	<b>17.87%</b>	<b>7.24%</b>	<b>6.17%</b>	<b>7.69%</b>	0.87
Specialty-Real Estate Universe	Peer Group	7.97%	22.18%	9.20%	8.71%	10.45%	
NCREIF Property Index	Benchmark	6.15%	17.70%	8.37%	7.76%	9.32%	
<b>TARGET DATE</b>							
<b>Vanguard Target Retire Inc Tr Select</b>	<b>TIAA-CREF/Fidelity</b>	<b>2.03%</b>	<b>5.28%</b>	<b>9.51%</b>	<b>6.94%</b>	-	0.05
Retirement Income Moderate	Peer Group	2.19%	5.79%	9.84%	6.90%	5.68%	
Morningstar Lifetime Moderate Income Index	Benchmark	2.66%	7.62%	10.46%	7.43%	6.08%	
<b>Vanguard Target Retire 2015 Tr Select</b>	<b>TIAA-CREF/Fidelity</b>	<b>2.17%</b>	<b>5.85%</b>	<b>10.35%</b>	<b>7.79%</b>	-	0.05
2015 Moderate	Peer Group	2.82%	7.75%	11.12%	7.87%	7.21%	
Morningstar Lifetime Moderate 2015 Index	Benchmark	3.29%	8.31%	12.38%	8.80%	7.64%	
<b>Vanguard Target Retire 2020 Tr Select</b>	<b>TIAA-CREF/Fidelity</b>	<b>2.96%</b>	<b>8.26%</b>	<b>12.64%</b>	<b>9.36%</b>	-	0.05
2020 Moderate	Peer Group	3.37%	9.00%	12.23%	8.79%	8.20%	
Morningstar Lifetime Moderate 2020 Index	Benchmark	3.61%	9.04%	13.31%	9.47%	8.38%	
<b>Vanguard Target Retire 2025 Tr Select</b>	<b>TIAA-CREF/Fidelity</b>	<b>3.61%</b>	<b>9.93%</b>	<b>14.32%</b>	<b>10.48%</b>	-	0.05
2025 Moderate	Peer Group	3.62%	10.05%	13.64%	9.82%	9.13%	
Morningstar Lifetime Conservative 2025 Index	Benchmark	3.93%	10.10%	14.31%	10.23%	9.24%	
<b>Vanguard Target Retire 2030 Tr Select</b>	<b>TIAA-CREF/Fidelity</b>	<b>4.14%</b>	<b>11.50%</b>	<b>15.58%</b>	<b>11.34%</b>	-	0.05
2030 Moderate	Peer Group	4.25%	11.99%	15.31%	10.98%	10.00%	
Morningstar Lifetime Conservative 2030 Index	Benchmark	4.29%	11.69%	15.47%	11.07%	10.13%	

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<b>Vanguard Target Retire 2035 Tr Select</b>	<b>TIAA-CREF/Fidelity</b>	<b>4.61%</b>	<b>13.11%</b>	<b>16.82%</b>	<b>12.19%</b>	-	0.05
2035 Moderate	Peer Group	4.91%	14.15%	17.14%	12.16%	10.88%	
Morningstar Lifetime Conservative 2035 Index	Benchmark	4.66%	13.63%	16.60%	11.85%	10.83%	
<b>Vanguard Target Retire 2040 Tr Select</b>	<b>TIAA-CREF/Fidelity</b>	<b>5.09%</b>	<b>14.70%</b>	<b>18.04%</b>	<b>13.01%</b>	-	0.05
2040 Moderate	Peer Group	5.32%	15.61%	18.21%	12.83%	11.38%	
Morningstar Lifetime Moderate 2040 Index	Benchmark	4.98%	15.35%	17.50%	12.42%	11.23%	
<b>Vanguard Target Retire 2045 Tr Select</b>	<b>TIAA-CREF/Fidelity</b>	<b>5.60%</b>	<b>16.35%</b>	<b>19.19%</b>	<b>13.65%</b>	-	0.05
2045 Moderate	Peer Group	5.67%	16.76%	18.82%	13.13%	11.42%	
Morningstar Lifetime Moderate 2045 Index	Benchmark	5.16%	16.36%	17.99%	12.70%	11.36%	
<b>Vanguard Target Retire 2050 Tr Select</b>	<b>TIAA-CREF/Fidelity</b>	<b>5.73%</b>	<b>16.63%</b>	<b>19.34%</b>	<b>13.75%</b>	-	0.05
2050 Moderate	Peer Group	5.86%	17.10%	18.92%	13.24%	11.57%	
Morningstar Lifetime Moderate 2050 Index	Benchmark	5.17%	16.60%	18.09%	12.75%	11.33%	
<b>Vanguard Target Retire 2055 Tr Select</b>	<b>TIAA-CREF/Fidelity</b>	<b>5.71%</b>	<b>16.62%</b>	<b>19.33%</b>	<b>13.74%</b>	-	0.05
2055 Moderate	Peer Group	5.78%	16.87%	18.86%	13.03%	11.44%	
Morningstar Lifetime Moderate 2055 Index	Benchmark	5.12%	16.50%	18.05%	12.71%	11.24%	
<b>Vanguard Target Retire 2060 Tr Select</b>	<b>TIAA-CREF/Fidelity</b>	<b>5.71%</b>	<b>16.62%</b>	<b>19.35%</b>	<b>13.75%</b>	-	0.05
<b>Vanguard Target Retire 2065 Tr Select</b>	<b>TIAA-CREF/Fidelity</b>	<b>5.69%</b>	<b>16.59%</b>	<b>19.33%</b>	-	-	0.05
2060+ Moderate	Peer Group	5.54%	16.97%	19.37%	13.41%	-	
Morningstar Lifetime Moderate 2060 Index	Benchmark	5.05%	16.33%	17.95%	12.65%	-	

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