

PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY  
 THE UNIVERSITY OF NORTH CAROLINA  
 FOR THE PERIOD ENDING 6.30.16

INVESTMENT NAME	PROVIDER	Q2 '16	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*	Exp Ratio
<b>MONEY MARKET</b>							
Fidelity Retirement Money Market	Fidelity	0.01%	0.02%	0.01%	0.01%	1.12%	0.42
CREF Money Market R3	TIAA-CREF	0.03%	0.05%	0.02%	0.01%	0.99%	0.37
BofA Merrill Lynch 3-month U.S. T-Bill	Benchmark	0.07%	0.19%	0.09%	0.09%	1.04%	
<b>STABLE VALUE</b>							
Fidelity Managed Income Portfolio	Fidelity	0.32%	1.21%	1.07%	1.14%	1.95%	0.78
Lincoln Fixed Account*	Fidelity	0.56%					-
TIAA Traditional Annuity - GRA	TIAA-CREF			Current Rate is 3.75%			
TIAA Traditional Annuity - GSRA	TIAA-CREF			Current Rate is 3.00%			
Hueler Stable Value Index (gross)	Peer Group	0.44%	1.76%	1.74%	1.94%	2.92%	
BofA Merrill Lynch 3-month U.S. T-Bill	Benchmark	0.07%	0.19%	0.09%	0.09%	1.04%	
<b>SHORT TERM BOND</b>							
Vanguard Short Term Bond Index I	Fidelity/TIAA-CREF	0.94%	2.55%	1.84%	1.69%	3.43%	0.06
Morningstar Short Term Bond Universe	Peer Group	1.03%	1.50%	1.43%	1.57%	3.00%	
Barclays Government/Credit 1-3 Yr	Benchmark	0.67%	1.58%	1.22%	1.10%	2.80%	
<b>INTERMEDIATE TERM BOND</b>							
JPMorgan Core Bond R5	Fidelity	2.33%	5.72%	3.88%	3.85%	5.53%	0.53
Vanguard Total Bond Market Index Inst	TIAA-CREF/Fidelity	2.36%	6.13%	4.04%	3.74%	5.15%	0.05
MetWest Total Return Bond	TIAA-CREF/Fidelity	1.99%	4.76%	4.20%	4.94%	6.65%	0.40
JPMorgan Core Bond R6	TIAA-CREF	2.35%	5.91%	3.97%	3.93%	5.59%	0.36
Morningstar Intermediate Term Bond Universe	Peer Group	2.35%	4.63%	3.61%	3.67%	4.87%	
Barclays Aggregate Bond Index	Benchmark	2.21%	6.00%	4.06%	3.76%	5.13%	
<b>ALLOCATION--50% TO 70% EQUITY</b>							
Fidelity Balanced K	Fidelity	2.32%	0.53%	8.66%	8.59%	6.47%	0.46
Morningstar Allocation-50% to 70% Equity Universe	Peer Group	2.19%	-0.10%	5.82%	6.15%	5.36%	
60% S&P 500 40% BC Agg	Benchmark	2.37%	5.04%	8.73%	8.90%	6.81%	
<b>WORLD ALLOCATION</b>							
CREF Social Choice Account R3	TIAA-CREF	1.90%	1.95%	6.29%	6.75%	5.64%	0.33
Morningstar World Allocation Universe	Peer Group	2.15%	-2.23%	3.36%	3.38%	4.45%	
60% MSCI World 40% BC Agg Index	Benchmark	1.62%	1.28%	6.32%	6.07%	5.42%	
<b>LARGE COMPANY VALUE</b>							
JHancock Disciplined Value R5	TIAA-CREF/Fidelity	1.52%	-3.83%	7.38%	10.38%	7.20%	0.77
Morningstar Large Value Universe	Peer Group	2.68%	-0.05%	8.05%	9.47%	5.64%	
Russell 1000 Value	Benchmark	4.58%	2.86%	9.87%	11.35%	6.13%	
<b>LARGE COMPANY BLEND</b>							
Vanguard Instl Index Fund	TIAA-CREF/Fidelity	2.45%	3.97%	11.63%	12.07%	7.43%	0.04
CREF Stock R3	TIAA-CREF	1.51%	-2.60%	7.85%	7.71%	5.50%	0.37
Morningstar Large Blend Universe	Peer Group	1.76%	0.01%	9.46%	10.15%	6.47%	
S&P 500 Index	Benchmark	2.46%	3.99%	11.66%	12.10%	7.42%	

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\*403(b) Plan only

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<b>LARGE COMPANY GROWTH</b>							
Vanguard FTSE Social Index Inv	Fidelity	1.46%	-0.33%	11.33%	12.58%	6.30%	0.25
Fidelity Contrafund K	Fidelity	0.40%	0.19%	11.65%	11.57%	8.26%	0.61
T Rowe Price Instl Large Cap Growth	TIAA-CREF/Fidelity	0.00%	-3.14%	12.63%	12.26%	9.00%	0.56
Morningstar Large Growth Universe	Peer Group	0.53%	-2.33%	10.63%	10.03%	7.27%	
Russell 1000 Growth	Benchmark	0.61%	3.02%	13.07%	12.35%	8.78%	
<b>MEDIUM COMPANY VALUE</b>							
MFS Mid Cap Value R4	Fidelity	2.07%	0.35%	10.08%	10.94%	7.86%	0.94
MFS Mid Cap Value R5	TIAA-CREF	2.08%	0.47%	10.22%	10.92%	7.71%	0.84
Morningstar Mid Value Universe	Peer Group	2.38%	-2.14%	7.94%	8.87%	6.69%	
Russell MidCap Value	Benchmark	4.77%	3.25%	11.00%	11.70%	7.79%	
<b>MEDIUM COMPANY BLEND</b>							
Vanguard Ext Mkt Idx Inst	Fidelity	3.42%	-5.38%	8.49%	9.44%	7.51%	0.07
Vanguard Ext Mkt Idx Instl Plus	TIAA-CREF	3.42%	-5.37%	8.51%	9.46%	7.43%	0.06
Morningstar Mid Blend Universe	Peer Group	1.48%	-4.30%	7.64%	8.30%	6.33%	
Russell MidCap	Benchmark	3.18%	0.56%	10.80%	10.90%	8.07%	
<b>MEDIUM COMPANY GROWTH</b>							
MassMutual Select Mid Cap Gr Eq II	TIAA-CREF/Fidelity	2.00%	-0.82%	13.07%	11.66%	9.45%	0.75
Morningstar Mid Growth Universe	Peer Group	1.98%	-6.39%	8.24%	7.96%	6.96%	
Russell MidCap Growth	Benchmark	1.56%	-2.14%	10.52%	9.98%	8.12%	
<b>FOREIGN LARGE VALUE</b>							
MFS International Value R4	Fidelity	2.16%	5.63%	8.83%	9.17%	6.53%	0.84
MFS International Value R5	TIAA-CREF	2.16%	5.72%	8.93%	9.24%	6.60%	0.69
Morningstar Foreign Large Value Universe	Peer Group	-1.50%	-11.37%	0.75%	0.34%	0.61%	
MSCI EAFE	Benchmark	-1.19%	-9.72%	2.52%	2.15%	2.05%	
<b>FOREIGN LARGE BLEND</b>							
Amer Funds EuroPac R6	TIAA-CREF	-0.32%	-9.57%	3.76%	2.50%	3.87%	0.49
Amer Funds EuroPac R4	Fidelity	-0.41%	-9.88%	3.41%	2.14%	3.61%	0.85
Vanguard Total Intl Stock Index Inst	TIAA-CREF/Fidelity	0.24%	-9.10%	2.03%	0.61%	1.95%	0.10
Morningstar Foreign Large Blend Universe	Peer Group	-1.08%	-9.96%	1.75%	1.17%	1.55%	
MSCI EAFE	Benchmark	-1.19%	-9.72%	2.52%	2.15%	2.05%	
<b>FOREIGN SMALL/MID GROWTH</b>							
T Rowe Price International Discovery	TIAA-CREF/Fidelity	-1.24%	-3.55%	7.76%	6.39%	6.17%	1.20
Morningstar Foreign Small/Mid Growth Universe	Peer Group	-1.25%	-4.70%	5.16%	4.80%	4.74%	
MSCI World ex USA Smid Cap USD	Benchmark	-1.54%	-4.32%	5.62%	3.49%	3.52%	
<b>SMALL COMPANY VALUE</b>							
Goldman Sachs Small Value Inst	TIAA-CREF/Fidelity	4.71%	-2.93%	8.53%	10.28%	8.01%	0.99
Morningstar Small Value Universe	Peer Group	2.28%	-4.22%	6.00%	7.82%	5.83%	
Russell 2000 Value	Benchmark	4.31%	-2.58%	6.36%	8.15%	5.15%	
<b>SMALL COMPANY GROWTH</b>							
Eagle Small Cap Growth R5	Fidelity	4.88%	-7.68%	8.36%	7.37%	8.49%	0.75
Eagle Small Cap Growth R6	TIAA-CREF	4.92%	-7.59%	8.47%	7.46%	8.34%	0.66
Morningstar Small Growth Universe	Peer Group	3.77%	-9.83%	6.48%	7.29%	6.67%	
Russell 2000 Growth	Benchmark	3.24%	-10.75%	7.74%	8.51%	7.14%	

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<b>SPECIALTY-REAL ESTATE</b>							
Cohen & Steers Realty Shares	Fidelity	5.70%	21.31%	13.40%	11.38%	7.34%	0.96
Cohen & Steers Instl Realty Shares	TIAA-CREF	5.70%	21.59%	13.63%	11.55%	7.56%	0.75
Morningstar Specialty-Real Estate Universe	Peer Group	5.51%	19.42%	12.19%	11.25%	6.43%	
Dow Jones US Select REIT	Benchmark	5.42%	22.85%	13.55%	12.30%	6.86%	
<b>SPECIALTY-REAL ESTATE</b>							
TIAA-CREF Real Estate Account	TIAA-CREF	1.28%	6.96%	9.55%	9.66%	3.74%	0.87
Morningstar Specialty-Real Estate Universe	Peer Group	5.51%	19.42%	12.19%	11.25%	6.43%	
NCREIF Property Index	Benchmark	2.03%	10.64%	11.60%	11.51%	7.40%	
<b>TARGET DATE</b>							
Vanguard Instl Target Retirement Income Instl	TIAA-CREF/Fidelity	2.02%	3.37%	-	-	-	0.10
Retirement Income Moderate	Peer Group	1.99%	1.63%	4.26%	4.19%	4.40%	
Morningstar Lifetime Moderate Income Index	Benchmark	2.37%	2.55%	4.29%	4.46%	5.31%	
Vanguard Instl Target Retirement 2010 Instl	TIAA-CREF/Fidelity	2.00%	3.03%	-	-	-	0.10
2000-2010 Conservative	Peer Group	1.94%	2.28%	3.79%	3.49%	3.83%	
Morningstar Lifetime Conservative 2010 Index	Benchmark	2.71%	3.92%	4.31%	4.55%	5.58%	
Vanguard Instl Target Retirement 2015 Instl	TIAA-CREF/Fidelity	1.98%	2.06%	-	-	-	0.10
2011-2015 Moderate	Peer Group	2.12%	0.81%	5.01%	5.16%	4.51%	
Morningstar Lifetime Moderate 2015 Index	Benchmark	2.83%	2.82%	5.56%	5.76%	5.90%	
Vanguard Instl Target Retirement 2020 Instl	TIAA-CREF/Fidelity	2.00%	1.46%	-	-	-	0.10
2016-2020 Moderate	Peer Group	1.91%	-0.07%	5.62%	5.79%	4.46%	
Morningstar Lifetime Moderate 2020 Index	Benchmark	2.92%	2.50%	6.02%	6.17%	5.95%	
Vanguard Instl Target Retirement 2025 Instl	TIAA-CREF/Fidelity	1.96%	0.81%	-	-	-	0.10
2021-2025 Conservative	Peer Group	2.02%	-0.05%	5.29%	5.23%	4.37%	
Morningstar Lifetime Conservative 2025 Index	Benchmark	3.13%	3.79%	5.65%	5.82%	6.06%	
Vanguard Instl Target Retirement 2030 Instl	TIAA-CREF/Fidelity	1.87%	0.04%	-	-	-	0.10
2026-2030 Conservative	Peer Group	2.37%	-0.47%	5.64%	5.54%	4.37%	
Morningstar Lifetime Conservative 2030 Index	Benchmark	3.15%	3.12%	6.13%	6.23%	6.11%	
Vanguard Instl Target Retirement 2035 Instl	TIAA-CREF/Fidelity	1.84%	-0.68%	-	-	-	0.10
2031-2035 Conservative	Peer Group	1.74%	-2.15%	5.84%	5.83%	4.51%	
Morningstar Lifetime Conservative 2035 Index	Benchmark	3.08%	2.05%	6.50%	6.55%	6.14%	
Vanguard Instl Target Retirement 2040 Instl	TIAA-CREF/Fidelity	1.80%	-1.46%	-	-	-	0.10
2036-2040 Moderate	Peer Group	1.69%	-2.03%	6.71%	6.79%	5.13%	
Morningstar Lifetime Moderate 2040 Index	Benchmark	2.67%	-1.10%	6.85%	6.90%	5.98%	
Vanguard Instl Target Retirement 2045 Instl	TIAA-CREF/Fidelity	1.80%	-1.51%	-	-	-	0.10
2041-2045 Moderate	Peer Group	1.70%	-2.42%	6.14%	6.38%	4.90%	
Morningstar Lifetime Moderate 2045 Index	Benchmark	2.63%	-1.49%	6.70%	6.73%	5.92%	
Vanguard Instl Target Retirement 2050 Instl	TIAA-CREF/Fidelity	1.80%	-1.47%	-	-	-	0.10
2050 Moderate	Peer Group	1.68%	-2.40%	6.53%	6.53%	5.31%	
Morningstar Lifetime Moderate 2050 Index	Benchmark	2.61%	-1.70%	6.55%	6.56%	5.86%	
Vanguard Instl Target Retirement 2055 Instl	TIAA-CREF/Fidelity	1.80%	-1.47%	-	-	-	0.10
2055 Moderate	Peer Group	1.66%	-2.00%	6.91%	6.91%	-	
Morningstar Lifetime Moderate 2055 Index	Benchmark	2.61%	-1.86%	6.40%	6.38%	5.79%	

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INVESTMENT NAME	PROVIDER	Q2 '16	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*	Exp Ratio
<b>Vanguard Instl Target Retirement 2060 Instl</b>	<b>TIAA-CREF/Fidelity</b>	<b>1.81%</b>	<b>-1.54%</b>	-	-	-	0.10
2060+ Moderate	Peer Group	1.70%	-1.60%	7.31%	-	-	
Morningstar Lifetime Moderate 2060 Index	Benchmark	2.59%	-2.03%	6.29%	6.26%	5.82%	

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