

PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY  
 THE UNIVERSITY OF NORTH CAROLINA  
 FOR THE PERIOD ENDING 3.31.16

INVESTMENT NAME	PROVIDER	Q1 '16	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*	Exp Ratio
<b>MONEY MARKET</b>							
Fidelity Retirement Money Market	Fidelity	0.00%	0.02%	0.01%	0.01%	1.23%	0.42
CREF Money Market R3	TIAA-CREF	0.02%	0.02%	0.01%	0.00%	1.10%	0.37
BofA Merrill Lynch 3-month U.S. T-Bill	Benchmark	0.07%	0.12%	0.07%	0.08%	1.15%	
<b>STABLE VALUE</b>							
Fidelity Managed Income Portfolio	Fidelity	0.30%	1.18%	1.05%	1.14%	2.01%	0.78
Lincoln Fixed Account*	Fidelity			Current Rate is 2.25%			-
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	0.43%	1.76%	1.75%	1.99%	3.00%	
BofA Merrill Lynch 3-month U.S. T-Bill	Benchmark	0.07%	0.12%	0.07%	0.08%	1.15%	
<b>SHORT TERM BOND</b>							
Vanguard Short Term Bond Index I	Fidelity/TIAA-CREF	1.61%	1.54%	1.27%	1.80%	3.38%	0.07
Morningstar Short Term Bond Universe	Peer Group	1.00%	0.40%	0.75%	1.55%	2.94%	
Barclays Government/Credit 1-3 Yr	Benchmark	0.98%	1.04%	0.95%	1.14%	2.80%	
<b>INTERMEDIATE TERM BOND</b>							
JPMorgan Core Bond R5	Fidelity	2.78%	2.04%	2.36%	3.82%	5.28%	0.55
Vanguard Total Bond Market Index Inst	TIAA-CREF/Fidelity	3.09%	1.83%	2.39%	3.72%	4.89%	0.06
MetWest Total Return Bond	TIAA-CREF/Fidelity	2.48%	1.33%	2.73%	4.81%	6.48%	0.39
JPMorgan Core Bond R6	TIAA-CREF	2.80%	2.14%	2.45%	3.89%	5.35%	0.36
Morningstar Intermediate Term Bond Universe	Peer Group	2.50%	0.66%	1.89%	3.55%	4.57%	
Barclays Aggregate Bond Index	Benchmark	3.03%	1.96%	2.50%	3.78%	4.90%	
<b>MODERATE ALLOCATION</b>							
Fidelity Balanced K	Fidelity	0.09%	-1.61%	8.18%	8.17%	6.09%	0.46
Morningstar Moderate Allocation Universe	Peer Group	0.88%	-2.85%	5.17%	5.89%	5.04%	
60% S&P 500 40% BC Agg	Benchmark	2.11%	2.09%	8.18%	8.61%	6.47%	
<b>WORLD ALLOCATION</b>							
CREF Social Choice Account R3	TIAA-CREF	1.65%	-1.03%	5.62%	6.62%	5.28%	0.33
Morningstar World Allocation Universe	Peer Group	1.03%	-4.91%	2.05%	3.09%	4.08%	
60% MSCI World 40% BC Agg Index	Benchmark	1.20%	-0.71%	5.60%	6.01%	5.23%	
<b>LARGE COMPANY VALUE</b>							
JHancock Disciplined Value R5	TIAA-CREF/Fidelity	-0.35%	-5.02%	8.84%	10.00%	6.94%	0.77
Morningstar Large Value Universe	Peer Group	1.27%	-2.92%	8.23%	8.84%	5.32%	
Russell 1000 Value	Benchmark	1.64%	-1.54%	9.38%	10.25%	5.72%	
<b>LARGE COMPANY BLEND</b>							
Vanguard Instl Index Fund	TIAA-CREF/Fidelity	1.34%	1.77%	11.79%	11.55%	7.01%	0.04
CREF Stock R3	TIAA-CREF	0.09%	-3.33%	7.62%	7.39%	5.16%	0.37
Morningstar Large Blend Universe	Peer Group	0.30%	-1.93%	9.62%	9.65%	6.03%	
S&P 500 Index	Benchmark	1.35%	1.78%	11.82%	11.58%	7.01%	

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>LARGE COMPANY GROWTH</b>							
Vanguard FTSE Social Index Inv	Fidelity	-0.71%	-1.26%	12.42%	12.23%	5.88%	0.25
Fidelity Contrafund K	Fidelity	-1.55%	0.80%	12.26%	11.36%	8.13%	0.61
T Rowe Price Instl Large Cap Growth	TIAA-CREF/Fidelity	-6.44%	-2.37%	14.28%	12.02%	8.44%	0.56
Morningstar Large Growth Universe	Peer Group	-2.45%	-2.34%	11.13%	9.93%	6.68%	
Russell 1000 Growth	Benchmark	0.74%	2.52%	13.61%	12.38%	8.28%	
<b>MEDIUM COMPANY VALUE</b>							
MFS Mid Cap Value R4	Fidelity	3.81%	-2.06%	10.50%	10.64%	7.23%	0.94
MFS Mid Cap Value R5	TIAA-CREF	3.84%	-1.90%	10.64%	10.60%	7.07%	0.84
Morningstar Mid Value Universe	Peer Group	2.41%	-5.47%	7.90%	8.18%	6.26%	
Russell MidCap Value	Benchmark	3.92%	-3.39%	9.88%	10.52%	7.23%	
<b>MEDIUM COMPANY BLEND</b>							
Vanguard Ext Mkt Idx Inst	Fidelity	-0.87%	-8.92%	8.14%	8.50%	6.73%	0.08
Vanguard Ext Mkt Idx Instl Plus	TIAA-CREF	-0.85%	-8.89%	8.16%	8.52%	6.64%	0.06
Morningstar Mid Blend Universe	Peer Group	1.28%	-6.53%	7.85%	7.79%	5.88%	
Russell MidCap	Benchmark	2.24%	-4.04%	10.45%	10.30%	7.45%	
<b>MEDIUM COMPANY GROWTH</b>							
MassMutual Select Mid Cap Gr Eq II	TIAA-CREF/Fidelity	-0.55%	-1.35%	13.19%	10.99%	8.68%	0.75
Morningstar Mid Growth Universe	Peer Group	-1.85%	-7.74%	8.36%	7.59%	6.20%	
Russell MidCap Growth	Benchmark	0.58%	-4.75%	10.99%	9.99%	7.43%	
<b>FOREIGN LARGE VALUE</b>							
MFS International Value R4	Fidelity	2.63%	2.69%	9.51%	9.63%	6.44%	0.84
MFS International Value R5	TIAA-CREF	2.66%	2.81%	9.61%	9.69%	6.52%	0.69
Morningstar Foreign Large Value Universe	Peer Group	-1.64%	-8.67%	1.23%	0.96%	0.86%	
MSCI EAFE	Benchmark	-2.88%	-7.87%	2.68%	2.76%	2.27%	
<b>FOREIGN LARGE BLEND</b>							
Amer Funds EuroPac R6	TIAA-CREF	-2.32%	-8.26%	3.62%	2.78%	3.83%	0.49
Amer Funds EuroPac R4	Fidelity	-2.38%	-8.58%	3.27%	2.43%	3.58%	0.84
Vanguard Total Intl Stock Index Inst	TIAA-CREF/Fidelity	-0.16%	-8.13%	0.84%	0.71%	1.93%	0.12
Morningstar Foreign Large Blend Universe	Peer Group	-1.98%	-7.95%	1.80%	1.63%	1.59%	
MSCI EAFE	Benchmark	-2.88%	-7.87%	2.68%	2.76%	2.27%	
<b>FOREIGN SMALL/MID GROWTH</b>							
T Rowe Price International Discovery	TIAA-CREF/Fidelity	-1.72%	3.68%	8.04%	7.27%	5.89%	1.21
Morningstar Foreign Small/Mid Growth Universe	Peer Group	-1.51%	0.39%	5.71%	5.52%	4.46%	
MSCI World ex USA Smid Cap USD	Benchmark	0.64%	-0.15%	5.48%	3.87%	3.56%	
<b>SMALL COMPANY VALUE</b>							
Goldman Sachs Small Value Inst	TIAA-CREF/Fidelity	0.36%	-7.77%	7.88%	9.06%	7.03%	0.94
Morningstar Small Value Universe	Peer Group	2.16%	-6.87%	6.12%	6.69%	5.23%	
Russell 2000 Value	Benchmark	1.70%	-7.72%	5.73%	6.66%	4.42%	
<b>SMALL COMPANY GROWTH</b>							
Eagle Small Cap Growth R5	Fidelity	-3.67%	-9.64%	7.15%	7.25%	7.29%	0.75
Eagle Small Cap Growth R6	TIAA-CREF	-3.67%	-9.55%	7.26%	7.32%	7.14%	0.66
Morningstar Small Growth Universe	Peer Group	-4.33%	-11.67%	6.35%	6.52%	5.52%	
Russell 2000 Growth	Benchmark	-4.68%	-11.84%	7.91%	7.70%	6.00%	

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<b>SPECIALTY-REAL ESTATE</b>							
Cohen & Steers Realty Shares	Fidelity	3.74%	3.60%	10.75%	10.96%	6.69%	0.97
Cohen & Steers Instl Realty Shares	TIAA-CREF	3.86%	3.93%	10.99%	11.15%	6.92%	0.75
Morningstar Specialty-Real Estate Universe	Peer Group	4.64%	2.62%	9.50%	10.81%	5.74%	
Dow Jones US Select REIT	Benchmark	5.12%	4.88%	11.09%	11.99%	6.17%	
<b>SPECIALTY-REAL ESTATE</b>							
TIAA-CREF Real Estate Account	TIAA-CREF	1.89%	7.02%	10.00%	10.27%	4.08%	0.87
Morningstar Specialty-Real Estate Universe	Peer Group	4.64%	2.62%	9.50%	10.81%	5.74%	
NCREIF Property Index	Benchmark	2.21%	11.84%	11.91%	11.93%	7.61%	
<b>TARGET DATE</b>							
Vanguard Instl Target Retirement Income Instl	TIAA-CREF/Fidelity	2.28%	-	-	-	-	0.10
Retirement Income Moderate	Peer Group	1.80%	-1.32%	2.96%	4.04%	4.09%	
Morningstar Lifetime Moderate Income Index	Benchmark	2.44%	0.05%	2.82%	4.23%	5.08%	
Vanguard Instl Target Retirement 2010 Instl	TIAA-CREF/Fidelity	2.20%	-	-	-	-	0.10
2000-2010 Conservative	Peer Group	1.95%	-0.30%	2.38%	3.27%	3.38%	
Morningstar Lifetime Conservative 2010 Index	Benchmark	3.03%	0.46%	2.57%	4.30%	5.30%	
Vanguard Instl Target Retirement 2015 Instl	TIAA-CREF/Fidelity	1.91%	-	-	-	-	0.10
2011-2015 Moderate	Peer Group	1.44%	-1.80%	3.99%	4.87%	4.10%	
Morningstar Lifetime Moderate 2015 Index	Benchmark	2.59%	-0.54%	4.09%	5.35%	5.55%	
Vanguard Instl Target Retirement 2020 Instl	TIAA-CREF/Fidelity	1.77%	-	-	-	-	0.10
2016-2020 Moderate	Peer Group	1.01%	-2.36%	4.86%	5.53%	4.10%	
Morningstar Lifetime Moderate 2020 Index	Benchmark	2.50%	-0.91%	4.63%	5.69%	5.57%	
Vanguard Instl Target Retirement 2025 Instl	TIAA-CREF/Fidelity	1.57%	-	-	-	-	0.10
2021-2025 Conservative	Peer Group	1.27%	-2.67%	4.24%	5.12%	3.97%	
Morningstar Lifetime Conservative 2025 Index	Benchmark	3.02%	-0.30%	3.99%	5.39%	5.67%	
Vanguard Instl Target Retirement 2030 Instl	TIAA-CREF/Fidelity	1.37%	-	-	-	-	0.10
2026-2030 Conservative	Peer Group	0.93%	-3.45%	4.43%	5.13%	3.82%	
Morningstar Lifetime Conservative 2030 Index	Benchmark	2.81%	-0.83%	4.60%	5.73%	5.70%	
Vanguard Instl Target Retirement 2035 Instl	TIAA-CREF/Fidelity	1.12%	-	-	-	-	0.10
2031-2035 Conservative	Peer Group	0.47%	-4.09%	5.16%	5.67%	4.10%	
Morningstar Lifetime Conservative 2035 Index	Benchmark	2.48%	-1.55%	5.14%	6.02%	5.74%	
Vanguard Instl Target Retirement 2040 Instl	TIAA-CREF/Fidelity	0.86%	-	-	-	-	0.10
2036-2040 Moderate	Peer Group	0.33%	-3.62%	6.25%	6.47%	4.67%	
Morningstar Lifetime Moderate 2040 Index	Benchmark	1.43%	-3.46%	5.91%	6.36%	5.59%	
Vanguard Instl Target Retirement 2045 Instl	TIAA-CREF/Fidelity	0.80%	-	-	-	-	0.10
2041-2045 Moderate	Peer Group	0.49%	-4.11%	5.53%	6.09%	4.56%	
Morningstar Lifetime Moderate 2045 Index	Benchmark	1.37%	-3.76%	5.75%	6.21%	5.54%	
Vanguard Instl Target Retirement 2050 Instl	TIAA-CREF/Fidelity	0.86%	-	-	-	-	0.10
Vanguard Instl Target Retirement 2055 Instl	TIAA-CREF/Fidelity	0.86%	-	-	-	-	0.10
Vanguard Instl Target Retirement 2060 Instl	TIAA-CREF/Fidelity	0.80%	-	-	-	-	0.10
2050+ Moderate	Peer Group	0.42%	-4.01%	5.91%	6.22%	4.88%	
Morningstar Lifetime Moderate 2050 Index	Benchmark	1.37%	-3.95%	5.57%	6.05%	5.49%	

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