

PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY
 THE UNIVERSITY OF NORTH CAROLINA
 FOR THE PERIOD ENDING 9.30.18

INVESTMENT NAME	PROVIDER	Q3 '18	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*	Exp Ratio
MONEY MARKET							
Fidelity Government Money Market	Fidelity	0.40%	1.20%	0.52%	0.32%	0.23%	0.42
CREF Money Market R3	TIAA-CREF	0.43%	1.11%	0.52%	0.31%	0.23%	0.24
Vanguard Federal Money Market	TIAA-CREF	0.48%	1.50%	0.79%	0.48%	0.34%	0.11
BofA Merrill Lynch 3-month U.S. T-Bill	Benchmark	0.49%	1.59%	0.84%	0.52%	0.34%	
STABLE VALUE							
Fidelity Managed Income Portfolio	Fidelity	0.41%	1.48%	1.32%	1.21%	1.31%	0.77
Lincoln Fixed Account*	Fidelity	0.50%	2.00%	2.10%	2.16%	2.57%	0.35
TIAA Traditional Annuity - GRA	TIAA-CREF			Current Rate is 4.00%			
TIAA Traditional Annuity - GSRA	TIAA-CREF			Current Rate is 3.25%			
Hueler Stable Value Index (gross)	Peer Group	0.57%	2.17%	1.95%	1.86%	2.29%	
BofA Merrill Lynch 3-month U.S. T-Bill	Benchmark	0.49%	1.59%	0.84%	0.52%	0.34%	
SHORT TERM BOND							
Vanguard Short Term Bond Index I	Fidelity/TIAA-CREF	0.23%	-0.41%	0.66%	1.00%	2.19%	0.05
Short Term Bond Universe	Peer Group	0.45%	0.30%	1.26%	1.14%	2.47%	
Barclays Government/Credit 1-3 Yr	Benchmark	0.33%	0.20%	0.73%	0.83%	1.67%	
INTERMEDIATE TERM BOND							
JPMorgan Core Bond R5	Fidelity	0.01%	-1.00%	1.31%	2.16%	4.22%	0.45
Vanguard Total Bond Market Index Inst	TIAA-CREF/Fidelity	0.03%	-1.21%	1.29%	2.10%	3.73%	0.04
MetWest Total Return Bond	TIAA-CREF/Fidelity	0.12%	-0.81%	1.45%	2.34%	5.66%	0.38
JPMorgan Core Bond R6	TIAA-CREF	0.03%	-0.90%	1.41%	2.24%	4.30%	0.35
Intermediate Term Bond Universe	Peer Group	0.14%	-1.14%	1.63%	2.17%	4.26%	
Barclays Aggregate Bond Index	Benchmark	0.02%	-1.22%	1.31%	2.16%	3.77%	
ALLOCATION--50% TO 70% EQUITY							
Fidelity Balanced K	Fidelity	4.00%	11.36%	11.89%	9.85%	9.79%	0.46
Allocation-50% to 70% Equity Universe	Peer Group	3.08%	6.61%	8.87%	6.85%	7.66%	
60% S&P 500 40% BC Agg	Benchmark	4.59%	9.99%	10.77%	9.22%	8.91%	
WORLD ALLOCATION							
CREF Social Choice Account R3	TIAA-CREF	3.28%	6.92%	9.32%	7.12%	7.71%	0.27
World Allocation Universe	Peer Group	1.38%	3.41%	7.28%	4.43%	6.11%	
60% MSCI World 40% BC Agg Index	Benchmark	3.05%	6.53%	8.98%	6.87%	7.30%	
ALLOCATION--85%+ EQUITY							
CREF Stock R3	TIAA-CREF	4.76%	11.80%	14.38%	10.35%	9.70%	0.31
Allocation--85%+ Equity Universe	Peer Group	3.81%	9.81%	12.31%	8.66%	8.80%	
85% S&P 500, 15% BBgBarc Agg	Benchmark	7.31%	16.81%	16.27%	13.16%	11.36%	
LARGE COMPANY VALUE							
JHancock Disciplined Value R6	TIAA-CREF	7.53%	12.50%	14.41%	10.84%	10.90%	0.70
JHancock Disciplined Value R5	Fidelity	7.53%	12.45%	14.34%	10.79%	10.88%	0.75
Large Value Universe	Peer Group	5.53%	10.37%	13.26%	10.08%	9.65%	
Russell 1000 Value	Benchmark	5.70%	9.45%	13.55%	10.72%	9.79%	

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*403(b) Plan only

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LARGE COMPANY BLEND							
Vanguard Instl Index PI Fund	TIAA-CREF/Fidelity	7.71%	17.89%	17.30%	13.94%	11.98%	0.02
Large Blend Universe	Peer Group	6.63%	15.08%	15.13%	11.92%	10.85%	
S&P 500 Index	Benchmark	7.71%	17.91%	17.31%	13.95%	11.97%	
LARGE COMPANY GROWTH							
Vanguard FTSE Social Index I	Fidelity	7.67%	18.78%	17.46%	14.59%	12.50%	0.12
Fidelity Contrafund K	Fidelity	6.69%	24.80%	19.40%	15.65%	13.44%	0.65
T Rowe Price Instl Large Cap Growth	TIAA-CREF/Fidelity	6.82%	28.43%	22.68%	17.99%	16.70%	0.56
Large Growth Universe	Peer Group	7.44%	23.47%	17.81%	14.10%	12.66%	
Russell 1000 Growth	Benchmark	9.17%	26.30%	20.55%	16.58%	14.31%	
MEDIUM COMPANY VALUE							
MFS Mid Cap Value R4	Fidelity	3.55%	8.69%	12.00%	9.90%	11.81%	0.86
MFS Mid Cap Value R6	TIAA-CREF	3.55%	8.80%	12.16%	10.06%	11.76%	0.71
Mid Value Universe	Peer Group	3.16%	8.32%	12.19%	9.16%	10.38%	
Russell MidCap Value	Benchmark	3.30%	8.81%	13.09%	10.72%	11.29%	
MEDIUM COMPANY BLEND							
Vanguard Ext Mkt Idx Instl Plus	TIAA-CREF/Fidelity	4.36%	16.13%	16.20%	11.44%	12.40%	0.05
Mid Blend Universe	Peer Group	4.02%	11.20%	12.53%	9.53%	10.70%	
Russell MidCap	Benchmark	5.00%	13.98%	14.52%	11.65%	12.31%	
MEDIUM COMPANY GROWTH							
MassMutual Select Mid Cap Gr Eq II	TIAA-CREF/Fidelity	7.25%	17.21%	15.86%	13.95%	14.10%	0.72
Mid Growth Universe	Peer Group	6.63%	20.98%	16.13%	11.94%	12.17%	
Russell MidCap Growth	Benchmark	7.57%	21.10%	16.65%	13.00%	13.46%	
FOREIGN LARGE VALUE							
MFS International Value R4	Fidelity	2.41%	8.10%	12.56%	9.00%	9.80%	0.76
MFS International Value R6	TIAA-CREF	2.43%	8.22%	12.68%	9.11%	9.85%	0.66
Foreign Large Value Universe	Peer Group	0.69%	-0.95%	7.64%	3.01%	4.30%	
MSCI EAFE	Benchmark	1.42%	3.25%	9.77%	4.90%	5.87%	
FOREIGN LARGE BLEND							
Amer Funds EuroPac R6	TIAA-CREF	-0.84%	1.47%	9.93%	6.20%	6.83%	0.49
Amer Funds EuroPac R4	Fidelity	-0.93%	1.10%	9.54%	5.83%	6.49%	0.83
Vanguard Total Intl Stock Index Inst	TIAA-CREF/Fidelity	0.54%	1.63%	9.97%	4.49%	5.19%	0.09
Foreign Large Blend Universe	Peer Group	0.59%	0.89%	8.40%	4.00%	5.06%	
MSCI EAFE	Benchmark	1.42%	3.25%	9.77%	4.90%	5.87%	
FOREIGN SMALL/MID GROWTH							
T Rowe Price International Discovery	Fidelity	-4.35%	3.46%	13.64%	9.84%	10.97%	1.19
T Rowe Price International Discovery I	TIAA-CREF	-4.32%	3.59%	13.77%	9.91%	11.01%	1.07
Foreign Small/Mid Growth Universe	Peer Group	-1.25%	4.96%	11.40%	7.24%	9.60%	
MSCI World ex USA Smid Cap USD	Benchmark	-0.03%	3.88%	11.88%	6.90%	8.30%	
SMALL COMPANY VALUE							
Goldman Sachs Small Value Inst	Fidelity	3.26%	9.17%	14.78%	10.40%	11.50%	0.95
Goldman Sachs Small Value R6	TIAA-CREF	3.26%	9.19%	14.80%	10.25%	11.20%	0.94
Small Value Universe	Peer Group	1.09%	8.12%	13.50%	8.63%	10.09%	
Russell 2000 Value	Benchmark	1.60%	9.33%	16.12%	9.91%	9.52%	

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SMALL COMPANY GROWTH							
Eagle Small Cap Growth R5	Fidelity	6.92%	21.73%	17.73%	11.83%	12.77%	0.77
Eagle Small Cap Growth R6	TIAA-CREF	6.95%	21.87%	17.86%	11.95%	12.72%	0.66
Small Growth Universe	Peer Group	7.00%	24.89%	18.42%	11.87%	12.73%	
Russell 2000 Growth	Benchmark	5.52%	21.06%	17.98%	12.14%	12.65%	
SPECIALTY-REAL ESTATE							
Cohen & Steers Realty Shares	Fidelity	1.28%	5.73%	7.79%	9.65%	8.15%	0.97
Cohen & Steers Instl Realty Shares	TIAA-CREF	1.33%	5.93%	8.07%	9.90%	8.33%	0.75
Specialty-Real Estate Universe	Peer Group	0.53%	3.30%	6.66%	8.45%	7.12%	
Dow Jones US Select REIT	Benchmark	0.72%	4.59%	6.88%	9.14%	7.20%	
SPECIALTY-REAL ESTATE							
TIAA Real Estate Account	TIAA-CREF	1.17%	5.14%	5.02%	7.05%	2.99%	0.89
Specialty-Real Estate Universe	Peer Group	0.53%	3.30%	6.66%	8.45%	7.12%	
NCREIF Property Index	Benchmark	1.67%	7.16%	7.76%	9.57%	6.42%	
TARGET DATE							
Vanguard Target Retirement Income Tr Plus	TIAA-CREF/Fidelity	1.35%	3.36%	5.44%	4.61%	-	0.06
Retirement Income Moderate	Peer Group	1.52%	3.14%	5.54%	4.38%	5.41%	
Morningstar Lifetime Moderate Income Index	Benchmark	1.60%	4.39%	5.77%	4.28%	-	
Vanguard Target Retirement 2015 Tr Plus	TIAA-CREF/Fidelity	1.80%	4.63%	7.27%	6.02%	-	0.06
2015 Moderate	Peer Group	1.89%	3.97%	6.95%	5.24%	6.32%	
Morningstar Lifetime Moderate 2015 Index	Benchmark	1.77%	4.96%	7.16%	5.45%	-	
Vanguard Target Retirement 2020 Tr Plus	TIAA-CREF/Fidelity	2.36%	5.96%	8.77%	7.04%	-	0.06
2020 Moderate	Peer Group	2.10%	4.80%	7.86%	5.96%	6.98%	
Morningstar Lifetime Moderate 2020 Index	Benchmark	1.97%	5.50%	7.97%	6.03%	-	
Vanguard Target Retirement 2025 Tr Plus	TIAA-CREF/Fidelity	2.77%	6.89%	9.81%	7.68%	-	0.06
2025 Moderate	Peer Group	2.50%	5.91%	9.04%	6.60%	7.61%	
Morningstar Lifetime Conservative 2025 Index	Benchmark	2.28%	6.34%	9.08%	6.76%	-	
Vanguard Target Retirement 2030 Tr Plus	TIAA-CREF/Fidelity	3.13%	7.76%	10.75%	8.24%	-	0.06
2030 Moderate	Peer Group	2.84%	7.25%	10.43%	7.54%	8.31%	
Morningstar Lifetime Conservative 2030 Index	Benchmark	2.70%	7.49%	10.44%	7.56%	-	
Vanguard Target Retirement 2035 Tr Plus	TIAA-CREF/Fidelity	3.44%	8.59%	11.69%	8.80%	-	0.06
2035 Moderate	Peer Group	3.18%	8.09%	11.25%	8.00%	8.52%	
Morningstar Lifetime Conservative 2035 Index	Benchmark	3.14%	8.65%	11.72%	8.22%	-	
Vanguard Target Retirement 2040 Tr Plus	TIAA-CREF/Fidelity	3.80%	9.46%	12.63%	9.29%	-	0.06
2040 Moderate	Peer Group	3.43%	8.80%	11.74%	8.34%	8.62%	
Morningstar Lifetime Moderate 2040 Index	Benchmark	3.43%	9.42%	12.57%	8.60%	-	
Vanguard Target Retirement 2045 Tr Plus	TIAA-CREF/Fidelity	4.02%	9.91%	12.99%	9.49%	-	0.06
2045 Moderate	Peer Group	3.59%	9.00%	12.02%	8.26%	8.53%	
Morningstar Lifetime Moderate 2045 Index	Benchmark	3.53%	9.69%	12.92%	8.69%	-	
Vanguard Target Retirement 2050 Tr Plus	TIAA-CREF/Fidelity	4.02%	9.92%	12.99%	9.48%	-	0.06
2050 Moderate	Peer Group	3.59%	9.23%	12.16%	8.42%	8.62%	
Morningstar Lifetime Moderate 2050 Index	Benchmark	3.49%	9.62%	12.97%	8.62%	-	

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Vanguard Target Retirement 2055 Tr Plus	TIAA-CREF/Fidelity	4.04%	9.93%	13.00%	9.47%	-	0.06
2055 Moderate	Peer Group	3.64%	9.00%	12.29%	8.76%	-	
Morningstar Lifetime Moderate 2055 Index	Benchmark	3.41%	9.48%	12.95%	8.51%	-	
Vanguard Target Retirement 2060 Tr Plus	TIAA-CREF/Fidelity	4.05%	9.96%	13.02%	9.47%	-	0.06
Vanguard Target Retirement 2065 Tr Plus	TIAA-CREF/Fidelity	4.00%	9.95%	-	-	-	
2060+ Moderate	Peer Group	3.72%	9.53%	12.56%	9.21%	-	
Morningstar Lifetime Moderate 2060 Index	Benchmark	3.32%	9.30%	12.89%	-	-	

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