

PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY
 THE UNIVERSITY OF NORTH CAROLINA
 FOR THE PERIOD ENDING 12.31.17

INVESTMENT NAME	PROVIDER	Q4 '17	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*	Exp Ratio
MONEY MARKET							
Fidelity Government Money Market	Fidelity	0.19%	0.51%	0.19%	0.12%	0.32%	0.42
CREF Money Market R3	TIAA-CREF	0.17%	0.50%	0.21%	0.13%	0.32%	0.23
Vanguard Federal Money Market	TIAA-CREF	0.27%	0.81%	0.38%	0.24%	0.41%	0.11
BofA Merrill Lynch 3-month U.S. T-Bill	Benchmark	0.28%	0.86%	0.41%	0.27%	0.39%	
STABLE VALUE							
Fidelity Managed Income Portfolio	Fidelity	0.34%	1.29%	1.23%	1.13%	1.49%	0.78
Lincoln Fixed Account*	Fidelity	0.50%	2.00%	2.17%	2.20%	2.72%	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	0.51%	1.95%	1.84%	1.81%	2.47%	
BofA Merrill Lynch 3-month U.S. T-Bill	Benchmark	0.28%	0.86%	0.41%	0.27%	0.39%	
SHORT TERM BOND							
Vanguard Short Term Bond Index I	Fidelity/TIAA-CREF	-0.32%	1.20%	1.22%	1.03%	2.37%	0.05
Short Term Bond Universe	Peer Group	-0.07%	1.61%	1.34%	1.80%	2.23%	
Barclays Government/Credit 1-3 Yr	Benchmark	-0.21%	0.84%	0.93%	0.84%	1.85%	
INTERMEDIATE TERM BOND							
JPMorgan Core Bond R5	Fidelity	0.40%	3.78%	2.34%	2.12%	4.42%	0.51
Vanguard Total Bond Market Index Inst	TIAA-CREF/Fidelity	0.41%	3.57%	2.19%	2.03%	3.97%	0.04
MetWest Total Return Bond	TIAA-CREF/Fidelity	0.39%	3.49%	2.09%	2.56%	5.50%	0.38
JPMorgan Core Bond R6	TIAA-CREF	0.42%	3.87%	2.46%	2.21%	4.50%	0.35
Intermediate Term Bond Universe	Peer Group	0.30%	3.79%	2.24%	2.11%	4.08%	
Barclays Aggregate Bond Index	Benchmark	0.39%	3.54%	2.24%	2.10%	4.01%	
ALLOCATION--50% TO 70% EQUITY							
Fidelity Balanced K	Fidelity	3.64%	16.60%	7.87%	10.85%	6.82%	0.46
Allocation-50% to 70% Equity Universe	Peer Group	3.39%	13.33%	6.10%	8.18%	5.56%	
60% S&P 500 40% BC Agg	Benchmark	4.14%	14.26%	7.76%	10.25%	7.09%	
WORLD ALLOCATION							
CREF Social Choice Account R3	TIAA-CREF	3.44%	14.27%	6.75%	8.68%	6.04%	0.27
World Allocation Universe	Peer Group	3.19%	14.56%	5.20%	6.04%	4.09%	
60% MSCI World 40% BC Agg Index	Benchmark	3.51%	14.90%	6.92%	8.22%	5.33%	
ALLOCATION--85%+ EQUITY							
CREF Stock R3	TIAA-CREF	5.72%	23.45%	10.15%	12.69%	6.45%	0.32
Allocation--85%+ Equity Universe	Peer Group	4.75%	19.06%	8.06%	11.33%	5.69%	
85% S&P 500, 15% BBgBarc Agg	Benchmark	5.69%	18.92%	10.07%	13.71%	7.98%	
LARGE COMPANY VALUE							
JHancock Disciplined Value R6	TIAA-CREF/Fidelity	6.97%	19.33%	9.02%	14.36%	8.46%	0.72
Large Value Universe	Peer Group	5.78%	15.84%	8.49%	13.23%	6.84%	
Russell 1000 Value	Benchmark	5.33%	13.66%	8.65%	14.04%	7.10%	

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*403(b) Plan only

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LARGE COMPANY BLEND							
Vanguard Instl Index Fund	TIAA-CREF/Fidelity	6.64%	21.82%	11.41%	15.78%	8.52%	0.02
Large Blend Universe	Peer Group	6.29%	20.45%	9.71%	14.25%	7.55%	
S&P 500 Index	Benchmark	6.40%	21.83%	11.41%	15.79%	8.50%	
LARGE COMPANY GROWTH							
Vanguard FTSE Social Index Inv	Fidelity	6.84%	24.19%	11.54%	17.12%	8.73%	0.12
Fidelity Contrafund K	Fidelity	6.78%	32.39%	13.44%	16.54%	9.08%	0.65
T Rowe Price Instl Large Cap Growth	TIAA-CREF/Fidelity	7.29%	37.82%	15.99%	19.63%	11.60%	0.56
Large Growth Universe	Peer Group	6.43%	28.30%	11.20%	15.37%	8.33%	
Russell 1000 Growth	Benchmark	7.86%	30.21%	13.79%	17.33%	10.00%	
MEDIUM COMPANY VALUE							
MFS Mid Cap Value R4	Fidelity	4.61%	13.65%	8.71%	14.09%	8.91%	0.86
MFS Mid Cap Value R6	TIAA-CREF	4.63%	13.84%	8.88%	14.23%	8.83%	0.72
Mid Value Universe	Peer Group	5.07%	12.97%	8.09%	13.27%	8.02%	
Russell MidCap Value	Benchmark	5.50%	13.34%	9.00%	14.68%	9.10%	
MEDIUM COMPANY BLEND							
Vanguard Ext Mkt Idx Instl Plus	TIAA-CREF/Fidelity	4.82%	18.13%	9.92%	14.62%	9.26%	0.05
Mid Blend Universe	Peer Group	5.20%	15.61%	8.03%	13.09%	7.82%	
Russell MidCap	Benchmark	6.07%	18.52%	9.50%	14.96%	9.11%	
MEDIUM COMPANY GROWTH							
MassMutual Select Mid Cap Gr Eq II	TIAA-CREF/Fidelity	4.42%	24.66%	11.94%	16.66%	10.31%	0.72
Mid Growth Universe	Peer Group	5.97%	24.63%	9.51%	13.82%	7.79%	
Russell MidCap Growth	Benchmark	6.81%	25.27%	10.30%	15.30%	9.10%	
FOREIGN LARGE VALUE							
MFS International Value R4	Fidelity	5.92%	27.16%	12.24%	12.89%	6.89%	0.76
MFS International Value R6	TIAA-CREF	5.94%	27.25%	12.35%	12.99%	6.94%	0.66
Foreign Large Value Universe	Peer Group	3.36%	22.73%	6.80%	6.52%	1.27%	
MSCI EAFE	Benchmark	4.27%	25.62%	8.30%	8.39%	2.42%	
FOREIGN LARGE BLEND							
Amer Funds EuroPac R6	TIAA-CREF	4.23%	31.17%	9.66%	9.21%	3.90%	0.50
Amer Funds EuroPac R4	Fidelity	4.14%	30.70%	9.28%	8.83%	3.59%	0.85
Vanguard Total Intl Stock Index Inst	TIAA-CREF/Fidelity	4.87%	27.55%	8.54%	7.14%	1.94%	0.09
Foreign Large Blend Universe	Peer Group	3.86%	24.40%	7.61%	7.25%	1.86%	
MSCI EAFE	Benchmark	4.27%	25.62%	8.30%	8.39%	2.42%	
FOREIGN SMALL/MID GROWTH							
T Rowe Price International Discovery	TIAA-CREF/Fidelity	6.06%	39.01%	15.53%	13.81%	6.86%	1.08
Foreign Small/Mid Growth Universe	Peer Group	6.04%	35.91%	12.26%	11.10%	5.17%	
MSCI World ex USA Smid Cap USD	Benchmark	5.53%	29.80%	11.79%	10.83%	4.64%	
SMALL COMPANY VALUE							
Goldman Sachs Small Value Inst	TIAA-CREF/Fidelity	4.01%	12.34%	9.83%	14.56%	10.64%	0.94
Small Value Universe	Peer Group	3.53%	9.12%	8.60%	12.48%	8.35%	
Russell 2000 Value	Benchmark	2.05%	7.84%	9.55%	13.01%	8.17%	

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SMALL COMPANY GROWTH							
Eagle Small Cap Growth R5	Fidelity	6.04%	23.30%	10.61%	13.94%	9.74%	0.78
Eagle Small Cap Growth R6	TIAA-CREF	6.06%	23.40%	10.73%	14.07%	9.65%	0.67
Small Growth Universe	Peer Group	5.05%	22.30%	9.92%	14.01%	8.49%	
Russell 2000 Growth	Benchmark	4.59%	22.17%	10.28%	15.21%	9.19%	
SPECIALTY-REAL ESTATE							
Cohen & Steers Realty Shares	Fidelity	2.97%	7.09%	5.90%	9.77%	8.02%	0.96
Cohen & Steers Instl Realty Shares	TIAA-CREF	3.02%	7.45%	6.19%	10.03%	8.24%	0.75
Specialty-Real Estate Universe	Peer Group	2.36%	5.73%	4.89%	8.55%	6.82%	
Dow Jones US Select REIT	Benchmark	1.98%	3.76%	4.97%	9.09%	7.07%	
SPECIALTY-REAL ESTATE							
TIAA Real Estate Account	TIAA-CREF	1.29%	4.37%	5.90%	7.88%	2.49%	0.85
Specialty-Real Estate Universe	Peer Group	2.36%	5.73%	4.89%	8.55%	6.82%	
NCREIF Property Index	Benchmark	1.80%	6.98%	9.39%	10.19%	6.08%	
TARGET DATE							
Vanguard Instl Target Retirement Income Instl	TIAA-CREF/Fidelity	2.05%	8.54%	-	-	-	0.09
Retirement Income Moderate	Peer Group	2.30%	9.74%	4.34%	4.94%	4.40%	
Morningstar Lifetime Moderate Income Index	Benchmark	2.34%	8.55%	4.33%	4.70%	-	
Vanguard Instl Target Retirement 2015 Instl	TIAA-CREF/Fidelity	2.73%	11.50%	-	-	-	0.09
2015 Moderate	Peer Group	2.44%	11.31%	5.25%	6.58%	4.41%	
Morningstar Lifetime Moderate 2015 Index	Benchmark	3.15%	11.39%	5.45%	6.46%	-	
Vanguard Instl Target Retirement 2020 Instl	TIAA-CREF/Fidelity	3.40%	14.13%	-	-	-	0.09
2020 Moderate	Peer Group	2.95%	13.46%	5.88%	7.73%	4.77%	
Morningstar Lifetime Moderate 2020 Index	Benchmark	3.53%	12.79%	6.01%	7.34%	-	
Vanguard Instl Target Retirement 2025 Instl	TIAA-CREF/Fidelity	3.81%	15.94%	-	-	-	0.09
2025 Conservative	Peer Group	3.20%	13.47%	5.95%	7.30%	4.78%	
Morningstar Lifetime Conservative 2025 Index	Benchmark	3.07%	11.51%	5.40%	6.22%	-	
Vanguard Instl Target Retirement 2030 Instl	TIAA-CREF/Fidelity	4.25%	17.57%	-	-	-	0.09
2030 Conservative	Peer Group	3.97%	15.86%	6.82%	8.18%	4.79%	
Morningstar Lifetime Conservative 2030 Index	Benchmark	3.48%	13.16%	6.09%	7.29%	-	
Vanguard Instl Target Retirement 2035 Instl	TIAA-CREF/Fidelity	4.60%	19.14%	-	-	-	0.09
2035 Conservative	Peer Group	4.31%	17.81%	7.39%	9.27%	5.25%	
Morningstar Lifetime Conservative 2035 Index	Benchmark	3.99%	15.18%	6.92%	8.45%	-	
Vanguard Instl Target Retirement 2040 Instl	TIAA-CREF/Fidelity	4.99%	20.73%	-	-	-	0.09
2040 Moderate	Peer Group	4.67%	20.12%	8.36%	10.70%	5.69%	
Morningstar Lifetime Moderate 2040 Index	Benchmark	5.35%	19.87%	8.81%	10.84%	-	
Vanguard Instl Target Retirement 2045 Instl	TIAA-CREF/Fidelity	5.24%	21.47%	-	-	-	0.09
2045 Moderate	Peer Group	4.83%	20.49%	8.50%	10.34%	5.67%	
Morningstar Lifetime Moderate 2045 Index	Benchmark	5.51%	20.53%	9.01%	10.91%	-	
Vanguard Instl Target Retirement 2050 Instl	TIAA-CREF/Fidelity	5.20%	21.47%	-	-	-	0.09
2050 Moderate	Peer Group	4.90%	20.59%	8.54%	10.68%	5.86%	
Morningstar Lifetime Moderate 2050 Index	Benchmark	5.55%	20.78%	9.04%	10.83%	-	

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Vanguard Instl Target Retirement 2055 Instl 2055 Moderate	TIAA-CREF/Fidelity	5.17%	21.47%	-	-	-	0.09
Morningstar Lifetime Moderate 2055 Index	Peer Group	5.03%	20.87%	8.90%	11.11%	6.82%	
	Benchmark	5.57%	20.95%	9.04%	10.71%	-	
Vanguard Instl Target Retirement 2060 Instl 2060+ Moderate	TIAA-CREF/Fidelity	5.16%	21.42%	-	-	-	0.09
Morningstar Lifetime Moderate 2060 Index	Peer Group	4.88%	20.99%	9.36%	11.66%	-	
	Benchmark	5.57%	21.06%	9.01%	-	-	

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