PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY The University of North Carolina

For the period ending 6/30/2023							
	PROVIDER	Q2′23	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*	Exp Ratio
MONEY MARKET CREF Money Market R3	TIAA	1.21%	3.49%	1.18%	1.38%	0.80%	0.18
Fidelity Government MMkt	Fidelity	1.16%	3.44%	1.17%	1.29%	0.76%	0.42
Vanguard Federal Money Market Investor	TIAA	1.24%	3.77%	1.31%	1.50%	0.94%	0.11
ICE BofA ML US Treasury Bill 3 Mon USD	Benchmark	1.17%	3.59%	1.27%	1.55%	0.98%	
STABLE VALUE		1					
Fidelity Managed Income II CL 1	Fidelity	0.42%	1.51%	1.31%	1.60%	1.49%	0.50
Lincoln Stable Value Z68X	Fidelity	0.50%	1.87%	1.67%	1.82%	2.00%	0.35
TIAA Traditional - Group Retirement Annuity	TIAA		Cur	rent Rate is 6	.50%		
TIAA Traditional - Group Supplemental Retirement Annuity	TIAA		Cur	rent Rate is 5	.75%		
Morningstar US Stable Value GR USD	Peer Group	0.70%	2.40%	2.02%	2.19%	2.01%	
ICE BofA ML US Treasury Bill 3 Mon USD	Benchmark	1.17%	3.59%	1.27%	1.55%	0.98%	
SHORT TERM BOND							
Vanguard Short-Term Bond Idx InstiPis	Fidelity/TIAA	-0.64%	0.22%	-1.59%	1.13%	1.11%	0.04
Short Term Bond Universe	Peer Group	-0.08%	1.33%	-0.60%	1.18%	1.18%	
Bloomberg US Govt/Credit 1-3 Yr TR USD	Benchmark	-0.37%	0.53%	-0.88%	1.13%	0.99%	
INTERMEDIATE TERM BOND	-	-					
JPMCB Core Bond Fund CF**	TIAA	-0.93%	-0.52%	-3.00%	1.34%	1.87%	0.30
JPMorgan Core Bond R5	Fidelity	-0.93%	-0.64%	-3.13%	1.21%	1.72%	0.44
JPMorgan Core Bond R6	TIAA	-0.81%	-0.44%	-3.00%	1.33%	1.83%	0.34
Vanguard Institutional Total Bond Market Index Trust- UNC	TIAA/Fidelity	-0.89%	-	-	-	-	0.02
Vanguard Total Bond Market Idx InstiPis*	TIAA/Fidelity	-0.90%	-0.88%	-4.00%	0.79%	1.50%	0.03
Intermediate Core Bond Universe	Peer Group	-0.88%	-1.03%	-3.84%	0.66%	1.41%	
Bloomberg US Agg Bond TR USD	Benchmark	-0.84%	-0.94%	-3.97%	0.77%	1.52%	
INTERMEDIATE CORE-PLUS BOND							
TCW MetWest Total Return Bond Fund CIT (Class C)	TIAA/Fidelity	-1.28%	-1.37%	-4.01%	0.89%	-	0.30
Metropolitan West Total Return Bond Plan	Fidelity	-1.27%	-1.36%	-4.01%	0.89%	1.71%	0.36
Intermediate Core Plus Bond Universe	Peer Group	-0.69%	-0.41%	-3.29%	0.86%	1.69%	
Bloomberg US Agg Bond TR USD	Benchmark	-0.84%	-0.94%	-3.97%	0.77%	1.52%	
ALLOCATION50% TO 70% EQUITY							
Fidelity Balanced K	Fidelity	5.95%	13.86%	9.88%	9.39%	9.73%	0.43
Moderate Allocation Universe	Peer Group	3.21%	8.79%	6.25%	5.53%	6.47%	
60% S&P 500, 40% Bloomberg Agg	Benchmark	4.86%	11.24%	7.09%	7.94%	8.45%	
WORLD ALLOCATION	TIAA	0.000/	10.001			. ===:/	0.40
CREF Social Choice R3	TIAA	2.96%	10.00%	5.77%	6.23%	6.77%	0.19
Global Allocation Universe	Peer Group	2.06%	7.46%	5.66%	3.96%	4.81%	
60% MSCI World 40% Bloomberg Agg Index	Benchmark	3.36%	9.44%	5.00%	5.45%	6.04%	
ALLOCATION85%+ EQUITY CREF Stock R3	TIAA	<b>A</b> 4494				a ==0/	0.23
	TIAA Peer Group	6.44%	17.23%	11.41%	8.23%	9.57%	0.23
Aggressive Allocation Universe		5.40%	14.31%	9.55%	7.07%	8.52%	
85% S&P 500, 15% Bloomberg Agg	Benchmark	7.28%	16.44%	11.78%	10.71%	11.23%	
LARGE COMPANY VALUE	TIAA/Fidelity	4 - 00/				0.070/	0.65
JHancock Disciplined Value R6	Peer Group	4.56%	11.52%	17.01%	8.46%	9.37%	0.05
Large Value Universe Russell 1000 Value	Benchmark	3.69%	10.72%	14.61%	8.12%	9.09%	
LARGE COMPANY BLEND	Benchinark	4.07%	11.54%	14.30%	8.11%	9.22%	
	Fidelity	9.86%	20.32%	42.029/	12.43%	13.32%	0.12
Vanguard FTSE Social Index I	TIAA/Fidelity		20.32%	13.23%	12.43%	13.32%	0.12
Vanguard Institutional 500 Index Trust- UNC Vanguard Institutional Index Inst! PI*	TIAA/Fidelity	8.74% 8.74%					0.01
-	Peer Group	<b>6.74%</b> 7.96%	<b>19.57%</b> 18.26%	14.58%	<b>12.29%</b> 10.96%	12.85%	0.02
Large Blend Universe S&P 500 Index	Benchmark			13.72%		11.59% 12.86%	
	Denchinark	8.74%	19.59%	14.60%	12.31%	12.00%	
LARGE COMPANY GROWTH Fidelity Contrafund K	Fidelity	12.29%	25.16%	10.63%	11 540/	13.82%	0.74
Fidelity Contratund K T Rowe Price Lrg Cp Gr I	TIAA/Fidelity	12.29%	25.16% 26.57%	9.52%	11.54% 11.72%	13.82% 15.49%	0.74
Large Growth Universe	Peer Group	11.83%	23.27%	9.81%	11.61%	13.26%	0.00
Russell 1000 Growth	Benchmark	12.81%	23.27%			15.74%	
MEDIUM COMPANY VALUE	Benchinark	12.01%	∠1.11%	13.73%	15.14%	13.74%	
MEDIOM COMPANY VALUE MFS Mid Cap Value R4	Fidelity	5.52%	13.45%	16.83%	8.81%	9.74%	0.74
MFS Mid Cap Value R6	TIAA	5.52% 5.51%	13.45%	16.98%	8.96%	9.74% 9.90%	0.62
Mid Value Universe	Peer Group	4.22%	12.25%	16.45%	6.85%	8.57%	0.02
Russell Mid Cap Value	Benchmark	3.86%	12.25%	15.04%	6.84%	9.03%	
	Benefinark	0.0070	10.0070	10.0470	0.0470	5.0570	

Shading highlights performance at or above median for peer group if available, otherwise at or above benchmark. \*403(b) Plan only \*\*457(b) Plan only

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INVESTMENT NAME	PROVIDER	Q1′23	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*	Exp Rati
MEDIUM COMPANY BLEND							
Vanguard Extended Market Index InstiPlus*	TIAA/Fidelity	6.46%	15.23%	9.29%	6.16%	9.36%	0.04
Vanguard Institutional Extended Market Index Trust- UNC	TIAA/Fidelity	6.46%	-	-	-	-	0.035
Mid Blend Universe	Peer Group	4.75%	14.12%	13.47%	7.38%	9.22%	
Russell Mid Cap	Benchmark	4.76%	14.92%	12.50%	8.46%	10.32%	
MEDIUM COMPANY GROWTH	•	•					
MassMutual Mid Cap Growth I	TIAA/Fidelity	5.44%	17.84%	7.99%	8.83%	11.67%	0.66
Mid Growth Universe	Peer Group	5.81%	18.53%	6.92%	8.73%	10.74%	
Russell Mid Cap Growth	Benchmark	6.23%	23.13%	7.63%	9.71%	11.53%	
FOREIGN LARGE BLEND							
American Funds Europacific Growth R4	Fidelity	2.06%	15.38%	5.11%	3.93%	5.93%	0.82
American Funds Europacific Growth R6	TIAA	2.16%	15.80%	5.47%	4.29%	6.30%	0.47
MFS International Intrinsic Value Equity CIT Class 4	Fidelity	3.24%	17.93%	4.68%	5.94%	8.20%	0.57
MFS International Intrinsic Value R6	TIAA	3.15%	17.39%	4.63%	5.89%	8.07%	0.61
Vanguard Institutional Total International Stock Market Index Trust- UNC	TIAA/Fidelity	2.64%	-			-	0.059
Vanguard Total Inti Stock Idx InstiPis*	TIAA/Fidelity	2.61%	12.34%	7.55%	3.73%	5.09%	0.07
Foreign Large Blend Universe	Peer Group	2.88%	16.21%	7.97%	3.90%	5.10%	
MSCI EAFE	Benchmark	3.22%	19.41%	9.48%	4.90%	5.91%	
FOREIGN SMALL/MID GROWTH							
T Rowe Price International Discovery	Fidelity	1.13%	6.81%	2.26%	2.29%	7.53%	1.23
T Rowe Price International Discovery I	TIAA	1.14%	6.97%	2.41%	2.43%	7.64%	1.08
Foreign Small/Mid Growth Universe	Peer Group	0.62%	10.65%	2.75%	1.49%	5.49%	
MSCI World ex USA Smid Cap USD	Benchmark	0.80%	11.49%	6.04%	1.84%	5.44%	
SMALL COMPANY VALUE	1						
Goldman Sachs Small Cap Value Inst	Fidelity	1.17%	5.10%	14.02%	3.05%	7.24%	0.97
Goldman Sachs Small Cap Value R6	TIAA	1.17%	5.12%	14.03%	3.06%	7.16%	0.96
Small Value Universe	Peer Group	3.74%	10.77%	17.67%	5.03%	7.77%	
Russell 2000 Value	Benchmark	3.18%	6.01%	15.43%	3.54%	7.29%	
SMALL COMPANY GROWTH						-	1
TRP Integrated US Small-Cap Gr Eq I	TIAA/Fidelity	6.44%	20.65%	9.04%	7.11%	10.83%	0.66
Small Growth Universe	Peer Group	5.03%	14.45%	6.92%	6.24%	9.65%	
Russell 2000 Growth	Benchmark	7.05%	18.53%	6.10%	4.22%	8.83%	
SPECIALTY-REAL ESTATE							
Cohen & Steers Insti Realty Shares	TIAA	3.13%	-2.36%	8.21%	6.79%	7.92%	0.75
Cohen & Steers Realty Shares L	Fidelity	3.13%	-2.57%	8.04%	6.62%	7.71%	0.88
Specialty-Real Estate Universe	Peer Group	1.77%	-2.96%	6.98%	4.61%	6.21%	
Dow Jones US Select REIT	Benchmark	2.92%	-0.69%	9.17%	3.28%	5.75%	
SPECIALTY-PRIVATE REAL ESTATE							
TIAA Real Estate Account	TIAA	-4.60%	-9.10%	6.08%	4.88%	6.18%	0.77
NCREIF ODCE Index	Peer Group	-2.68%	-9.98%	7.99%	6.50%	8.74%	
NCREIF Property Index	Benchmark	-1.98%	-6.60%	6.79%	5.90%	7.82%	1

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## PLAN INVESTMENT REVIEW | PERFORMANCE SUMMARY

INVESTMENT NAME	PROVIDER	Q1′23	1 YEAR*	3 YEAR*	5 YEAR*	10 YEAR*	Exp Rati
TARGET DATE							
Vanguard Target Retire Income Select	TIAA/Fidelity	1.38%	4.54%	1.77%	3.52%	4.20%	0.05
Retirement Income Moderate	Peer Group	1.62%	5.00%	2.21%	3.36%	3.78%	
Morningstar Lifetime Moderate Income Index	Benchmark	1.38%	5.12%	3.03%	3.88%	4.21%	
Vanguard Target Retire 2020 Select	TIAA/Fidelity	2.12%	6.60%	3.90%	4.70%	6.12%	0.05
2020 Moderate	Peer Group	2.06%	6.65%	3.94%	4.43%	5.56%	
Morningstar Lifetime Moderate 2020 Index	Benchmark	1.78%	6.10%	2.95%	4.27%	5.38%	
Vanguard Target Retire 2025 Select	TIAA/Fidelity	2.96%	8.59%	5.07%	5.38%	6.80%	0.05
2025 Moderate	Peer Group	2.42%	7.36%	4.63%	4.73%	6.04%	
Morningstar Lifetime Moderate 2025 Index	Benchmark	2.09%	6.99%	3.60%	4.56%	5.93%	
Vanguard Target Retire 2030 Select	TIAA/Fidelity	3.62%	10.06%	6.16%	5.91%	7.36%	0.05
2030 Moderate	Peer Group	3.16%	9.22%	5.99%	5.49%	6.78%	
Morningstar Lifetime Moderate 2030 Index	Benchmark	2.55%	8.34%	4.82%	5.01%	6.59%	
Vanguard Target Retire 2035 Select	TIAA/Fidelity	4.11%	11.35%	7.32%	6.47%	7.94%	0.05
2035 Moderate	Peer Group	3.94%	11.14%	7.47%	6.18%	7.44%	
Morningstar Lifetime Moderate 2035 Index	Benchmark	3.14%	10.16%	6.52%	5.59%	7.24%	
Vanguard Target Retire 2040 Select	TIAA/Fidelity	4.63%	12.68%	8.46%	7.01%	8.45%	0.05
2040 Moderate	Peer Group	4.65%	12.77%	8.74%	6.70%	7.95%	
Morningstar Lifetime Moderate 2040 Index	Benchmark	3.71%	11.97%	8.15%	6.13%	7.70%	
Vanguard Target Retire 2045 Select	TIAA/Fidelity	5.12%	14.02%	9.62%	7.54%	8.80%	0.05
2045 Moderate	Peer Group	5.17%	14.02%	9.53%	7.11%	8.28%	
Morningstar Lifetime Moderate 2045 Index	Benchmark	4.09%	13.21%	9.20%	6.46%	7.92%	
Vanguard Target Retire 2050 Select	TIAA/Fidelity	5.44%	14.72%	9.85%	7.69%	8.87%	0.05
2050 Moderate	Peer Group	5.33%	14.64%	9.83%	7.25%	8.40%	
Morningstar Lifetime Moderate 2050 Index	Benchmark	4.24%	13.72%	9.58%	6.56%	7.94%	
Vanguard Target Retire 2055 Select	TIAA/Fidelity	5.42%	14.70%	9.84%	7.68%	8.84%	0.05
2055 Moderate	Peer Group	5.36%	14.71%	9.92%	7.29%	8.44%	
Morningstar Lifetime Moderate 2055 Index	Benchmark	4.23%	13.74%	9.61%	6.51%	7.88%	

Vanguard Target Retire 2060 Select	TIAA/Fidelity	5.41%	14.72%	9.85%	7.71%	8.87%	0.05
2060 Moderate	Peer Group	5.30%	14.68%	9.90%	7.28%	8.68%	
Morningstar Lifetime Moderate 2060 Index	Benchmark	4.19%	13.66%	9.56%	6.42%	7.80%	
Vanguard Target Retire 2065 Select	TIAA/Fidelity	5.40%	14.74%	9.86%	7.72%	-	0.05
Vanguard Target Retire 2070 Select	TIAA/Fidelity	5.44%	14.78%	-	-	-	0.05
2065+ Moderate	Peer Group	5.33%	14.75%	9.83%	7.59%	-	
Morningstar Lifetime Moderate 2065 Index	Benchmark	4.14%	13.53%	9.48%	6.32%	7.71%	

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