

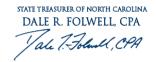


STATE TREASURER OF NORTH CAROLINA DALE R. FOLWELL, CPA

INVESTMENT MANAGEMENT DIVISION NCRS Investment Policy Statement Review

August 28, 2024

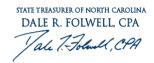




Investment Objectives

- Provide investment returns sufficient for the Fund to make timely payment of statutory benefits to current and future members and keep contribution rates at a reasonable level over the long-term. To achieve this, long-term projected investment returns should be generally consistent with the actuarial assumed rate of return, unless otherwise determined by the Treasurer.
- Avoid excessive volatility in contribution rates over the intermediateterm by maintaining a moderate risk profile and diversifying with respect to economic and financial risk factors. It is acceptable to limit the use of return-seeking strategies in order to avoid excessive volatility.
- Achieve cost-efficiency in the overall investment program.
- Exceed composite benchmark returns for the Fund and broad categories of investments within reasonable risk limits and over market cycles.
- Ensure sufficient liquidity to meet the Fund's obligations over all time periods.
- Comply with all governing statutes and fiduciary obligations.





Strategic Asset Allocation – Asset Categories

- Growth
 - Global public equity (long-only and hedged equity)
 - Private equity
 - Public/Private non-investment grade credit (distressed, mezzanine, and long/short)
 - Non-core real estate
- Rates and Liquidity
 - Treasury, agency, corporate, and mortgage securities
 - Cash/short duration

Inflation Sensitive and Diversifiers

- Short duration TIPS and/or global inflation linked bonds
- Core real estate (public and private)
- Public/Private natural resources (commodities, energy, timberland, agriculture, etc.)
- Other real assets and diversifiers
- Multi-Strategy





Strategic Asset Allocation Targets & Ranges

	Minimum	Policy Target	Maximum
Growth	33%	55%	68%
Public Equity	33%	38%	43%
Private Equity	0%	7%	8.75%
Non-Core Real Estate	0%	3%	8%
Opportunistic Fixed Income	0%	7%	7.5%
Rates and Liquidity	23%	33%	48%
Investment Grade Fixed Income	23%	28%	33%
Pension Cash	0%	5%	15%
Inflation Sensitive and Diversifiers	4%	11%	16%
Inflation Sensitive	2%	6%	7.5%
Core Real Estate	2%	5%	10%
Multi-Strategy	0%	1%	4%



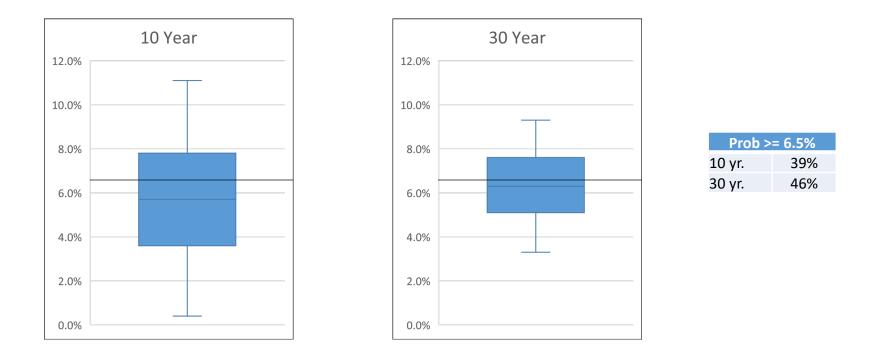
Strategic Asset Allocation - Deviation from Actual

6/30/2024	Market Value (\$000)	%	Target	Range		Relative		
				Minimum	Maximum	%	Relative \$ (\$000)	
Growth	\$65,300,865	53.07%	55.0%	33.0%	68.0%	-1.93%	(\$2,373,510)	
Public Equity	49,367,408	40.12%	38.0%	33.0%	43.0%	2.12%	2,610,567	
Private Equity	6,099,959	4.96%	7.0%	0.0%	8.75%	-2.04%	(2,513,143)	
Non-Core Real Estate	2,125,761	1.73%	3.0%	0.0%	8.0%	-1.27%	(1,565,568)	
Opportunistic Fixed Income	7,707,737	6.26%	7.0%	0.0%	7.5%	-0.74%	(905,365)	
Rates & Liquidity	43,271,893	35.17%	33.0%	23.0%	48.0%	2.17%	2,667,268	
IG Fixed Income & Cash	33,629,957	27.33%	28.0%	23.0%	33.0%	-0.67%	(822,452)	
Pension Cash	9,641,936	7.84%	5.0%	0.0%	15.0%	2.84%	3,489,720	
Inflation Sensitive & Diversifiers	11,900,453	9.67%	11.0%	4.0%	16.0%	-1.33%	(1,634,422)	
Inflation Sensitive	5,635,645	4.58%	6.0%	2.0%	7.5%	-1.42%	(1,747,014)	
Core Real Estate	6,264,808	5.09%	5.0%	2.0%	10.0%	0.09%	112,592	
Multi-Strategy	2,571,108	2.09%	1.0%	0.0%	4.0%	1.09%	1,340,664	
Grand Total	123,044,319	100.00%						





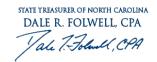
Projected ranges of Annualized Passive Investment Returns per 2022 Asset Liability Study



Horizon	95 th Percentile	75 th Percentile	Expected	25 th Percentile	5 th Percentile
10 Years	0.4%	3.6%	5.7%	7.8%	11.1%
30 Years	3.3%	5.1%	6.3%	7.6%	9.3%

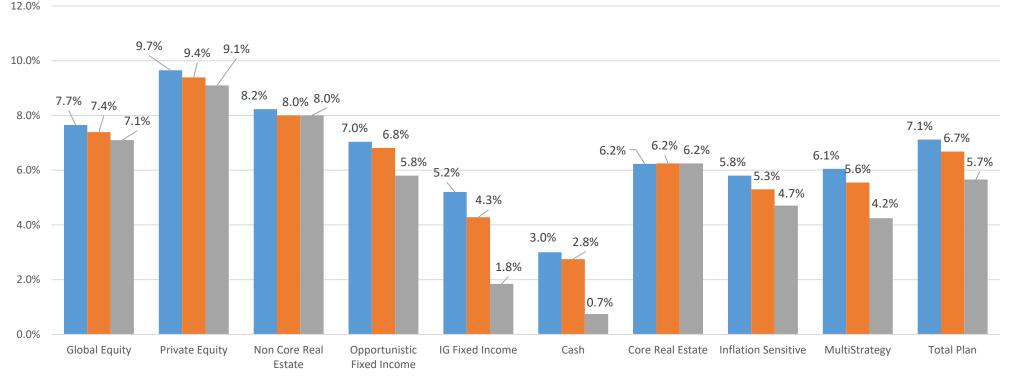


Investment Management Division



Updated Expected Returns

10 Year Geometric Expected Returns - 2024 vs 2023 vs 2022 Asset Liability Study



■ 2024 ■ 2023 ■ 2022 ALM



Risk Management and Controls

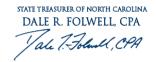
- Risk Standards and Metrics
 - Annual volatility of Fund returns of 10%
 - Betas
 - Net of fees risk-adjusted returns
 - Net contributions as a ratio of Fund assets and Level 1 liquidity
 - Fund tracking error or active risk
- Rebalancing
 - Typically +/- 2%, but may deviate due to market movements, active positioning, or exogenous factors
- Cost-effectiveness
- Portfolio-level Guidelines
- Compliance



Fund Benchmarks

- Long-Term Policy Benchmark: compares the performance of the Fund to a low cost, passive, publicly traded portfolio that represents the Fund's broad allocations to the core drivers of risk and return
 - 56% MSCI All Country World Investable Market Index, in dollar terms, net of withholding taxes on non-resident institutional investors
 - 28% ICE BofA 5+ Years U.S. Treasury Index
 - 5% ICE BofA 3 Month Treasury Bill Index
 - 6.5% Bloomberg Commodities Index
 - 4.5% ICE BofA 1-3 Years U.S. Inflation-Linked Treasury Index.
- Implementation Benchmark is a weighted performance of the Portfolios' individual benchmarks using the Target Allocations





Implementation Guidelines

- Interim Capital Allocation
- Active Management
- Internal and External Management
- Selection and Monitoring of Investment Managers
 - External Investment Manager and Vehicle Selection Policy
 - Investment Manager and Vehicle Monitoring Policy





General Portfolio Guidelines

- Investment Vehicles
- Contracts
- Investor Protections, Transparency, and Alignment
- Diversification
- Geography
- Leverage
- Investment Firm Concentration
- Investment Strategy Concentration
- Fund Concentration
- Vintage Year
- Securities Lending
- Transition Management



Statutory Compliance

Statutory Citation	Minimum or Maximum Percentage of Fund	Percentage of Total Assets Invested as of 6-30-2024	Compliant
N.C.G.S. §§ 147-69.1(c) and 147-69.2(b)(1)-(6b) for fixed income and cash	At least 20%	35.2%	✓
N.C.G.S. § 147-69.2(b)(8) for public equity	No more than 65%	40.1%	✓
N.C.G.S. § 147-69.2(b)(8)(b.) for public equity limited liability investment vehicles	No more than 8.5%	1.6%	✓
N.C.G.S. § 147-69.2(b)(6c) for other fixed income	No more than 7.5%	6.3%	✓
N.C.G.S. § 147-69.2(b)(7) for real estate	No more than 10%	6.8%	\checkmark
N.C.G.S. § 147-69.2(b)(9) for private equity and other alternatives	No more than 8.75%	7.0%	✓
N.C.G.S. § 147-69.2(b)(9a) for inflation protection	No more than 7.5%	4.6%	✓
N.C.G.S. § 147-69.2(b)(10a) for the 35% aggregate portfolio limit	The sum of rows 3 to 7; No more than 35%	26.3%	✓