

Office of the Treasurer



DALE R. FOLWELL, CPA STATE TREASURER OF NORTH CAROLINA

February 14, 2017

By Electronic Mail and U.S. Mail

Joint Legislative Commission on Governmental Operations North Carolina General Assembly Raleigh, North Carolina 27601

RE: Quarterly Investment Report for the Period Ended December 31, 2016

Dear Colleagues:

This quarterly report provides the information required under N.C.G.S. 147-69.12 and provides information on the overall performance of the State Treasurer's investment programs. The information in this report is as of December 31, 2016. This report addresses the following topics:

- I. Investment Performance
 - A. Market Environment Context
 - B. Retirement Systems
 - i. Total Fund (Investment Program) Performance
 - ii. Investment Policy Statement (IPS) Asset Class Performance
 - C. Cash Management Programs
 - i. Performance of Short-Term Investment Fund (STIF)
 - ii. Bank Balances
 - D. Other Investment Programs Ancillary Governmental Participant Investment Programs
 - i. Bond Index Fund (BIF)
 - ii. Equity Index Fund (EIF)
 - iii. Escheat Fund
 - E. Other Investments with or on behalf of the State, its Agencies, or Institutions

i. Bond Proceeds Fund

- II. North Carolina Retirement System Financial Information
 - A. Introduction to Differences between the IPS and Statute
 - B. Concordance of IPS and N.C.G.S. § 147-69.2
 - C. Statutory Compliance Statutory Asset Classes
 - D. Fees Statutory Asset Classes
 - E. Green Managers and Funds
 - F. Locations on Website

Additionally, there are explanatory tables, financial data, and other information included as appendices to this report:

Appendix 1: Financial Information

- A. Department of State Treasurer Bank Balances
- B. Combined Statement of Net Positions (Fiscal Year to Date)

Appendix 2: References

- A. Implementation vs. Long-Term Policy Benchmark
- B. Other Benchmark Definitions
- C. Definitions and Rules as required by N.C.G.S. § 147-69.12(e)

Sincerely,

Dale R. Folwell, CPA

cc: Kevin SigRist, Chief Investment Officer
Fran Lawrence, Chief Financial Officer

Quarterly Investment Report for the Period ending December 31, 2016

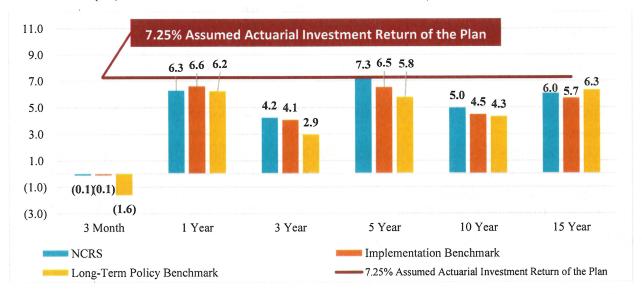
I. Investment Performance [147-69.12(a)(6)(g)]

A. Market Environment Context

For the quarter ended December 31, 2016, Gross Domestic Product (GDP) adjusted for inflation and seasonality increased at a moderated rate of 1.9%. The unemployment rate, however, decreased further to 4.7%. Consumer price inflation saw some gains, increasing at a rate of 2.1% year over year, nearly catching up with core consumer price inflation (i.e., removing the volatile food and energy sectors), which remained relatively flat at 2.2% year over year. Signs of improvement in corporate profits supported US equity markets throughout the quarter. In addition, following the US presidential election in November, expectations for corporate tax reform and spending on infrastructure boosted equity markets even further. While international equity markets generally performed well in their local currencies, a rally in the US Dollar masked much of these gains. Emerging market equities were notably lower on a Dollar-adjusted basis. Oil prices trended higher, driven in large part to an announcement of plans to cut production by OPEC on November 30 – its first since 2008. The US Federal Reserve continued its easing process in December, although still remained accommodative overall by only increasing their target short-term rate by 25 basis points. On the back of higher future growth and inflation expectations, longer-term US interest rates also moved higher, and to a greater extent than short-term yields, causing a steepening of the yield curve. Corporate bonds fared slightly better than their government-related counterparts, with lower-quality issues generally holding up the best. High yield bonds posted positive returns during the quarter, benefitting from their lower duration and economic tailwinds.

B. Retirement Systems [147-69.12(a)(5)(a,b)]

i. Total Fund (Investment Program) Performance for Periods Ending December 31, 2016 (%; Periods Greater than 1 Year are Annualized)



For definitions of the Implementation Benchmark and the Long Term Policy Benchmarks, and a comparison of the two, please see Appendix 2, Part A.

ii. IPS Asset Class Performance

	Market Value (\$000) M	3 Ionth	1 Yr	3 Yr	5 Yr	10 Yr	15 Yr
Growth	52,104,451	1.06	7.54	4.48	10.18	4.18	5.69
Benchmark		1.67	8.29	3.89	9.11	3.65	<i>5.31</i>
Public Equity	38,515,480	0.73	7.33	3.19	10.28	4.14	5.67
Benchmark		1.21	7.92	3.17	9.55	3.53	5.09
Private Equity	4,488,706	1.79	6.05	9.70	9.30	6.73	5.30
Benchmark		3.01	5.45	8.21	10.49	8.77	10.13
Non-Core Real Estate	3,714,288	0.99	11.83	15.33	13.29	3.38	5.37
Benchmark		1.02	4.52	7.86	9.20	1.98	6.81
Opportunistic Fixed Income	5,385,977	3.01	7.09	2.55	7.45	6.61	andra karen Kalendar
Benchmark		3.58	13.99	2.06	3.26	0.40	-
Rates & Liquidity	24,805,829 (3.36)	3.10	3.86	3.02	5.67	5.90
Benchmark	(-	3.94)	3.04	4.32	2.87	5.37	5.66
IG Fixed Income	23,952,573 (3.48)	3.24	3.95	3.07	5.70	5.91
Benchmark	(-	(4.08)	3.13	4.39	2.91	5.39	5.67
Cash	853,256	0.23	0.98	0.67	÷	rad Tubide	one of Terror
Benchmark		0.12	0.31	0.13	~	-	~
Inflation Sensitive & Diversifiers	10,561,060	1.54	6.93	2.87	3.57	0.77	3.64
Benchmark	(0.36	6.61	3.64	4.04	0.18	3.70
Inflation Sensitive	6,035,886	2.34	7.19	(1.06)	(0.69)	(1.25)	2.93
Benchmark		0.40	5.12	(1.96)	(1.38)	1.72	3.70
Core Real Estate	4,525,174	0.54	6.61	8.42	10.02	4.35	6.06
Benchmark	1	0.30	8.33	10.60	11.21	4.90	6.94
Multi-Strategy	1,632,181	1.61	6.00	3.16	9.08	5.22	erren er
Benchmark		<i>1.19</i> .	4.63	2.04	8.04	4.97	-
Total Pension Plan	89,103,522 (0.14)	6.26	4.21	7.28	4.95	6.04
Implementation Benchmark	(0.12)	6.59	4.06	6.51	4.46	5.69
Long-Term Policy Benchmark		(1.62)	6.22	2.94	5.76	4.30	6.29
Actuarial Assumed Investment Return		<i>1.77</i>	7.25	<i>7.25</i>	7.25	7.25	7.25

For definitions of the Benchmarks please see the Appendix 2, Part B.

C. Cash Management Programs

i. Performance of STIF [147-69.12(a)(4)]

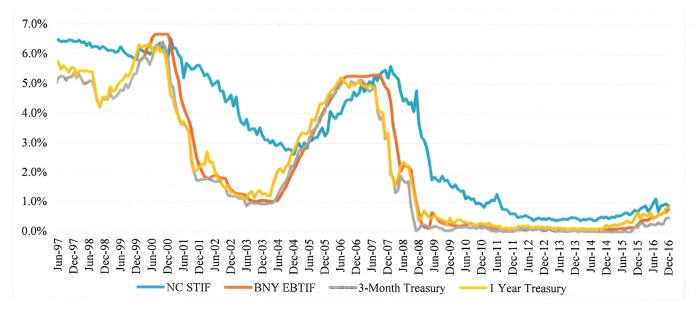
The STIF is responsible for managing the operating funds of the State. Investors include the State's General Fund, Highway Trust Fund, certain Retirement Systems funds, and other investors. The STIF is also where any bank balances are held for the State; please see part C(ii) below for information about the quarter-end bank balances.

As of December 31, 2016, STIF had the following characteristics:

Total Assets	Duration 3-Month Return		Benchmark 3- Month Return	Crediting Rate	Fees
\$18.7 billion	1.24 years	0.23%	0.12%	0.89%	N/A

The benchmark for the cash management program as outlined in the "Department of State Treasurer Investment Management Division Investment Policy Statement for North Carolina Retirement Systems" is the iMoneyNet First Tier Institutional Money Market Funds Net Index.

For comparison purposes, the crediting rate of STIF is shown below, over time, versus the yields of other short-term benchmarks.



Note: BNY EBTIF is the Employee Benefit Temporary Investment Fund, a money market sweep vehicle.

ii. Bank Balances [147-69.12(a)(3)]

The State's total Bank Balance as of December 31, 2016 was \$204.8 million. For a list of each bank and other qualified depository utilized by the State Treasurer and the current quarter end cash balances, please see Appendix 1, Part A.

D. Other Investment Programs - Ancillary Governmental Participant Investment Programs

Pursuant to N.C.G.S. 147-69.3, the Treasurer is responsible for one or more investment programs for the deposit and investment of assets pursuant to provisions of N.C.G.S. 147-69.1 and N.C.G.S. 147-69.2, the Ancillary Governmental Participant Investment Program (AGPI Program). The AGPI Program includes assets for, among others, the Escheat Fund, public hospitals, Local Government Other Post-Employment Benefits Trusts, Local Government Law Enforcement Special Separation Allowance Trusts, the North Carolina Conservation Grant Fund as well as entities such as the State Health Plan, the Disability Income Plan and the State Educational Assistance Authority. For a complete listing of the AGPI Program participants see the Ancillary Governmental Participant Investment Program statement in Appendix 1, Part B. While each of the AGPI Program participants has its particular investment authority as to how it may invest, all AGPI

Program participants are eligible for STIF as referenced in Part C(i) above. The following are other investment options maintained by the Treasurer for the AGPI Program.

i. BIF [147-69.12(a)(6)]

The BIF invests in high quality debt securities, under N.C.G.S. 147-69.2(b)(1)-(6). The BIF maintains a low cost approach to investing in investment grade fixed income assets through a passive index strategy. The BIF is designed to produce a return consistent with its Barclays U.S. Aggregate Bond Index benchmark.

As of December 31, 2016, BIF had the following characteristics:

Total Assets	Duration	3-Month Return	Benchmark 3- Month Return	Crediting Rate	Fees
\$1.6 billion	5.72 years	-2.97%	-2.98%	N/A	2.5 bps on first \$750 million; 2.0 thereafter

For a list of the entities invested in the BIF at quarter end please see the Ancillary Governmental Participant Investment Program statement in Appendix 1, Part B.

ii. EIF [147-69.12(a)(6)]

The EIF invests primarily in U.S. and non-U.S. equity securities eligible under N.C.G.S. 147-69.2 (b) (8) with the objective of closely approximating the capitalization weighted total return of the markets for global publicly traded equity securities while maintaining a low cost approach. The EIF is designed to produce a return consistent with its Morgan Stanley Capital International All Country World Index benchmark.

As of December 31, 2016, EIF had the following characteristics:

Total Assets	Duration	3-Month Return	Benchmark 3- Month Return	Crediting Rate	Fees
\$365.0 million	N/A	1.27%	1.19%	N/A	2.0 bps

For a list of the entities invested in the EIF at quarter end please see the Ancillary Governmental Participant Investment Programs statement in Appendix 1, Part B.

iii. Escheat Fund [147-69.12(a)(6)]

As of December 31, 2016, the Escheat Fund had \$613.3 million in total assets. \$456.0 million of this was invested in STIF and \$118.3 million was invested in BIF.

In addition, pursuant to G.S. 147-69.2(b)(12), up to 20% of the Escheat Fund's assets may be invested in authorized Public Equity, Real Estate, and Alternative Investments. For the quarter ending December 31, 2016, the Escheat Fund held \$39.1 million in Alternatives. Performance data for these assets are shown below:

Market Value (\$000)	3 Month	1 Yr	3 Yr ,	5 Yr	10 Yr
Escheats Alternatives 39,072	1.88	7.60	5.37	7.31	9.72
Benchmark	2.79	6.91	10.95	12.18	10.05

Additional financial information on the Escheat Fund is available in the Ancillary Governmental Participant Investment Program statement in Appendix 1, Part B. Information on the Escheats Alternatives Benchmark is available in Appendix 2, Part B.

E. Other Investments with or on behalf of the State, its Agencies, or Institutions

i. General Obligation Bond Proceeds Fund [147-69.12(a)(6)]

The General Obligation Bond Proceeds Fund is managed by a private investment company under contract with the Department of State Treasurer. The investments are valued at amortized cost, which approximates fair value. The General Obligation Bond Proceeds Fund has a separate investment account for each state bond issue to comply with Internal Revenue Service regulations on bond arbitrage. Additional information on the fund may be found in the Ancillary Governmental Participant Investment Programs statement in Appendix 1, Part B.

II. North Carolina Retirement System Financial Information

A. Introduction to Differences Between IPS and Statute

North Carolina General Statute § 147-69.2 proscribes limits on different kinds of investments the Treasurer is authorized to make with the assets of the Retirement Systems. The limits are expressed in terms of percentages of the overall assets invested and there are limits on individual asset classes and in the aggregate.

During the year ended June 30, 2014, the Investment Management Division conducted an asset liability study to develop a new IPS that would utilize some of the additional investment flexibility created by this statute which was updated in 2013. The IPS describing the asset class structure was finalized and became effective July 1, 2014. The tables below compare the investment policy statement's classifications to the statutory classifications. The numbers reflect net assets owned only by the NCRS funds in the statutory asset classes excluding securities lending, as of the quarter end date for this report.

B. Concordance of IPS and N.C.G.S. § 147-69.2 [147-69.12(a)(5)(c)]

The following connects statutory guidelines to those in the IPS:

Gene	eral Statute § 147-69.2	Statutory Asset Class Names	IPS
5		STIF	Cook
b(1)-(6) ¹	At least 20%	Bank Balances	Cash
0(1)-(0)	At least 20%	External Fixed Income	Investment Cond. Fined Inc.
		Long-Term Fixed Income	Investment Grade Fixed Income
b(6c)	No more than 7.5%	Other Fixed Income	Opportunistic Fixed Income
b(7)	No more than 10%	Real Estate	Core Real Estate
0(7)	No more than 1078	Real Estate	Non-Core Real Estate
b(8)	No more than 65%	Public Equity	Public Equity
b(8)(b)	No more than 8.5%	Public Equity Limited Liability	Public Equity
b(9)	No more than 8.75%	Alternatives	Private Equity
U(3)	No more than 8.75%	Alternatives	Multi-Strategy
b(9a)	No more than 7.5%	Inflation Protection	Inflation Sensitive

Guide to IPS "segment" groups: Green = Rates and Liquidity; Blue = Growth; Purple = Inflation Sensitive & Diversifiers; Orange = Multi-Strategy

¹ Per § 147-69.2(b)(6a) investments authorized by these sections (fixed income) and those authorized by § 147-69.1(c)(1)-(7) (cash management) are combined in calculating the 20% limit.

The following maps the market value balances of the retirement system at quarter end to the respective statutory and IPS classifications:

					Statutory (Classification	(\$ Millions)				
		Public Equity ¹	Long Term	Cash ²	External Fixed Income ²	Alternatives	Real Estate	Inflation Protection ⁵	Other Fixed Income ⁶	Public Equity Limited Liability ⁷	Total
	Public Equity	\$35,197								\$3,319	\$38,515
Millions)	Private Equity					\$4,489					4,489
Ϋ́	Non-Core Real Estate						\$3,714				3,714
9	Opportunistic Fixed Income								\$5,386		5,386
tion	IG Fixed Income		\$21,439		\$2,513						23,953
fica	Cash			\$853							853
Classification	Inflation Sensitive							\$6,036			6,036
	Core Real Estate						4,525				4,525
IPS	Multi-Strategy					1,632					1,632
L	Total	\$35,197	\$21,439	\$853	\$2,513	\$6,121	\$8,239	\$6,036	\$5,386	\$3,319	\$89,104

 $^{^{1}\}text{ N.C.G.S.} \$ 147-69.2(b)(8)(a),(c) ; ^{2}\text{ N.C.G.S.} \$ 147-69.1(c) \text{ and N.C.G.S.} \$ 147-69.2(b)(1)-(6b) ; ^{3}\text{ N.C.G.S.} \$ 147-69.2(b)(9) ; ^{4}\text{ N.C.G.S.} \$ 147-69.2(b)(7) ; ^{5}\text{ N.C.G.S.} \$ 147-69.2(b)(9a) ; ^{6}\text{ N.C.G.S.} \$ 147-69.2(b)(6c) ; ^{7}\text{ N.C.G.S.} \$ 147-69.2(b)(8b)(b)$

Note: For statutory compliance purposes, all public equity investments made through funds with limited liability structures are included in the category of investments authorized by N.C.G.S. § 147-69.2(b)(8)(b.), this kind of investment structure is limited to a maximum of 8.5% of the total fund. One external manager, ValueAct Capital Management LP is a limited liability partnership, and thus assets invested with this manager are included in the N.C.G.S. § 147-69.2(b)(8)(b.) 8.5%. However, ValueAct Capital Management has a different investment strategy than the other assets invested with managers through limited liability structures.

The following provides a summary of the investment vehicles in which the various trusts and clients are invested:

			Veh	icles	
		Short Term Investment Fund	Bond Index Fund	Equity Index Fund	Long-Term Investment Fund (QIB)
ts	Retirement Systems	•			•
& Clients	Cash Management Programs	•			
Trusts &	Ancillary Governmental Participant Investment Program	•	•	•	
F	Escheats Fund	•	•		

C. Statutory Compliance – Statutory Asset Classes [147-69.12(a)(5)(c)], [147-69.12(a)(1)]

The table below lists the maximum or minimum percentages of the total assets allowed and actual percentages as of the quarter end.

Statutory Citation	Minimum or Maximum Percentage of Fund	Percentage of Total Assets Invested as of 12/31/16	Compliant
N.C.G.S. § 147-69.1(c) and 147-69.2(b)(1)-(6b) for fixed income and cash	At least 20%	27.8%	✓
N.C.G.S. § 147-69.2(b)(8) for public equity	No more than 65%	43.2%	✓
N.C.G.S. § 147-69.2(b)(8)(b.) for public equity limited liability investment vehicles	No more than 8.5%	3.7%	✓
N.C.G.S. § 147-69.2(b)(6c) for other fixed income	No more than 7.5%	6.0%	√
N.C.G.S. § 147-69.2(b)(7) for real estate	No more than 10%	9.2%	√
N.C.G.S. § 147-69.2(b)(9) for private equity and other alternatives	No more than 8.75%	6.9%	√
N.C.G.S. § 147-69.2(b)(9a) for inflation protection	No more than 7.5%	6.8%	✓
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%	32.7%	✓

Note: Percentage of Total Assets Invested is based on market values as of the most recent quarter-end. Undrawn capital commitments are not included in the calculations until they are called and invested.

In the event that the market value of any of subdivision (6c) or (7), sub-subdivision b. of subdivision (8), or subdivision (9) or (9a) of G.S. 147-69.2 increases during a fiscal year by an amount greater than three percent (3%) of the market value of all invested assets of the Retirement Systems as of the prior fiscal year end, then that event will be noted in this report along with the expected impact on the risk profile of the assets. No such change occurred during the fiscal year ending June 30, 2016.

D. Fees – Statutory Asset Classes [147-69.12(a)(1)]

The Investment Management Division utilizes external managers for a portion of the Retirement Systems. Over time, the Department of State Treasurer, with the advice and counsel of the Investment Advisory Committee, has used a relatively lower risk and lower cost approach to investing the North Carolina Retirement System trust funds. While costs have risen somewhat over time as more diverse external investment strategies were pursued, the all-in costs of investing the retirement trust fund remain modest.

The fees incurred to external investment managers, by asset class, are outlined in the Combining Statement of Operations – Pension Trust Funds Investment Program in Appendix 1, Part B. In addition to the fees shown in this statement, internal administrative expenses of the Funds and (for the internally managed fixed income portfolio) trade transaction costs are paid by the Treasurer. These charges are reported on the Combined Statement of Operations in Appendix 1, Part B.

During the calendar year 2015, the Department engaged CEM Benchmarking, a leading independent cost and performance analysis firm, to review the cost structure of the funds. The report showed that the funds' cost structure was below that of most institutional peers. This leads to savings of roughly 7.3 basis points compared to the median peer. Importantly, after deducting all fees, incentives, and expenses, the trust fund exceeded its performance benchmarks. This outperformance is a positive for plan beneficiaries, employers, and taxpayers. At the same time, the Department continues to proactively target improvements in cost-efficiency, transparency, risk management, and compliance.

Calendar Year 2015 NCRS Costs of Investment Operations Compared to Peers

(Expressed in basis points where 50 basis points equals 0.50%)

Total (Basis Points)

Median Peer 54.7

North Carolina Retirement Systems 47.4

Percentile 38%

Source: CEM [Cost Effectiveness Measurement] Benchmarking Inc., The peer group consists of 14 U.S. public pension funds managing from \$42 billion to \$157.7 billion. The median peer managed \$68.6 billion versus NCRS' \$89 billion. In CEM's methodology, total cost excludes carry / performance fees for real estate, infrastructure, natural resources, and private equity funds. Performance fees are included for public market asset classes and hedge funds. All such fees and expenses have been deducted from all investment returns reported by NCRS.

E. Green Managers and Funds [147-69.12(a)(2)]

There is no consensus on a validation group or process to certify green managers for investments, and the statute provides no definition of the term "sustainable practices" that would enable the Treasurer to determine which companies and funds would fall under this provision. Thus, it is not possible to report any relevant data at this time.

However, the Treasurer has adopted "Long Term Stewardship Practices" on September 23, 2016 which includes evaluation of material long term economic, environmental, geopolitical, societal, and technological risks for asset management.

F. Locations on Website [147-69.12(a)(6)(f,i,j)]

The current Investment Policy may be accessed at the following link:

https://www.nctreasurer.com/inv/Policies/InvestmentPolicyForNCRetirementSystems.pdf

A list of new commitments to external investment managers may be found within the periodic IAC Performance Review presentations at the following link:

https://www.nctreasurer.com/inv/Pages/IAC-Reports.aspx

Information on the use of placement agents by investment managers may be accessed at the following link:

https://www.nctreasurer.com/inside-the-department/OpenGovernment/Pages/Placement-Agent-Disclosures.aspx

The "Long Term Stewardship Practices" can be accessed at the following link:

https://www.nctreasurer.com/inv/IAC Resources/IMD-POL-1014-IMD Long Term Stewardship Practices 9.28.2016.pdf

Appendix 1: Financial Information

Part A: Department of State Treasurer Bank Balances

DEPARTMENT OF STATE TREASURER BANK BALANCES AS OF DECEMBER 31, 2016

Summary of Bank Balances								
Balance as of 09/30/2016	\$	194,808						
Total Receipts	\$	46,137,048						
Total Payments	\$	46,127,024						
Balance as of 12/31/2016	\$	204,832						

Bank Balances as of De	cember 31, 2016	
Bank	Bank Balance	
Wells Fargo	\$	77,504
Bank of America	\$	34,496
SunTrust	\$	7,272
PNC	\$	376
First Citizens	\$	3,933
BB&T	\$	3,108
Asheville Savings Bank	\$	750
Bank of North Carolina	\$	100
Bank of Tennessee	\$	1
Bank of the Ozarks	\$	1,500
Capital Bank	\$	3,483
CommunityOne Bank	\$	1,884
Fidelity Bank	\$	9,258
First Bank	\$	12,588
First Federal Savings Bank	\$	1,000
Four Oaks Bank	\$	100
High Point Bank	\$	1,000
HomeTrust Bank	\$	1,000
KS Bank	\$	100
Lumbee Guaranty Bank	\$	3,000
Entegra Bank (formerly Macon Bank)	\$	2,000
M&F Bank	\$	2,750
Peoples Bank	\$	1,000
South State Bank	\$	1,079
Southern Bank & Trust	\$	13,197
Surrey Bank	\$	750
TD Bank	\$	1,500
The Little Bank	\$	186
Townebank	\$	2,000
Union Bank	\$	750
United Community Bank	\$	5,024
Uwharrie Bank	\$. 2,000
Yadkin Bank	\$	10,143
Total*	\$	204,832

^{*}This number reflects the balance in the State treasury credited to all State funds, including not only the General Fund but also other funds.

Part B: Combined Statement of Net Positions (Fiscal Year to Date)

- Combined Statement of Net Position
- Combining Statement of Net Position Pension Trust Funds Investment Program
- Other Investment Programs
- Combined Statement of Operations
- Combining Statement of Operations Pension Trust Funds Investment Program

DEPARTMENT OF STATE TREASURER COMBINED STATEMENT OF NET POSITION DECEMBER 31, 2016

		Short-term Investment Fund		*Pension Trust Funds Investment Program Subtotal		Intrafund Eliminations		Total
Net Assets:				Suototai	***********	Limitations		Total
Investment Securities:								
Cash Equivalents	\$	-	\$	-	\$	_	\$	à
Certificates of Deposit		10,600		_		_	_	10,600
Repurchase Agreements		1,680,000		-		_		1,680,000
U.S. Treasury Bills/ Notes/ Bonds		7,697,544		5,060,118		_		12,757,662
U.S. Government Agency Notes/ Bonds		9,107,920		757,085		_		9,865,005
GNMA Certificates		_		7,676,634		_		7,676,634
Corporate Obligations		_		8,040,839		_		8,040,839
Other Investments		-		393,318		_		393,318
Investments in Equity Securities		-		1,791		-		1,791
Investments in Equity Trusts & Limited Liability Entities	S**	-		38,515,480		_		38,515,480
Investments in Real Estate Trust Funds & Partnerships		-		8,239,462		-		8,239,462
Investments in Alternative Partnerships		-		6,119,096		-		6,119,096
Investments in Credit Partnerships		-		5,385,977		_		5,385,977
Investments in Inflation Partnerships and Other Invest.				5,461,280		-		5,461,280
Total Investment Securities	\$	18,496,064	\$	85,651,080	\$	-	\$	104,147,144
Cash in Bank		204,832		-		-		204,832
Deposits in Short-term Investment Fund		-		3,271,508		(3,271,508)		
Other Assets, Net of Liabilities		43,001		180,934		-		223,935
Total Net Assets	\$	18,743,897	\$	89,103,522	\$_	(3,271,508)	\$	104,575,911
Participant Equity:								
General Fund	\$	4,389,177	\$	-	\$	-	\$	4,389,177
Other Funds Which Earn Interest							·	., ,
for General Fund		1,347,345		_		_		1,347,345
Highway Fund		476,577		-		-		476,577
Highway Trust Fund		1,467,975		-		-		1,467,975
University Trust Funds		2,325,598				-		2,325,598
Pension Trust Funds		344,660		89,103,522		_		89,448,182
Other Independent Trust Funds		4,327,728		· · ·		-		4,327,728
Local Political Subdivisions		752,204		-		-		752,204
Licensing Boards		41,125		-		-		41,125
Other Investment Funds		3,271,508		-		(3,271,508)		-
Total Participant Equity	\$		\$_	89,103,522	\$	(3,271,508)	\$	104,575,911
Percent of Total		17.92%		85.21%		-3.13%		100.00%

^{*}The Trust Funds Investment Program is presented at market value. Trust Funds detail is included on Combining Statement of Net Position.

^{**}See description of Equity Investment Fund in note on following pages

COMBINING STATEMENT OF NET POSITION - PENSION TRUST FUNDS INVESTMENT PROGRAM DECEMBER 31, 2016 DEPARTMENT OF STATE TREASURER

	Cash Investment Fund	Long-term Investment Fund	External Fixed Inc. Investment Fund	Long-Only Public Equity Investment Fund	Hedged Public Equity Investment Fund *	Real Estate Investment Fund	Alternatives Investment Fund	Other Fixed Income Inflation Protection Investment Investment Fund Fund	nflation Protection Investment Fund	Totals
Net Assets:										
Investment Securities:		•			6	٥	9		6/5	•
Cash and Cash Equivalents	S .		•	A .		•		•	780 086	5.060118
U.S. Treasury Bills/ Notes/ Bonds	•	4,780,042						•	700,010	2,000,110
U.S. Government Agency Notes/ Bonds		757,085	•	•				•		600,161
GNMA Certificates		7,676,634	•	•		•		ı	1 000	7,070,034
Comorate Ohlinations	•	7,770,110	•				•		671017	8,040,839
Colporate Configurations	371 082	. •	•		•	•			22,236	393,318
Other investments	200,116						1,791			1,791
Investments in Equity Securities	•	•	1	26 500 245	3 503 7 13 5		. '	,	,	38.515.480
Investments in Equity Trusts & Limited Liability Entities	•	•		33,388,343	6,727,133	00000			•	8 239 462
Investments in Real Estate Trust Funds & Partnerships	•		•	•	•	704,407	- 000			6 119 006
Investments in Alternative Partnerships	1	•					6,119,096	. !	•	0,111,000
Tarrestante in Coodit Dortnerchine	1	,			•	•	•	5,385,977		116,585,5
Investments in Clean ratherships			•	•		•			5,461,280	5,461,280
Investments in Inflation Partnerships and Other Invest.				\$ 25 588 345 6	2 927 135 \$	8 239 462 \$	6 120 887 \$	5.385.977 \$	6,034,321 \$	85,651,080
Total Investment Securities	\$ 371,082 \$	20,983,871				9 101 (7016)				
Cash in Bank	•	•	•			ı			•	3 271 508
Deposits in Short-term Investment Fund	482,174	276,047	2,513,287			•		•	3/31	180.034
Other Access Not of Lishilities	i	179,369	•	•					1,363	180,934
Total Net Assets	\$ 853,256 \$	21,439,287	5 2,513,287	\$ 35,588,345	2,927,135 \$	8,239,462 \$	6,120,887 \$	5,385,977 \$	6,035,886 \$	89,103,522
Participant Equity:	950 050	71 439 287	2 513 287	35.588.345	2,927,135	8,239,462	6,120,887	5,385,977	6,035,886	89,103,522
Fension Lnst Funds Total Participant Family	\$ 853.256 \$	21,439,287	\$ 2,513,287	\$ 35,588,345	2,927,135 \$	8,239,462 \$	6,120,887 \$	5,385,977 \$	6,035,886 \$	89,103,522
total tattopant Equity										
Percent of Total	%96'0	24.06%	2.82%	39.94%	3.29%	9.25%	6.87%	6.04%	6.77%	100.00%

* In terms of calculating performance, all public equity investments with long strategies are grouped together, and all public equity investments with hedged strategies are grouped together.

Note: One external manager, ValueAct Capital Management LP is included in the Long-Only. Public Equity. Investment Fund group on this combining strategies.

Included in the "Public Equity Limited Liability" category, not the "Public Equity" category. The "Public Equity" category includes all assets invested in long strategies.

- (2) "Cash management programs" means the Short-Term Investment Fund, bank balances, and any other future investment fund or strategy designed primarily to preserve capital and maintain a strong liquidity profile, as well as achieve competitive relative returns.
- (3) "Duration" of an investment refers to the sensitivity of an investment's price to changes in interest rates. The calculation involves the present value of the investment, its yield, coupon payment, maturity date and other features, and is measured in terms of years. A higher figure suggests higher interest rate sensitivity. The duration of a portfolio is calculated as the weighted average of all of the underlying securities' duration.
- "Fee" means a charge against the State Treasurer or a State Treasurer investment. The State Treasurer's reports shall include under "fees" all of the following types of charges:
 - (i) Management fees;
 - (ii) Incentive compensation, carried interest, incentive fees, or performance fees; and
 - (iii) Placement fees.
- (5) "Expense" means the Department of State Treasurer's administrative costs attributable to and charged to the investment portfolio. The State Treasurer's reports shall include under "expenses" all of the following types of charges, as communicated to the State Treasurer:
 - (i) Administrative expenses;
 - (ii) Commissions, asset fees, or custody fees;
 - (iii) Partnership or organizational expenses;
 - (iv) Pass-through expenses; and
 - (v) The portion of the Department of State Treasurer's administrative costs attributable to and charged to the investment portfolio or investment fund.
- (6) "Investment manager" means a person or entity, other than Department of State Treasurer employees, given authority or discretion by the State Treasurer to make decisions concerning State Treasurer investments.
- (7) "Placement fee" or "placement agent fee" means a net fee, after any offsets, (i) to a placement agent or (ii) to any other entity, other than the investment manager itself or one of its employees or affiliates, that an investment manager directly or indirectly engaged in order to obtain investment from the State Treasurer.
- (8) "Rate of return" refers to the time-weighted return of each period shown, with adjustments made for cash inflows and outflows to limit distorting effects. Periods of greater than one year are annualized. All returns shown are net of all investment manager fees and all related State Treasurer expenses.
- (9) "Section" means all the subsections within this Section .0100 of Title 20 of the North Carolina Administrative Code.
- (10) "State Treasurer investments" shall mean all investments of any kind by the Treasurer of the State of North Carolina or Department of State Treasurer, including but not limited to securities held directly, securities held in separate accounts pursuant to third-party investment management agreements, interests in limited liability investment vehicles or other investment companies as defined under generally accepted United States accounting principles as promulgated by the Financial Accounting Standards Board.
- (11) "Website portal delivery" means a secure method of accessing messages on a website portal set up by the Department of State Treasurer.

Part C: Definitions and Rules as required by N.C.G.S. § 147-69.12(e)

Pursuant to N.C.G.S. § 147-69.12(e) the State Treasurer shall adopt rules to implement the provisions of N.C.G.S. § 147-69.12 "Reporting on the State Treasurer's Investment Programs". Adoption of the rules is pending with the NC Rules Review Commission. The content of the proposed rules, including definitions of terms used in this report, is as follows:

REQUIRED INVESTMENT REPORTS

- (a) The State Treasurer shall issue all the reports required by G.S.147-69.12(e) concerning the State Treasurer's investment programs on or before the dates required by law. The State Treasurer may also issue voluntary reports or include in mandatory reports additional information that is not required by the statute.
- (b) Reports required by different statutory provisions may be combined, so long as the combined report provides all the information required by each statutory provision.
- (c) Failure by any Department of State Treasurer employee to comply with any provision of this Section may result in disciplinary action up to and including dismissal.

TRANSMISSION OF REPORTS

- (a) The State Treasurer will issue reports directly or through a deputy authorized under G.S. 147-75.
- (b) To fulfill the report delivery requirements set out in G.S. 147-69.12(d):
 - (1) E-mail delivery shall be used to send reports to the Joint Legislative Commission on Government Operations, chairs of the House of Representatives and Senate Appropriations Committees, chairs of the House of Representative and Senate Finance Committees, Fiscal Research Division, Governor, Council of State, and State Auditor.
 - (2) A paper copy shall also be sent to the Joint Legislative Commission on Government Operations, unless the Commission indicates that a paper copy is not necessary.
 - (3) The website of the State Treasurer shall have a publicly accessible page that collects recent reports required by the North Carolina General Statutes concerning the State Treasurer's investment programs. Reports shall be collected for at least ten years.
 - (4) E-mail delivery or website portal delivery, at the State Treasurer's discretion, shall be used to send reports, where required by G.S. 147-69.12(d), to other officials, institutions, boards, commissions, or agencies investing in a State Treasurer investment program, including but not limited to the State Treasurer's Ancillary Governmental Participant Investment Programs (AGPIPs).

SCOPE OF REPORTING; LEVEL OF DETAIL

- (a) Each statutory investment report shall include all State Treasurer investments, unless the statute specifically requests only certain types of investments.
- (b) For internally managed portfolios, the State Treasurer may make aggregated reports for each strategy that describe performance and assets at the portfolio level, rather than listing each asset within the internally managed portfolio.
- (c) Unless otherwise specified by the Department of State Treasurer in the report, all reports shall use generally accepted accounting principles and performance measurement methodologies as adopted by the State Treasurer in its policies and procedures. The State Treasurer shall periodically review and update such policies and procedures and make them available upon request.

DEFINITIONS OF TERMS

In this Rule and in the State Treasurer's required investment reports, the following words and phrases shall have the meanings defined below:

(1) "Bank balance" means money held by the State Treasurer in a bank or savings institution.

Appendix 2: References

Part A: Implementation vs. Long-Term Policy Benchmark

The Implementation Benchmark is a blend of the Asset Class Benchmarks at policy weights. It is currently weighted as follows: 58% Growth Benchmark, 29% Rates & Liquidity Benchmark, 11% Inflation Sensitive & Diversifiers Benchmark, and 2% Multi-Strategy Benchmark.

The Long-Term Policy Benchmark is comprised of 57% MSCI ACWI IMI Net, 33% BOAML 5+ Years U.S. Treasury Index, 6% Bloomberg Commodity Index, and 4% BOAML 1-3 Years U.S. Inflation-Linked Treasury Index.

The Implementation Benchmark represents the retirement system's current strategic policy allocations, and thus allows for the evaluation of (1) the impact of manager selection, and (2) the impact of tactical variations away from the strategic policy allocations. The Long-Term Policy Benchmark represents the retirement system's passively-managed equivalent, and allows for evaluation of the active asset allocation decisions made across the retirement system. Taken together, these two benchmarks may provide insights as to how the retirement system is performing versus reasonably comparable hypothetical portfolios.

Part B: Other Benchmark Definitions

The Growth Benchmark is a blend of the Public Equity Benchmark, Private Equity Benchmark, Non-Core Real Estate Benchmark, & Opportunistic FI Benchmark at policy weights.

The Public Equity Benchmark is the dynamically weighted combination of the MSCI ACWI IMI Net (Long-Only) and a beta adjusted MSCI ACWI IMI Net (Hedged Equity).

The Private Equity Benchmark is comprised of the following Burgiss Group Private iQ indices: 50% Buyout, 20% Venture Capital, and 30% Special Situations and Distressed Securities.

The Non-Core Real Estate Benchmark is comprised of the following Burgiss Group Private iQ indices: 80% U.S. Non-Core Real Estate (Opportunistic and Value-Added) and 20% Non-U.S. Non-Core Real Estate (Opportunistic and Value-Added).

The Opportunistic Fixed Income Benchmark is a comprised of 50% HFRX Distressed Securities Index, 20% HFRX Relative Value Index, 15% Credit Suisse Leveraged Loan Index, and 15% BOAML High Yield Index.

The Rates & Liquidity Benchmark is a blend of the IG Fixed Income Benchmark and the Cash Benchmark at policy weights.

The IG Fixed Income Benchmark is comprised 10% iMoneyNet First Tier Institutional Money Market Funds Net Index and 90% custom BOAML Core Investment Grade Index. The custom BOAML core index comprised of the following weightings: 30% BOAML 5+ Years Governments, 35% BOAML 5+ Years Investment Grade Corporates, and 35% BOAML Mortgage Master.

The Cash Benchmark is the iMoneyNet First Tier Institutional Money Market Funds Net Index.

The Inflation Sensitive & Diversifiers Benchmark is a blend of the Inflation Sensitive Benchmark and the Core Real Estate Benchmark at policy weights.

The Inflation Sensitive Benchmark is the dynamically weighted combination of the Bank of America Merrill Lynch 1-3 Years U.S. Inflation-Linked Treasury Index (TIPS), the Bloomberg Commodities Index (Commodities), and a combination of the benchmarks of investments classified within Private Natural Resources or Other Real Assets and Diversifiers.

The Core Real Estate Benchmark is comprised of 80% NCREIF ODCE Net and 20% FTSE EPRA NAREIT Global Index.

The Multi-Strategy Benchmark is comprised of a dynamically weighted combination of the HFRX ED: Multi-Strategy Index, net of fees, and the market value weighted benchmarks for any other total fund strategies within the Portfolio.

The Escheat Alternatives Benchmark is the total blended Burgiss Private iQ Private Equity index.

COMBINING STATEMENT OF OPERATIONS - PENSION TRUST FUNDS INVESTMENT PROGRAM FOR THE SIX MONTHS ENDED DECEMBER 31, 2016 (dollars in thousands) DEPARTMENT OF STATE TREASURER

	Cash Investment		Long-term Investment Eund	External Fixed Inc. Investment	Long-Only Public Equity Investment	Hedged Public Equity Investment	Real Estate Investment Fund	Alternative Investment Fund	Other Fixed Income Inflation Protection Investment Investment Fund Fund	Inflation Protection Investment Fund	Totals
Revenues:	Land		niin r	nun r	n r			*			
Investment Income:											
Investment Earnings	\$ 55	551 \$	573,427 \$	•	\$ 755,059	\$ (2,457) \$	530,432 \$	372,684	\$ 106,504 \$	40,211 \$	2,376,411
Intra-Pool Interest Earnings	3,601	101	868	11,720	•		•	•	•	•	16,219
Income from Securities Lending		•	3,548	•	2,724	•	•	•	•	•	6,272
Commission Recapture			•	i	17			•	•	•	17
Other Income		,	•	•	1,595	•	,	1	1	,	1,595
Subtotal	4,152	52	577,873	11,720	759,395	(2,457)	530,432	372,684	106,504	40,211	2,400,514
Net Unrealized Appreciation/Depreciation	- uoi.		(1,281,364)	•	1,571,115	82,998	(169,502)	(35,384)	274,335	349,205	794,403
Total Investment Income	4,152	52	(703,491)	11,720	2,330,510	83,541	360,930	337,300	380,839	389,416	3,194,917
Expenditures:											
Treasurer's Allocated Cost			(48)	•	(83)	•	(18)	(13)	(11)	(12)	(182)
Management Fees			•	•	(18,125)	•	(39,960)	(31,731)	(26,613)	(27,575)	(144,004)
Incentive Fees				•	•	•	(13,769)	(17,430)	(7,947)	(738)	(39,884)
Placement Fees*			,	•	•	•	•	•	•	•	
Dividend Withholding Tax			•	•	(6,330)		(119)	(12)		(7)	(6,468)
Other Cost	Ů.	(75)	(1,420)	(910)	(3,585)	•	(5,838)	(12,149)	(3,738)	(3,671)	(31,386)
Total Expenditures		(35)	(1,468)	(910)	(28,123)		(59,704)	(61,335)	(38,309)	(32,003)	(221,927)
Net Investment Income	\$ 4.077	S 777	(704.959) \$	10,810 \$	\$ 2,302,387 \$	\$ 83,541 \$	301,226 \$	275,965 \$	342,530 \$	357,413 \$	2,972,990
			, 755.6.		1						
Total Investment Income Allocated:											
General Fund	\$	\$	\$	•	· ·		\$	\$		\$.	1
Highway Fund			•	•		•	•	•	•	•	ı
Highway Trust Fund			•	•	•	•	•	•	•		1
University Trust Funds			•	•		•	•	•	•	•	
Pension Trust Funds	4,077	177	(704,959)	10,810	2,302,387	83,541	301,226	275,965	342,530	357,413	2,972,990
Other Independent Trust Funds			•	•	•	•	ı	•			•
Local Political Subdivisions			Ť	•	•			•	•	,	•
Licensing Boards		,	Ì	•	•	•		•			•
Other Investment Funds		•	1	1		•		-			1
Total Investment Income Allocated	\$ 4,077	\$ 11.	(704,959) \$	10,810	\$ 2,302,387 \$	\$ 83,541 \$	301,226 \$	275,965 \$	\$ 342,530 \$	357,413 \$	2,972,990
Total Return, 12, 24, and 36 and 60 months:											
12 months	0.9	%86.0	3.54%	0.78%	7.69%	3.97%	9.08%	6.01%	7.09%	7.19%	6.26%
24 months	7.0	0.78%	1.88%	1.07%	2 210/	V /N	10.40%	8.26%	2 55%	%9Z-U-	421%
sunuom oc	0.0	0//0	4.13%	1.07.70	3.21.70	V.N	11.72/0	8 37%	7.45%	-0.8%%	7.22.7
SUIHOHHUS	4	₹.	5.0970	4.7.70	10.3070	VA.	0/4711	0/7/0	0/CF./	0.00.0-	0/07:1

* By policy and practice, neither the Department of State Treasurer nor the funds bear the cost of placement agent fees.

DEPARTMENT OF STATE TREASURER COMBINED STATEMENT OF OPERATIONS FOR THE SIX MONTHS ENDED DECEMBER 31, 2016

(dollars in thousands)

		Short-term Investment Fund	Pension Trust Funds Investment Program Subtotal*			Intrafund Eliminations	Total
Revenues:			-		•	The state of the s	
Investment Income:							
Investment Earnings	\$	88,293	\$	2,376,411	\$	- \$	2,464,704
Intra-Pool Interest Earnings		-		16,219		(16,219)	-
Income from Securities Lending		2,384		6,272		-	8,656
Commission Recapture		· _		17		_	17
Other Income		-		1,595		-	1,595
Subtotal		90,677		2,400,514	•	(16,219)	2,474,972
Net Unrealized Appreciation/Depreciation				794,403		· · ·	794,403
Total Investment Income		90,677	*****	3,194,917	•	(16,219)	3,269,375
Expenditures:						,	, ,
Treasurer's Allocated Cost		(1,497)		(185)		.	(1,682)
Management Fees		-		(144,004)		-	(144,004)
Placement Fees**		-		· -		-	-
Incentive Fees		· <u>-</u>		(39,884)		-	(39,884)
Dividend Withholding Tax		-		(6,468)		-	(6,468)
Other Cost		(1,759)		(31,386)			(33,145)
Total Expenditures		(3,256)		(221,927)	-	-	(225,183)
Net Investment Income (Loss)	\$ _	87,421 \$	\$ _	2,972,990	\$ _	(16,219) \$	3,044,192
Total Investment Income Allocated:							
General Fund	\$	25,374	\$	-	\$	- \$	25,374
Highway Fund		1,782		-		_	1,782
Highway Trust Fund		6,740		-		-	6,740
University Trust Funds		11,596		-		-	11,596
Pension Trust Funds		2,792		2,972,990		-	2,975,782
Other Independent Trust Funds		19,218		, -		-	19,218
Local Political Subdivisions		3,494		-		-	3,494
Licensing Boards		206		-		-	206
Other Investment Funds		16,219	_			(16,219)	-
Total Investment Income Allocated	\$	87,421 \$	\$	2,972,990	\$ _	(16,219) \$	3,044,192

Cash Return, Fiscal Year-to-Date (Annualized)

0.91%

^{*} Pension Trust Funds detail is included on the Combining Statement of Operations-Pension Trust Funds Investment Program.

^{**}By policy and practice, neither the Department of State Treasurer nor the funds bear the cost of placement agent fees.

DEPARTMENT OF STATE TREASURER OTHER INVESTMENT PROGRAMS DECEMBER 31, 2016

	Bond Index Fund	Equity Index Fund	Escheats Alternative Investments	General Obligation Bond Proceeds	Totals
STATEMENT OF NET POSITION					
Net Assets: Deposits in Equity Index Fund	\$ - \$	364,960 \$	- \$	- \$	364,960
Deposits in Equity Index Fund Deposits in Bond Index Fund	1,559,158	-	1_	-	1,559,158
Deposits in Alternative Investment Fund	-	-	39,072	-	39,072
Other Assets	- 1,550,150, ф	364,960 \$	39,072 \$	376,599 376,599 \$	376,599 2,339,789
Total Net Assets	\$1,559,158_\$_	364,960 \$	39,072 3	370,399 \$	2,339,789
STATEMENT OF OPERATIONS (For the Six Months Ended December 31, 2016) Revenues: Investment Income:					
Investment Tearnings	13,760	69,228	112	560	83,660
Other Income			_		-
Subtotal	13,760	69,228	112	560	83,660
Net Unrealized Appreciation/Depreciation	(64,760) (51,000)	(45,365) 23,863	2,711 2,823	560	(107,414) (23,754)
Total Investment Income Expenditures:	(31,000)	23,803	2,823	500	(23,734)
Treasurer's Allocated Cost	-	-	-	-	-
Management Fees	-	(290)	(12)	(56)	(358)
Other Cost		(290)	(67)	(56)	(67)
Total Expenditures Net Investment Income (Loss)	\$ (51,000) \$	23,573 \$	2,744 \$		
	Bond	Equity	Escheats		·
Participants in Ancillary Governmental Investment Program:	Index Fund	Index Fund	Alternatives		
City of Asheville City of Concord City of Greensboro City of Greenville City of Sanford Clean Water - Department of Environmental Quality Columbus Regional Healthcare System		•			
Community Colleges County of Dare County of Guilford		44.35.47.25.25.25.25.25.25.25.25.25.25.25.25.25.	AND ASSESSED OF THE SECOND SEC	,	
County of Union Disability Income Plan of Noth Carolina					
DMS Nutrient Offset Drinking Water - Department of Environmental Quality Ecosystem Enhancement Program Wetlands Trust			CHARLES AT LESS		
Escheats Fund Forsyth County Green ville Utilities Commission	Guidaro (2003)	ANGELIEU E	1. 改建自办官制制		
Housing Authority of the City of Raleigh Isothermal Planning and Development Commission	ment destroy of	and a second and a	Carlotter Control (Carlotter)		
Margaret R. Pardee Hospital Mecklenburg County NC Conservation Easement Endowment	第 80年代的	ngaring states of the second			
NC Employee Benefit Trust NC Student Loan Fund		A CONTRACTOR OF THE CONTRACTOR	Sancahilla ak		
New Hanover Memorial Hospital, Inc. Orange County Government Public Schools			al Proposition		
Register of Deeds Rowan-Cabarrus Community College		odnosia en la compositione			
State Property Fire Insurance Swain County Tours of Williamston					
Town of Williamston Trillium Health Resources UNC SEAA Student Loan	AND THE PARTY OF T	MARKATAN PARA	ALL CONTROL OF THE PARTY OF THE		
Watauga Medical Center, Inc. Wildlife Endowment		es posteriore	La major de l'Alle		