November 9, 2017

Delivered by: Electronic and U.S. Mail
Delivered to: Governor Roy Cooper
North Carolina General Assembly
Joint Legislative Commission on Governmental Operations
North Carolina Council of State
Charles Perusse - Office of State Budget Management, State Budget Director
Debbie Young - Office of State Budget Management, Executive Assistant to the State Budget Director Lisa Hollowell - North Carolina General Assembly - Fiscal Research

RE: Quarterly Investment Report for the Period Ended September 30, 2017
Dear Colleagues:
Attached is the Quarterly Investment Report for the state pension fund (Fund) for the period ending September 30, 2017. We continue to be intently focused on reducing cost and complexity, increasing transparency and accountability, and building value across the divisions of the Department of State Treasurer.

The attached report provides detailed information I hope you will find valuable. I am aware of your time constraints, so I wanted to provide you with the following highlights of the report that you may find helpful.

Specifically:

- Investment Performance - 3rd Quarter 2017

The Fund, comprised of the retirement plans the Department of State Treasurer manages, reported gains of 3.0 percent for the quarter. Pension fund assets were valued at $\$ 96.1$ billion, up from $\$ 94.1$ billion at the end of the second quarter of 2017. During the third quarter the Fund hit its all-time highest valuations. These figures, and all of the following performance figures, are reported net of all fees and expenses.

- Fee Reductions

We continue to make significant progress toward my pledge of cutting $\$ 100$ million in management fees by the end of my first term. To date, we have identified more than $\$ 67$ million in annual cost savings with a $\$ 268$ million run-rate over four years. In addition, our Investment Management Division launched a new management capability in November 2017, with $\$ 100$ million in passive indexing funds now being managed in-house as a means of reducing fees paid to outside investment managers. Performance of those funds will be maintained as measured against the Russell Top 200 index strategy and the Russell Mid Cap index strategy.

- Retirement Systems among Top Five in U.S.

In October 2017, S\&P Global rated North Carolina's Retirement Systems among the five highest-funded pension plans in the country. The report credited proactive management and funding discipline for keeping the state's liabilities manageable. This ranking is a credit to the monies contributed by state and local employees, taxpayers, through the North Carolina General Assembly and to the investment gains made by the Investment Management Division of the Office of State Treasurer.

Thank you all for your support of the Department of State Treasurer. We will continue to look for opportunities to reduce complexity, increase value, and protect the futures of the 900,000 North Carolinians who rely on our retirement systems.

Warmest Regards,


Dale R. Folwell, CPA
North Carolina State Treasurer

## Outline

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 September 30, 2017. 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 Procedures

# Quarterly Investment Report for the Period ending September 30, 2017 

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

## A. Market Environment Context

For the quarter ended September 30, 2017, Gross Domestic Product (GDP) adjusted for inflation and seasonality increased at a rate of $3.0 \%$, which was above expectations. The unemployment rate also improved, decreasing further to $4.2 \%$. Consumer price inflation gained some momentum, increasing $2.2 \%$ year over year, while core consumer price inflation (i.e., removing the volatile food and energy sectors), remained steady at $1.7 \%$ year over year for the fifth month in a row. Favorable economic data and strong second-quarter earnings reports supported US equity markets throughout the quarter. International equity markets fared even better than US markets, with European and emerging markets seeing some of the largest gains. These gains were further advanced in Dollar terms with an appreciation of the Euro, Pound Sterling, and some emerging market currencies against the Dollar during the quarter. Oil prices trended higher, ending the quarter at roughly $\$ 52$ (WTI). The US Federal Reserve ("Fed") held short-term interest rates steady during the quarter, but "dots" projections reiterated the expectation of one more rate hike before the end of calendar year 2017. Intermediateto long-term US rates moved downward for most of the quarter, driven largely by rising geopolitical tensions between the US and North Korea. However, this fall in longer-term yields was largely reversed in September as geopolitical tensions lessened, the US debt ceiling was pushed back, and the Fed announced that it would begin to gradually unwind its balance sheet beginning in October. Corporate bonds outperformed their government-related counterparts, with high-yield (noninvestment grade) corporate debt outperforming higher-rated securities. Mortgage-backed securities also slightly outperformed government bonds, as refinancing activity remained relatively muted amidst low mortgage rates.
B. Retirement Systems [147-69.12(a)(5)(a,b)]
i. Total Fund (Investment Program) Performance for Periods Ending September 30, 2017 (\%; Periods Greater than 1 Year are Annualized)


The assumed actuarial investment return of the plan is the discount rate used to calculate the total pension liability as measured in the annual actuarial valuation. 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) | 3 Mo | 1 Yr | 3 Yr | 5 Yr | 10 Yr | 15 Yr | 20 Yr |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Growth | 50,980,479 | 4.69 | 16.41 | 7.82 | 10.78 | 4.61 | 8.81 | 6.41 |
| Benchmark |  | 4.21 | 15.22 | 6.73 | 9.46 | 3.84 | 8.32 | 5.76 |
| Public Equity | 37,156,420 | 5.72 | 19.01 | 8.00 | 11.13 | 4.88 | 9.00 | 6.50 |
| Benchmark |  | 5.04 | 17.75 | 7.37 | 10.19 | 4.13 | 8.38 | 5.68 |
| Private Equity | 4,891,720 | 2.88 | 10.18 | 8.22 | 9.93 | 6.00 | 6.98 | 6.76 |
| Benchmark |  | 3.37 | 11.51 | 6.63 | 10.41 | 7.14 | 11.03 | 12.17 |
| Non-Core Real Estate | 3,447,285 | 2.76 | 10.73 | 13.59 | 14.03 | 2.67 | 6.55 | 8.17 |
| Benchmark |  | 2.67 | 7.50 | 6.70 | 9.22 | (0.15) | 7.06 | 8.01 |
| Opportunistic Fixed Income | 5,485,054 | 0.96 | 8.61 | 2.50 | 6.50 | 6.68 | - | - |
| Benchmark |  | 0.62 | 6.99 | 2.32 | 2.88 | 0.38 | - | - |
| Rates \& Liquidity | 32,148,130 | 0.94 | (0.04) | 3.02 | 2.36 | 5.67 | 5.29 | 6.19 |
| Benchmark |  | 0.96 | (0.23) | 3.29 | 2.44 | 5.42 | 5.12 | 5.99 |
| IG Fixed Income \& Cash | 28,628,268 | 1.02 | 0.11 | 3.17 | 2.47 | 5.73 | 5.33 | 6.22 |
| Benchmark |  | 0.98 | (0.27) | 3.39 | 2.50 | 5.45 | 5.14 | 6.01 |
| Pension Cash | 3,519,862 | 0.30 | 1.05 | 0.83 | - | - | - | - |
| Benchmark |  | 0.25 | 0.73 | 0.32 | 0.21 | - | - | - |
| Inflation Sensitive \& Diversifiers | 11,143,991 | 1.28 | 8.28 | 3.47 | 3.68 | 0.57 | 4.05 | 5.24 |
| Benchmark |  | 1.24 | 4.53 | 3.38 | 3.39 | (0.51) | 3.88 | 5.55 |
| Inflation Sensitive | 6,429,109 | 0.62 | 8.20 | (0.30) | (0.33) | (1.46) | 3.19 | 3.54 |
| Benchmark |  | 0.73 | 2.94 | (1.91) | (1.89) | 0.78 | 4.29 | 4.61 |
| Core Real Estate | 4,714,882 | 2.26 | 8.57 | 8.81 | 9.66 | 4.17 | 6.57 | 7.20 |
| Benchmark |  | 1.85 | 6.47 | 9.96 | 10.30 | 4.38 | 7.26 | 8.12 |
| Multi-Strategy | 1,821,600 | 2.68 | 11.95 | 5.81 | 8.74 | 5.63 | 6.19 | - |
| Benchmark |  | 2.89 | 11.26 | 4.70 | 8.01 | 4.75 | 7.73 | - |
| Total Pension Plan | 96,094,201 | 2.99 | 10.18 | 5.91 | 7.39 | 5.17 | 7.41 | 6.50 |
| Implementation Benchmark |  | 2.91 | 9.30 | 5.40 | 6.52 | 4.58 | 7.06 | 6.17 |
| Long-Term Policy Benchmark |  | 3.37 | 9.00 | 5.11 | 6.04 | 4.37 | 7.58 | 6.05 |
| Actuarial Assumed Investment Return |  | 1.75 | 7.20 | 7.20 | 7.20 | 7.20 | 7.20 | 7.20 |

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 September 30, 2017, STIF had the following characteristics:

| Total Assets | Duration | 3-Month Return | Benchmark 3- <br> Month Return | Crediting Rate | Fees |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\$ 23.3$ billion | 1.07 years | $0.30 \%$ | $0.25 \%$ | $1.24 \%$ | 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 September 30, 2017 was $\$ 169.7$ 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 September 30, 2017, BIF had the following characteristics:

| Total Assets | Duration | 3-Month Return | Benchmark 3- <br> Month Return | Crediting Rate | Fees |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\$ 1.6$ billion | 5.74 years | $0.86 \%$ | $0.85 \%$ | N/A | 2.5 bps on first <br> $\$ 750$ million; <br> 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 September 30, 2017, EIF had the following characteristics:

| Total Assets | Duration | 3-Month Return | Benchmark 3- <br> Month Return | Crediting Rate | Fees |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\$ 444.5$ million | N/A | $5.25 \%$ | $5.18 \%$ | 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), 147-69.2A(b)]

As of September 30, 2017, the Escheat Investment Fund had $\$ 559.6$ million in total assets. $\$ 393.4$ million of this was invested in STIF and $\$ 122.0$ million was invested in BIF.

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 September 30, 2017, the Escheat Fund held $\$ 44.2$ million in these types of investments. Performance data for these assets are shown below:

|  | Market Value (\$000) | $\mathbf{3}$ Month | $\mathbf{1 Y y}$ | $\mathbf{3}$ Yr | $\mathbf{5}$ Yr | $\mathbf{1 0}$ Yr |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Escheats Alternatives | 44,169 | 0.87 | 4.88 | 1.32 | 6.94 | 4.66 |
| Benchmark |  | 3.67 | 11.28 | 8.38 | 12.10 | 8.10 |

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.

In addition, pursuant to G.S. 147-69.2A9 and G.S. 147-69.2(b)12(c) the State Treasurer is required to invest $10 \%$ of the Escheat Fund through the Venture Capital Multiplier Fund. This is included in the $20 \%$ limit laid out in G.S. 14769.2(b)(12). The Venture Capital Multiplier Fund is administered by a third party professional investment management firm selected following a public procurement process by designees from the Governor's Office, Department of State Treasurer, the Speaker of the House of Representatives, and the President Pro Tempore of the Senate. This fund was originally created in November 2016. Performance and investment information through the most recent quarter-end are as follows:

|  | Market Value | Commitment | Unfunded | IRR $^{1}$ | TVPI $^{2}$ | Distributions $^{\text {DPI }}{ }^{3}$ |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Venture Capital Multiplier Fund | $\mathbf{9 , 9 0 8 , 9 9 2}$ | $\mathbf{6 0 , 0 0 0 , 0 0 0}$ | $\mathbf{4 8 , 9 5 3 , 1 4 5}$ | $\mathbf{- 1 9 . 0 1 \%}$ | $\mathbf{0 . 8 8}$ | 0 | N/A |

${ }^{1}$ Internal rate of return; ${ }^{2}$ Total value to paid in capital, or the sum of (distributions + ending value) divided by the total paid in or funded capital; ${ }^{3}$ Distributions to paid in capital, or distributions divided by the total paid in or funded capital
Note: Returns may reflect higher costs and lower returns in earlier years.

## 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 prescribes 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:

| General Statute § 147-69.2 |  | Statutory Asset Classifications |  |
| :--- | :--- | :--- | :--- |
| $\mathrm{b}(1)-(6)^{1}$ | At least 20\% | STIF | IPS |
|  |  | Bank Balances |  |
|  |  | External Fixed Income | Opportunistic Fixed Income |
|  | Long-Term Fixed Income | Core Real Estate |  |
| $\mathrm{b}(6 \mathrm{c})$ | No more than 7.5\% | Other Fixed Income | Non-Core Real Estate |
| $\mathrm{b}(7)$ | No more than $10 \%$ | Real Estate | Public Equity |
| $\mathrm{b}(8)$ |  | Public Equity | Public Equity |
| $\mathrm{b}(8)(\mathrm{b})$ | No more than $8.5 \%$ | Public Equity Limited Liability | Private Equity |
| $\mathrm{b}(9)$ | No more than $8.75 \%$ | Alternatives | Multi-Strategy |
| $\mathrm{b}(9 \mathrm{a})$ | No more than $7.5 \%$ | Inflation Protection |  |

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) |  |  |  |  |  |  |  |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Public Equity ${ }^{1}$ | $\operatorname{Long}_{2}$ Term | Cash ${ }^{2}$ | External <br> Fixed Income ${ }^{2}$ | $\underset{3}{\text { Alternatives }}$ | Real Estate | Inflation Protection ${ }^{5}$ | Other Fixed Income ${ }^{6}$ | Public Equity Limited Liability ${ }^{7}$ |  |
|  | Public Equity | \$33,630 |  |  |  |  |  |  |  | \$3,526 | \$37,156 |
| . | Private Equity |  |  |  |  | \$4,892 |  |  |  |  | 4,892 |
| $\overline{2}$ | Non-Core Real Estate |  |  |  |  |  | \$3,447 |  |  |  | 3,447 |
| $\stackrel{5}{6}$ | Opportunistic Fixed Income |  |  |  |  |  |  |  | \$5,485 |  | 5,485 |
| - | IG Fixed Income |  | \$25,637 |  | \$2,991 |  |  |  |  |  | 28,628 |
| 是 | Cash |  |  | \$3,520 |  |  |  |  |  |  | 3,520 |
| \% | Inflation Sensitive |  |  |  |  |  |  | \$6,429 |  |  | 6,429 |
| 0 | Core Real Estate |  |  |  |  |  | 4,715 |  |  |  | 4,715 |
|  | Multi-Strategy |  |  |  |  | 1,822 |  |  |  |  | 1,822 |
|  | Total | \$33,630 | \$25,637 | \$3,520 | \$2,991 | \$6,713 | \$8,162 | \$6,429 | \$5,485 | \$3,526 | \$96,094 |

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

|  |  | Vehicles |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Short Term Investment Fund | Bond Index Fund | Equity Index Fund | Long-Term Investment Fund (QIB) |
|  | Retirement Systems | $\bullet$ |  |  | $\bullet$ |
|  | Cash Management Programs | $\bullet$ |  |  |  |
|  | Ancillary Governmental Participant Investment Program | $\bullet$ | $\bullet$ | $\bullet$ |  |
|  | Escheats Fund | $\bullet$ | $\bullet$ |  |  |

## C. Statutory Compliance - Statutory Asset Classes [147-69.12(a)(5)(c)], [14769.12(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 <br> Percentage of Fund | Percentage of Total <br> Assets Invested | Compliant |
| :--- | :--- | :--- | :---: |

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, 2017.

## 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 2016, 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 8.5 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 2016 NCRS Costs of Investment Operations Compared to Peers 

(Expressed in basis points where $\mathbf{5 0}$ basis points equals $\mathbf{0 . 5 0 \%}$ )
Total (Basis Points)
Median Peer 59.0
North Carolina Retirement Systems 50.5
Percentile 38\%
Source: CEM [Cost Effectiveness Measurement] Benchmarking Inc., The peer group consists of 14 U.S. public pension funds managing from $\$ 44$ billion to $\$ 170$ billion. The median peer managed $\$ 71$ billion versus NCRS' $\$ 88$ 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 <br> AS OF SEPTEMBER 30, 2017

(dollars in thousands)

| Summary of Bank Balances |  |  |  |
| ---: | :--- | ---: | :---: |
| Balance as of 06/30/2017 | $\$$ | $\mathbf{2 3 9 , 8 4 6}$ |  |
| Total Receipts | $\$$ | $46,019,854$ |  |
| Total Payments | $\$$ | $46,090,030$ |  |
| Balance as of 09/30/2017 | $\$$ | $\mathbf{1 6 9 , 6 7 0}$ |  |


| Bank Balances as of September 30, 2017 |  |  |
| :--- | :--- | ---: |
| Bank | Bank Balance |  |
| Wells Fargo | $\$$ | 49,896 |
| Bank of America | $\$$ | 19,008 |
| SunTrust | $\$$ | 4,826 |
| PNC | $\$$ | 405 |
| First Citizens | $\$$ | 3,986 |
| BB\& T | $\$$ | 14,861 |
| Asheville Savings Bank | $\$$ | 750 |
| Pinnacle Bank | $\$$ | 850 |
| Bank of Tennessee | $\$$ | 2 |
| Bank of the Ozarks | $\$$ | 1,500 |
| Capital Bank | $\$$ | 5,218 |
| Entegra Bank | $\$$ | 2,000 |
| Fidelity Bank | $\$$ | 8,338 |
| First Bank | $\$$ | 11,028 |
| First Federal Savings Bank | $\$$ | 1,000 |
| First National Bank | $\$$ | 10,348 |
| Four Oaks Bank | $\$$ | 850 |
| HomeTrust Bank | $\$$ | 1,000 |
| KS Bank | $\$$ | 100 |
| Lumbee Guaranty Bank | $\$$ | 2,750 |
| M\&F Bank | $\$$ | 2,250 |
| Peoples Bank | $\$$ | 1,000 |
| South State Bank | $\$$ | 1,085 |
| Southern Bank \& Trust | $\$$ | 13,027 |
| Surrey Bank | $\$$ | 750 |
| TD Bank | $\$$ | 1,500 |
| Townebank | $\$$ | 2,000 |
| Union Bank | $\$$ | 955 |
| United Community Bank | $\$$ | 6,387 |
| Uwharrie Bank | $\$$ | 2,000 |
| Total* | $\$$ | $\mathbf{1 6 9 , 6 7 0}$ |
|  |  |  |

*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

|  | Short-term <br> Investment <br> Fund |  | *Pension Trust Funds Investment Program Subtotal |  | Intrafund <br> Eliminations |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Assets: |  |  |  |  |  |  |  |  |
| Investment Securities: |  |  |  |  |  |  |  |  |
| Cash Equivalents | \$ | - | \$ | - | \$ | - | \$ | - |
| Certificates of Deposit |  | 10,600 |  | - |  | - |  | 10,600 |
| Repurchase Agreements |  | 1,695,000 |  | - |  | - |  | 1,695,000 |
| U.S. Treasury Bills/ Notes/ Bonds |  | 9,281,506 |  | 6,863,154 |  | - |  | 16,144,660 |
| U.S. Government Agency Notes/ Bonds |  | 12,035,924 |  | 749,593 |  | - |  | 12,785,517 |
| GNMA Certificates |  | - |  | 9,028,398 |  | - |  | 9,028,398 |
| Corporate Obligations |  | - |  | 9,236,935 |  | - |  | 9,236,935 |
| Other Investments |  | - |  | 362,144 |  | - |  | 362,144 |
| Investments in Equity Securities |  | - |  | 23,792 |  | - |  | 23,792 |
| Investments in Equity Trusts \& Limited Liability Entities* |  | - |  | 37,156,420 |  | - |  | 37,156,420 |
| Investments in Real Estate Trust Funds \& Partnerships |  | - |  | 8,162,167 |  | - |  | 8,162,167 |
| Investments in Alternative Partnerships |  | - |  | 6,689,529 |  | - |  | 6,689,529 |
| Investments in Credit Partnerships |  | - |  | 5,485,054 |  | - |  | 5,485,054 |
| Investments in Inflation Partnerships and Other Invest. |  | - |  | 5,837,862 |  | - |  | 5,837,862 |
| Total Investment Securities | \$ | 23,023,030 | \$ | 89,595,048 | \$ | - | \$ | 112,618,078 |
| Cash in Bank |  | 169,670 |  | - |  | - |  | 169,670 |
| Deposits in Short-term Investment Fund |  | - |  | 6,308,530 |  | $(6,308,530)$ |  | - |
| Other Assets, Net of Liabilities |  | 94,312 |  | 190,623 |  | - |  | 284,935 |
| Total Net Assets | \$ | 23,287,012 | \$ | 96,094,201 | \$ | $\underline{(6,308,530)}$ | \$ | 113,072,683 |
| Participant Equity: |  |  |  |  |  |  |  |  |
| General Fund | \$ | 4,964,438 | \$ | - | \$ | - | \$ | 4,964,438 |
| Other Funds Which Earn Interest for General Fund |  | 1,849,500 |  | - |  | - |  | 1,849,500 |
| Highway Fund |  | 486,564 |  | - |  | - |  | 486,564 |
| Highway Trust Fund |  | 1,702,510 |  | - |  | - |  | 1,702,510 |
| University Trust Funds |  | 2,487,370 |  | - |  | - |  | 2,487,370 |
| Pension Trust Funds |  | 403,391 |  | 96,094,201 |  | - |  | 96,497,592 |
| Other Independent Trust Funds |  | 4,297,595 |  | - |  | - |  | 4,297,595 |
| Local Political Subdivisions |  | 743,819 |  | - |  | - |  | 743,819 |
| Licensing Boards |  | 43,295 |  | - |  | - |  | 43,295 |
| Other Investment Funds |  | 6,308,530 |  | - |  | $(6,308,530)$ |  | - |
| Total Participant Equity | \$ | 23,287,012 | \$ | 96,094,201 | \$ | $(6,308,530)$ | \$ | 113,072,683 |
| Percent of Total |  | 20.59\% |  | 84.99\% |  | -5.58\% |  | 100.00\% |

[^0]DEPARTMENT OF STATE TREASURER
COMBINING STATEMENT OF NET POSITION - PENSION TRUST FUNDS INVESTMENT PROGRAM
SEPTEMBER 30, 2017
(dollars in thousands)

# DEPARTMENT OF STATE TREASURER 

## OTHER INVESTMENT PROGRAMS

SEPTEMBER 30, 2017
(dollars in thousands)


# DEPARTMENT OF STATE TREASURER <br> COMBINED STATEMENT OF OPERATIONS FOR THE THREE MONTHS ENDED SEPTEMBER 30, 2017 

Unaudited
(dollars in thousands)

|  | Short-term Investment Fund |  | Pension Trust Funds Investment Program Subtotal* |  | Intrafund <br> Eliminations |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Revenues: |  |  |  |  |  |  |  |
| Investment Income: |  |  |  |  |  |  |  |
| Investment Earnings | \$ | 70,802 | \$ | 1,558,685 | \$ | \$ | 1,629,487 |
| Intra-Pool Interest Earnings |  | - |  | 18,748 |  | $(18,748)$ | - |
| Income from Securities Lending |  | 293 |  | 1,965 |  | - | 2,258 |
| Commission Recapture |  | - |  | - |  | - | - |
| Other Income |  | - |  | 2,049 |  | - | 2,049 |
| Subtotal |  | 71,095 |  | 1,581,447 |  | $(18,748)$ | 1,633,794 |
| Net Unrealized Appreciation/Depreciation |  |  |  | 1,252,004 |  | - | 1,252,004 |
| Total Investment Income |  | 71,095 |  | 2,833,451 |  | $(18,748)$ | 2,885,798 |
| Expenditures: |  |  |  |  |  |  |  |
| Treasurer's Allocated Cost |  | (703) |  | (36) |  | - | (739) |
| Management Fees |  | - |  | $(20,984)$ |  | - | $(20,984)$ |
| Placement Fees** |  | - |  | - |  | - | - |
| Incentive Fees |  | - |  | (343) |  | - | (343) |
| Dividend Withholding Tax |  | - |  | $(4,636)$ |  | - | $(4,636)$ |
| Other Cost |  | (959) |  | $(12,531)$ |  | - | $(13,490)$ |
| Total Expenditures |  | $(1,662)$ |  | $(38,530)$ |  | - | $(40,192)$ |
| Net Investment Income (Loss) | \$ | 69,433 \$ | \$ | 2,794,921 | \$ | $(18,748)$ \$ | 2,845,606 |
| Total Investment Income Allocated: |  |  |  |  |  |  |  |
| General Fund | \$ | 20,236 | \$ | - | \$ | \$ | 20,236 |
| Highway Fund |  | 1,400 |  | - |  | - | 1,400 |
| Highway Trust Fund |  | 5,169 |  | - |  | - | 5,169 |
| University Trust Funds |  | 6,995 |  | - |  | - | 6,995 |
| Pension Trust Funds |  | 2,135 |  | 2,794,921 |  | - | 2,797,056 |
| Other Independent Trust Funds |  | 12,420 |  | - |  | - | 12,420 |
| Local Political Subdivisions |  | 2,200 |  | - |  | - | 2,200 |
| Licensing Boards |  | 130 |  | - |  | - | 130 |
| Other Investment Funds |  | 18,748 |  | - |  | $(18,748)$ | - |
| Total Investment Income Allocated | \$ | 69,433 \$ | \$ | 2,794,921 | \$ | $(18,748)$ \$ | 2,845,606 |

## Cash Return, Fiscal Year-to-Date (Annualized) 1.20\%

[^1]* By policy and practice, neither the Department of State Treasurer nor the funds bear the cost of placement agent fees.


## 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\% Distressed.

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

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.

## Part C: Definitions and Procedures

The Department of State Treasurer provides the following information on its internal procedures for submitting statutorily required reports, and definitions of terms used within this report.

## 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.
(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.
(4) "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.


[^0]:    *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

[^1]:    *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.

