



**STATE OF TENNESSEE
COMPTROLLER OF THE TREASURY**

**DEPARTMENT OF THE TREASURY
TENNESSEE CONSOLIDATED RETIREMENT
SYSTEM**

Financial and Compliance Audit Report

For the Year Ended June 30, 2016

Justin P. Wilson, Comptroller



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March 10, 2017

Members of the General Assembly
Members of the Board of Trustees
The Honorable David H. Lillard, Jr., Treasurer

Ladies and Gentlemen:

Transmitted herewith is the financial and compliance audit of the Tennessee Consolidated Retirement System for the year ended June 30, 2016. You will note from the independent auditor's report that an unmodified opinion was given on the fairness of the presentation of the financial statements.

Consideration of internal control over financial reporting and tests of compliance disclosed a deficiency, which is detailed in the Finding and Recommendation section of this report. The system's management has responded to the audit finding; the response is included following the finding. The Division of State Audit will follow up the audit to examine the application of the procedures instituted because of the audit finding.

Sincerely,

Deborah V. Loveless, CPA
Director

Audit Report
Tennessee Consolidated Retirement System
For the Year Ended June 30, 2016

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State of Tennessee

Audit Highlights

Comptroller of the Treasury

Division of State Audit

Financial and Compliance Audit

Tennessee Consolidated Retirement System

For the Year Ended June 30, 2016

Opinion on the Financial Statements

The opinion on the financial statements is unmodified.

Audit Finding

Internal controls were not sufficient for the Tennessee Consolidated Retirement System information system

The Tennessee Consolidated Retirement System did not design and monitor internal controls in specific areas. The details of this finding are confidential pursuant to Section 10-7-504(i), *Tennessee Code Annotated* (page 29).



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Independent Auditor's Report

Members of the General Assembly
Members of the Board of Trustees
The Honorable David H. Lillard, Jr., Treasurer

Report on the Financial Statements

We have audited the accompanying financial statements of the Tennessee Consolidated Retirement System, pension trust funds of the State of Tennessee, as of and for the year ended June 30, 2016, and the related notes to the financial statements, which collectively comprise the Tennessee Consolidated Retirement System's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness

of accounting principles used and reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion. Tennessee statutes, in addition to audit responsibilities, entrust certain other responsibilities to the Comptroller of the Treasury. Those responsibilities include serving as a member of the board of trustees of the Tennessee Consolidated Retirement System. We do not believe that the Comptroller's service in this capacity affected our ability to conduct an independent audit of the Tennessee Consolidated Retirement System.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Tennessee Consolidated Retirement System as of June 30, 2016, and the changes in fiduciary net position thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matter

As discussed in Note A, the financial statements present only the Tennessee Consolidated Retirement System, pension trust funds, and do not purport to, and do not, present fairly the financial position of the State of Tennessee as of June 30, 2016, and the changes in its financial position for the year then ended in conformity with accounting principles generally accepted in the United States of America. Our opinion is not modified with respect to this matter.

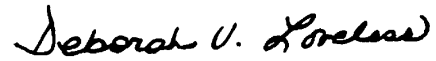
Other Matter - Required Supplementary Information

Accounting principles generally accepted in the United States of America require that management's discussion and analysis, the schedules of changes in net pension liability, the schedules of net pension liability, the schedule of investment returns, and the schedules of pension plan contributions be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, which considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated December 21, 2016, on our consideration of the Tennessee Consolidated Retirement System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and other matters. The purpose of that report is to describe

the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Tennessee Consolidated Retirement System's internal control over financial reporting and compliance.



Deborah V. Loveless, CPA
Director
December 21, 2016

MANAGEMENT'S DISCUSSION AND ANALYSIS FOR THE YEAR ENDED JUNE 30, 2016

The Management of the Tennessee Consolidated Retirement System (TCRS) provides this discussion and analysis as an overview of the TCRS' financial activities for the fiscal year ended June 30, 2016. This section should be read in conjunction with the Independent Auditor's Report, the audited financial statements, and the accompanying notes.

The assets of TCRS were transferred to the Tennessee Retiree Group Trust (TRGT) for investment purposes during fiscal year 2016. Detailed information on the TRGT can be found on pages 46-62 of the Tennessee Consolidated Retirement System *Comprehensive Annual Financial Report*.

FINANCIAL HIGHLIGHTS

- The net position for the TCRS plans (total assets minus total liabilities) at June 30, 2016 was \$43.3 billion, increasing \$0.1 billion (0.1 percent) from the plan net position at June 30, 2015. The net position is restricted for future benefit obligations. This increase in plan net position is mainly due to an increase in contribution revenue.
- Net investment income for fiscal year 2016 was \$1.1 billion. During fiscal year 2016, the TCRS received a time-weighted rate of return on its portfolio of 2.8 percent, compared to 3.3 percent for fiscal year 2015.
- Contribution revenue for fiscal year 2016 totaled \$1.3 billion, representing an increase of 0.8 percent compared to fiscal year 2015.
- Total benefits and refunds paid for fiscal year 2016 were \$2.4 billion, representing an increase of 5.3 percent over fiscal year 2015 total benefits and refunds paid of \$2.3 billion. The growth is primarily due to the retiring members' benefits exceeding the benefits of long-term retired members whose benefits ceased due to death. Additionally, a 1.0 percent cost of living adjustment was given in July 2015.
- Total administrative expenses for fiscal year 2016 were \$20.2 million, representing an increase of 34 percent from fiscal year 2015 administrative expenses of \$15.1 million.

OVERVIEW OF THE FINANCIAL STATEMENTS

The TCRS financial statements consist of the *Statement of Fiduciary Net Position*, the *Statement of Changes in Fiduciary Net Position*, and the *Notes to the Financial Statements*. In addition, *Required Supplementary Information* and the *Notes to the Required Supplementary Information* are presented, which includes this *Management's Discussion and Analysis*. These financial statements, notes to the financial statements, and required supplementary information were prepared in conformity with GASB Statement No. 67, *Financial Reporting for Pension Plans*. Collectively, this information presents the combined net position held in trust for pensions for each of the plans administered by TCRS as of June 30, 2016.

The *Statement of Fiduciary Net Position* and the *Statement of Changes in Fiduciary Net Position* report information about the fiduciary net position (total assets in excess of total liabilities) as of the end of the fiscal year and the changes in the fiduciary net position during the fiscal year. These statements include all assets and liabilities using the accrual basis of accounting. Under the accrual basis of accounting, the current year's revenues and expenses are included in the financial activity, regardless of when cash is received or paid. The difference between the total assets and total liabilities on the *Statement of Fiduciary Net Position*, or net position restricted for pensions, provides a measurement of the financial position of the TCRS as of the end of the fiscal year. The *Statement of Changes in*

**MANAGEMENT'S DISCUSSION AND ANALYSIS
FOR THE YEAR ENDED JUNE 30, 2016 (CONTINUED)**

Fiduciary Net Position provides information on the activities that caused the financial position to change during the fiscal year. Over time, increases or decreases in the fiduciary net position of the TCRS are one indicator of whether the system's financial health is improving or deteriorating.

The *Notes to the Financial Statements* are essential to the reader's understanding of the financial statements and provide additional information regarding the TCRS, such as descriptions of the plans administered by the TCRS, including contribution and benefit provisions, and information about the accounting policies and investment activities.

ANALYSIS OF ASSETS, LIABILITIES, AND PLAN NET POSITION

At June 30, 2016, the TCRS had a net position (total assets in excess of total liabilities) of \$43.3 billion, an increase of \$0.1 billion (0.1 percent) from \$43.2 billion at June 30, 2015. The assets of the TCRS consist primarily of investments. Condensed financial information comparing the TCRS' fiduciary net position for the past two fiscal years follows:

FIDUCIARY NET POSITION

| | <u>June 30, 2016</u> | <u>June 30, 2015</u> | Increase (Decrease) <u>Amount</u> | Percentage <u>Change</u> |
|---|-------------------------|-------------------------|---|-----------------------------|
| ASSETS | | | | |
| Cash and cash equivalents | \$24,779,761 | \$445,811,146 | (\$421,031,385) | (94.4)% |
| Cash collateral for securities on loan | 7,514,864,420 | 5,892,943,764 | \$1,621,920,656 | 27.5% |
| Member and employer receivables | 100,314,218 | 100,955,668 | (\$641,450) | (0.6)% |
| Investments | 43,182,757,359 | 42,693,844,430 | \$488,912,929 | 1.1% |
| Capital assets | <u>28,034,008</u> | <u>31,747,896</u> | <u>(\$3,713,888)</u> | (11.7)% |
| TOTAL ASSETS | <u>50,850,749,766</u> | <u>49,165,302,904</u> | <u>1,685,446,862</u> | 3.4% |
| LIABILITIES | | | | |
| Death benefits, refunds and other payables | 29,676,046 | 28,418,554 | \$1,257,492 | 4.4% |
| Cash collateral for securities on loan | <u>7,514,864,420</u> | <u>5,892,943,764</u> | <u>1,621,920,656</u> | 27.5% |
| TOTAL LIABILITIES | <u>7,544,540,466</u> | <u>5,921,362,318</u> | <u>1,623,178,148</u> | 27.4% |
| NET POSITION RESTRICTED FOR PENSIONS | <u>\$43,306,209,300</u> | <u>\$43,243,940,586</u> | <u>\$62,268,714</u> | 0.14% |

**MANAGEMENT'S DISCUSSION AND ANALYSIS
FOR THE YEAR ENDED JUNE 30, 2016 (CONTINUED)**

ANALYSIS OF REVENUES AND EXPENSES

Employer contribution rates for the TCRS did not change during fiscal year 2016; therefore, the 0.8 percent increase in contributions from fiscal year 2015 to fiscal year 2016 was due to increases in salaries. Gross investment income for fiscal year 2016 decreased \$170 million (12.8 percent) over fiscal year 2015.

Investment expenses for fiscal year 2016 totaled \$66 million for a 21.1 percent increase over fiscal year 2015. These expenses were split between portfolio management investment expenses of \$48.2 million and \$17.9 million in expenses attributed to the securities lending program. The TCRS investment portfolio earned a time-weighted rate of return of 2.8 percent and net investment income of \$1.1 billion.

Total benefits, paid during the year ended June 30, 2016 were \$2.3 billion, an increase of 5.3 percent over fiscal year 2015 total benefits, which can be attributed to an increase in the number of retirees and a 1.0 percent cost of living adjustment given in July 2015. Total refunds paid decreased \$2.6 million, a decrease of 5.6 percent, in fiscal year 2016 from fiscal year 2015. The increase in 2015 was attributed to the change in structure of two large employers where the members of these employers chose to withdraw their funds when they were not rehired by the new employer. The amount of refunds for fiscal year 2016 is more closely reflective of the refunds in normal course of business.

Administrative expenses for the year ended June 30, 2016 were \$20.2 million, an increase of 34.0 percent from fiscal year 2015 administrative expenses. Since implementation of the new pension benefit system, Concord, at the beginning of fiscal year 2015, there have been further costs with improving the reporting and operations of Concord. These costs were expensed as incurred during fiscal year 2016 and have resulted in an increase of \$5.1 million in the current year.

Condensed financial information comparing the TCRS' revenues and expenses for the past two fiscal years follows:

Revenue by Type

(expressed in thousands)

| | <u>Year ended June 30, 2015</u> | | <u>Year ended June 30, 2016</u> | |
|------------------------|---------------------------------|-------------------|---------------------------------|-------------------|
| | <u>Amount</u> | <u>% of Total</u> | <u>Amount</u> | <u>% of Total</u> |
| Employee Contributions | 274,532 | 10.6% | 294,538 | 12.1% |
| Employer Contributions | 1,011,445 | 38.9% | 1,000,586 | 41.0% |
| Other Contributions | 384 | 0.0% | 2,158 | 0.1% |
| Net Investment Income | <u>1,311,262</u> | <u>50.5%</u> | <u>1,143,160</u> | <u>46.8%</u> |
| Total | <u>2,597,623</u> | <u>100.0%</u> | <u>2,440,442</u> | <u>100.0%</u> |

Expenditures by Type

(expressed in thousands)

| | <u>Year ended June 30, 2015</u> | | <u>Year ended June 30, 2016</u> | |
|------------------|---------------------------------|-------------------|---------------------------------|-------------------|
| | <u>Amount</u> | <u>% of Total</u> | <u>Amount</u> | <u>% of Total</u> |
| Benefit Payments | 2,195,814 | 97.2% | 2,312,706 | 97.3% |
| Refunds | 47,961 | 2.1% | 45,288 | 1.9% |
| Administrative | <u>15,064</u> | <u>0.7%</u> | <u>20,180</u> | <u>0.8%</u> |
| Total | <u>2,258,839</u> | <u>100.0%</u> | <u>2,378,174</u> | <u>100.0%</u> |

MANAGEMENT'S DISCUSSION AND ANALYSIS
FOR THE YEAR ENDED JUNE 30, 2016 (CONTINUED)

CHANGES IN FIDUCIARY NET POSITION

| | For the Year Ended <u>June 30, 2016</u> | For the Year Ended <u>June 30, 2015</u> | FY16 - FY15 Increase (Decrease) <u>Amount</u> | FY16-FY15 Percentage <u>Change</u> |
|---|--|--|--|--|
| ADDITIONS | | | | |
| Contributions | <u>\$1,297,282,137</u> | <u>\$1,286,361,016</u> | <u>\$10,921,121</u> | 0.8% |
| Investment income | 1,161,002,153 | 1,331,512,496 | (170,510,343) | (12.8)% |
| Less: Investment expense | (48,199,939) | (46,712,686) | 1,487,253 | 3.2% |
| Net income from securities lending activities | <u>30,357,833</u> | <u>26,461,821</u> | <u>3,896,012</u> | 14.7% |
| Net investment income | <u>1,143,160,047</u> | <u>1,311,261,631</u> | <u>(168,101,584)</u> | (12.8)% |
| TOTAL ADDITIONS | <u>2,440,442,184</u> | <u>2,597,622,647</u> | <u>(157,180,463)</u> | (6.1)% |
| DEDUCTIONS | | | | |
| Annuity benefits | 2,307,100,889 | 2,190,289,366 | 116,811,523 | 5.3% |
| Death benefits | 5,604,581 | 5,524,605 | 79,976 | 1.4% |
| Refunds | 45,288,055 | 47,961,414 | (2,673,359) | (5.6)% |
| Administrative expenses | <u>20,179,945</u> | <u>15,064,171</u> | <u>5,115,774</u> | 34.0% |
| TOTAL DEDUCTIONS | <u>2,378,173,470</u> | <u>2,258,839,556</u> | <u>119,333,914</u> | 5.3% |
| NET INCREASE (DECREASE) | 62,268,714 | 338,783,091 | (276,514,377) | (81.6)% |
| NET POSITION RESTRICTED FOR PENSIONS | | | | |
| BEGINNING OF YEAR | <u>43,243,940,586</u> | <u>42,905,157,495</u> | <u>338,783,091</u> | 0.8% |
| END OF YEAR | <u>\$43,306,209,300</u> | <u>\$43,243,940,586</u> | <u>\$62,268,714</u> | 0.1% |

MANAGEMENT'S DISCUSSION AND ANALYSIS FOR THE YEAR ENDED JUNE 30, 2016 (CONTINUED)

ECONOMIC FACTORS, FUTURE FUNDING PROVISIONS, AND OVERALL OUTLOOK

For the year ended June 30, 2016, the portfolio delivered a return of 2.8 percent, which was below the actuarial assumed return of 7.5 percent. The fund gained 7.4 percent for the trailing three-year period and 7.5 percent for the trailing five-year period. Additionally, according to the Verus performance universe, the fund beat 83 percent of peers for the trailing five-year period.

Real estate, private equities, and nominal fixed income produced strong returns of 12.6 percent, 10.3 percent, and 10.6 percent respectively while developed international stocks lost 7.5 percent and emerging markets stocks lost 6.4 percent.

The investment environment in 2016 was notable for encompassing two significant downturns in risky assets which were both followed by generally sharp recoveries along with a decline in interest rates. The decline in rates was striking given that the Federal Reserve increased interest rates in December of 2015 for the first time since June of 2006.

An actuarial valuation was performed as of July 1, 2013 that determined the employer contribution rates for the period July 1, 2014 through June 30, 2016. An actuarial experience study to establish demographic and economic assumptions was completed effective June 30, 2012; was adopted by the Board of Trustees during fiscal year 2013; and was utilized in the July 1, 2013 actuarial valuation. Beginning with the June 30, 2015 actuarial valuation, the valuations are performed annually. The June 30, 2015 valuation will provide employer contribution rates for the period July 1, 2016 through June 30, 2017.

CONTACTING THE TCRS

This report is designed to provide a financial overview of the TCRS to state legislators, members of the Board of Trustees of the TCRS, state officials, participating employers, members of the TCRS, and any other interested parties. Questions or requests for additional information regarding the financial information presented in this report may be addressed in writing to the Tennessee Treasury Department, Consolidated Retirement System, 502 Deaderick Street, Nashville, TN 37243-0201.

STATEMENTS OF FIDUCIARY NET POSITION
JUNE 30, 2016

(Expressed in Thousands)

| | <u>Public Employee Retirement Plan</u> | <u>Teacher Retirement Plan</u> | <u>Teacher Legacy Pension Plan</u> | <u>Total</u> |
|---|--|------------------------------------|--|----------------------|
| ASSETS | | | | |
| Cash and cash equivalents | \$ 12,613 | \$ 31 | \$ 12,136 | \$ 24,780 |
| Cash collateral for securities on loan | 3,825,098 | 9,446 | 3,680,320 | 7,514,864 |
| Receivables | | | | |
| Member receivable | 7,251 | 2,076 | 17,862 | 27,189 |
| Employer receivable | <u>38,640</u> | <u>1,676</u> | <u>32,809</u> | <u>73,125</u> |
| Total receivables | <u>45,891</u> | <u>3,752</u> | <u>50,671</u> | <u>100,314</u> |
| Investment in Tennessee Retiree Group Trust | 21,980,213 | 54,272 | 21,148,272 | 43,182,757 |
| Capital assets (net) | <u>14,270</u> | <u>35</u> | <u>13,729</u> | <u>28,034</u> |
| TOTAL ASSETS | <u>25,878,085</u> | <u>67,536</u> | <u>24,905,128</u> | <u>50,850,749</u> |
| LIABILITIES | | | | |
| Accounts payable | | | | |
| Death benefits and refunds payable | 1,213 | 74 | 1,696 | 2,983 |
| Federal withholding payable | 8,461 | 21 | 8,141 | 16,623 |
| Retiree insurance premium payable | 4,412 | 11 | 4,245 | 8,668 |
| Other | 714 | 1 | 687 | 1,402 |
| Cash collateral for securities on loan | <u>3,825,098</u> | <u>9,446</u> | <u>3,680,320</u> | <u>7,514,864</u> |
| TOTAL LIABILITIES | <u>3,839,898</u> | <u>9,553</u> | <u>3,695,089</u> | <u>7,544,540</u> |
| NET POSITION RESTRICTED FOR PENSIONS | <u>\$ 22,038,187</u> | <u>\$ 57,983</u> | <u>\$ 21,210,039</u> | <u>\$ 43,306,209</u> |

See accompanying Notes to the Financial Statements.

**STATEMENTS OF CHANGES IN FIDUCIARY NET
POSITION FOR THE YEAR ENDED JUNE 30, 2016**

(Expressed in Thousands)

| | <u>Public Employee Retirement Plan</u> | <u>Teacher Retirement Plan</u> | <u>Teacher Legacy Pension Plan</u> | <u>Total</u> |
|---|--|------------------------------------|--|---------------------|
| ADDITIONS | | | | |
| Contributions | | | | |
| Member contributions | \$90,919 | \$21,856 | \$181,763 | \$294,538 |
| Employer contributions | 655,525 | 17,539 | 327,522 | 1,000,586 |
| Other contributions | <u>2,158</u> | <u>0</u> | <u>0</u> | <u>2,158</u> |
| Total contributions | <u>748,602</u> | <u>39,395</u> | <u>509,285</u> | <u>1,297,282</u> |
| Investment income | 590,437 | 1,027 | 569,538 | 1,161,002 |
| Less: Investment expense | <u>(24,512)</u> | <u>(43)</u> | <u>(23,645)</u> | <u>(48,200)</u> |
| Net income from investing activities | 565,925 | 984 | 545,893 | 1,112,802 |
| Securities lending activities | | | | |
| Securities lending income | 24,532 | 43 | 23,664 | 48,239 |
| Less: Securities lending expense | <u>(9,094)</u> | <u>(15)</u> | <u>(8,772)</u> | <u>(17,881)</u> |
| Net income from securities lending activities | <u>15,438</u> | <u>28</u> | <u>14,892</u> | <u>30,358</u> |
| Net investment income | <u>581,363</u> | <u>1,012</u> | <u>560,785</u> | <u>1,143,160</u> |
| TOTAL ADDITIONS | <u>1,329,965</u> | <u>40,407</u> | <u>1,070,070</u> | <u>2,440,442</u> |
| DEDUCTIONS | | | | |
| Annuity benefits | 1,193,591 | 0 | 1,113,510 | 2,307,101 |
| Death benefits | 3,293 | 0 | 2,312 | 5,605 |
| Refunds | 22,812 | 284 | 22,192 | 45,288 |
| Administrative expense | <u>12,466</u> | <u>820</u> | <u>6,894</u> | <u>20,180</u> |
| TOTAL DEDUCTIONS | <u>1,232,162</u> | <u>1,104</u> | <u>1,144,908</u> | <u>2,378,174</u> |
| NET INCREASE (DECREASE) | 97,803 | 39,303 | (74,838) | 62,268 |
| FIDUCIARY NET POSITION RESTRICTED FOR PENSIONS | | | | |
| BEGINNING OF YEAR | <u>21,940,384</u> | <u>18,680</u> | <u>21,284,877</u> | <u>43,243,941</u> |
| END OF YEAR | <u>\$22,038,187</u> | <u>\$57,983</u> | <u>\$21,210,039</u> | <u>\$43,306,209</u> |

See accompanying Notes to the Financial Statements.

NOTES TO THE FINANCIAL STATEMENTS

JUNE 30, 2016

The Tennessee Consolidated Retirement System (TCRS) is a public employee retirement system comprised of defined benefit pension plans covering Tennessee state employees, employees of the state's higher education systems, teachers, and employees of political subdivisions in Tennessee. The TCRS was established in 1972 by a statutory enactment of the Tennessee General Assembly. The provisions of the TCRS are codified in *Tennessee Code Annotated*, Title 8, Chapters 34-37. In accordance with *Tennessee Code Annotated*, Title 8, Chapter 34, Section 202, all funds invested, securities, cash, and other property of the TCRS are held in trust and can be expended only for the purposes of the trust. Although the assets for all pension plans within the TCRS are commingled for investment purposes, the assets of each separate plan may legally be used only for the payment of benefits to the members of that plan and for its administration, in accordance with the terms of the plan.

In accordance with *Tennessee Code Annotated*, Title 8, Chapter 37, Section 104, all assets of TCRS were transferred to the Tennessee Retiree Group Trust (TRGT) for pooling with other assets in custody of the Treasurer for investment purposes. Detailed information on the TRGT can be found on pages 46-62 of the Tennessee Consolidated Retirement System's *Comprehensive Annual Financial Report*.

A: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Reporting entity: The TCRS is included in the State of Tennessee financial reporting entity. Because of the state's fiduciary responsibility, the TCRS has been included as a pension trust fund in the *Tennessee Comprehensive Annual Financial Report*.

Measurement focus and basis of accounting: The accompanying financial statements have been prepared in accordance with generally accepted accounting principles (GAAP) as prescribed by the Governmental Accounting Standards Board (GASB). The financial statements have been prepared using the flow of economic resources measurement focus and the accrual basis of accounting. Under the accrual method, revenues are recorded when earned, and expenses are recorded at the time liabilities are incurred regardless of the timing of related cash flows.

Plan member and employer contributions are recognized in the period of time for which they are due, in accordance with legal provisions. Benefits and refunds are recognized when due and payable in accordance with the terms of each plan.

Cash and cash equivalents: Cash and cash equivalents includes cash, short-term investments with a maturity date within three months of the acquisition date, cash management pools, and cash invested in a short-term, open-end mutual fund under the contractual arrangement for master custody services. Cash received by the TCRS, that cannot be invested immediately in securities or is needed for operations, is invested in the State Pooled Investment Fund sponsored by the State of Tennessee and administered by the State Treasurer.

Method used to value investments: All investments are held by the TRGT and are reported at fair value. For detailed information on the TRGT, see pages 46-62 of the Tennessee Consolidated Retirement System's *Comprehensive Annual Financial Report*.

Capital assets: Capital assets consist of internally generated computer software, reported at historical cost less any applicable amortization. Capital assets are defined by the state as assets with an initial individual cost of \$5,000 or more and an estimated useful life in excess of two years. The computer software was valued at \$28 million at year end and is being amortized using the straight-line method over the ten-year estimated life of the system. The amortization expense for the current year was \$3.7 million.

NOTES TO THE FINANCIAL STATEMENTS
 JUNE 30, 2016 (CONTINUED)

B: PLAN DESCRIPTIONS

Plan administration: The Tennessee Treasury Department, an agency in the legislative branch of state government, administers the plans of the TCRS.

At June 30, 2016, there were three defined benefit pension plans within the TCRS. The Public Employee Retirement Plan is an agent, multiple-employer defined benefit pension plan for state government employees and for political subdivisions electing to participate in the TCRS. The Teacher Legacy Pension Plan is a cost-sharing, multiple-employer defined benefit pension plan for teachers of local education agencies (LEAs). The Teacher Legacy Pension Plan closed to new membership on June 30, 2014, but will continue providing benefits to existing members and retirees. Beginning July 1, 2014, the Teacher Retirement Plan became effective for teachers employed by LEAs after June 30, 2014. The Teacher Retirement Plan is a separate cost-sharing, multiple-employer defined benefit pension plan.

The general administration and responsibility for proper operation of the TCRS plans are vested in a 20-member Board of Trustees, consisting of 18 voting members and 2 non-voting members. The Board has nine ex-officio members, two of whom are non-voting. The seven voting ex-officio members are the State Treasurer, Secretary of State, Comptroller of the Treasury, Commissioner of Finance and Administration, Commissioner of Human Resources, Director of the TCRS, and Administrative Director of the Courts. The two non-voting ex-officio members are the chair and vice-chair of the Legislative Council on Pensions and Insurance.

Three active teacher members, one from each grand division of the state, and a retired teacher member are selected for three-year terms by the Speaker of the House of Representatives and the Speaker of the Senate. Two active state employee members, who are from departments other than those represented by ex-officio members, are elected by state employees for three-year terms. A board member is appointed for a two-year term by each of the following organizations: Tennessee County Services, Tennessee Municipal League, and the Tennessee County Officials Association. Two members, a public safety employee and a retired state employee, are appointed by the Governor for two-year terms. All members must be vested members of the TCRS, except for ex-officio members.

| | <u>Public Employee Retirement Plan</u> | <u>Teacher Retirement Plan</u> | <u>Teacher Legacy Pension Plan</u> | <u>Total</u> |
|--|--|------------------------------------|--|----------------|
| Inactive Plan Members or Beneficiaries Currently Receiving Benefits | 94,702 | 0 | 47,979 | 142,681 |
| Inactive Employees Entitled to But Not Yet Receiving Benefits | 107,423 | 540 | 30,259 | 138,222 |
| Active Plan Members | <u>134,859</u> | <u>5,524</u> | <u>69,125</u> | <u>209,508</u> |
| Total membership | <u>336,984</u> | <u>6,064</u> | <u>147,363</u> | <u>490,411</u> |
| Number of participating employers | 536 | 190 | 205 | 741 |

Membership above includes all plans whether open or closed.

NOTES TO THE FINANCIAL STATEMENTS

JUNE 30, 2016 (CONTINUED)

Benefits provided: The TCRS provides retirement, disability, and death benefits. The benefits of the TCRS are established by state law (*Tennessee Code Annotated*, Title 8, Chapters 34-37). In general, the benefits may be amended prospectively by the General Assembly for employees becoming members of the TCRS after June 30, 2014. Amendments of benefits for employees becoming members before July 1, 2014 can be restricted by precedent established by the Tennessee Supreme Court.

Teacher Legacy Pension Plan

Members of the Teacher Legacy Pension Plan are eligible to retire at age 60 with 5 years of service credit or after 30 years of service credit regardless of age. Plan members are entitled to receive unreduced service retirement benefits, which are determined by a formula using the member's highest five consecutive year average compensation and the member's years of service credit. Service related disability benefits are provided regardless of length of service. Five years of service is required for non-service related disability eligibility. The service related and non-service related disability benefits are determined in the same manner as a service retirement benefit but are reduced 10 percent and include projected service credits. A variety of death benefits are available under various eligibility criteria. Member and beneficiary annuitants are entitled to automatic cost of living adjustments (COLAs) after retirement. A COLA is granted each July for annuitants retired prior to the second of July of the previous year. The COLA is based on the change in the consumer price index (CPI) during the prior calendar year, capped at 3 percent, and applied to the current benefit. No COLA is granted if the change in the CPI is less than one-half percent. A one percent COLA is granted if the CPI change is between one-half percent and one percent.

Teacher Retirement Plan

Members of the Teacher Retirement Plan are eligible to retire at age 65 with 5 years of service credit or pursuant to the rule of 90 where age and years of service total 90. Plan members are entitled to receive unreduced service retirement benefits, which are determined by a formula using the member's highest five consecutive year average compensation and the member's years of service credit. Service related disability benefits are provided regardless of length of service. Five years of service is required for non-service related disability eligibility. The service related and non-service related disability benefits are determined in the same manner as a service retirement benefit but are reduced 10 percent and include projected service credits. A variety of death benefits are available under various eligibility criteria. Member and beneficiary annuitants are entitled to automatic cost of living adjustments (COLAs) after retirement. A COLA is granted each July for annuitants retired prior to the second of July of the previous year. The COLA is based on the change in the consumer price index (CPI) during the prior calendar year, capped at 3 percent, and applied to the current benefit. No COLA is granted if the change in the CPI is less than one-half percent. A one percent COLA is granted if the CPI change is between one-half percent and one percent. The Teacher Retirement Plan includes provisions to control employer contributions and unfunded liabilities. As such, plan provisions are automatically changed when employer contributions and unfunded liabilities exceed statutory limits.

Public Employee Retirement Plan

For state employees, there are two major tiers of benefits and eligibility requirements. State employees becoming members before July 1, 2014 are eligible to retire at age 60 with 5 years of service credit or after 30 years of service credit regardless of age. State employees becoming members after June 30, 2014 are eligible to retire at age 65 with five years of service or pursuant to the rule of 90 where age and years of service total 90. Plan mem-

NOTES TO THE FINANCIAL STATEMENTS

JUNE 30, 2016 (CONTINUED)

bers are entitled to receive unreduced service retirement benefits, which are determined by a formula using the member's highest five consecutive year average compensation and the member's years of service credit. Service related disability benefits are provided regardless of length of service. Five years of service is required for non-service related disability eligibility. The service related and non-service related disability benefits are determined in the same manner as a service retirement benefit but are reduced 10 percent and include projected service credits. A variety of death benefits are available under various eligibility criteria. Member and beneficiary annuitants are entitled to automatic COLAs after retirement. A COLA is granted each July for annuitants retired prior to the second of July of the previous year. The COLA is based on the change in the CPI during the prior calendar year, capped at 3 percent, and applied to the current benefit. No COLA is granted if the change in the CPI is less than one-half percent. A one percent COLA is granted if the CPI change is between one-half percent and one percent. There are additional classes of employees that include state judges, elected members of the general assembly, and public safety officers which have different benefit structures and eligibility requirements. These classifications represent an immaterial percentage of the state employee membership.

For political subdivision employees, there are various tiers of benefits and eligibility requirements. Each political subdivision adopts the benefit structure that the entity provides to its employees. Unreduced service retirement benefits are determined using a multiplier of the member's highest 5 consecutive year average compensation multiplied by the member's years of service credit. Plan members are eligible for service related disability benefits regardless of length of service. Five years of service is required for non-service related disability eligibility. The service related and non-service related disability benefits are determined in the same manner as a service retirement benefit but are reduced 10 percent and include projected service credits. A variety of death benefits are available under various eligibility criteria. If adopted as a benefit provision by the political subdivision, member and beneficiary annuitants are entitled to automatic COLAs after retirement. A COLA is granted each July for annuitants retired prior to the second of July of the previous year. The COLA is based on the change in the CPI during the prior calendar year, capped at 3 percent, and applied to the current benefit. No COLA is granted if the change in the CPI is less than one-half percent. A one percent COLA is granted if the CPI change is between one-half percent and one percent. There are additional classes of employees, local judges, elected officials, and public safety officers, which may have different benefit structures and eligibility requirements. These classifications represent an immaterial percentage of the political subdivisions' membership.

Contributions: Pursuant to *Tennessee Code Annotated*, Title 8, Chapter 37, the Board of Trustees adopted an actuarially determined contribution (ADC) for each participating employer, as recommended by an independent actuary following an actuarial valuation.

For the Teacher Legacy Pension Plan, LEAs are required by statute to contribute the ADC. The ADC is the estimated amount necessary to finance the costs of benefits earned by plan members during the year, the unfunded accrued liability, and the cost of administration. Teachers are required by statute to contribute 5 percent of salary. For the year ended June 30, 2016, the required ADC for LEAs was 9.04 percent of covered payroll.

For the Teacher Retirement Plan, LEAs are required by statute to contribute the greater of the ADC or 4 percent. The ADC is the estimated amount necessary to finance the costs of benefits earned by plan members during the year, the unfunded accrued liability, and the cost of administration. Teachers are required by statute to contribute 5 percent of salary. For the year ended June 30, 2016, the required ADC for LEAs was 2.5 percent of covered payroll while actual contributions were 4 percent of covered payroll.

NOTES TO THE FINANCIAL STATEMENTS

JUNE 30, 2016 (CONTINUED)

For the Public Employee Retirement Plan, each governmental entity is required by statute to contribute the ADC except that the contribution rate for state employees hired after June 30, 2014 is the greater of the ADC or 4 percent. The ADC is the estimated amount necessary to finance the costs of benefits earned by plan members during the plan year, the unfunded accrued liability, and the cost of administration. For the year ended June 30, 2016, the required ADC varied for each participating employer, with approximately 50 percent of all employer rates between 8 percent and 20 percent and contributions from these same employers accounting for over 90 percent of the contributions for this plan. By statute, state employees hired before July 1, 2014 are noncontributory while employees hired after June 30, 2014 contribute 5 percent of salary. As adopted by the governmental entity, political subdivision employees may be noncontributory, contribute 2.5 percent of salary, or contribute 5 percent of salary.

Reserves: The statute governing the Teacher Retirement Plan and certain employers in the Public Employee Retirement Plan provide for a minimum employer contribution rate of 4 percent. The statute further provides that the amount of the employer contributions in excess of the actuarially determined contribution rate is deposited into a stabilization reserve for each plan. The statute may be amended by the Tennessee General Assembly. Assets in the stabilization reserve are commingled for investment purposes and receive a pro rata share of investment earnings. The amount in the stabilization reserve is not considered in calculating the actuarially determined employer contribution rate for each plan. The statute provides that the assets in the stabilization reserve will be utilized should the actuarially determined contribution rate exceed 4 percent. In such case, the required employer contribution in excess of 4 percent will be transferred from the stabilization reserve to the account of the Teachers Retirement Plan or certain Public Employee Retirement Plan employers. By statute, the Board of Trustees may adopt a policy to suspend the deposits into the stabilization reserve in any given year when the stabilization reserve reaches a certain level that is determined by the Board. If deposits are suspended, then the employer contribution will be the actuarially determined contribution rate for that year rather than the higher 4 percent. The Board has not adopted a policy at this time. At June 30, 2016, there was \$9,991,123 in the stabilization reserve on behalf of the Teachers Retirement Plan and \$7,831,567 in the various stabilization reserves on behalf of the Public Employee Retirement Plan.

C: DEPOSITS AND INVESTMENTS

Statutory Authority: Effective July 1, 2015, state statute authorizes the TCRS to invest in the State of Tennessee Retiree Group Trust (TRGT). TRGT is located and administered by State of Tennessee Treasury Department. The assets of TCRS and any other trust the state Treasurer deems eligible will be pooled and invested in the TRGT. All assets will be kept separate and will be for the exclusive benefit of the individual plan. Each of the trusts invested in TRGT has equity in TRGT based on funds contributed and earnings allocated. Earnings of TRGT are allocated monthly based on the number of shares owned by each participant. For financial statement purposes, TRGT presents a separate financial statement from the participating trusts. The investment policy of the TRGT and all required disclosures related to investments can be found in the *State of Tennessee Treasurer's Report*.

Securities Lending: The TRGT is authorized to invest in securities lending investments. For detailed information on the TRGT, see pages 46-62 of the Tennessee Consolidated Retirement System's *Comprehensive Annual Financial Report*. Related assets, liabilities, income, and expenses from lending transactions are reflected on a pro rata basis in the financial statements of TCRS.

NOTES TO THE FINANCIAL STATEMENTS
 JUNE 30, 2016 (CONTINUED)

D: NET PENSION LIABILITY (ASSET) FOR COST-SHARING PLANS

The components of net pension liability at June 30, 2016, were as follows:

| | <u>Teacher Legacy Pension Plan</u> | <u>Teacher Retirement Plan</u> |
|--|--|------------------------------------|
| Total Pension Liability | \$22,113,073,747 | \$45,524,629 |
| Plan Fiduciary Net Position | <u>(21,210,039,027)</u> | <u>(57,982,727)</u> |
| Net Pension Liability (Asset) | \$903,034,720 | \$(12,458,098) |
| Percent of Net Position to Pension Liability | 95.92% | 127.37% |

Actuarial assumptions: The total pension liability was determined by an actuarial valuation as of July 1, 2015, updated to roll forward to June 30, 2016, using the following actuarial assumptions applied to all prior periods included in the measurement:

| | |
|----------------------------------|--|
| Inflation | 3.0 percent |
| Salary Increases | Graded salary ranges from 8.97 to 3.71 percent based on age, including inflation, averaging 4.25 percent |
| Investment Rate of Return | 7.5 percent, net of pension plan investment expense, including inflation |
| Cost of Living Adjustment | 2.5 percent |

Mortality rates were based on actual experience from the June 30, 2012 actuarial experience study plus some adjustment for expected future improvement in life expectancy.

The actuarial assumptions used in the July 1, 2015 actuarial valuation were based on the results of an actuarial experience study performed for the period July 1, 2008 through June 30, 2012. The demographic assumptions were adjusted to more closely reflect actual and expected future experience.

The long-term expected rate of return on pension plan investments was established by the TCRS Board of Trustees in conjunction with the June 30, 2012 actuarial experience study by considering the following three techniques: (1) the 25-year historical return of the TCRS at June 30, 2012, (2) the historical market returns of asset classes from 1926 to 2012 using the TCRS investment policy asset allocation, and (3) capital market projections that were utilized as a building-block method in which best-estimate ranges of expected future real rate of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. Four sources of capital market projections were blended and utilized in the third technique. The blended capital market projection established the long-term expected rate of return by weighting the expected future real rate of return by the target asset allocation percentage and by adding inflation of 3 percent.

NOTES TO THE FINANCIAL STATEMENTS
 JUNE 30, 2016 (CONTINUED)

The target allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

| Asset Class | Long-Term Expected Real Rate of Return | Target Allocations |
|---------------------------------------|---|--------------------|
| U.S. equity | 6.46% | 33% |
| Developed market international equity | 6.26% | 17% |
| Emerging market international equity | 6.40% | 5% |
| Private equity and strategic lending | 4.61% | 8% |
| U.S. fixed income | 0.98% | 29% |
| Real estate | 4.73% | 7% |
| Short-term securities | 0.00% | 1% |
| | | 100% |

The long-term expected rate of return on pension plan investments was established by the TCRS Board of Trustees as 7.5 percent based on a blending of the three techniques described above.

Discount rate: The discount rate used to measure the total pension liability was 7.5 percent. The projection of cash flows used to determine the discount rate assumed that employee contributions from plan members will be made at the statutorily required contribution rates and that employer contributions from LEAs will be made at the actuarially determined rate as required by statute. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of net pension liability (asset) to changes in the discount rate: The following presents the Teacher Legacy Pension Plan's and Teacher Retirement Plan's net pension liability for LEAs using the discount rate of 7.5 percent, as well as what its net pension liability would be if it were calculated using a discount rate that is one percentage point lower (6.5%) or one percentage point higher (8.5%) than the current rate:

| Plan | 1 percent Decrease (6.5%) | Current Discount Rate (7.5%) | 1 percent Increase (8.5%) |
|-----------------------------|------------------------------|---------------------------------|------------------------------|
| Teacher Legacy Pension Plan | \$3,732,101,114 | \$903,034,720 | \$(1,439,639,926) |
| Teacher Retirement Plan | \$1,931,585 | \$(12,458,098) | \$(23,017,903) |

TENNESSEE CONSOLIDATED RETIREMENT SYSTEM
 REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULE OF CHANGES IN THE TEACHER LEGACY PENSION PLAN'S NET PENSION LIABILITY
Fiscal Year Ended June 30

| | <u>2016</u> | <u>2015</u> | <u>2014</u> |
|---|-------------------------|-------------------------|-------------------------|
| Total pension liability | | | |
| Service cost | \$359,568,654 | \$393,173,920 | \$404,576,942 |
| Interest | 1,582,470,751 | 1,578,251,721 | 1,483,656,307 |
| Change of benefit terms | 0 | 0 | 0 |
| Difference between expected and actual experience | (764,354,573) | 46,576,630 | 0 |
| Change of assumptions | 0 | 0 | 0 |
| Benefit payments, including refunds of member contributions | <u>(1,138,014,028)</u> | <u>(1,096,410,122)</u> | <u>(1,037,013,093)</u> |
| Net change in total pension liability | 39,670,804 | 921,592,149 | 851,220,156 |
| | | | |
| Total pension liability - beginning | <u>22,073,402,943</u> | <u>21,151,810,794</u> | <u>20,300,590,638</u> |
| Total pension liability - ending (a) | <u>\$22,113,073,747</u> | <u>\$22,073,402,943</u> | <u>\$21,151,810,794</u> |
| | | | |
| Plan fiduciary net position | | | |
| Contributions-employer | \$327,521,593 | \$338,301,211 | \$348,474,887 |
| Contributions-members | 181,763,296 | 187,121,567 | 195,520,938 |
| Net investment income | 560,785,122 | 646,526,936 | 3,054,117,821 |
| Benefit payments, including refunds of member contributions | (1,138,014,028) | (1,096,410,122) | (1,037,013,093) |
| Administrative expense | <u>(6,893,993)</u> | <u>(5,635,689)</u> | <u>(2,663,319)</u> |
| Net change in plan fiduciary net position | (74,838,010) | 69,903,903 | 2,558,437,235 |
| | | | |
| Plan fiduciary net position - beginning | <u>21,284,877,037</u> | <u>21,214,973,134</u> | <u>18,656,535,899</u> |
| Plan fiduciary net position - ending (b) | <u>\$21,210,039,027</u> | <u>\$21,284,877,037</u> | <u>\$21,214,973,134</u> |
| | | | |
| Net pension liability (asset) - ending (a) - (b) | <u>\$903,034,720</u> | <u>\$788,525,906</u> | <u>(\$63,162,340)</u> |

This schedule is intended to show information for ten years. Additional years' information will be shown as it becomes available.

TENNESSEE CONSOLIDATED RETIREMENT SYSTEM
 REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULE OF CHANGES IN THE TEACHER RETIREMENT PLAN'S NET PENSION LIABILITY
Fiscal Year Ended June 30

| | | |
|---|-----------------------|----------------------|
| Total pension liability | <u>2016</u> | <u>2015</u> |
| Service cost | \$28,980,449 | \$15,581,497 |
| Interest | 2,175,079 | \$583,011 |
| Change of benefit terms | 0 | 0 |
| Difference between expected and actual experience | (1,477,409) | 0 |
| Change of assumptions | 0 | 0 |
| Benefit payments, including refunds of member contributions | <u>(283,467)</u> | <u>(\$34,531)</u> |
| Net change in total pension liability | 29,394,652 | 16,129,977 |
| Total pension liability - beginning | <u>16,129,977</u> | <u>0</u> |
| Total pension liability - ending (a) | <u>\$45,524,629</u> | <u>\$16,129,977</u> |
| | | |
| Plan fiduciary net position | | |
| Contributions-employer | 17,538,589 | \$8,310,132 |
| Contributions-members | 21,855,921 | 10,390,077 |
| Net investment income | 1,011,283 | 294,742 |
| Benefit payments, including refunds of member contributions | (283,467) | (34,531) |
| Administrative expense | <u>(819,972)</u> | <u>(280,047)</u> |
| Net change in plan fiduciary net position | 39,302,354 | 18,680,373 |
| | | |
| Plan fiduciary net position - beginning | <u>18,680,373</u> | <u>0</u> |
| Plan fiduciary net position - ending (b) | <u>\$57,982,727</u> | <u>\$18,680,373</u> |
| | | |
| Net pension liability (asset) - ending (a) - (b) | <u>(\$12,458,098)</u> | <u>(\$2,550,396)</u> |

This schedule is intended to show information for ten years. Additional years' information will be shown as it becomes available.

TENNESSEE CONSOLIDATED RETIREMENT SYSTEM
 REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULE OF THE TEACHER LEGACY PENSION PLAN'S NET PENSION LIABILITY
Fiscal Year Ended June 30

| | <u>2016</u> | <u>2015</u> | <u>2014</u> |
|---|-----------------------|-----------------------|-----------------------|
| Total pension liability | \$22,113,073,747 | \$22,073,402,943 | \$21,151,810,794 |
| Plan fiduciary net position | <u>21,210,039,027</u> | <u>21,284,877,037</u> | <u>21,214,973,134</u> |
| Net pension liability (asset) | <u>\$903,034,720</u> | <u>\$788,525,906</u> | <u>(\$63,162,340)</u> |
| Plan fiduciary net position as a percentage of the total pension liability | 95.92% | 96.43% | 100.30% |
| Covered payroll | \$3,622,228,641 | \$3,742,270,034 | \$3,925,131,835 |
| Net pension liability (asset) as a percentage of covered payroll | 24.93% | 21.07% | (1.61%) |

This schedule is intended to show information for ten years. Additional years' information will be shown as it becomes available.

TENNESSEE CONSOLIDATED RETIREMENT SYSTEM
 REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULE OF THE TEACHER RETIREMENT PLAN'S NET PENSION LIABILITY
Fiscal Year Ended June 30

| | <u>2016</u> | <u>2015</u> |
|---|-----------------------|----------------------|
| Total pension liability | \$45,524,629 | \$16,129,977 |
| Plan fiduciary net position | <u>57,982,727</u> | <u>18,680,373</u> |
| Net pension liability (asset) | <u>(\$12,458,098)</u> | <u>(\$2,550,396)</u> |
| Plan fiduciary net position as a percentage of the total pension liability | 127.37% | 115.81% |
| Covered payroll | \$441,775,131 | \$207,753,299 |
| Net pension liability (asset) as a percentage of covered payroll | (2.82%) | (1.23%) |

This schedule is intended to show information for ten years. Additional years' information will be shown as it becomes available.

TENNESSEE CONSOLIDATED RETIREMENT SYSTEM
 REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULE OF THE TEACHER LEGACY PENSION PLAN'S CONTRIBUTIONS
Fiscal Year Ended June 30

| | <u>Actuarially Determined Contribution</u> | <u>Contributions in Relation to the Actuarially Determined Contribution</u> | <u>Contribution Deficiency</u> | <u>Covered Payroll</u> | <u>Contributions as a Percentage of Covered Payroll</u> |
|------|--|---|------------------------------------|----------------------------|---|
| 2016 | \$327,521,593 | \$327,521,593 | \$0 | \$3,622,228,641 | 9.04% |
| 2015 | 338,301,211 | 338,301,211 | 0 | 3,742,270,034 | 9.04% |
| 2014 | 348,474,888 | 348,474,888 | 0 | 3,931,983,889 | 8.88% |
| 2013 | 344,534,643 | 344,534,643 | 0 | 3,879,878,989 | 8.88% |
| 2012 | 343,594,496 | 343,594,496 | 0 | 3,796,077,699 | 9.05% |
| 2011 | 339,833,421 | 339,833,421 | 0 | 3,754,600,827 | 9.05% |
| 2010 | 236,545,072 | 236,545,072 | 0 | 3,683,968,661 | 6.42% |
| 2009 | 233,214,598 | 233,214,598 | 0 | 3,632,637,952 | 6.42% |
| 2008 | 218,862,049 | 218,862,049 | 0 | 3,507,360,900 | 6.24% |
| 2007 | 204,370,625 | 204,370,625 | 0 | 3,333,693,142 | 6.13% |

TENNESSEE CONSOLIDATED RETIREMENT SYSTEM
 REQUIRED SUPPLEMENTARY INFORMATION

SCHEDULE OF THE TEACHER RETIREMENT PLAN'S CONTRIBUTIONS
Fiscal Year Ended June 30

| | <u>Actuarially Determined Contribution</u> | <u>Contributions in Relation to the Actuarially Determined Contribution</u> | <u>Contribution Deficiency</u> | <u>Covered Payroll</u> | <u>Contributions as a Percentage of Covered Payroll</u> |
|------|--|---|------------------------------------|----------------------------|---|
| 2016 | \$17,538,589 | \$17,538,589 | \$0 | \$441,775,131 | 3.97% |
| 2015 | 8,310,132 | 8,310,132 | 0 | 207,753,299 | 4.00% |

TENNESSEE CONSOLIDATED RETIREMENT SYSTEM
REQUIRED SUPPLEMENTARY INFORMATION

**SCHEDULE OF THE PUBLIC EMPLOYEES RETIREMENT PLAN,
THE TEACHER LEGACY PENSION PLAN,
AND THE TEACHER RETIREMENT PLAN INVESTMENT RETURNS**
Fiscal Year Ended June 30

| | <u>2016</u> | <u>2015</u> | <u>2014</u> |
|--|-------------|-------------|-------------|
| Annual money-weighted rate of return, net of investment expense | 2.78% | 3.29% | 16.49% |

This schedule is intended to show information for ten years. Additional years' information will be shown as it becomes available.

TENNESSEE CONSOLIDATED RETIREMENT SYSTEM
 NOTES TO THE REQUIRED SUPPLEMENTARY INFORMATION
 FOR THE COST-SHARING PLANS

Method and assumptions used in calculations of actuarially determined contributions. The actuarially determined contribution rates for the fiscal year ended June 30, 2016 for Local Education Agencies for the Teacher Legacy Pension Plan were calculated as the result of an actuarial valuation performed as of July 1, 2013. The actuarially determined contribution rates for the fiscal year ended June 30, 2016 for Local Education Agencies for the Teacher Retirement Plan were adopted based on an actuarial study adopted by the TCRS Board of Trustees on March 28, 2014. The following actuarial methods and assumptions were used to determine contribution rates reported in the schedule:

| | <u>Teacher Legacy Pension Plan</u> | <u>Teacher Retirement Plan</u> |
|--------------------------------------|---|---|
| Actuarial cost method | Frozen Initial Liability Method | N/A |
| Amortization method | Level Dollar Amortization | N/A |
| Remaining amortization period | Eight years | N/A |
| Inflation | 3.0 percent | 3.0 percent |
| Salary increases | Graded salary ranges from 8.97 percent to 3.71 percent, including inflation, averaging 4.25 percent | Graded salary ranges from 8.97 percent to 3.71 percent, including inflation, averaging 4.25 percent |
| Investment rate of returns | 7.50 percent, net of pension plan investment expense, including inflation | 7.50 percent, net of pension plan investment expense, including inflation |



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**Independent Auditor's Report on Internal Control Over
Financial Reporting and on Compliance and Other Matters
Based on an Audit of Financial Statements Performed in
Accordance With *Government Auditing Standards***

Members of the General Assembly
Members of the Board of Trustees
The Honorable David H. Lillard, Jr., Treasurer

We have audited the financial statements of the Tennessee Consolidated Retirement System, as of and for the year ended June 30, 2016, and the related notes to the financial statements, which collectively comprise the Tennessee Consolidated Retirement System's basic financial statements, and have issued our report thereon dated December 21, 2016. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the Tennessee Consolidated Retirement System's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Tennessee Consolidated Retirement System's internal control. Accordingly, we do not express an opinion on the effectiveness of the Tennessee Consolidated Retirement System's internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. *A material weakness* is a deficiency, or a combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. *A significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies, and therefore, material weaknesses or significant

deficiencies may exist that were not identified. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. We did identify a deficiency in internal control, as described below, that we consider to be a significant deficiency.

- Internal controls were not sufficient for the Tennessee Consolidated Retirement System information system.

This deficiency is described in the Finding and Recommendation section of this report

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Tennessee Consolidated Retirement System's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, and contracts, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Tennessee Consolidated Retirement System's Responses to Findings

The Tennessee Consolidated Retirement System's response to the finding identified in our audit is included in the Finding and Recommendation section of this report. The Tennessee Consolidated Retirement System's response was not subjected to the auditing procedures applied in the audit of the financial statements and, accordingly, we express no opinion on it.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.



Deborah V. Loveless, CPA
Director
December 21, 2016

Finding and Recommendation

Internal controls were not sufficient for the Tennessee Consolidated Retirement System information system

The Tennessee Consolidated Retirement System did not design and monitor internal controls in specific areas. The inconsistent implementation of internal controls increases the risk of fraud or error.

The details of this finding are confidential pursuant to Section 10-7-504(i), *Tennessee Code Annotated*. We provided the Tennessee Consolidated Retirement System with detailed information regarding the specific conditions we identified, as well as our recommendations for improvement.

Management's Comment

We concur. These important issues have received immediate attention from the Treasurer, Treasury Department, and TCRS staff. Effective November 23, 2016, interim processes were implemented to address the finding.

In December 2016, permanent process changes will be incorporated into TCRS operations. Treasury Internal Audit will conduct follow-up audits to confirm the changes implemented by management.