



**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, 2015

Justin P. Wilson, Comptroller



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STATE OF TENNESSEE
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February 18, 2016

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, 2015. 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 resulted in no audit findings.

Sincerely,

A handwritten signature in black ink that reads "Deborah V. Loveless".

Deborah V. Loveless, CPA
Director

15/084

Audit Report
Tennessee Consolidated Retirement System
For the Year Ended June 30, 2015

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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, 2015

Opinion on the Financial Statements

The opinion on the financial statements is unmodified.

Audit Finding

The audit report contains no findings.



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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, 2015; 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, 2015, 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 Matters

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, 2015, 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.

As discussed in Note C, the financial statements of the Tennessee Consolidated Retirement System include investments valued at \$4,683,390,636 (11.08 percent of net position) whose fair values have been estimated by management in the absence of readily determinable fair values. Management's estimates are based on information provided by the fund managers or the general partners. 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, schedule of changes in net pension liability, schedule of net pension liability, schedule of investment returns, and schedule 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 23, 2015, 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 23, 2015

MANAGEMENT'S DISCUSSION AND ANALYSIS FOR THE YEAR ENDED JUNE 30, 2015

MANAGEMENT'S DISCUSSION AND ANALYSIS

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, 2015. This section should be read in conjunction with the Independent Auditor's Report, the audited financial statements, and the accompanying notes.

FINANCIAL HIGHLIGHTS

- The net position for the TCRS plans (total assets minus total liabilities) at June 30, 2015 was \$43.2 billion, increasing \$0.3 billion (0.8 percent) from the plan net position at June 30, 2014. The net position is restricted for future benefit obligations. This increase in plan net position is mainly attributable to net investment income. Returns were led by strong returns of 20.5 percent for private equity and 12.8 percent for real estate.
- Net investment income for fiscal year 2015 was \$1.3 billion. During fiscal year 2015, the TCRS received a time-weighted rate of return on its portfolio of 3.3 percent, compared to 16.7 percent for fiscal year 2014.
- Based on the latest actuarial valuation as of June 30, 2014 for accounting purposes pursuant to GASB 67 & 68, the overall funded ratio for all participating employers within TCRS is 98.8 percent.
- Contribution revenue for fiscal year 2015 totaled \$1.29 billion, representing a decrease of 1.4 percent compared to fiscal year 2014. Effective July 1, 2014 a new retirement plan was established for newly hired state employees and teachers. The new retirement plan consists of a defined benefit component and a defined contribution component. The defined benefit component has a lower benefit structure than the previous defined benefit plan; as a result fewer contributions are required.
- Total benefits and refunds paid for fiscal year 2015 were \$2.24 billion, representing an increase of 6.1 percent over fiscal year 2014 total benefits and refunds paid of \$2.11 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 1.5 percent cost of living adjustment was given in July 2014.
- Total administrative expenses for fiscal year 2015 were \$15.06 million, representing an increase of 51.3 percent from fiscal year 2014 administrative expenses of \$9.96 million. Administrative expenses represent three basis points (three one-hundredths of one percent) of the average of the beginning and ending net position.

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 Pensions 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, 2015.

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 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.

**MANAGEMENT'S DISCUSSION AND ANALYSIS
FOR THE YEAR ENDED JUNE 30, 2015 (CONTINUED)**

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, 2015, the TCRS had a net position (total assets in excess of total liabilities) of \$43.2 billion, an increase of \$0.3 billion (0.8 percent) from \$42.9 billion at June 30, 2014. The assets of the TCRS consist primarily of investments. The increase in plan assets is primarily the result of investment return for the year since contributions decreased 1.4 percent from June 30, 2014. Condensed financial information comparing the TCRS' fiduciary net position for the past two fiscal years follows:

FIDUCIARY NET POSITION

	June 30, 2015	June 30, 2014	Increase (Decrease) Amount	Percentage Change
ASSETS				
Cash and cash equivalents	\$ 445,811,146	\$ 279,661,206	\$ 166,149,940	59.4 %
Cash collateral on loaned securities	5,892,943,764	3,611,068,696	2,281,875,068	63.2 %
Member and employer receivables	100,955,668	107,700,566	(6,744,898)	(6.3) %
Investment receivables	1,423,035,570	1,053,100,529	369,935,041	35.1 %
Short-term securities	206,266,693	137,164,148	69,102,545	50.4 %
Long-term investments	42,501,110,787	42,292,975,604	208,135,183	0.5 %
Capital assets	31,747,896	28,341,604	3,406,292	12.0 %
TOTAL ASSETS	<u>50,601,871,524</u>	<u>47,510,012,353</u>	<u>3,091,859,171</u>	6.5 %
LIABILITIES				
Death benefits, refunds and other payables	28,418,554	14,105,043	14,313,511	101.5 %
Investment payables	1,436,568,620	979,681,119	456,887,501	46.6 %
Securities Lending collateral	5,892,943,764	3,611,068,696	2,281,875,068	63.2 %
TOTAL LIABILITIES	<u>7,357,930,938</u>	<u>4,604,854,858</u>	<u>2,753,076,080</u>	59.8 %
NET POSITION RESTRICTED FOR PENSIONS	<u>\$ 43,243,940,586</u>	<u>\$ 42,905,157,495</u>	<u>\$ 338,783,091</u>	0.8 %

**MANAGEMENT'S DISCUSSION AND ANALYSIS
FOR THE YEAR ENDED JUNE 30, 2015 (CONTINUED)**

ANALYSIS OF REVENUES AND EXPENSES

Employer contribution rates for the TCRS did not change during fiscal year 2015; therefore, the 1.4 percent decrease in contributions from fiscal year 2014 to fiscal year 2015 was due to the transition of new employees to hybrid pension plans. Gross investment income for fiscal year 2015 decreased \$4.8 billion (78.0 percent) over fiscal year 2014.

Investment expenses for fiscal year 2015 totaled \$54.5 million for a 26.3 percent increase over fiscal year 2014. These expenses were split between portfolio management investment expenses of \$46.7 million and \$7.8 million in expenses attributed to the securities lending program that was initiated during the latter part of the 2014 fiscal year. The TCRS investment portfolio earned a time-weighted rate of return of 3.3 percent and net investment income of \$1.3 billion.

Total benefits paid during the year ended June 30, 2015 were \$2.2 billion, an increase of 6.1 percent over fiscal year 2014 total benefits which can be attributed to an increase in the number of retirees and a 1.5% cost of living adjustment given in July 2014. Total refunds paid decreased \$6.1 million, a decrease of 11.3%, in fiscal year 2015 from fiscal year 2014. This was attributed to the change in structure of two large employers in 2014 where the members of these employers chose to withdraw their funds when they were not rehired by the new employer.

Administrative expenses for the year ended June 30, 2015 were \$15.1 million, an increase of 51.3 percent from fiscal year 2014 administrative expenses. The increase was primarily due to the new pension administration system being implemented in July 2015 resulting in the amortization expense of the software development costs of \$3.7 million for the year, an increase of \$2.5 million over fiscal year 2014. Software development costs are capitalized and amortized over the ten year expected life of this capital asset. Additionally, Information Technology and Data Processing costs increased by \$2.0 million during the systems' first full fiscal year of operations which included a maintenance phase with the pension administration system consultants.

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, 2014</u>		<u>Year Ended June 30, 2015</u>	
	Amount	Percentage of Total	Amount	Percentage of Total
Employee Contributions	\$ 270,551	3.6%	\$ 274,532	10.6%
Employer Contributions	1,034,694	13.9%	1,011,445	38.9%
Other Contributions	0	0.0%	384	0.0%
Net Investment Income	<u>6,159,900</u>	<u>82.5%</u>	<u>1,311,262</u>	<u>50.5%</u>
Total	<u>\$ 7,465,145</u>	<u>100.0%</u>	<u>\$ 2,597,623</u>	<u>100.0%</u>

EXPENDITURES BY TYPE
(EXPRESSED IN THOUSANDS)

	<u>Year Ended June 30, 2014</u>		<u>Year Ended June 30, 2015</u>	
	Amount	Percentage of Total	Amount	Percentage of Total
Benefit Payments	\$ 2,060,890	97.0%	\$ 2,195,814	97.2%
Refunds	54,046	2.5%	47,961	2.1%
Administrative	<u>9,957</u>	<u>0.5%</u>	<u>15,064</u>	<u>0.7%</u>
	<u>\$ 2,124,893</u>	<u>100.0%</u>	<u>\$ 2,258,839</u>	<u>100.0%</u>

MANAGEMENT'S DISCUSSION AND ANALYSIS
FOR THE YEAR ENDED JUNE 30, 2015 (CONTINUED)

CHANGES IN FIDUCIARY NET POSITION

	For the Year Ended June 30, 2015	For the Year Ended June 30, 2014	FY15 - FY14 Increase (Decrease) Amount	FY15 - FY14 Percentage Change
ADDITIONS				
Contributions	\$ 1,286,361,016	\$ 1,305,245,165	\$ (18,884,149)	(1.4) %
Investment income				
Net appreciation in fair value of investments	79,983,802	5,123,250,163	(5,043,266,361)	(98.4) %
Interest, dividends and other investment income	1,251,528,694	1,073,491,403	178,037,291	16.6 %
Less: Investment expense	(46,712,686)	(42,190,619)	4,522,067	10.7 %
Net income from securities lending activities	26,461,821	5,348,721	21,113,100	394.7 %
Net investment income	1,311,261,631	6,159,899,668	(4,848,638,037)	(78.7) %
TOTAL ADDITIONS	2,597,622,647	7,465,144,833	(4,867,522,186)	(65.2) %
DEDUCTIONS				
Annuity benefits	2,190,289,366	2,056,977,497	133,311,869	6.5 %
Death benefits	5,524,605	3,912,205	1,612,400	41.2 %
Refunds	47,961,414	54,045,937	(6,084,523)	(11.3) %
Administrative expenses	15,064,171	9,957,061	5,107,110	51.3 %
TOTAL DEDUCTIONS	2,258,839,556	2,124,892,700	133,946,856	6.3 %
NET INCREASE	338,783,091	5,340,252,133	(5,001,469,042)	(93.7) %
NET POSITION RESTRICTED FOR PENSIONS				
BEGINNING OF YEAR	42,905,157,495	37,564,905,362	5,340,252,133	14.2 %
END OF YEAR	\$ 43,243,940,586	\$ 42,905,157,495	\$ 338,783,091	0.8 %

MANAGEMENT'S DISCUSSION AND ANALYSIS FOR THE YEAR ENDED JUNE 30, 2015 (CONTINUED)

ECONOMIC FACTORS, FUTURE FUNDING PROVISIONS, OVERALL OUTLOOK

For the year ended June 30, 2015 the portfolio delivered a return of 3.3 percent which was below the actuarial assumed return of 7.5 percent. The fund gained 9.8 percent for the trailing three year period which exceeded the actuarially required return by over 2.3 percent annually. Additionally, the fund generated more return for unit of risk employed than 84 percent of peers for the trailing five-year period.

Private equities and real estate generated strong returns of 20.5 percent and 12.8 percent, respectively, while Canadian and emerging markets stocks lost 14.1 percent and 11.9 percent, respectively. U.S. stocks generated 7.9 percent and U.S. bonds delivered 2.8 percent.

The investment environment in 2015 was characterized by a strengthening dollar and weakening commodity prices which led to generally poor returns from international and commodity-based assets. Yields fell slightly during the year, but the volatility of rates was pronounced with a sharp fall in yields through the first part of the year followed by a similar rise near the end of the year as investors began to anticipate the Federal Reserve tightening cycle.

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. Annual actuarial valuations will begin in July 2015.

In December 2010, TCRS contracted with Deloitte Consulting, LLC, to provide a new pension administration system to replace the retirement information system. The new pension administration system, referred to as Concord, replaced five separate operating systems with one integrated web-based system that will greatly improve the level of service we provide to our members and employers. The final phase of Concord was implemented in July 2014. Software development costs have been capitalized and are being amortized over the useful life of the system.

During the 2013 legislative session, a new pension plan for state employees, higher education and K-12 public school teachers hired on or after June 30, 2014 was enacted into law. Members and retirees currently enrolled in TCRS will remain in the legacy plan. The new hybrid plan contains elements of a defined benefit plan and a defined contribution plan. The goals of the new plan were to provide a sufficient retirement benefit to members, a long term sustainable pension plan, and an affordable plan to employers. The new plan contains provisions to control employer cost and unfunded liability. New members were enrolled in the plan beginning July 1, 2014.

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, 2015

Expressed in Thousands

	Public Employee Retirement Plan	Teacher Retirement Plan	Teacher Legacy Pension Plan	Total
ASSETS				
Cash and cash equivalents	\$ 226,338	\$ 163	\$ 219,310	\$ 445,811
Cash collateral on loaned securities	2,990,874	2,275	2,899,795	5,892,944
Receivables				
Member receivable	5,924	1,127	19,520	26,571
Employer receivable	37,563	902	35,919	74,384
Accrued interest and dividends receivable	73,422	56	71,186	144,664
Real estate income receivable	1,218	1	1,180	2,399
Derivative instruments receivable	267,616	204	259,467	527,287
Investments sold	379,984	289	368,413	748,686
Total receivables	<u>765,727</u>	<u>2,579</u>	<u>755,685</u>	<u>1,523,991</u>
Investments, at fair value				
Short-term securities	104,688	79	101,500	206,267
Government securities	4,371,589	3,325	4,238,463	8,613,377
Corporate securities	2,802,686	2,132	2,717,337	5,522,155
Corporate stocks	12,019,535	9,142	11,653,511	23,682,188
Strategic Lending	475,264	361	460,791	936,416
Private equities	539,095	410	522,679	1,062,184
Real estate	1,362,625	1,037	1,321,129	2,684,791
Total investments	<u>21,675,482</u>	<u>16,486</u>	<u>21,015,410</u>	<u>42,707,378</u>
Capital assets (net)	<u>16,114</u>	<u>12</u>	<u>15,622</u>	<u>31,748</u>
TOTAL ASSETS	<u>25,674,535</u>	<u>21,515</u>	<u>24,905,822</u>	<u>50,601,872</u>
LIABILITIES				
Accounts payable				
Death benefits and refunds payable	1,029	5	1,642	2,676
Federal withholding payable	7,920	0	7,591	15,511
Retiree insurance premium payable	4,330	0	4,150	8,480
Other	888	1	862	1,751
Investments purchased	444,206	338	430,678	875,222
Derivative instruments payable	268,264	204	260,095	528,563
Other investment payables	16,640	12	16,132	32,784
Securities lending collateral	2,990,874	2,275	2,899,795	5,892,944
TOTAL LIABILITIES	<u>3,734,151</u>	<u>2,835</u>	<u>3,620,945</u>	<u>7,357,931</u>
NET POSITION RESTRICTED FOR PENSIONS	<u>\$ 21,940,384</u>	<u>\$ 18,680</u>	<u>\$ 21,284,877</u>	<u>\$ 43,243,941</u>

See accompanying Notes to the Financial Statements.

**STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED JUNE 30, 2015**

Expressed in Thousands

	Public Employee Retirement Plan	Teacher Retirement Plan	Teacher Legacy Pension Plan	Total
ADDITIONS				
Contributions				
Member contributions	\$ 77,020	\$ 10,390	\$ 187,122	\$ 274,532
Employer contributions	664,834	8,310	338,301	1,011,445
Other contributions	384	0	0	384
Total contributions	<u>742,238</u>	<u>18,700</u>	<u>525,423</u>	<u>1,286,361</u>
Investment income				
Net appreciation in fair value of investments	40,523	17	39,444	79,984
Interest & Dividends	596,689	266	580,579	1,177,534
Real estate income, net of operating expenses	37,488	16	36,491	73,995
Total investment income	674,700	299	656,514	1,331,513
Less: Investment expense	(23,667)	(10)	(23,036)	(46,713)
Net income from investing activities	651,033	289	633,478	1,284,800
Securities lending activities				
Securities lending income	17,331	8	16,869	34,208
Less: securities lending expense	(3,924)	(2)	(3,820)	(7,746)
Net income from securities lending activities	13,407	6	13,049	26,462
Net investment income	<u>664,440</u>	<u>295</u>	<u>646,527</u>	<u>1,311,262</u>
TOTAL ADDITIONS	<u>1,406,678</u>	<u>18,995</u>	<u>1,171,950</u>	<u>2,597,623</u>
DEDUCTIONS				
Annuity benefits	1,118,386	0	1,071,903	2,190,289
Death benefits	3,154	0	2,371	5,525
Refunds	25,790	35	22,136	47,961
Administrative expense	9,148	280	5,636	15,064
TOTAL DEDUCTIONS	<u>1,156,478</u>	<u>315</u>	<u>1,102,046</u>	<u>2,258,839</u>
NET INCREASE	250,200	18,680	69,904	338,784
FIDUCIARY NET POSITION				
RESTRICTED FOR PENSIONS				
BEGINNING OF YEAR	<u>21,690,184</u>	<u>0</u>	<u>21,214,973</u>	<u>42,905,157</u>
END OF YEAR	<u>\$ 21,940,384</u>	<u>\$ 18,680</u>	<u>\$ 21,284,877</u>	<u>\$ 43,243,941</u>

See accompanying Notes to the Financial Statements.

NOTES TO THE FINANCIAL STATEMENTS

JUNE 30, 2015

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.

A. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

1. **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*.
2. **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.

3. **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.
4. **Method Used to Value Investments** - Investments are reported at fair value. Securities traded on a national or international exchange are valued at the last reported sales price at current exchange rates. The fair value of real estate investments is determined at least every three years by qualified, independent appraisers who are members of the Appraisal Institute. In those years independent appraisals are not conducted, appraisals are completed internally by real estate advisors. The fair value of private equity investments is determined by the fund managers using various methodologies, as applicable under GAAP. In many cases, these valuations are additionally reviewed by advisory boards comprised of a subgroup of the fund's investors. These valuations are audited on an annual basis by independent accounting firms engaged by the private equity fund managers. Investment income includes realized and unrealized appreciation (depreciation) in the fair value of investments. Interest income is recognized when earned. Securities and securities transactions are recorded in the financial statements on trade-date basis. Real estate transactions are recorded in the financial statements at the time of closing.
5. **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 \$31.7 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.

B. PLAN DESCRIPTIONS

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

**NOTES TO THE FINANCIAL STATEMENTS
JUNE 30, 2015 (CONTINUED)**

At June 30, 2015, 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 two 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 the 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.

Plan Membership - At June 30, 2015 the membership of the pension plans consisted of the following:

	Public Employee Retirement Plan	Teacher Retirement Plan	Teacher Legacy Pension Plan	Total
Inactive Plan Members or Beneficiaries Currently Receiving Benefits	91,683	0	47,292	138,975
Inactive Vested Plan Members Entitled to But Not Yet Receiving Benefits	32,989	3	8,000	40,992
Inactive Non-Vested Plan Members Entitled to Refund of Member Account Balance	30,015	523	18,341	48,879
Active Plan Members	138,267	5,516	69,140	212,923
Total Membership	<u>292,954</u>	<u>6,042</u>	<u>142,773</u>	<u>441,769</u>
Number of Participating Employers	545	142	142	687
<i>Membership above includes all plans whether open or closed.</i>				

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.

NOTES TO THE FINANCIAL STATEMENTS JUNE 30, 2015 (CONTINUED)

Teacher Legacy Pension Plan

Members of the Teacher Legacy Pension Plan are eligible to retire at age 60 with five 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 ten percent (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 2nd 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 three percent (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 (1 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 five 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 ten percent (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 2nd 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 three percent (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 (1 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 five 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 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 ten percent (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 2nd of July of the previous year. The COLA is based on the change in the CPI during the prior calendar year, capped at three percent (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 (1 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

**NOTES TO THE FINANCIAL STATEMENTS
JUNE 30, 2015 (CONTINUED)**

using a multiplier of the member's highest five 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 ten percent (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 2nd of July of the previous year. The COLA is based on the change in the CPI during the prior calendar year, capped at three percent (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 (1 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 five percent (5 percent) of salary. For the year ended June 30, 2015, the required ADC for LEAs was 9.04 percent of covered-employee payroll.

For the Teacher Retirement Plan, LEAs are required by statute to contribute greater of the ADC or four percent (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 five percent (5 percent) of salary. For the year ended June 30, 2015, the required ADC for LEAs was two and one-half percent (2.5 percent) of covered-employee payroll while actual contributions were four percent (4 percent) of covered-employee payroll.

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 four percent (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, 2015, the required ADC varied for each participating employer, with approximately fifty percent (50 percent) of all employer rates between eight percent (8 percent) and twenty percent (20 percent) and contributions from these same employers accounting for over ninety percent (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 five percent (5 percent) of salary. As adopted by the governmental entity, political subdivision employees may be noncontributory, contribute two and one-half percent (2.5 percent) of salary, or contribute five percent (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 four percent (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 four percent (4 percent). In such case, the required employer contribution in excess of four percent (4 percent) will be transferred from the stabilization reserve to the account of the Teacher 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 four percent (4 percent).

NOTES TO THE FINANCIAL STATEMENTS JUNE 30, 2015 (CONTINUED)

The Board has not adopted a policy at this time. At June 30, 2015, there was \$3,232,080 in the stabilization reserve on behalf of the Teacher Retirement Plan and \$1,987,839 in the various stabilization reserves on behalf of the Public Employee Retirement Plan.

C. DEPOSITS AND INVESTMENTS

Statutory Authority - State statute authorizes the TCRS to maintain cash, not exceeding ten percent (10 percent) of the total amount of funds in the retirement system, on deposit in one or more banks, savings and loan associations, or trust companies that are qualified as state depositories. The TCRS does not utilize its own bank accounts but invests in the State Pooled Investment Fund for the initial deposit of funds and for its operating cash needs. The State Pooled Investment Fund is authorized by state statute to invest funds in accordance with policy guidelines approved by the Funding Board of the State of Tennessee. The current resolution of that board gives the Treasurer authority to invest in collateralized certificates of deposit in authorized state depositories, prime commercial paper, prime bankers' acceptances, certain repurchase agreements, and various U.S. Treasury and Agency obligations. The State Pooled Investment Fund is also authorized to enter into securities lending agreements in which U.S. Government Securities may be loaned for a fee. The loaned securities are transferred to the borrower by the custodial agent upon simultaneous receipt of collateral securities.

State statute also authorizes the TCRS to invest in bonds, debentures, preferred stock, common stock, real estate and in other good and solvent securities subject to the approval of the Board of Trustees, but further subject to the following statutory restrictions and provisions:

- a. The total sum invested in common and preferred stocks shall not exceed seventy-five percent (75 percent) of the total of the funds of the retirement system.
- b. The total sum invested in notes and bonds or other fixed income securities exceeding one year in maturity shall not exceed seventy-five percent (75 percent) of the total funds of the retirement system.
- c. Within the restrictions in (a) and (b) above, an amount not to exceed twenty-five percent (25 percent) of the total of the funds of the retirement system may be invested in securities of the same kinds, classes, and investment grades as those otherwise eligible for investment in various approved foreign countries, provided that such percentage may be increased by the board with the subsequent approval of the council on pensions and insurance.
- d. Within the restrictions in (a) and (b) above, funds may be invested in Canadian securities which are substantially of the same kinds, classes, and investment grades as those otherwise eligible for investment.
- e. The total amount of securities loaned under a securities lending program cannot exceed thirty percent (30 percent) of total assets.
- f. The total sum invested in real estate shall not exceed ten percent (10 percent) of the market value of total assets.
- g. The total sum invested in private equities shall not exceed ten percent (10 percent) of the market value of total assets.

State statute also authorizes the TCRS to invest in forward contracts to hedge its foreign currency exposure and to purchase or sell domestic equity index futures contracts for the purpose of asset allocation relating to the domestic equity portfolio. The total amount of the financial futures contract obligation shall not exceed ten percent (10 percent) of the market value of total assets. Gross exposure to approved fixed income financial instruments will be limited to ten percent (10 percent) of the market value of the System's total assets for risk mitigating positions and ten percent (10 percent) for risk positions. Position sizes will be measured by notional amounts. Options will be measured in their notional equivalents.

Investment Policy - The TCRS investment authority is established pursuant to *Tennessee Code Annotated*, Title 8, Chapter 37. The statute provides the Board of Trustees with the responsibility to establish the investment policy of the TCRS. The investment policy may be amended by the Board. The TCRS plan assets are managed on a total return basis with a long-term objective of

**NOTES TO THE FINANCIAL STATEMENTS
JUNE 30, 2015 (CONTINUED)**

achieving and maintaining a fully funded status for the benefits provided by the TCRS. The following was the TCRS Board's adopted asset allocation policy as of June 30, 2015:

Authorized Asset Class	Target Allocation
U.S. Equity	33%
Canadian Equity	4%
Developed Market International Equity	13%
Emerging Market International Equity	5%
Private Equity	3%
U.S. Fixed Income	25%
Inflation Indexed Fixed Income	4%
International Fixed Income	0%
Strategic Lending	5%
Real Estate	7%
Short-Term Securities	<u>1%</u>
Total	<u><u>100%</u></u>

Securities Lending - The TCRS is authorized to invest in securities lending investments by TCA 8-37-104(a)(6) with the terms established in the investment policy whereby TCRS loans securities to brokers and dealers (borrower) and in turn, TCRS receives cash as collateral. TCRS pays the borrower interest on the collateral received and invests the collateral with the goal of earning a higher yield than the interest rate paid to the borrower. Loans are limited to no more than thirty percent (30 percent) of the market value of the total assets in the TCRS portfolio and provided further that such loans are secured by collateral. Securities received as collateral hereunder shall have a market value equal to at least one hundred two percent (102 percent) of the market value of the loaned domestic security or one hundred five percent (105 percent) of any foreign security. Cash received as collateral shall equal at least one hundred percent (100 percent) of the market value of the loaned securities and may be invested by or on behalf of the TCRS in any instrument the TCRS may be directly invested. Cash Collateral is held in the TCRS name and is not subject to custodial credit risk. During the year there were no violations of legal or contractual provisions by the TCRS.

The TCRS securities lending program is managed by a third party lending agent, Deutsche Bank AG. The TCRS may loan any debt or equity securities which is owned by TCRS. At June 30, 2015, the TCRS had the following securities on loan and received the cash collateral as shown below:

Securities on Loan	Fair Value of Securities on Loan	Cash/Non-Cash Collateral Received
Fixed	\$2,031,510,790	\$2,077,594,484
Equity	<u>3,730,719,970</u>	<u>3,815,349,280</u>
Total	<u><u>\$5,762,230,760</u></u>	<u><u>\$5,892,943,764</u></u>

The TCRS has the ability to sell the collateral securities only in the case of a borrower default.

NOTES TO THE FINANCIAL STATEMENTS
JUNE 30, 2015 (CONTINUED)

As of June 30, 2015 the TCRS had the following investments:

Credit Quality Distribution for Securities with Credit Exposure as a Percentage of Total Investments		
Rating	Fair Value (in thousands)	Percentage of Total Investments
AAA	\$ 876,554	2.052%
AA	521,115	1.220%
A	1,077,924	2.524%
BBB	2,757,564	6.457%
BB	183,838	0.430%
B	39,467	0.092%
CCC	90,396	0.212%
CC	1,181	0.003%
D	35,069	0.082%
NR	<u>3,400,589</u>	7.963%
	\$ 8,983,697	
U. S. Government Agencies and Obligations Explicitly Guaranteed by the U.S. Government	<u>5,627,671</u>	
Total Fixed Income Securities	\$ 14,611,368	
Equity	\$ 23,757,978	
Real Estate	2,684,791	
Private Equities	1,062,184	
Strategic Lending	936,416	
Derivative Instruments (not rated)	0	
Escrow Claim (not rated)	0	
Short Term Investment Fund with Custodian (NR)	1,772	
Add Back Short Term Investments Classified as Cash	<u>(347,131)</u>	
Total Investments as Shown on Fiduciary Net Position	<u><u>\$ 42,707,378</u></u>	

Credit Risk - Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The credit quality distribution for the TCRS' investments in fixed income securities at year end is included in the above schedule. Securities are rated using Standard and Poor's and/or Moody's and are presented above using the Standard and Poor's rating scale. The State Pooled Investment Fund has not obtained a credit quality rating from a nationally recognized credit ratings agency.

The TCRS' investment policy specifies that bond issues subject for purchase are investment grade bonds rated in the four highest ratings by one of the recognized rating agencies. For short-term investments, the TCRS' investment policy provides for the purchase of only the highest quality debt issues. Commercial paper should be rated in the highest tier by all rating agencies which rate the paper, with a minimum of two ratings required. Commercial paper cannot be purchased if a rating agency has the commercial paper on a negative credit watch. The investment policy also requires preparation of a credit analysis report on the corporation prior to purchasing commercial paper.

**NOTES TO THE FINANCIAL STATEMENTS
JUNE 30, 2015 (CONTINUED)**

As noted above, the TCRS does not utilize its own bank accounts but invests in the State Pooled Investment Fund for its operating cash purposes. Required risk disclosures relative to the State Pooled Investment Fund are presented in the State of Tennessee Treasurer's Report. That report is available on the state's website at <http://www.tn.gov/treasury/>.

Interest Rate Risk - Interest rate risk is the risk that future changes in prevailing market rates of interest will have an adverse effect on the fair value of debt investments. The fair values of securities with long terms to maturity may be highly sensitive to interest rate changes. The TCRS' investment policy does not specifically address limits on investment maturities. The fixed income portfolio, however, is benchmarked against the Citigroup Broad Investment Grade Index and tends to have duration within a range around that index. Duration is a measure of a debt investment's exposure to fair value changes arising from changing interest rates. It uses the present value of cash flows weighted for those cash flows as a percentage of the investment's full price. The TCRS had the following investments and effective duration at year end.

Investment Type	Fair Value as of June 30, 2015 (in thousands)	Effective Duration (years)
Government Agencies	\$ 288,764	8.18
Government Bonds	2,255,342	14.11
Government Inflation Indexed	2,604,278	8.45
Government Mortgage Backed	3,466,373	4.30
Government Asset Backed	45,411	7.15
Municipal Bonds	156,099	10.22
Commercial Mortgage Backed	470,623	2.40
Corporate Asset Backed Securities	236,558	2.41
Corporate Bonds	4,536,294	8.31
Short Term Bills and Notes	551,626	0.05
Total Debt Investments	<u>\$14,611,368</u>	<u>7.70</u>

Asset-Backed Securities - The TCRS invests in various collateralized mortgage obligations (CMOs) which are mortgage-backed securities. These securities are based on cash flows from interest and principal payments on underlying mortgages and could therefore be more sensitive to prepayments by mortgagees as a result of a decline in interest rates. The fair value of CMOs at June 30, 2015 was \$470,622,689, of which \$317,431,678 were CMOs that are generally more sensitive to interest rate changes.

Foreign Currency Risk - Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or deposit. The TCRS' investment policy limits the asset allocation for international investments to twenty-five percent (25 percent) of total assets. The TCRS' exposure to foreign currency risk was as follows:

NOTES TO THE FINANCIAL STATEMENTS
JUNE 30, 2015 (CONTINUED)

Currency	Total Fair Value June 30, 2015 (in thousands)	Fixed Income	Equity (in thousands)	Cash (in thousands)
Australian Dollar	\$ 246,507	\$0	\$ 246,300	\$ 207
British Pound Sterling	1,112,564	0	1,103,194	9,370
Canadian Dollar	1,577,942	0	1,562,054	15,888
Danish Krone	122,986	0	122,986	0
Euro Currency	1,519,192	0	1,512,236	6,956
Hong Kong Dollar	203,728	0	201,594	2,134
Japanese Yen	1,373,639	0	1,356,066	17,573
New Israeli Shekel	19,773	0	19,661	112
New Zealand Dollar	6,146	0	6,146	0
Norwegian Krone	48,326	0	48,121	205
Singapore Dollar	54,479	0	54,375	104
Swedish Krona	166,508	0	166,494	14
Swiss Franc	545,066	0	543,181	1,885
Total	<u>\$ 6,996,856</u>	<u>\$0</u>	<u>\$ 6,942,408</u>	<u>\$ 54,448</u>

Custodial Credit Risk - Custodial Credit Risk for deposits is the risk that in the event of a bank failure, the TCRS' deposits may not be returned to TCRS. The TCRS does not have an explicit policy with regards to Custodial Credit Risk for deposits. At year end, the TCRS had uninsured and uncollateralized cash deposits of \$54,448,276 in foreign currency held by our master custodian, State Street Bank, in State Street's name. These deposits were used for investments pending settlement.

Rate of Return - For the year, the money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 3.29 percent. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

Derivatives:

Futures - The TCRS may buy or sell fixed income and equity index futures contracts for the purposes of making asset allocation changes in an efficient and cost effective manner and to improve liquidity. Gains (losses) on futures hedge losses (gains) produced by any deviation from the TCRS' target allocation. The gains and losses resulting from daily fluctuations in the fair value of the outstanding futures contract are settled daily, on the following day, and a receivable or payable is established for any unsettled gain or loss as of the financial statement date. Any resulting payable is reflected in the financial statements at fair value.

Foreign Currency Forward Contracts - The international securities expose the TCRS to potential losses due to a possible rise in the value of the US dollar. The TCRS investment managers can reduce foreign currency exposure by selling foreign currency forward contracts, at agreed terms and for future settlement, usually within a year. The manager will reverse the contract by buying the foreign currency before the settlement date. A gain (loss) on this transaction pair will hedge a loss (gain) on the currency movement of the international security. The TCRS can sell up to eighty percent (80 percent) of its foreign currency exposure into US dollars. Foreign currency forward contracts expose the TCRS to foreign currency risk as they are denominated in foreign currency. Any unrealized gain on foreign currency forward contracts has been reflected in the financial statements as an investment. The notional amount of the foreign currency forward contracts has been reflected in the financial statements

NOTES TO THE FINANCIAL STATEMENTS
JUNE 30, 2015 (CONTINUED)

as a receivable and a payable. Any unrealized loss on foreign currency forward contracts has been included in the payable established for the contracts.

Mortgages - The TCRS is authorized to invest in To Be Announced (TBA) mortgage backed securities similar to the foreign currency forward contracts. The TCRS enters into agreements to purchase pools of mortgage backed securities prior to the actual security being identified. The TCRS will roll this agreement prior to settlement date to avoid taking delivery of the security. Any unrealized gain on TBA mortgage backed securities has been reflected in the financial statements as an investment. Any unrealized loss on TBA mortgage backed securities has been included in the payable established for the mortgages. The notional amounts of these agreements have been included in the financial statements as a receivable and a payable. The TCRS invests in these derivatives to adjust its exposure to mortgage coupon risk and to replicate the return on mortgage backed securities portfolios without actually purchasing the security.

Options - The TCRS is authorized to enter into option contracts and any income earned on option contracts has been included in investment income in the financial statements.

The fair value balances and notional amounts of derivative instruments outstanding at year end, classified by type, and the changes in fair value of derivative instrument types for the year ended as reported in the financial statements are as follows:

	Changes in Fair Value (in thousands)		Fair Value at June 30, 2015 (in thousands)		
	Financial Statement Classification	Amount	Financial Statement Classification	Amount	Notional Amount Currency
Foreign Currency Forward Contracts		\$142		\$142	16,390 EUR
		(332)		(332)	16,845,184 JPY
	Investment Income	(\$190)	Derivative Instruments Payable	(\$190)	
Futures Contracts					
	Investment Income	(\$22,559)	Derivative Instruments Receivable	\$352	\$859,140
TBA Mortgage Backed Securities					
	Investment Income	(\$734)	Derivative Instruments Receivable	(\$734)	\$369,403

The fair values of foreign currency forward contracts are estimated based on the present value of their estimated future cash flows. Futures, Options, and TBA mortgage backed securities are exchange traded and their price is based on quoted market prices at year end. It is the TCRS policy to conduct derivative transactions through the custodian bank and high quality money center banks or brokerage firms. The credit risk of foreign currency forward contracts is managed by limiting the term of the forward contracts and restricting the trading to high quality banks. The credit risk of futures contracts is managed by maintaining a daily variation margin.

Alternative Investments - The TCRS has investments in strategic lending, private equity funds, and real estate with an estimated fair value of \$4,683,390,636 at June 30, 2015. Because these investments are not readily marketable, the estimated value is subject to uncertainty and, therefore, may differ from the value that would have been used had a ready market for the investments existed, and such differences could be material. Title to real property invested in by TCRS is held by real estate investment holding companies.

**NOTES TO THE FINANCIAL STATEMENTS
JUNE 30, 2015 (CONTINUED)**

Commitments:

Standby Commercial Paper Purchase Agreement - The TCRS has agreed to serve as standby commercial paper purchaser for commercial paper issued by the Funding Board of the State of Tennessee. By serving as a standby commercial paper purchaser, the TCRS receives an annual fee of 25 basis points on the \$350 million maximum issuance under this agreement during times when both Moody's and Standard and Poor's investment ratings assigned to the State of Tennessee's general obligation bonds are Aaa and AAA respectively, 40 basis points during times when either Moody's or Standard and Poor's has assigned ratings of Aa and AA respectively, or 55 basis points during times when either Moody's or Standard and Poor's has assigned ratings lower than Aa and AA respectively. In the unlikely event that the TCRS would be called upon to purchase the commercial paper, the TCRS would receive interest at a rate equal to prime plus 75 basis points during the first 30 consecutive days, plus an additional 50 basis points for each consecutive 30 days thereafter, up to a maximum rate allowed by state law.

Alternative Investments - The TCRS had unfunded commitments of \$1,978,496,528 in private equity, strategic lending, and real estate commitments at year end.

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

The components of net pension liability at June 30, 2015, were as follows:

	Teacher Legacy Pension Plan	Teacher Retirement Plan
Total Pension Liability	\$ 22,073,402,943	\$ 16,129,977
Plan Fiduciary Net Position	(21,284,877,037)	(18,680,373)
Net Pension Liability (Asset)	<u>\$ 788,525,906</u>	<u>\$ (2,550,396)</u>
Plan Fiduciary Net Position	96.43%	115.81%

Actuarial assumptions - The total pension liability was determined by an actuarial valuation as of July 1, 2014, updated to roll forward to June 30, 2015, 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 income, 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, 2014 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.

**NOTES TO THE FINANCIAL STATEMENTS
JUNE 30, 2015 (CONTINUED)**

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 three percent (3 percent). 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%
		<u>100%</u>

The long-term expected rate of return on pension plan investments was established by the TCRS Board of Trustees as seven and one-half percent (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 seven and one-half percent (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 seven and one-half percent (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 percent) or one percentage point higher (8.5 percent) than the current rate:

Plan	One Percent Decrease (6.5%)	Current Discount Rate (7.5%)	One Percent Increase (8.5%)
Teacher Legacy Pension Plan	\$3,633,924,606	\$788,525,906	(\$1,567,286,797)
Teacher Retirement Plan	\$589,448	(\$2,550,396)	(\$5,179,946)

**SCHEDULES OF REQUIRED SUPPLEMENTARY INFORMATION
TEACHER LEGACY PENSION PLAN**

**SCHEDULE OF CHANGES IN NET PENSION LIABILITY
FISCAL YEAR ENDED JUNE 30**

	<u>2015</u>	<u>2014</u>
Total pension liability		
Service cost	\$ 393,173,920	\$ 404,576,942
Interest	1,578,251,721	1,483,656,307
Change of benefit terms	0	0
Difference between expected and actual experience	46,576,630	0
Change of assumptions	0	0
Benefit payments, including refunds of member contributions	<u>(1,096,410,122)</u>	<u>(1,037,013,093)</u>
Net change in total pension liability	921,592,149	851,220,156
Total pension liability - beginning	<u>21,151,810,794</u>	<u>20,300,590,638</u>
Total pension liability - ending (a)	<u>22,073,402,943</u>	<u>21,151,810,794</u>
Plan fiduciary net position		
Contributions – employer	338,301,211	348,474,888
Contributions - members	187,121,567	195,520,938
Net investment income	646,526,936	3,054,117,821
Benefit payments, including refunds of member contributions	<u>(1,096,410,122)</u>	<u>(1,037,013,093)</u>
Administrative expense	<u>(5,635,689)</u>	<u>(2,663,319)</u>
Net change in plan fiduciary net position	69,903,903	2,558,437,235
Plan fiduciary net position - beginning	<u>21,214,973,134</u>	<u>18,656,535,899</u>
Plan fiduciary net position - ending (b)	<u>21,284,877,037</u>	<u>21,214,973,134</u>
Net pension liability (asset) - ending (a) - (b)	<u>\$ 788,525,906</u>	<u>\$ (63,162,340)</u>

**SCHEDULES OF REQUIRED SUPPLEMENTARY INFORMATION
TEACHER RETIREMENT PLAN**

SCHEDULE OF CHANGES IN NET PENSION LIABILITY
FISCAL YEAR ENDED JUNE 30

	2015
Total pension liability	
Service cost	\$ 15,581,497
Interest	583,011
Change of benefit terms	0
Difference between expected and actual experience	0
Change of assumptions	0
Benefit payments, including refunds of member contributions	(34,531)
Net change in total pension liability	16,129,977
Total pension liability - beginning	0
Total pension liability - ending (a)	16,129,977
Plan fiduciary net position	
Contributions – employer	8,310,132
Contributions - members	10,390,077
Net investment income	294,742
Benefit payments, including refunds of member contributions	(34,531)
Administrative expense	(280,047)
Net change in plan fiduciary net position	18,680,373
Plan fiduciary net position - beginning	0
Plan fiduciary net position - ending (b)	18,680,373
Net pension liability (asset) - ending (a) - (b)	\$ (2,550,396)

**SCHEDULES OF REQUIRED SUPPLEMENTARY INFORMATION
TEACHER LEGACY PENSION PLAN**

SCHEDULE OF NET PENSION LIABILITY
FISCAL YEAR ENDED JUNE 30

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

**SCHEDULES OF REQUIRED SUPPLEMENTARY INFORMATION
TEACHER RETIREMENT PLAN**

SCHEDULE OF NET PENSION LIABILITY
FISCAL YEAR ENDED JUNE 30

	<u>2015</u>
Total pension liability	\$ 16,129,977
Plan fiduciary net position	18,680,373
Net pension liability (asset)	<u>\$ (2,550,396)</u>
Plan fiduciary net position as a percentage of the total pension liability	115.81%
Covered-employee payroll	\$207,753,299
Net pension liability (asset) as a percentage of covered-employee payroll	(1.23%)

**SCHEDULES OF REQUIRED SUPPLEMENTARY INFORMATION
TEACHER LEGACY PENSION PLAN**

**SCHEDULE OF CONTRIBUTIONS
FISCAL YEAR ENDED JUNE 30**

	Actuarially-Determined Contribution	Contributions in Relation to the Actuarially-Determined Contributions	Contribution Deficiency	Covered-Employee Payroll	Contributions as a Percentage of Covered-Employee Payroll
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%
2006	175,719,201	175,719,201	0	3,194,957,343	5.50%

**SCHEDULES OF REQUIRED SUPPLEMENTARY INFORMATION
PUBLIC EMPLOYEE RETIREMENT PLAN,
TEACHER LEGACY PENSION PLAN, AND
TEACHER RETIREMENT PLAN**

SCHEDULE OF INVESTMENT RETURNS
FISCAL YEAR ENDED JUNE 30

	<u>2015</u>	<u>2014</u>
Annual Money-Weighted Rate of Return, Net of Investment Expense	3.29%	16.49%

**NOTES TO REQUIRED SUPPLEMENTARY INFORMATION
 COST-SHARING PLANS
 FOR THE YEAR ENDED JUNE 30, 2015**

Method and Assumptions Used in Calculations of Actuarially-Determined Contributions - The actuarially-determined contribution rates for the fiscal year ended June 30, 2015 for Local Education Agencies were calculated as the result of an actuarial valuation performed as of July 1, 2013. The following actuarial methods and assumptions were used to determine contribution rates reported in the schedule:

	Teacher Legacy Pension Plan	Teacher Retirement Plan
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 Rates of Return	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, 2015, 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 23, 2015. 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. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

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*.

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 23, 2015