

# TENNESSEE CONSOLIDATED RETIREMENT SYSTEM

*A Program of the Tennessee Treasury Department  
Pension Trust Funds of the State of Tennessee*



## Comprehensive Annual Financial Report *For the Fiscal Year Ended June 30, 2016*

Prepared by:  
State of Tennessee  
Treasury Department  
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David H. Lillard, Jr., State Treasurer  
Jill Bachus, TCRS Director



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# *Introductory Section*

Letter from the Chairman of the Board

Professional Awards

Letter of Transmittal

Administration and Mission

The Council on Pensions and Insurance

The Board of Trustees

Professional Consultants

Treasury Department Executive Staff

Organization Chart



State of Tennessee

DAVID H. LILLARD, JR.  
STATE TREASURER615.741.2956  
David.Lillard@tn.govTREASURY DEPARTMENT  
STATE CAPITOL  
Nashville, Tennessee 37243-0225

December 23, 2016

Dear Members of the Tennessee Consolidated Retirement System:

It is my pleasure to submit this annual financial report of the Tennessee Consolidated Retirement System. This is the twenty-ninth consecutive year that the financial report is being submitted to the Government Finance Officers Association for review. All previous reports have received the Certificate of Achievement for Excellence in Financial Reporting.

**Administration:** TCRS has upgraded its pension administration system with a goal of providing enhanced operational efficiency and better access to information for our members. This web-based system allows active members and retirees access to real-time information, adjust tax withholding, bank account or address changes affecting the retirement benefit, and a variety of other services. In addition, employers electronically report pertinent payroll information through the system on a monthly basis. Information about the TCRS pension plans can be found at <http://treasury.tn.gov/tcrs>.

**Investments:** The 2016 fiscal year was challenging for investors and TCRS gained 2.79% for the fiscal year with an annualized gain of 7.54% for the trailing five-year period. While the one-year figure trailed the actuarially-required return, the five-year number has exceeded the target and the portfolio was still managed in a manner to protect capital in an adverse environment.

**Financial Soundness of the Plan:** TCRS is considered one of the best-funded public pension plans in the nation. Standard and Poor's (S&P) ranks TCRS the sixth best-funded state pension plan in the U.S. All three national ratings agencies: S&P, Moody's, and Fitch, recognize Tennessee for fully funding its annual actuarially-determined contribution every year since 1972.

The General Assembly, the Board of Trustees and the TCRS staff have worked diligently to provide the best possible management of the system, invest the system assets in a prudent manner without undue risk, fund the system on an actuarially-strong basis and provide the best possible services to the members in the system.

Sincerely,

A handwritten signature in blue ink, appearing to read "David H. Lillard, Jr.", written over a white background.David H. Lillard, Jr., State Treasurer  
Chairman of the Board

**CERTIFICATE OF ACHIEVEMENT FOR EXCELLENCE  
IN FINANCIAL REPORTING**

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the Tennessee Consolidated Retirement System (TCRS) for our Comprehensive Annual Financial Report for the fiscal year ended June 30, 2015. This was the 28th consecutive year that TCRS has achieved this prestigious award.



**PUBLIC PENSION STANDARDS AWARD**

The Tennessee Consolidated Retirement System (TCRS) was awarded a Public Pension Standards Award for our Comprehensive Annual Financial Report for the fiscal year ended June 30, 2015. This prestigious award was presented by the Public Pension Coordinating Council, a confederation of the National Association of State Retirement Administrators (NASRA), the National Conference on Public Employee Retirement Systems (NCPERS), and the National Council on Teacher Retirement (NCTR). TCRS received the award in recognition of meeting professional standards for plan funding and administration as set forth in the Public Pension Standards.



STATE OF TENNESSEE  
TENNESSEE CONSOLIDATED RETIREMENT SYSTEM  
15th FLOOR ANDREW JACKSON BUILDING  
502 DEADERICK STREET  
NASHVILLE, TENNESSEE 37243-0201

DAVID H. LILLARD, JR.  
STATE TREASURER

JILL BACHUS  
DIRECTOR

December 23, 2016

Board of Trustees  
Tennessee Consolidated Retirement System  
Nashville, TN 37243

Ladies and Gentlemen:

We are pleased to present to you the Tennessee Consolidated Retirement System (TCRS) comprehensive annual financial report for the fiscal year ended June 30, 2016. Responsibility for the accuracy of the data and the fairness and completeness of this presentation, including all disclosures, rests with the management of TCRS. To the best of our knowledge and belief, the enclosed data is accurate in all material respects and is reported in a manner designed to provide a precise representation of the financial position and results of operations of the system.

This report has been prepared in accordance with generally accepted accounting principles as promulgated or adopted by the Government Accounting Standards Board and the American Institute of Certified Public Accountants. Specific accounting treatments are detailed in the Notes to the Financial Statements found in the Financial Section of this report. Management is responsible for establishing and maintaining internal controls for TCRS. The accounting systems are designed to include internal controls to provide reasonable assurances regarding safekeeping of assets and the reliability of financial records. These internal controls have been created to provide reasonable, rather than absolute, assurance that the financial statements are free of any material misstatements. The concept of reasonable assurance recognizes that first, the cost of a control should not exceed the benefits likely derived, and second, the valuation of the cost and benefits requires estimates and judgments by management. By statute, the Comptroller of the Treasury serves as the independent auditor for the system.

For additional discussion regarding financial information, please review Management's Discussion and Analysis located in the Financial Section of this report.

**PROFILE OF TCRS**

TCRS was established in 1972 with the consolidation of seven separate retirement systems for state employees, public higher education institution employees, public school teachers and employees of political subdivisions electing to participate in TCRS. The State of Tennessee is responsible for the pension benefits of state employees and higher education employees and funds a significant portion of the retirement liability for teachers through the Basic Education Program. Each of the 501 participating political subdivisions is responsible for the pension benefits of its employees. TCRS is a qualified pension plan under Section 401(a) of the Internal Revenue Code. As such, the system is exempt from federal income taxation on its investment earnings. Since January 1, 1987, member contributions have been tax deferred under Section 414(h) of the Internal Revenue Code.

Beginning July 1, 2014, a new pension plan structure was implemented for new hire state employees and K-12 teachers. The plan combines components of a defined benefit plan through TCRS and a defined contribution plan through the

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state's deferred compensation program. The structure was designed with cost and unfunded liability controls. TCRS was established as a retirement program for the public employees of Tennessee. A variety of services are provided for the membership including: investing assets; counseling of rights and benefits; publishing newsletters, booklets, pamphlets and financial statements; processing deductions for retiree insurance programs and federal income tax; calculating death, disability and retirement benefits; and processing refund and prior service requests.

## **ECONOMIC CONDITION**

Funding of TCRS is provided through employee and employer contributions plus earnings from the invested assets. A standard actuarial "advanced funding" method is used to provide for the accumulation of assets to fund the cost of retirement, disability and death benefits provided by the system. The funding objective of TCRS is being met as the state and political subdivisions continue to make contributions to the plan at the rates established by the Board of Trustees. The Board is utilizing a strong actuarial method and has adopted reasonable actuarial assumptions for the determination of the appropriate employer contribution rates.

An actuarial valuation of TCRS is performed by an independent actuarial firm annually beginning June 30, 2015 to determine the funding requirements for the employers participating in TCRS. On June 30, 2015, the plan had the following funded ratios on an actuarial basis for the legacy plan: state employees, 90.01%; K-12 teachers, 98.74%; and political subdivisions in aggregate 98.79%. On a market value basis, the plan had the following funded ratios: state employees, 95.11%; K-12 teachers, 100.08%; and political subdivisions in aggregate 102.12%. Experience studies are performed on a quadrennial basis. The results of the June 30, 2012 experience study have been incorporated into the July 1, 2013 actuarial valuation which produced employer contribution rates for the period July 1, 2014-June 30, 2016.

The TCRS portfolio is diversified among domestic and international stocks and bonds, real estate, private equity and short-term securities. A diversified portfolio is used to manage risk and to minimize significant exposure to unpredictable events. Staff consults with the TCRS general consultant periodically to determine the optimal, long-term mix of assets to best meet the plan's investment objectives. TCRS has adopted a conservative investment strategy that has yielded excellent returns with a low level of risks. The investment return for fiscal year 2016 was 2.79 percent.

Because TCRS is a well-funded pension plan, volatility in investment income will cause employer contribution rates to fluctuate. Investment strategies have been adopted that somewhat reduce, but do not eliminate, this volatility. The investment market outlook continues to create significant challenges in meeting the 7.5 percent investment return assumed by TCRS. A premium will continue to be placed on security selection.

The current TCRS Investment Policy can be found at [www.treasury.tn.gov/tcrs](http://www.treasury.tn.gov/tcrs). Pension funds are invested in the Tennessee Retiree Group Trust (TRGT). TCRS pension funds represent 99.94% of the TRGT. For fiscal year 2016, the TRGT investments provided a 2.79% rate of return. The annualized rate of return was 7.41% over the past three years and 7.54% over the past five years. For further information on investments of TRGT, please refer to pages 46-62 of this report.

## **AWARDS AND ACKNOWLEDGMENTS**

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to Tennessee Consolidated Retirement System for its comprehensive annual financial report for the fiscal year that ended June 30, 2015. This was the twenty-eighth consecutive year that the System has achieved this prestigious award. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized comprehensive annual financial report. This report must satisfy both

*(continued)*




generally accepted accounting principles and applicable legal requirements. The GFOA Certificate of Achievement is valid for a period of one year only. We believe that our current comprehensive annual financial report continues to meet the Certificate of Achievement Program's requirements and we are submitting it to the GFOA to determine its eligibility for another certificate.

TCRS is also the recipient of the Public Pension Principles Achievement Award. This program, administered by the Public Pension Coordinating Council, recognizes the professional achievements of public employee retirement systems.

The dedicated effort of the Treasury Department team to assemble the information contained in this publication is hereby acknowledged with our sincerest appreciation. The report will be provided to state legislators, members of the Board of Trustees, state officials, participating employers and other interested parties.

A handwritten signature in black ink that reads "Jill Bachus".

Jill Bachus  
TCRS Director

A handwritten signature in black ink that reads "Michael Brakebill".

Michael Brakebill  
Chief Investment Officer

## ADMINISTRATION

The State Treasurer is a constitutional officer elected every two years by a joint session of the General Assembly. He serves as the Chief Executive Officer of the Treasury Department, a part of the legislative branch of state government. The administration and operation of TCRS are among the primary responsibilities of the State Treasurer. In order to meet the statutory requirements and fiduciary responsibilities of administering TCRS, the Treasurer appoints two executive officers: the Director of TCRS and the Chief Investment Officer.

The Director of TCRS is responsible for the daily operation of the retirement system which includes providing counseling services for the active and retired members; issuance of payments to retired members, disabled members, beneficiaries of deceased members and refunds to terminated employees; enrollment of members; maintenance of member account balances and records; establishment of service credit and issuance of various publications to inform members of their rights and benefits.

The Chief Investment Officer is responsible for the investment and oversight of TCRS assets in accordance with statutory guidelines and the investment policies and strategies established by the Board of Trustees.

Other divisions within the Treasury Department, which support the operations of TCRS, include Information Systems, Accounting, Management Services, Financial Empowerment, Internal Audit, and Human Resources. Through these divisions, data processing services, accounting services, records maintenance, control reviews and personnel services are provided.

The administrative budget of TCRS is subject to approval by the General Assembly and is part of the overall annual budget process of the State of Tennessee. Funding for the operation of TCRS is provided by three sources. The State of Tennessee is responsible for the operation cost associated with state employees and higher education employees. Local education agencies are responsible for the operation cost related to K-12 teachers. Political subdivisions are responsible for the operation cost associated with their employees.

## MISSION

The mission of the Tennessee Consolidated Retirement System is to provide superior services to constituents in a cost-effective manner through qualified personnel while maintaining the highest ethical standards. The mission is accomplished by TCRS in cooperation with the Board of Trustees, the Council on Pensions and Insurance and the TCRS membership through the following objectives:

- ❖ **Exemplary Service** — To provide accurate, courteous and prompt service to members of TCRS.
- ❖ **Benefit Standards** — To provide retirement coverage through TCRS, Social Security and personal savings vehicles which will allow public employees to maintain their standard of living after retirement.
- ❖ **Funding Standards** — To provide for the long-term funding of TCRS on an actuarial basis which will ensure that sufficient assets will be accumulated to pay the statutory benefits of current and future retirees.
- ❖ **Staffing** — To attract and retain professional, highly-trained staff in an atmosphere conducive to innovation, challenges and a high level of performance.
- ❖ **Research** — To continuously perform studies on pension issues and to compare the TCRS plan with other public and private pension systems.
- ❖ **Management** — To manage by leading, planning, organizing and controlling the operation of TCRS in a cost-effective manner for the benefit of members and Tennessee taxpayers utilizing personnel, technology and capital efficiently while providing the highest level of service.
- ❖ **Ethical Standards** — To maintain the highest ethical standards.
- ❖ **Investment Return** — To obtain the highest available return on investments consistent with the preservation of principal while maintaining sufficient liquidity to react to the changing environment and to pay benefits when due.

## THE COUNCIL ON PENSIONS AND INSURANCE

Created as a legislative oversight committee, the Council on Pensions and Insurance develops, recommends and establishes pension and retirement standards and maintains a progressive state policy on retirement. Additionally, the Council reviews legislation affecting state-provided insurance programs for both active and retired members of the Tennessee Consolidated Retirement System.

The Council periodically reviews Tennessee's retirement and state-provided insurance provisions and recommends changes in state law as deemed necessary. Since its creation, the Council has continuously performed studies and comparisons of other pension systems, including those of other states, private industry and the federal government's Social Security program. All proposed legislation affecting Tennessee's retirement laws must be reviewed by the Council before the legislature may take action. The Council

is authorized to prepare and propose amendments which are then forwarded to the standing committees. Information regarding the actuarial cost or impact of proposed legislation is provided by the Council to the other members of the legislature. The staff of the TCRS director also serves as staff to the Council.

The voting membership of the Council consists of the Speaker of each house of the General Assembly; the officers of the House and the Senate Committees on Finance, Ways and Means; and three additional members of each finance committee. The Speaker of the Senate may designate a member of the Senate and the Speaker of the House of Representatives may designate a member of the House to serve as alternates to vote or otherwise act at Council meetings in absence of the respective speaker. Nonvoting members include the Commissioner of Human Resources, the Commissioner of Finance and Administration, the Comptroller of the Treasury, the State Treasurer and the Director of TCRS.

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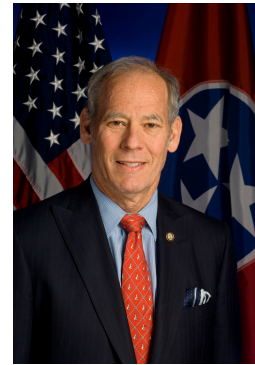
**NON-VOTING MEMBERS**



**David H. Lillard, Jr.**  
*State Treasurer*



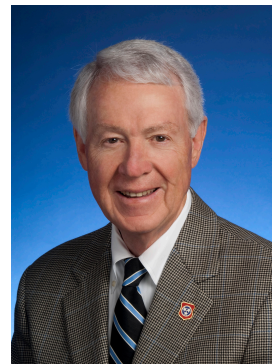
**Jill Bachus**  
*TCRS Director*



**Justin Wilson**  
*Comptroller of the Treasury*



**Rebecca Hunter**  
*Commissioner of  
Human Resources*



**Larry Martin**  
*Commissioner of  
Finance and Administration*

*(continued)*

**VOTING MEMBERS - SENATORS**



**Lieutenant Governor  
Ron Ramsey**  
*Speaker of the Senate*



**Senator  
Ferrell Haile**



**Senator  
Thelma Harper**



**Senator  
Randy McNally**  
*Council Chair  
Finance, Ways and  
Means Chair*



**Senator  
Mark Norris**



**Senator  
Doug Overbey**  
*Finance, Ways and Means  
Second Vice-Chair*



**Senator  
Jim Tracy**  
*Speaker's Designee*



**Senator  
Bo Watson**  
*Finance, Ways and Means  
First Vice-Chair*

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VOTING MEMBERS - REPRESENTATIVES



**Speaker**  
**Beth Harwell**  
*House of Representatives*



**Representative**  
**David Alexander**  
*Finance, Ways and Means*  
*Vice-Chair*



**Representative**  
**Kent Calfee**  
*Speaker's Designee*



**Representative**  
**Karen Camper**



**Representative**  
**Craig Fitzhugh**



**Representative**  
**Curtis Johnson**  
*Finance, Ways and Means*  
*Sub-Committee Chair*



**Representative**  
**Steve McDaniel**



**Representative**  
**Charles Sargent**  
*Council Vice Chair*  
*Finance, Ways & Means Chair*

## THE BOARD OF TRUSTEES

The Tennessee Consolidated Retirement System Board of Trustees is responsible for the general administration and proper operation of TCRS within the requirements and provisions of state statute (T.C.A., Title 8, Chapters 34-37). The 20-member Board meets quarterly and is subject to the call of the chair for special meetings. Nine voting members constitute a quorum and nine affirmative votes are needed for decision making.

The Board consists of nine ex-officio members, nine representatives of the active TCRS membership and two representatives for retirees. Ex-officio members include the chair and vice-chair of the Legislative Council on Pensions and Insurance (as nonvoting members), the Commissioner of Human Resources, the Commissioner of Finance and Administration, the Comptroller of the Treasury, the Secretary of State and the Administrative Director of the Courts. In addition, the State Treasurer sits as Chair of the Board and the Director of TCRS serves as Secretary.

Employee representation consists of three teachers, one from each grand division of the state; two state employees from departments other than those represented by ex-officio members; one public safety officer and three representatives of local governments. Retiree representation includes a retired teacher and a retired state employee.

Three teachers and one retired teacher are selected for three-year terms by the Speaker of the Senate and the Speaker of the House of Representatives. State employees elect two representatives who also serve three-year terms.

One representative is appointed for a two-year term by each of the following organizations: The Tennessee County Services Association, the Tennessee Municipal League and the Tennessee County Officials Association. The public safety representative and the state retiree representative are appointed by the Governor. All employee representatives must be vested members of TCRS.

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**EX-OFFICIO MEMBERS**



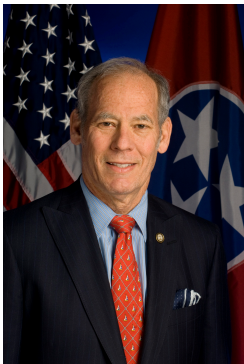
**David H. Lillard, Jr.**  
*State Treasurer*



**Jill Bachus**  
*TCRS Director*



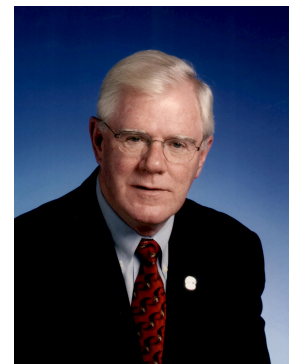
**Tre Hargett**  
*Secretary of State*



**Justin Wilson**  
*Comptroller of the Treasury*



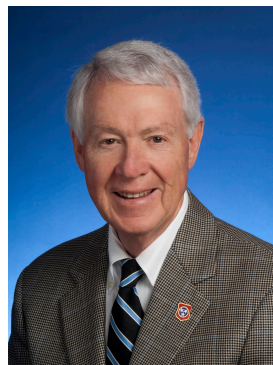
**Senator  
Randy McNally**  
*Council Vice-Chair*



**Representative  
Charles Sargent**  
*Council Chair*



**Rebecca Hunter**  
*Commissioner of  
Human Resources*



**Larry Martin**  
*Commissioner of  
Finance and Administration*



**Deborah Taylor-Tate**  
*Administrative Director  
of the Courts*

*(continued)*



**ELECTED OR APPOINTED MEMBERS**



**Michael Barker**  
*Retired Teacher*  
Term Expires:  
June 30, 2019



**Vicki Burton**  
*State Employee*  
Term Expires:  
June 30, 2019



**Kevin Fielden**  
*East Tennessee Teacher*  
Term Expires:  
June 30, 2019



**Bill Kemp**  
*Tennessee County  
Officials Association*  
Term Expires:  
June 30, 2017



**Alfred Laney**  
*Retired State Employee*  
Term Expires:  
June 30, 2018



**Patsy Moore**  
*West Tennessee Teacher*  
Term Expires:  
June 30, 2017



**Harold Morrison**  
*Middle Tennessee Teacher*  
Term Expires:  
June 30, 2018



**Ed Taylor**  
*State Employee*  
Term Expires:  
June 30, 2019



**Paul Todd Varble**  
*Public Safety*  
Term Expires: June 30, 2019



**Ken Wilber**  
*Tennessee  
Municipal League*  
Term Expires: June 30, 2017



**Robert Wormsley**  
*Tennessee County  
Services Association*  
Term Expires: June 30, 2017

(continued)

## PROFESSIONAL CONSULTANTS

Independent professional consultants are appointed by the Board of Trustees to advise the Board and the TCRS staff on investment, medical and actuarial issues. Service fees related to investment professionals may be found on pages 71 and 72.

### INVESTMENT ADVISORY COUNCIL

The Investment Advisory Council (IAC) was established to assist both the Board of Trustees and the TCRS investment staff. The investment professionals on the IAC serve three- year or five-year terms, meet quarterly and are available to the TCRS staff for consultation. IAC members include:

Frederick S. Crown, CFA (retired)  
Nashville, Tennessee

Susan Logan Huffman, CFA  
Reliant Investment Management, LLC  
Memphis, Tennessee

George B. Stadler, CFA  
HMS Capital Management, LLC  
Nashville, Tennessee

Carol B. Womack  
Diversified Trust  
Nashville, Tennessee

## GENERAL INVESTMENT CONSULTANT

An investment consultant is employed to assist in the long-term financial planning process, to evaluate various investment strategies, to measure investment performance, to determine whether the system's objectives are being met, to research investment proposals regarding the use of new asset classes or variations of existing asset classes and to provide investment information on various issues which may arise.

Margaret Jadallah  
Verus  
San Francisco, California

## PRIVATE EQUITY AND STRATEGIC LENDING CONSULTANT

Thomas Martin  
TorreyCove Capital Partners  
San Diego, California

*(continued)*

**REAL ESTATE INVESTMENT CONSULTANT  
AND ADVISORS**

The real estate consultant provides general market advice relative to real estate, measures performance of real estate properties, assists in the formulation of policy and assists in the selection of real estate advisors.

Martin Rosenberg  
The Townsend Group  
Cleveland, Ohio

The real estate investment advisors identify prospective real estate transactions and provide asset management services.

Adam N. Cohen, CFA  
Blackrock  
New York, New York

Chris Conklin  
RREEF America LLC  
Chicago, Illinois

Rob Greer  
Clarion Partners LLC  
Washington, DC

Christine M. Mullis  
L&B Realty Advisors, LLP  
Dallas, Texas

Lawrence Ostow  
J.P. Morgan Investment Management, Inc.  
New York, New York

Steve Jacobs  
Cornerstone Real Estate Advisers LLC  
Hartford, Connecticut

**INTERNATIONAL EQUITY INVESTMENT  
MANAGERS**

The international equity investment managers are responsible for purchasing stock of companies domiciled in foreign countries as set out in the investment policy.

Sue Curran  
Fidelity Institutional Asset Management  
Smithfield, Rhode Island

Jill Farrell  
American Century Investments  
Kansas City, Missouri

Jane Henderson  
Walter Scott & Partners, Ltd.  
Edinburgh, Scotland, UK

Dawn Henry  
GE Asset Management, Inc.  
Stamford, Connecticut

Robert Job  
PanAgora Asset Management, Inc.  
Boston, Massachusetts

Susan Marshall  
Baring Asset Management, Inc.  
Boston, Massachusetts

Wilson Phillips  
Marathon Asset Management  
London

Molly Sodeinde  
TT International  
London

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**MASTER CUSTODIAN BANK**

The Master Custodian bank settles all financial investment transactions and provides custody services for TCRS assets.

State Street Corporation  
Boston, Massachusetts

**THE MEDICAL BOARD**

The Medical Board evaluates applications for disability retirement to determine whether the applicants are totally and permanently disabled and unable to engage in gainful employment. Additionally, the panel reviews medical data submitted by disabled retirees who are subject to periodic evaluation. The Medical Board consists of the following:

Suzanne Fletcher, M.D.  
Brentwood, Tennessee

Thomas Mullady, M.D.  
Chattanooga, Tennessee

Barry R. Siegel, M.D.  
Memphis, Tennessee

**CONSULTING ACTUARY**

An independent consulting firm performs an actuarial valuation every two years to determine the funding status of the TCRS and recommend employer contribution rates. The actuary also conducts an experience study every four years to evaluate and adjust actuarial assumptions and methods.

Justin Thacker  
Bryan, Pendleton, Swats & McAllister, LLC  
Brentwood, Tennessee

**OTHER PROFESSIONAL SERVICES**

State statute provides that the state Attorney General and Reporter will be the legal advisor of the Board and that the Office of the Comptroller of the Treasury will conduct an annual audit of the TCRS. These officers are as follows:

Herbert Slatery, III  
Attorney General/Reporter  
Nashville, Tennessee

Justin P. Wilson  
Comptroller of the Treasury  
Nashville, Tennessee



**TREASURER’S OFFICE**

State Treasurer ..... David H. Lillard, Jr., JD, LLM  
 Chief Operating Officer ..... Mary Jo Price  
 Communications Director ..... Shelli King  
 Government and Legislative Affairs Manager ..... Whitney Goetz  
 Executive Assistant to the Treasurer ..... Heather Sczeczanski

**TCRS INVESTMENTS**

Chief Investment Officer ..... Michael Brakebill, CFA, CAIA  
 Deputy Chief Investment Officer ..... Derrick Dagnan, CFA  
 Assistant CIO and Director of Cash Management ..... Tim McClure, CTP, CGFM, CFP  
 Equity Director ..... Michael Keeler, CFA  
 Fixed Income Director ..... Thomas Kim, CFA  
 Real Estate Director ..... J.P.Rachmaninoff  
 Private Equity Director ..... Daniel Crews, CFA

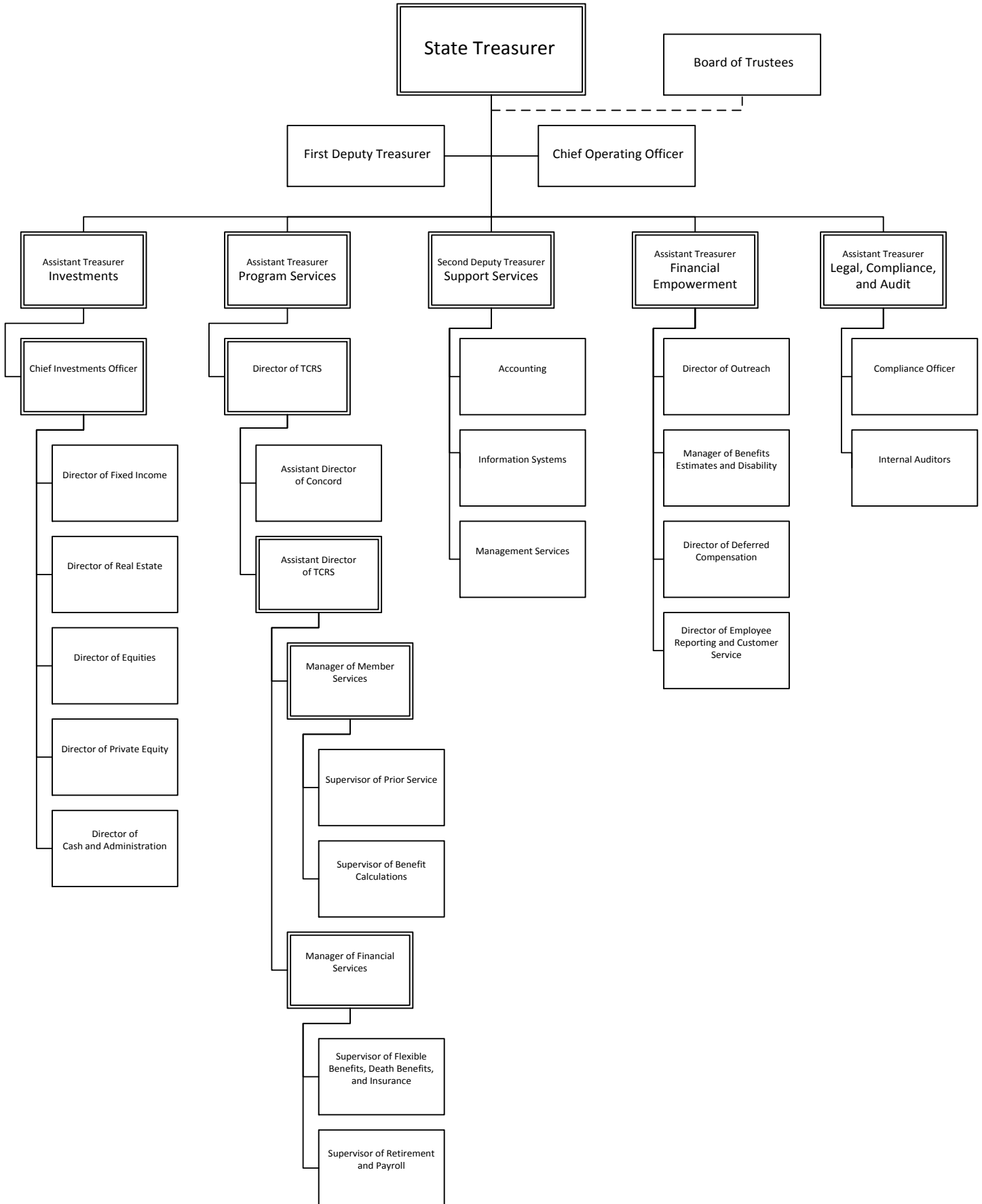
**RETIREMENT ADMINISTRATION**

TCRS Director ..... Jill Bachus, CPA  
 TCRS Assistant Director ..... Jamie Wayman, CPA, CEBS  
 Administrator of Old Age and Survivors Insurance ..... Mary Griffin, JD  
 Manager of Counseling Services ..... Candy O’Leary  
 Manager of Member Benefits ..... Erica Nale  
 Manager of Financial Services ..... Amy Whitehead

**TREASURY DIVISIONS**

First Deputy Treasurer ..... Steven Curry, CPA-inactive, CTP, CEBS, CCM  
 Second Deputy Treasurer, Support Services ..... Rick DuBray, CPA  
 Assistant Treasurer, Financial Empowerment ..... Joy Harris  
 Assistant Treasurer, Legal, Compliance and Audit ..... Christy A. Allen  
 Assistant Treasurer, Program Services ..... Steve Summerall  
 Compliance Officer ..... Jennifer Selliers  
 Director of Deferred Compensation ..... Kaci Lantz, CFP®  
 Director of Accounting ..... Kim Morrow, CPA  
 Deputy Director of Accounting ..... Brian Derrick, CPA  
 Assistant Director of Accounting ..... Kevin Bradley, CPA  
 Director of Information Systems ..... Mike Drexler  
 Director of Management Services ..... Kerry Hartley, CPA  
 Director of Human Resources ..... Greg Cason

*The Treasurer is housed on the 1st floor of the State Capitol Building.  
 Divisions are housed on the 13th, 14th and 15th floors of the Andrew Jackson Building.*



# *Financial Section*

## TCRS Independent Auditor's Report

Management's Discussion and Analysis

Notes to the Financial Statements

Required Supplementary Information

Notes to Required Supplementary Information

Schedules of Administrative & Investment Expenses

Schedules of Expenses for Consultants

## TRGT Independent Auditor's Report

Financial Statements

Notes to the Financial Statements

Schedule of Investment Expenses





STATE OF TENNESSEE  
COMPTROLLER OF THE TREASURY  
DEPARTMENT OF AUDIT  
DIVISION OF STATE AUDIT

SUITE 1500 JAMES K. POLK STATE OFFICE BUILDING  
505 DEADERICK STREET  
NASHVILLE, TENNESSEE 37243-1402

PHONE (615) 401-7897  
FAX (615) 532-2765

## 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 statement of fiduciary net position of the Tennessee Consolidated Retirement System, pension trust funds of the State of Tennessee, as of and for the year ended June 30, 2016, the related statement of changes in fiduciary net position for the year then ended, and the related notes to the financial statements, which collectively comprise the Tennessee Consolidated Retirement System's basic financial statements.

### *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.

(continued)



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 Matters***

#### ***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 Information***

Our audit was conducted for the purpose of forming an opinion on the basic financial statements as a whole. The accompanying financial information, listed as supporting schedules in the table of contents, is presented for purposes of additional analysis and is not a required part of the basic financial statements. Such information is the responsibility of management and was derived from, and relates directly to, the underlying accounting and other records used to prepare the

(continued)

financial statements. The information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated in all material respects in relation to the basic financial statements as a whole.

### **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, and 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.

A handwritten signature in black ink, appearing to read "Deborah V. Loveless".

Deborah V. Loveless, CPA  
Director  
December 21, 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 this 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 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, 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*

(continued)



**TENNESSEE CONSOLIDATED RETIREMENT SYSTEM  
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>	<u>Increase (Decrease) Amount</u>	<u>Percentage Change</u>
<b>ASSETS</b>				
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	28,034,008	31,747,896	(\$3,713,888)	(11.7) %
<b>TOTAL ASSETS</b>	<u>50,850,749,766</u>	<u>49,165,302,904</u>	<u>1,685,446,862</u>	3.4 %
<b>LIABILITIES</b>				
Death benefits, refunds and other payables	29,676,046	28,418,554	\$1,257,492	4.4 %
Cash collateral for securities on loan	7,514,864,420	5,892,943,764	1,621,920,656	27.5 %
<b>TOTAL LIABILITIES</b>	<u>7,544,540,466</u>	<u>5,921,362,318</u>	<u>1,623,178,148</u>	27.4 %
<b>NET POSITION RESTRICTED FOR PENSIONS</b>	<u>\$43,306,209,300</u>	<u>\$43,243,940,586</u>	<u>\$62,268,714</u>	0.14 %

*(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	1,311,262	50.5%	1,143,160	46.8%
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	15,064	0.7%	20,180	0.8%
Total	<u>2,258,839</u>	<u>100.0%</u>	<u>2,378,174</u>	<u>100.0%</u>

*(continued)*



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

**TENNESSEE CONSOLIDATED RETIREMENT SYSTEM  
CHANGES IN FIDUCIARY NET POSITION**

	For the Year Ended June 30, 2016	For the Year Ended June 30, 2015	FY16 - FY15 Increase (Decrease) Amount	FY16 - FY15 Percentage Change
<b>ADDITIONS</b>				
Contributions	\$1,297,282,137	\$1,286,361,016	\$10,921,121	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	30,357,833	26,461,821	3,896,012	14.7%
Net investment income	1,143,160,047	1,311,261,631	(168,101,584)	(12.8)%
<b>TOTAL ADDITIONS</b>	<b>2,440,442,184</b>	<b>2,597,622,647</b>	<b>(157,180,463)</b>	<b>(6.1)%</b>
<b>DEDUCTIONS</b>				
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	20,179,945	15,064,171	5,115,774	34.0%
<b>TOTAL DEDUCTIONS</b>	<b>2,378,173,470</b>	<b>2,258,839,556</b>	<b>119,333,914</b>	<b>5.3%</b>
<b>NET INCREASE (DECREASE)</b>	<b>62,268,714</b>	<b>338,783,091</b>	<b>(276,514,377)</b>	<b>(81.6)%</b>
<b>NET POSITION RESTRICTED FOR PENSIONS</b>				
BEGINNING OF YEAR	43,243,940,586	42,905,157,495	338,783,091	0.8%
END OF YEAR	\$43,306,209,300	\$43,243,940,586	\$62,268,714	0.1%

*(continued)*

## ECONOMIC FACTORS, FUTURE FUNDING PROVISIONS, 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.



**TENNESSEE CONSOLIDATED RETIREMENT SYSTEM  
STATEMENT OF FIDUCIARY NET POSITION  
JUNE 30, 2016**

**STATEMENT 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>
<b>ASSETS</b>				
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>
<b>TOTAL ASSETS</b>	<u>25,878,085</u>	<u>67,536</u>	<u>24,905,128</u>	<u>50,850,749</u>
<b>LIABILITIES</b>				
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>
<b>TOTAL LIABILITIES</b>	<u>3,839,898</u>	<u>9,553</u>	<u>3,695,089</u>	<u>7,544,540</u>
<b>NET POSITION RESTRICTED FOR PENSIONS</b>	<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.*



**TENNESSEE CONSOLIDATED RETIREMENT SYSTEM  
STATEMENT OF CHANGES IN FIDUCIARY NET POSITION  
FOR THE YEAR ENDED JUNE 30, 2016**



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

*(Expressed in Thousands)*

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

*See accompanying Notes to the Financial Statements*

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 this 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 this 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.

(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 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.

	<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.*

*(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 2<sup>nd</sup> 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 2<sup>nd</sup> 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

*(continued)*

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 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 2<sup>nd</sup> 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 2<sup>nd</sup> 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 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.

(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 fifty percent of all employer rates between eight (8) percent and twenty (20) percent and contributions from these same employers accounting for over ninety 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 this report. Related assets, liabilities, income, and expenses from lending transactions are reflected on a pro rata basis in the financial statements of TCRS.

(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:

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

(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)



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

	2016	2015	2014
<b>Total pension liability</b>			
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	(1,138,014,028)	(1,096,410,122)	(1,037,013,093)
<b>Net change in total pension liability</b>	39,670,804	921,592,149	851,220,156
<b>Total pension liability - beginning</b>	<u>22,073,402,943</u>	<u>21,151,810,794</u>	<u>20,300,590,638</u>
<b>Total pension liability - ending (a)</b>	<u>\$22,113,073,747</u>	<u>\$22,073,402,943</u>	<u>\$21,151,810,794</u>
<b>Plan fiduciary net position</b>			
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	(6,893,993)	(5,635,689)	(2,663,319)
<b>Net change in plan fiduciary net position</b>	(74,838,010)	69,903,903	2,558,437,235
<b>Plan fiduciary net position - beginning</b>	<u>21,284,877,037</u>	<u>21,214,973,134</u>	<u>18,656,535,899</u>
<b>Plan fiduciary net position - ending (b)</b>	<u>\$21,210,039,027</u>	<u>\$21,284,877,037</u>	<u>\$21,214,973,134</u>
<b>Net pension liability (asset)- ending (a) - (b)</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.*



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

<b>Total pension liability</b>	2016	2015
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	(283,467)	(\$34,531)
<b>Net change in total pension liability</b>	<b>29,394,652</b>	<b>16,129,977</b>
<b>Total pension liability - beginning</b>	<b>16,129,977</b>	<b>0</b>
<b>Total pension liability - ending (a)</b>	<b>\$45,524,629</b>	<b>\$16,129,977</b>
<b>Plan fiduciary net position</b>		
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	(819,972)	(280,047)
<b>Net change in plan fiduciary net position</b>	<b>39,302,354</b>	<b>18,680,373</b>
<b>Plan fiduciary net position - beginning</b>	<b>18,680,373</b>	<b>0</b>
<b>Plan fiduciary net position - ending (b)</b>	<b>\$57,982,727</b>	<b>\$18,680,373</b>
<b>Net pension liability (asset) - ending (a) - (b)</b>	<b>(\$12,458,098)</b>	<b>(\$2,550,396)</b>

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



**SCHEDULE OF THE TEACHER LEGACY PENSION PLAN'S NET PENSION LIABILITY**

*Fiscal Year Ended June 30*

	<b>2016</b>	<b>2015</b>	<b>2014</b>
Total pension liability	\$22,113,073,747	\$22,073,402,943	\$21,151,810,794
Plan fiduciary net position	21,210,039,027	21,284,877,037	21,214,973,134
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.*

(continued)



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

	<b>2016</b>	<b>2015</b>
Total pension liability	\$45,524,629	\$16,129,977
Plan fiduciary net position	57,982,727	18,680,373
Net pension liability (asset)	(\$12,458,098)	(\$2,550,396)
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.*

(continued)



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

	Actuarially- Determined Contribution	Contributions in Relation to the Actuarially- Determined Contribution	Contribution Deficiency	Covered Payroll	Contributions as a Percentage of Covered Payroll
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%

(continued)



**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%

(continued)



**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>
<b>Actuarial cost method</b>	Frozen Initial Liability Method	N/A
<b>Amortization method</b>	Level Dollar Amortization	N/A
<b>Remaining amortization period</b>	Eight years	N/A
<b>Inflation</b>	3.0 percent	3.0 percent
<b>Salary increases</b>	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
<b>Investment rate of returns</b>	7.50 percent, net of pension plan investment expense, including inflation	7.50 percent, net of pension plan investment expense, including inflation





**SCHEDULE OF ADMINISTRATIVE EXPENSES  
For the Year Ended June 30, 2016**

	<u>Public Employee Retirement Plan</u>	<u>Teacher Retirement Plan</u>	<u>Teacher Legacy Pension Plan</u>	<u>TOTAL</u>
<b>PERSONNEL SERVICES</b>				
Salaries and wages	\$1,721,488	\$113,235	\$952,026	\$2,786,749
Employee benefits	736,693	48,457	407,409	1,192,559
<b>TOTAL PERSONNEL SERVICES</b>	<u>2,458,181</u>	<u>161,692</u>	<u>1,359,435</u>	<u>3,979,308</u>
<b>PROFESSIONAL SERVICES</b>				
Accounting	222,524	14,637	123,062	360,223
Actuarial services	272,397	17,917	150,642	440,956
Information systems	4,890,377	321,673	2,704,498	7,916,548
Management services	124,303	8,176	68,742	201,221
Medical review	21,247	1,398	11,750	34,395
Administrative, Internal Audit, Legal, Personnel	1,598,551	105,149	884,039	2,587,739
<b>TOTAL PROFESSIONAL SERVICES</b>	<u>7,129,399</u>	<u>468,950</u>	<u>3,942,733</u>	<u>11,541,082</u>
<b>COMMUNICATION</b>				
Travel	9,880	650	5,464	15,994
Telephone	119,579	7,865	66,130	193,574
Printing	36,980	2,432	20,451	59,863
Postage	147,231	9,684	81,422	238,337
<b>TOTAL COMMUNICATION</b>	<u>313,670</u>	<u>20,631</u>	<u>173,467</u>	<u>507,768</u>
<b>MISCELLANEOUS</b>				
Office space	86,799	5,709	48,002	140,510
Supplies and maintenance	102,724	6,757	56,809	166,290
Amortization of intangible assets	2,294,222	150,906	1,268,760	3,713,888
Other services and charges	80,985	5,327	44,787	131,099
<b>TOTAL MISCELLANEOUS</b>	<u>2,564,730</u>	<u>168,699</u>	<u>1,418,358</u>	<u>4,151,787</u>
<b>TOTAL ADMINISTRATIVE EXPENSES</b>	<u><u>\$12,465,980</u></u>	<u><u>\$819,972</u></u>	<u><u>\$6,893,993</u></u>	<u><u>\$20,179,945</u></u>

With 213,714 active members and 149,315 retired members, the operating cost per member was \$55.59 for the year ended June 30, 2016.

**SCHEDULES OF INVESTMENT EXPENSES FOR THE YEAR ENDED JUNE 30, 2016**

TCRS is invested in the Tennessee Retiree Group Trust (TRGT). The TRGT charges TCRS 13 basis points as a fee to provide funding for the TRGT. For the fiscal year ended June 30, 2016, the TCRS paid \$66,081,402 to the TRGT for investment expenses. See page 62 of this report for detailed information regarding investment expenses for the TRGT.



**TENNESSEE CONSOLIDATED RETIREMENT SYSTEM  
SCHEDULES OF EXPENSES FOR CONSULTANTS  
FOR THE YEAR ENDED JUNE 30, 2016**

**SCHEDULES OF EXPENSES FOR CONSULTANTS  
For the Year Ended June 30, 2016**

	<u>Public Employee Retirement Plan</u>	<u>Teacher Retirement Plan</u>	<u>Teacher Legacy Pension Plan</u>	<u>TOTAL</u>
<b>ACTUARIAL SERVICES</b>				
Bryan, Pendleton, Swats and McAllister	\$272,397	\$17,917	\$150,642	\$440,956
<b>TOTAL ACTUARIAL SERVICES</b>	<u>272,397</u>	<u>17,917</u>	<u>150,642</u>	<u>440,956</u>
<b>CALL CENTER SERVICES</b>				
Empower	397,393	26,139	219,768	643,300
<b>TOTAL CALL CENTER SERVICES</b>	<u>397,393</u>	<u>26,139</u>	<u>219,768</u>	<u>643,300</u>
<b>INFORMATION SYSTEMS SERVICES</b>				
Deloitte Consulting LLP	2,242,657	147,515	1,240,245	3,630,417
The North Highland Company	732,702	48,195	405,203	1,186,100
<b>TOTAL INFORMATION SYSTEMS SERVICES</b>	<u>2,975,359</u>	<u>195,710</u>	<u>1,645,448</u>	<u>4,816,517</u>
<b>LEGAL SERVICES</b>				
Groom Law Group Chartered	7,467	491	4,130	12,088
Ice Miller, LLP	37,816	2,487	20,913	61,216
Williams & Jensen PLLC	62,593	4,117	34,615	101,325
<b>TOTAL LEGAL SERVICES</b>	<u>107,876</u>	<u>7,095</u>	<u>59,658</u>	<u>174,629</u>
<b>MEDICAL REVIEW SERVICES</b>				
Suzanne Fletcher, M.D.	7,165	471	3,963	11,599
Thomas Mullady, M.D.	7,064	465	3,906	11,435
Barry Siegel, M.D.	7,018	462	3,881	11,361
<b>TOTAL MEDICAL REVIEW SERVICES</b>	<u>21,247</u>	<u>1,398</u>	<u>11,750</u>	<u>34,395</u>
<b>TOTAL EXPENSES FOR CONSULTANTS</b>	<u><u>\$3,774,272</u></u>	<u><u>\$248,259</u></u>	<u><u>\$2,087,266</u></u>	<u><u>\$6,109,797</u></u>

*Note: For information regarding fees paid to investment professionals, refer to the Investment Section of this report.*



STATE OF TENNESSEE  
COMPTROLLER OF THE TREASURY  
DEPARTMENT OF AUDIT  
DIVISION OF STATE AUDIT  
SUITE 1500, JAMES K. POLK STATE OFFICE BUILDING  
505 DEADERICK STREET  
NASHVILLE, TENNESSEE 37243-1402

PHONE (615) 401-7897  
FAX (615) 532-2765

## Independent Auditor's Report

Members of the General Assembly  
Members of the Tennessee Retiree Group Trust Board  
The Honorable David H. Lillard, Jr., Treasurer

### Report on the Financial Statements

We have audited the accompanying statement of fiduciary net position of the Tennessee Retiree Group Trust as of June 30, 2016, the related statement of changes in fiduciary net position for the year then ended, and the related notes to the financial statements, which collectively comprise the Tennessee Retiree Group Trust's basic financial statements.

#### *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 Tennessee Retiree Group Trust Board. We do not believe that the Comptroller's service in this capacity affected our ability to conduct an independent audit of the Tennessee Retiree Group Trust.

***Opinion***

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Tennessee Retiree Group Trust of the State of Tennessee 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 Matters***

As discussed in Note A.1., the financial statements present only the Tennessee Retiree Group Trust, 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 financial position thereof for the year then ended in accordance 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 B, the financial statements of the Tennessee Retiree Group Trust include investments valued at \$6,047,213,901 (14 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 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 Retiree Group Trust's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, and 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 Retiree Group Trust's internal control over financial reporting and compliance.

Deborah V. Loveless, CPA  
Director  
December 21, 2016

(continued)

**STATEMENT OF FIDUCIARY NET POSITION**

*JUNE 30, 2016*

*(Expressed in Thousands)*

ASSETS

Cash and cash equivalents	\$ 493,190
Cash collateral for securities on loan	7,519,497
Receivables	
Investment income receivable	126,953
Derivative instruments receivable	519,649
Investments sold	611,089
Total Receivables	1,257,691
Investments at fair value	
Government securities	8,551,388
Corporate securities	5,140,192
Corporate stocks	22,979,833
Derivative instruments	5,268
Strategic lending	1,398,215
Private equities	1,485,193
Real estate	3,163,805
Total Investments	42,723,894
TOTAL ASSETS	\$ 51,994,272

LIABILITIES AND NET POSITION

LIABILITIES

Investments purchased	\$731,420
Other investments payables	9,329
Derivative instrument payable	524,686
Cash collateral for securities on loan	7,519,497
TOTAL LIABILITIES	\$ 8,784,932
NET POSITION HELD IN TRUST FOR POOL PARTICIPANTS	\$ 43,209,340

*See Accompanying Notes to the Financial Statements*



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

(Expressed in Thousands)

OPERATIONS

INVESTMENT INCOME

Net appreciation in fair value of investments	\$ 116,065
Income on securities	1,045,665
Total investment income	<u>1,161,730</u>
Less: Investment expense	<u>48,584</u>
Net income from investing activities	1,113,146

Securities lending activities

Securities lending income	48,258
Less: Securities lending expense	<u>17,888</u>
Net income from securities lending activities	<u>30,370</u>

NET INVESTMENT INCOME 1,143,516

CAPITAL SHARE TRANSACTIONS

Net shares sold	43,618,201
Net shares redeemed	<u>1,552,377</u>

TOTAL INCREASE FROM CAPITAL SHARE TRANSACTIONS 42,065,824

NET INCREASE IN FIDUCIARY NET POSITION \$ 43,209,340

NET POSITION RESTRICTED FOR PARTICIPANTS

NET POSITION, BEGINNING OF PERIOD 0

NET POSITION, END OF PERIOD \$ 43,209,340

See Accompanying Notes to the Financial Statements

## A: Summary of Significant Accounting Policies

**Reporting entity:** The Tennessee Retiree Group Trust (TRGT) is an external investment pool sponsored by the State of Tennessee. The external portion of the TRGT consists of funds belonging to entities outside of the State of Tennessee Financial Reporting Entity, and has been included as a separate investment trust fund in the Tennessee Comprehensive Annual Financial Report. The internal portion, consisting of funds belonging to the State and its component units, has been included in the various participating funds and component units 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.

**Cash and cash equivalents:** Cash and cash equivalents includes cash and short-term investments with a maturity date within three months of the acquisition date. Cash management pools are included as cash. Cash received that cannot be immediately invested in securities, or that is needed for operations, is invested in either the State Pooled Investment Fund sponsored by the State of Tennessee and administered by the State Treasurer or in the State Street Government Money Market Fund, a short-term, open-end mutual fund under the contractual arrangement for master custody services. The balance in this investment at June 30, 2016 was \$12,176,373.

**Method used to value investments and participant shares:** The TRGT is not registered with the Securities and Exchange Commission (SEC) as an investment company. The State of Tennessee has not obtained a credit quality rating for the TRGT from a nationally recognized credit ratings agency. The fair value of investment positions in the TRGT is determined daily based on the fair value of the pool's underlying portfolio. Furthermore, the State had not obtained or provided any legally binding guarantees to support the value of participant shares during the fiscal year. There are no restrictions on the sale or redemption of shares.

Investments are reported at fair value. Securities traded on a national exchange are valued at the last reported sales price. Investment income consists of realized and unrealized appreciation (depreciation) in the fair value of investments and interest and dividend income. Interest income is recognized when earned. Securities and securities transactions are recorded in the financial statements on trade-date basis.

GASB Statement No. 72, *Fair Value Measurement and Application*, which was adopted during the fiscal year ended June 30, 2016, addresses accounting and reporting issues related to fair value measurements. This Statement requires disclosures to be made about fair value measurements, the level of fair value hierarchy, and valuation techniques.

The fair value of assets of the TRGT held at June 30, 2016 represents the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. Assets held are categorized for fair value measurement within the fair value hierarchy established by GAAP. The hierarchy is based on the valuation inputs used to measure the fair value of the asset and give the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements).

(continued)

- Level 1 - Unadjusted quoted prices for identical assets or liabilities in active markets that can be accessed at the measurement date.
- Level 2 - Quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar assets or liabilities in markets that are not active; assets or liabilities that have a bid-ask spread price in an inactive dealer market, brokered market and principal-to-principal market; and Level 1 assets or liabilities that are adjusted.
- Level 3 - Valuations derived from valuation techniques in which significant inputs are unobservable.

Investments where fair value is measured using the Net Asset Value (“NAV”) per share have no readily determinable fair value and have been determined to be calculated consistent with FASB principals for investment companies.

Where inputs used in the measurement of fair value fall into different levels of the hierarchy, fair value of the instrument in its entirety are categorized based on the lowest level input that is significant to the valuation. This assessment requires professional judgement and as such management developed a fair value committee that worked in conjunction with our custodian and investment professionals to make these valuations. All assets held were valued individually and aggregated into classes so to be represented in the table below.

Short-term securities generally include investments in money market-type securities reported at cost plus accrued interest.

Equity and equity derivative securities classified in Level 1 are valued using last reported sales prices quoted in active markets that can be accessed at the measurement date. Equity and equity derivative securities classified in Level 2 are securities whose values are derived daily from associated traded securities. Equity securities classified in Level 3 are valued with last trade data having limited trading volume.

US Treasury Bills, Bonds, Notes and Futures classified in Level 1 are valued using last reported sales prices quoted in active markets that can be accessed at the measurement date. Debt and debt derivative securities classified in Level 2 are valued using a bid-ask spread price from multiple independent brokers, dealers, or market principals, which are known to be actively involved in the market. Level 3 debt securities are valued using proprietary information, a single pricing source, or other unobservable inputs related to similar assets or liabilities.

Real estate investments classified in Level 3 are valued using the last valuations provided by external investment advisors or independent external appraisers. Generally, all direct real estate investments are appraised by a qualified independent appraiser(s) with the professional designation of Member of the Appraisal Institute (“MAI”), or its equivalent, every three (3) years beginning from the acquisition date of the property. The appraisals are performed using generally accepted valuation approaches applicable to the property type.

Investments in private mutual funds, traditional private equity funds, strategic lending funds and real estate funds that report using GAAP, the fair value, as well as the unfunded commitments, was determined using the prior quarter’s NAV, as reported by the fund managers, plus the current cash flows. These assets were then categorized by investment strategy. In instances where the fund investment reported using non-GAAP standards, the investment was valued using the same method, but was classified in Level 3.

*(continued)*





**INVESTMENTS MEASURED AT FAIR VALUE**

**As of June 30, 2016**

*Expressed in Thousands*

<b>Investments at Fair Value Level</b>	<b>GAAP Hierarchy Level 1</b>	<b>GAAP Hierarchy Level 2</b>	<b>GAAP Hierarchy Level 3</b>	<b>NAV</b>	<b>Total Investments</b>
Common Stock	\$20,067,394	\$23,610	\$1,425	0	\$20,092,429
Real Estate & REIT's	510,415		2,473,066		2,983,481
Limited Partnership Units	458		135,402	2,747,549	2,883,409
Mutual Funds	2,069,870			236,586	2,306,456
Real Estate Limited Partnership Units				690,954	690,954
Depository Receipts	70,066				70,066
Rights	252				252
US Government Issues	4,623,983	196,073			4,820,056
Agency Securities		3,550,993	7,018		3,558,011
Corporate Bonds		4,074,409	24,458		4,098,867
Municipals		170,627	2,694		173,321
Other Asset Backed		297,892	12,587		310,479
CMO's		433,878	10,810		444,688
Auto Loans and Receivables		233,743			233,743
Preferred Stock	45,344	7,070			52,414
Derivative Instruments			5,268		5,268
<b>TOTAL INVESTMENTS AT FAIR VALUE</b>	<b>\$27,387,782</b>	<b>\$8,988,295</b>	<b>\$2,672,728</b>	<b>\$3,675,089</b>	<b>\$42,723,894</b>
Cash and Cash Equivalents					\$493,190
Cash Collateral on Loaned Securities					7,519,497
Other Receivables					611,089
Investment Income Receivable					126,953
Futures Receivable					519,649
<b>TOTAL FINANCIAL STATEMENT ASSETS</b>					<b>\$51,994,272</b>

*(continued)*

The following table sets forth the additional disclosures of the TRGT's investments, which are stated at fair value based on the net asset value "NAV" (expressed in thousands), as a practical expedient, reported by the investment managers or general partners:

Asset Classification	Strategy	Number of Funds	NAV	Remaining Life	Redemption Terms	Redemption Restrictions
Limited Partnerships	Traditional Private Equity and Strategic Lending	67	2,747,549	Various	N/A	Various transfer and sale restrictions
Mutual Funds	International Public Equities	25	236,586	N/A	May Redeem all or part of the shares with at least fifteen (15) days written notice prior to the last business day of each month	Redemptions may be distributed in cash, in-kind or a combination and are subject to further restrictions by the fund's trustees
Real Estate Limited Partnerships	Real Estate Commingled Investments	16	690,954	N/A	N/A	Various transfer and sale restrictions

**Traditional Private Equity and Strategic Lending:** The private equity asset class is categorized into two component portfolios: traditional and strategic lending. Generally speaking, the types of private equity strategies include: venture capital, buyout, natural resource, secondaries, special situations, tactical, structured credit, and high yield debt. The majority of these investments have an approximate life of 10 years or greater and are considered illiquid. During the life of the partnerships, distributions are received as underlying partnership investments are realized. Transfer or sale of the partnership interest are restricted over the life of the partnership. The TRGT has no plans to liquidate any of these investments.

**International Public Equities using Mutual Funds:** TRGT will invest in mutual funds as an efficient and cost-effective means to gain passive exposure to a specific sector, industry or country. As of June 30, 2016, TRGT has retained Baring International Investment Limited to facilitate an international equity investment strategy utilizing, in part, sector and country index mutual funds.

**Real Estate Commingled Investments:** The real estate asset class is comprised of two different investment types: direct investments and commingled investments. A commingled investment is a pooled investment vehicle comprised of real estate investments that is overseen by an external investment manager or general partner. Generally speaking, the commingled real estate investment strategies include: office, retail, industrial, multi-family, and diversified. The majority of these investments have an approximate life of 10 years or greater and are considered illiquid. During the life of the pooled investment vehicle, distributions are received as underlying investments are realized. Transfer or sale of the interest are restricted over the life of the investment. The TRGT has no plans to liquidate any of these investments.

(continued)

## B: Deposits and Investments

**Statutory Authority:** The Tennessee Retiree Group Trust (TRGT) was established in 2015 by a statutory enactment of the Tennessee General Assembly. The provisions of the TRGT are codified in *Tennessee Code Annotated* (TCA) Title 8, Chapters 34-37. Pursuant to this statute the Tennessee Consolidated Retirement System (TCRS) and its board of directors with the State Treasurer (Treasurer) as custodian, authorized by TCA 8-37-104 adopted this group trust for the purpose of pooling funds of TRGT with other assets in the custody of the Treasurer, solely for investment purposes. The assets invested consist exclusively of assets of exempt pension and profit sharing trusts and individual retirement accounts, custodial accounts, retirement income accounts, governmental plans and tax-exempt trusts under the Internal Revenue Code of 1986 and Rev. Rul. 81-100, as modified by Rev. Ruls. 2004-67, 2008-40 and 2011-1 (referred to herein as “Retirement Assets”). The Custodian shall be responsible for the managing and directing the investment of the Group Trust Funds in the same manner as it invests funds of the TCRS.

The TRGT is authorized to invest in securities in accordance with the investment policy of the TCRS. That policy allows the Trust to invest in bonds, debentures, preferred stock and 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 trust.
- 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 trust.
- 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 trust 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 TRGT 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

(continued)

(10 percent) of the market value of the TRGT's total assets. Gross exposure to approved fixed income financial instruments will be limited to ten percent (10 percent) of the market value of the Trust's total assets for risk mitigating positions and 10 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 TRGT 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 TRGT. The investment policy may be amended by the Board. The TRGT assets are managed on a total return basis with a long-term objective of achieving and maintaining a fully funded status for the benefits provided by the TCRS. The following was the Board's adopted asset allocation policy as of June 30, 2016:

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	1%
Total	100%

**Securities Lending:** The TRGT is authorized to invest in securities lending investments by TCA 8-37-104(a)(6) with the terms established in the investment policy whereby TRGT loans securities to brokers and dealers (borrower) and in turn, TRGT receives cash as collateral. TRGT 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%) of the market value of the total assets in the TRGT 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%) of the market value of the loaned domestic security or one hundred five percent (105%) of any foreign security. Cash received as collateral shall equal at least

(continued)



one hundred percent (100%) of the market value of the loaned securities and may be invested by or on behalf of the TRGT in any instrument the TRGT may be directly invested. Cash Collateral is held in the TRGT name and is not subject to custodial credit risk. During the year there were no violations of legal or contractual provisions by the TRGT.

The TRGT securities lending program is managed by a third party lending agent, Deutsche Bank AG. The TRGT may loan any debt or equity securities which is owned by TRGT. At June 30, 2016, the TRGT had the following

## SECURITIES LENDING

As of June 30, 2016

### Fair Value of Securities on Loan

Securities on Loan	Fair Value of Securities on Loan	Cash Collateral Received
Fixed	\$3,353,830,382	\$3,437,098,948
Equity	3,983,496,475	4,082,398,327
Total	\$7,337,326,857	\$7,519,497,275

**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 TRGT’s investments in fixed income securities at year end is included in the schedule below. Securities are rated using Standard and Poor’s and/or Moody’s and are presented below 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.

TRGT’s investment policy specifies that bond issues subject for purchase are investment grade bonds rated by one of the Nationally Recognized Statistical Rating Organizations (NRSROs). There is no requirement to divest an asset if it is downgraded after purchase. For short-term investments, the 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.

As noted below, the TRGT 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/>.

(continued)



At June 30, 2016, the TRGT had the following investments:

**CREDIT QUALITY DISTRIBUTION FOR SECURITIES WITH CREDIT EXPOSURE  
 AS A PERCENTAGE OF TOTAL INVESTMENTS**

**As of June 30, 2016**

*Expressed in Thousands*

Rating	Fair Value (in thousands)	Percentage of Total Investments
AAA	\$643,178	1.506%
AA	406,395	0.951%
A	976,943	2.287%
BBB	2,697,536	6.315%
BB	335,910	0.786%
B	48,673	0.114%
CCC	76,293	0.179%
CC	1,021	0.002%
D	27,087	0.063%
NR	<u>2,951,800</u>	6.910%
	\$8,164,836	
U. S. Government Agencies and Obligations explicitly guaranteed by the U. S. Government	<u>5,862,038</u>	
Total Fixed Income Securities	\$14,026,874	
Equity	\$22,979,833	
Real Estate	3,163,805	
Private Equities	1,485,193	
Strategic Lending	1,398,215	
Preferred Stock Classified as Fixed Income	52,414	
Derivative Instruments (not rated)	5,268	
Add Back Short term investment fund with custodian (NR)	(12,176)	
Add Back Short term investments classified as cash (NR)	<u>(375,532)</u>	
<b>Total Investments as shown on Fiduciary Net Position</b>	<b><u>\$42,723,894</u></b>	

(continued)



**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 investment policy for the TRGT states that the maturity of its debt securities may range from short-term instruments, including investments in the State Pooled Investment Fund, to long-term bonds, with consideration of liquidity needs. However, the policy does not specifically address limits on investment maturities. 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 TRGT had the following investments and effective duration at June 30, 2016.

### EFFECTIVE DURATION OF DEBT INVESTMENTS

**As of June 30, 2016**

*Expressed in Thousands*

Investment Type	Fair Value As of June 30, 2016	Effective Duration (years)
Government Agencies	\$361,747	3.04
Government Bonds	2,644,987	14.14
Government Inflation Indexed	2,232,696	8.54
Government Mortgage Backed	3,252,992	2.56
Government Asset Backed	38,867	11.77
Municipal Bonds	173,322	10.36
Commercial Mortgage Backed	330,334	2.02
Corporate Asset Backed Securities	505,354	1.74
Corporate Bonds	4,098,867	9.88
Short Term Investments	375,532	0.00
Cash Equivalents	12,176	0.00
Total Debt Investments	\$14,026,874	8.14

**Asset-Backed Securities:** The TRGT 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, 2016 was \$330,333,713 of which \$180,253,775 were CMOs that are generally more sensitive to interest rate changes.

*(continued)*

**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 investment policy limits the asset allocation for international investments to twenty-five percent of total assets. The TRGT's exposure to foreign currency risk was as follows:

## FOREIGN CURRENCY-DENOMINATED INVESTMENTS

As of June 30, 2016

Expressed in Thousands

Currency	Total Fair Value			
	June 30, 2016	Fixed Income	Equity	Cash
Australian Dollar	\$242,917	\$0	\$241,463	\$1,454
British Pound Sterling	1,081,235	0	1,073,734	7,501
Canadian Dollar	1,542,205	0	1,542,322	(117)
Danish Krone	138,475	0	138,431	44
Euro Currency	1,390,844	0	1,364,013	26,831
Hong Kong Dollar	183,929	0	183,139	790
Japanese Yen	1,271,723	0	1,260,282	11,441
New Israeli shekel	18,442	0	18,331	111
New Zealand Dollar	3,734	0	3,734	0
Norwegian Krone	35,204	0	35,204	0
Singapore Dollar	32,754	0	32,640	114
Swedish Krona	135,826	0	135,712	114
Swiss Franc	410,093	0	409,677	416
<b>Total</b>	<b>\$6,487,381</b>	<b>\$0</b>	<b>\$6,438,682</b>	<b>\$48,699</b>

**Custodial Credit Risk:** Custodial Credit Risk for deposits is the risk that in the event of a bank failure, the TRGT deposits may not be returned to TRGT. The TRGT does not have an explicit policy with regards to Custodial Credit Risk for deposits. At year end, the TRGT had uninsured and uncollateralized cash deposits of \$48,699,421 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 investments in the TRGT, net of investment expense, was 2.78 percent. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

### Derivatives:

**Futures** - The TRGT 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 TRGT 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. As of June 30, 2016, the TRGT was under contract for fixed income and equity index futures and the resulting payable is reflected in the financial statements at fair value.

(continued)





**Foreign Currency Forward Contracts** - The international securities expose the TRGT to potential losses due to a possible rise in the value of the US dollar. The TRGT 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 TRGT can sell up to 80% 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 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 TRGT is authorized to invest in To Be Announced (TBA) mortgage backed securities similar to the foreign currency forward contracts. The TRGT enters into agreements to purchase pools of mortgage backed securities prior to the actual security being identified. The TRGT 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 TRGT 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 TRGT 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:

**DERIVATIVE SUMMARY**

**As of June 30, 2016**

*Expressed in thousands*

	Changes in Fair Value		Fair Value at June 30, 2016			
	Financial Statement Classification	Amount	Financial Statement Classification	Amount	Notional Amount	Currency
<b>Foreign Currency</b>						
<b>Forward Contracts</b>						
		\$(120)		\$(120)	21,132	EUR
		3,043		3,043	26,601	GBP
		<u>(1,009)</u>		<u>(1,009)</u>	3,232,116	JPY
	Investment Income	\$1,914	Derivative Instruments	\$1,914		
			Derivative Instruments			
<b>Futures Contracts</b>	Investment Income	\$64,490	Payable	\$(5,058)	\$930,741	
<b>TBA Mortgage</b>						
<b>Backed Securities</b>	Investment Income	\$3,354	Derivative Instruments	\$3,354	\$419,374	

*(continued)*



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 TRGT 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 TRGT has investments in strategic lending, private equity funds and real estate with an estimated fair value of \$6,047,213,901 at June 30, 2016. 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 TRGT is held by real estate investment holding companies.

**Commitments:**

**Standby Commercial Paper Purchase Agreement:** The TRGT 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 TRGT 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 TRGT would be called upon to purchase the commercial paper, the TRGT 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 TRGT had unfunded commitments of \$2,553,633,278 in private equity, strategic lending, and real estate commitments at year end.

(continued)

**TENNESSEE RETIREE GROUP TRUST  
SCHEDULE OF INVESTMENT EXPENSES**



**For the Year Ended June 30, 2016**

Investment-related Personnel Services:	
Salaries and Wages	\$3,842,136
Employee Benefits	1,066,990
Total Personnel Services	4,909,126
Investment-related Professional Services:	
Accounting	368,851
Legal Services	151,762
Data Processing	437,941
Information Systems	408,145
Management Services	82,962
Securities Lending Fees	17,888,308
Alternative Asset Fees	37,128
External Investment Manager Fees	21,669,984
Investment Consulting Fees	1,388,580
Investment Custodian Fees	650,004
Legal Fees	294,130
Real Estate Manager Fees	13,314,203
Other Investment Professional Fees	472,299
Other Investment Transaction Fees	2,930,462
Administration, Internal Audit, Personnel	1,081,428
Total Professional Services	61,176,187
Communication:	
Travel	172,257
Telephone	37,151
Printing	2,520
Postage	1,185
Total Communication	213,113
Miscellaneous:	
Office Space	101,747
Supplies and Maintenance	1,973
Equipment	34,474
Other Services and Charges	35,667
Total Miscellaneous	173,861
Total Investment Expenses	\$66,472,287

# *Investment Section*

Report by Investment Consultant

Letter from TCRS Chief Investment Officer

Statutory Investment Authority

Investment Performance Review

Asset Allocation

Largest Holdings

Investment Summary

Schedules of Investment Fees and Commissions





October 11, 2016

Attn: Ms. Jill Bachus, Director  
 Tennessee Consolidated Retirement System  
 Andrew Jackson Building  
 Nashville, TN 37243-0230

Re: 2016 CAFR Performance Letter

Dear Jill:

For the year ended June 30, 2016, TCRS earned a return of 2.79%, underperforming its policy index (3.51%) and its as-allocated index (3.59%). Strong returns in Real Estate (12.62%), Private Equity (10.27%) and an unusually robust US Fixed Income market (10.58%) were additive for the year, whereas, International and Emerging Markets Equity (-7.20%) and Domestic Equities (0.08%) were detractors from portfolio returns. Active management in U.S. Equity underperformed the index but was a median peer performer.

Despite underperforming its policy benchmark for the fiscal year, TCRS ranked in the top decile of large public plans (InvestorForce’s Public DB > \$1 billion) over the past year, and was in the top quartile of its peer group for the three- and five- year periods ended June 30. Recent results were aided by TCRS’ longer duration positioning in US Fixed Income.

As of June 30, 2016, the System’s asset allocation and one-year respective returns were:

Asset Class	% of Assets	One Year Return
Domestic Equity	33.2%	0.08%
Canada Index Fund	3.5%	-4.21%
International Developed Market	12.3%	-7.50%
International Emerging Market	4.5%	-6.39%
Domestic Fixed Income	26.6%	10.58%
Inflation-Indexed Fixed Income	4.9%	4.80%
Real Estate	7.5%	12.62%
Private Equity	3.4%	10.27%
Strategic Lending	3.6%	1.59%
Cash and Cash Equivalents	0.4%	1.15%
<b>Total</b>	<b>100.0%</b>	<b>2.79%</b>

The fiscal year was characterized by the outperformance of U.S. financial markets relative to the rest of the world. U.S. equity markets were resilient and managed positive returns, while international developed and emerging markets experienced losses. The U.S. fixed income market saw positive returns as yields fell, despite the Fed raising interest rates 25 bps in December. Meanwhile, the ECB and BOJ continued to pursue aggressive monetary stimulus programs to combat anemic growth and low inflation. The fiscal year ended with the surprise outcome of the United Kingdom voting to leave the European Union.

Verus anticipates modest equity returns globally due to slow global economic growth. Bond yields are very low by historical standards. Future Fed decisions and changes to non-U.S. quantitative easing policies will be carefully scrutinized and could result in increased market volatility. TCRS’ well-funded, cost-effective Plan incorporates sensible diversification in order to weather a variety of market environments.

Best regards,



Margaret Jadallah  
 Managing Director

DAVID H. LILLARD, JR.  
STATE TREASURER

STATE OF TENNESSEE

MARYJO PRICE  
CHIEF OPERATING OFFICER

MICHAEL BRAKEBILL  
CHIEF INVESTMENT OFFICER



JILL BACHUS  
DIRECTOR OF TCRS

TREASURY DEPARTMENT  
STATE CAPITOL  
NASHVILLE, TENNESSEE 37243-0225

December 23, 2016

Dear Members:

I am pleased to present the Investment Section of the TCRS Comprehensive Annual Financial Report for the fiscal year ended June 30, 2016.

With over \$43.2 billion in assets, TCRS is one of the largest public pension plans in the United States. TCRS assets are invested to preserve principal value, to achieve a superior rate of return within acceptable risk levels and to provide the liquidity necessary to pay beneficiaries in a timely manner.

The TCRS portfolio is diversified among domestic and international stocks and bonds, real estate, private equity and short term securities. A diversified portfolio is used to manage risk and to minimize significant exposure to unpredictable events. Staff consults with the TCRS general investment consultant periodically to determine the optimal, long-term mix of assets to best meet the plan's investment objectives. TCRS has adopted a conservative investment strategy that has yielded excellent returns with a low level of risk. The investment performance for TCRS was computed using a market value based, time-weighted rate of return.

The 2016 fiscal year was challenging for investors and TCRS gained 2.79% for the fiscal year with an annualized gain of 7.54% for the trailing five-year period. While the one-year figure trailed the actuarially required return, the five-year number has exceeded the target and the portfolio was still managed in a manner to protect capital in an adverse environment.

The experienced investment staff of TCRS is committed to providing superior investment returns in a financially-sound manner with the highest ethical and professional standards. With the leadership of our Board, our Treasurer and our dedicated staff, this goal will be met.

Sincerely,



Michael Brakebill  
Chief Investment Officer

### ***Statutory Investment Authority***

The investment authority for the Board of Trustees of TCRS is set out in Tennessee Code Annotated, Section 8-37-104. Pursuant to this authority and the investment terms, conditions and limitations outlined therein, the Board of Trustees approves the TCRS' investment policy. The Board approved TCRS' revised and restated investment policy on March 31, 2015.

TCRS' primary investment objective, as set by the Board, is to establish a stable, diversified investment portfolio that, in the long-term, will meet or exceed the assumed actuarial rate of return, as adopted by the Board, in order to provide sufficient liquidity to pay beneficiaries in a timely manner.

TCRS' policies and the strategies implemented by the Treasury Investment Division staff serve to benefit plan members in several ways. The emphasis on a conservative asset allocation and high quality securities helps to ensure the soundness of the system and the ability to provide the needed funds upon a member's retirement.

Funds in the retirement system are actively managed, primarily by the Treasury Investment Division, through a diversified portfolio of high-quality domestic and international bonds, domestic and international stocks, real estate, private equity, and short-term instruments. From time to time, pursuant to Tennessee Code Annotated, Section 8-37-114, the Treasury Investment Division engages outside investment managers to manage a limited number of asset classes or subclasses. In those instances, the Investment Division endeavors to use emerging investment managers to the greatest extent feasible within the bounds of financial and fiduciary prudence, as prescribed under Tennessee Code Annotated, Section 8-37-113. During fiscal year 2015-2016, no assets were under the control of emerging investment managers.

To assist in the fiduciary responsibility for managing the TCRS portfolio during fiscal year 2016, Verus served as the general investment consultant for TCRS. The Townsend Group served as the real estate investment consultant and Torrey Cove served as the private equity consultant.

State Street Bank and Trust Company was the master bank custodian for TCRS, providing safekeeping and accounting services for the investment portfolio during fiscal year 2016.

### ***Cost of Investment Operation***

The cost to operate the investment program for TCRS is about twelve basis points (0.12%). This cost includes the cost of personnel, operational cost, master bank custodian cost, record keeping, and external manager fees. Commission costs for publicly listed securities and management fees for private equity investments are capitalized, meaning commission costs and management fees are not included in the expenses, but are recorded in the value of the assets. Recent peer comparisons of investment management fees and expenses indicate the investment program is managed very cost effectively.

### ***Performance Measurement***

TCRS' independent external investment consultant, Verus (formerly Strategic Investment Solutions), provided performance measurement for TCRS. TCRS had a total return of 2.79% during the fiscal year. Real estate led with a 12.62% return for the year versus 11.84% for the NCREIF index. Fixed Income gained 10.58% versus the Citigroup Large Pension Fund benchmark. Private equity contributed 10.27% and led the benchmark return of 4.78% considerably. Key areas reducing the overall performance of the fund were International and Canadian equities with declines of 7.20% and 4.21% respectively.

## INVESTMENT PERFORMANCE REVIEW

PERIODS ENDING JUNE 30, 2016

	Annualized Returns		
	Current Year	3-Year	5-Year
<b>Pension Plan Portfolio</b>			
TCRS Performance	2.79%	7.41%	7.54%
Policy Index	3.51%	7.59%	7.58%
As-Allocated Index	3.59%	7.41%	7.23%
<b>Domestic Equity</b>			
TCRS Performance	0.08%	10.55%	11.31%
S & P 1500 Index	3.64%	11.52%	11.94%
<b>Canadian Equity</b>			
TCRS Performance	-4.21%	1.49%	-1.47%
S & P TSX 60 Index	-4.21%	1.49%	-1.54%
<b>Domestic Fixed Income</b>			
TCRS Performance	10.58%	6.97%	7.02%
Citigroup LPF Index	10.83%	6.81%	6.49%
<b>Inflation Hedge Bonds</b>			
TCRS Performance	4.80%	2.59%	2.79%
Citigroup TIPS Index	4.66%	2.51%	2.78%
<b>International Equity</b>			
TCRS Performance	-7.20%	2.60%	2.58%
International Equity Custom Index	-8.74%	1.54%	0.61%
<b>Real Estate</b>			
TCRS Performance	12.62%	12.05%	11.25%
NCREIF Index	11.84%	11.91%	11.93%
<b>Short-Term Securities</b>			
TCRS Performance	0.10%	0.85%	0.88%
<b>Private Equity</b>			
TCRS Performance	10.27%	16.23%	15.01%
S & P 500 + 3%	4.78%	14.83%	14.58%

## Verus

Ranking of TCRS Portfolio	Risk Adjusted	
	Percentile Rankings	Basis
Last three years	23	21
Last five years	17	13

The percentile ranking is the position of the TCRS portfolio as compared with other public funds with one being the best and 100 being the worst. The investment performance for TCRS was computed using a market, time weighted rate of return by an independent consultant.



**ASSET ALLOCATION**

*As of June 30, 2016*

*Expressed in Thousands*

<b>Asset Class</b>	<b>Fair Value</b>	<b>Percentage</b>
Domestic Equity	\$13,983,690,889	33%
Domestic Fixed Income	13,673,135,658	32%
International Equity	6,689,686,400	15%
International Fixed Income	18,443,906	1%
Short-Term Securities	2,306,455,869	5%
Real Estate	3,163,804,942	7%
Private Equities & Strategic Lending	2,883,408,959	7%
Totals	<u>\$42,718,626,623</u>	<u>100%</u>

*This schedule classifies Canadian investments as domestic securities, convertible bonds as fixed income securities and preferred stock as fixed income securities. For investment purposes, convertible bonds and preferred stock are considered equity securities. Accordingly, the asset allocation percentages in this schedule will vary from the investment consultant's asset allocation percentages.*

## LARGEST STOCK HOLDINGS

as of June 30, 2016

by Fair Value

Shares	Security Name	Fair Value
4,458,631	APPLE INC	\$426,245,124
3,116,800	EXXON MOBIL CORP	292,168,832
4,575,014	MICROSOFT CORP	234,103,466
1,746,976	JOHNSON + JOHNSON	211,908,189
3,267,380	JPMORGAN CHASE + CO	203,034,993
4,654,244	AT+T INC	201,109,883
5,509,354	PFIZER INC	193,984,354
1,604,763	FACEBOOK INC A	183,392,316
5,806,415	GENERAL ELECTRIC CO W/D	182,785,944
244,958	AMAZON.COM INC	175,296,844

## LARGEST BOND HOLDINGS

as of June 30, 2016

by Fair Value

Par Value	Security Name	Yield	Maturity	Moody's Rating	Fair Value
\$264,235,000	United States Treasury Note	1.50%	2/15/2026	Aaa	\$267,207,644
203,503,358	United States Treasury Index Linked Note	-0.09%	1/15/2023	Aaa	206,200,795
183,328,992	United States Treasury Index Linked Note	-0.71%	4/15/2018	Aaa	186,050,328
158,590,000	United States Treasury Note	2.29%	5/15/2045	Aaa	182,285,566
157,500,000	GNMA II TBA 30 YR 3	2.31%	7/15/2043	NR	164,676,708
175,000,000	United States Treasury STRIPS	1.37%	8/15/2023	Aaa	158,646,425
152,305,000	FED HOME LN DISCOUNT NT	0.50%	10/11/2016	NR	152,149,649
130,946,000	United States Treasury Note	1.48%	11/15/2025	Aaa	139,703,014
135,889,867	United States Treasury Index Linked Note	-0.63%	4/15/2019	Aaa	138,761,627
111,300,000	United States Treasury Note	2.29%	11/15/2045	Aaa	127,977,637

A complete portfolio listing is available upon request

**Key to Ratings:** All ratings presented are from Moody's Investors Service with the exception of some of the government agency securities. Moody's does not rate these securities. Standard & Poor's does provide rating for the securities (AAA is Standard & Poor's highest rating.) Government Securities are not rated per se' but are considered the best quality securities.

Moody's rates securities as follows:

Aaa	Best Quality
Aa	High Quality
A	Upper Medium Quality
Baa	Medium Quality
NR	Not Rated



INVESTMENT SUMMARY  
JUNE 30, 2016

	Domestic		International		Total	
	Fair Value	%	Fair Value	%	Fair Value	%
<b>Fixed Income</b>						
Government Bonds	\$4,877,682,085	11.32%		0.00%	\$4,877,682,085	11.32%
Corporate Bonds	4,098,867,059	9.51%		0.00%	4,098,867,059	9.51%
Municipal/Provincial Bonds	173,321,491	0.40%		0.00%	173,321,491	0.40%
Total Bonds	9,149,870,635	21.23%	0	0.00%	9,149,870,635	21.23%
Lehman Brothers Escrow Adjustment		0.00%		0.00%	0	0.00%
Corporate Asset Backed	505,354,340	1.17%		0.00%	505,354,340	1.17%
Commercial Mortgage Backed	330,333,713	0.77%		0.00%	330,333,713	0.77%
Government Agencies	361,746,868	0.84%		0.00%	361,746,868	0.84%
Government Mortgage Backed Securites	3,252,991,950	7.55%		0.00%	3,252,991,950	7.55%
Government Asset Backed	38,867,402	0.09%		0.00%	38,867,402	0.09%
Preferred Stock	33,970,750	0.08%	18,443,906	0.04%	52,414,656	0.12%
Total Fixed Income	13,673,135,658	31.73%	18,443,906	0.04%	13,691,579,564	31.77%
<b>Common Stock</b>						
Consumer Discretionary	1,774,520,065	4.12%	820,879,119	1.90%	2,595,399,184	6.02%
Consumer Staples	1,405,219,602	3.26%	668,509,951	1.55%	2,073,729,553	4.81%
Energy	1,039,056,226	2.41%	516,766,674	1.20%	1,555,822,900	3.61%
Financials	1,860,397,609	4.32%	1,320,926,190	3.06%	3,181,323,799	7.38%
Healthcare	2,095,233,811	4.86%	555,463,686	1.29%	2,650,697,497	6.15%
Industrials	1,530,968,527	3.55%	992,080,451	2.30%	2,523,048,978	5.85%
Information Technology	2,840,858,679	6.59%	423,694,878	0.98%	3,264,553,557	7.57%
Materials	480,609,557	1.11%	536,709,657	1.25%	1,017,319,214	2.36%
Private Placements	0	0.00%	1,920,370	0.00%	1,920,370	0.00%
Rights/Warrants		0.00%	252,028	0.00%	252,028	0.00%
Telecommunication Services	356,024,949	0.83%	292,461,903	0.68%	648,486,852	1.50%
Utilities	520,042,079	1.21%	130,151,313	0.30%	650,193,392	1.51%
REITS	80,759,785	0.19%	429,870,180	1.00%	510,629,966	1.18%
Total Common Stock	\$13,983,690,889	32.45%	\$6,689,686,400	15.51%	\$20,673,377,289	47.96%

(Continued)

INVESTMENT SUMMARY  
JUNE 30, 2016 (CONTINUED)



	Domestic		International		Total	
	Fair Value	%	Fair Value	%	Fair Value	%
Short-Term Investments						
Commercial Paper	\$375,532,198	0.87%	\$0	0.00%	\$375,532,198	0.87%
Pooled Funds and Mutual Funds	2,318,632,241	5.38%	0	0.00%	2,318,632,241	5.38%
Total Short term investments	<u>2,694,164,439</u>	<u>6.25%</u>	<u>0</u>	<u>0.00%</u>	<u>2,694,164,439</u>	<u>6.25%</u>
Real Estate	3,163,804,942	7.34%	0	0.00%	3,163,804,942	7.34%
Private Equities & Strategic Lending	<u>2,805,817,198</u>	<u>6.50%</u>	<u>77,591,761</u>	<u>0.18%</u>	<u>2,883,408,959</u>	<u>6.69%</u>
Total Investments	<u>36,320,613,126</u>	<u>84.27%</u>	<u>6,785,722,067</u>	<u>15.73%</u>	<u>43,106,335,194</u>	<u>100.00%</u>
					0	
Derivatives & Options	5,267,951					
Short Term Investments classified as cash equivalents	<u>(387,708,570)</u>				<u>(387,708,570)</u>	
Total investments as Shown on the Statement of Fiduciary Net Position	<u>\$35,938,172,507</u>		<u>\$6,785,722,067</u>		<u>\$42,723,894,574</u>	

This schedule classifies Canadian investments as domestic securities, convertible bonds as fixed income securities and preferred stock as fixed income securities. For investment purposes convertible bonds and preferred stock are considered equity securities. Accordingly, the asset allocation percentages in this schedule will vary from the investment consultant's asset allocation percentages.



**SCHEDULES OF INVESTMENT FEES AND COMMISSIONS  
FOR THE YEAR ENDED JUNE 30, 2016**

**Schedule of Fees**

	Average Assets Under Management	Fees
<b>Asset Management</b>		
External Investment Manager Fees	\$5.5 Billion	\$21,669,986
Real Estate Asset Management	3.1 Billion	13,314,204
Private Equities & Strategic Lending Asset Management	2.8 Billion	<u>0</u>
Total Asset Management		<u><b>\$34,984,190</b></u>
<b>Other Investment Services Fees</b>		
Custodian Bank	\$43.1 Billion	\$650,004
General Investment Consultant	43.1 Billion	323,000
Real Estate Investment Consultant	3.1 Billion	231,750
Private Equities & Strategic Lending Investment Consultant	2.8 Billion	<u>833,830</u>
Total Investment Services Fees		<u><b>\$2,038,584</b></u>

**Schedules of Commissions**

**Domestic Exchange Traded Shares**

Broker Name	DOMESTIC		
	Number of Shares Traded	Total Commissions	Commission per Share
Instinet, LLC	81,073,261	\$1,621,483	0.020
Capis	8,505,759	340,230	0.040
Barclays Capital	11,992,173	239,843	0.020
Other Brokers-Instinet CCA Balance	10,657,482	213,150	0.020
RBC Capital Markets Corporation	9,404,499	188,090	0.020
Wells Fargo	6,420,965	128,419	0.020
Sanford C. Bernstein & Company, Inc.	5,179,807	103,596	0.020
OTHER BROKERS*	<u>51,089,882</u>	<u>996,206</u>	0.019
<b>Totals</b>	<u><b>184,323,828</b></u>	<u><b>\$3,831,017</b></u>	

\*LESS THAN \$100,000 TOTAL COMMISSION PER BROKERAGE FIRM

(continued)

**SCHEDULES OF INVESTMENT FEES AND COMMISSIONS  
FOR THE YEAR ENDED JUNE 30, 2016 (CONTINUED)**



**Schedules of Commissions (Continued)**

Program Trades where total commission cost includes trading commission, liquidity fees, and market impact fees.

Broker Name	DOMESTIC		
	Number of Shares Traded	Total Commissions	Commission per Share
Capis	58,473,765	\$935,680	0.016
Barclays Capital	25,930,719	499,568	0.019
Morgan Stanley & Company, Inc.	64,611,204	484,585	0.008
Deutsche Bank Securities, Inc.	62,028,646	465,216	0.008
Goldman Sachs Group, Inc.	44,576,517	334,325	0.008
Bank of America Merrill Lynch	30,285,090	227,139	0.008
Credit Suisse	16,841,433	213,853	0.013
UBS Securities LLC	24,154,977	181,163	0.008
Evercore Group LLC	20,187,337	144,345	0.007
Wells Fargo	18,461,194	138,460	0.008
JP Morgan Chase & Company	15,622,893	117,172	0.008
OTHER BROKERS*	39,310,712	278,491	0.007
<b>Totals</b>	<b>\$420,484,487</b>	<b>\$4,019,997</b>	

*International Exchange Traded Shares*

Broker Name	INTERNATIONAL		
	Number of Shares Traded	Total Commissions	Commission per Share
UBS Securities LLC	98,142,268	\$664,757	0.007
Bank of America Merrill Lynch	33,714,367	374,733	0.011
Citigroup Global Markets, Inc.	27,792,654	294,224	0.011
HSBC Bank PLC	42,262,350	289,291	0.007
JP Margan Chase & Company	26,415,448	287,787	0.011
Barclays Capital	16,404,672	283,981	0.017
Goldman Sachs Group, Inc.	25,460,223	273,587	0.011
Credit Suisse	14,039,895	265,011	0.019
Morgan Stanley & Company, Inc.	32,076,415	259,654	0.008
Deutsche Bank Securities, Inc.	11,945,139	199,534	0.017
Jefferies LLC	15,052,158	181,659	0.012
Instinet, LLC	14,057,066	160,774	0.011
Exane	4,618,809	103,114	0.022
OTHER BROKERS*	140,070,763	1,320,931	0.009
<b>TOTALS</b>	<b>502,052,227</b>	<b>\$4,959,037</b>	

Shares for international stocks are based on the actual foreign shares traded while the commission is expressed in U.S. dollars. Therefore, commissions per share between domestic and international are not comparable.

\*LESS THAN \$100,000 TOTAL COMMISSION PER BROKERAGE FIRM

# *Actuarial Section*

Actuarial Introduction

Actuary's Certification Letter

Summary of Actuarial Assumptions and Methods

Actuarial Data

Actuarial Balance Sheet

Short-Term Solvency Test

Summary of Accrued and Unfunded Accrued Liabilities

Selected Actuarial Funding Information

Analysis of Financial Experience

Plan Summary

Services for Active and Retired Members

Sample Benefit Calculations

Major Legislative Improvements



## ACTUARIAL VALUATIONS

Actuarial valuations of the TCRS are performed by an independent actuarial consulting firm to assess the funding status of the system and to determine employer contribution rates for its various components. The valuation performed as of July 1, 2013 set employer rates effective July 1, 2014 through June 30, 2016. The June 30, 2015 valuation established contribution rates beginning July 1, 2016. The Board of Trustees of the system is responsible for adopting the employer contribution rates after reviewing the actuarial results.

Recent GASB Standards separated pension accounting from pension funding. As a result, TCRS will begin annual actuarial valuations beginning June 30, 2015 for both GASB 67/68 purposes and funding purposes.

## FUNDING OF PENSIONS

It is the policy of the state to fund pensions by actuarially-determined contributions which are intended to provide funding for both the normal liability cost and the unfunded actuarial accrued liability cost. This policy seeks to ensure that sufficient assets will be available to pay the benefits as promised by the pension plan.

## ACCRUED LIABILITY

The unfunded accrued liability within the plan was most recently reestablished with the 2013 actuarial valuation for most groups. This was accomplished by setting the unfunded accrued liability equal to the excess of the Entry Age Normal Past Service Liability over the valuation assets for each group.

## SPECIFICS

Valuations are based on demographic data (employees' ages, salaries and service credits), economic projections (salary increases, interest rates and investment earnings) and decrement estimates (mortality and disability rates).

The economic projections and decrement estimates used for valuation purposes utilized the assumptions recommended by the actuary and adopted by the Board of Trustees based on an actuarial experience study conducted every four years. The earnings rate assumption adopted by the Board is subject to the approval of the Council on Pensions and Insurance.

## QUADRENNIAL EXPERIENCE STUDY

A quadrennial experience study was conducted as of June 30, 2012. The system noted improvements in mortality and included an adjustment for projected mortality. In addition, the system lowered the salary scale for all groups. Assumptions developed from the June 30, 2012 experience study were used in the July 1, 2013 actuarial valuation. The next experience study will occur as of June 30, 2016.

## FUNDING POLICY

The TCRS Board of Trustees adopted a funding policy for TCRS on September 26, 2014. The policy outlines the procurement of actuarial services, the assumptions to be used in the experience study, the components of the actuarial valuation, and performance of an actuarial audit. The funding policy can be found on the TCRS website at <http://treasury.tn.gov/tcrs/PDFs/FundingPolicy.pdf>.





Justin C. Thacker, F.S.A.  
Direct Line: (615) 665-5387  
Email: [Justin.Thacker@bpsm.com](mailto:Justin.Thacker@bpsm.com)

December 1, 2016

Mr. David H. Lillard, Jr.  
Chairman, Board of Trustees  
Tennessee Consolidated Retirement System  
502 Deaderick Street  
Nashville, Tennessee 37243-0201

**Re: Actuary's Certification Letter**

Dear Mr. Lillard:

The purpose of this letter is to certify the actuarial adequacy of contributions being made by the State of Tennessee, Local Education Agencies and participating Political Subdivisions to the Tennessee Consolidated Retirement System and to discuss the approach currently being taken toward meeting the financing objectives of the Plan.

The most recent actuarial valuation for funding purposes completed as of the year ending June 30, 2016 for the Tennessee Consolidated Retirement System was performed as of June 30, 2015. In addition, a valuation for accounting purposes pursuant to GASB 67 and 68 was performed as of June 30, 2015 and was used to satisfy June 30, 2016 reporting date requirements. These valuations were based on a set of actuarial assumptions (described in detail in the section headed "Summary of Actuarial Assumptions and Methods") which was adopted by the Board of Trustees on the recommendation of the actuary after a study of actual experience under the TCRS during the four-year period ending June 30, 2012. Beginning June 30, 2015, actuarial valuations will be performed annually for both funding and accounting purposes.

The Tennessee Consolidated Retirement System implemented a new hybrid plan design for all new employees hired on or after July 1, 2014. Employees hired prior to this date continue to participate in the legacy plans. The 2015 funding and accounting valuations reflect this change and provide separate reporting for each plan. There have been no other significant changes in the level of benefits provided by the plan since the date of the preceding valuation.

In performing the 2015 valuations, we relied on employee data and asset information provided by the administrative staff of the Tennessee Consolidated Retirement System. In the case of employee data, each individual record was audited for reasonableness and internal consistency, although the validity of the information was not traced to source documents. With respect to plan assets, a general review for consistency with the information furnished for prior valuations was performed.

Mr. David H. Lillard, Jr.  
Chairman, Board of Trustees  
December 1, 2016  
Page Two

Certain tables presented in the Comprehensive Annual Financial Report are derived from the 2015 actuarial valuation reports prepared by Bryan, Pendleton, Swats and McAllister, LLC. The tables were prepared by the staff of the Tennessee Consolidated Retirement System and examined by our firm. These tables include the following –

***Financial Section***

- Schedules of Changes in Net Pension Liability
- Schedules of Net Pension Liability
- Schedule of Contributions

***Actuarial Section***

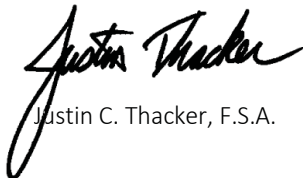
- Summary of Actuarial Assumptions and Methods
- Actuarial Data
- Actuarial Balance Sheet
- Short-Term Solvency Test
- Summary of Accrued and Unfunded Accrued Liabilities
- Selected Actuarial Funding Information
- Analysis of Financial Experience

The Schedule of Retired Member Activity in the Actuarial Data section was prepared by our firm using information gathered from prior actuarial valuations.

The 2015 valuations were prepared in accordance with accepted actuarial principles of practice prescribed by the Actuarial Standards Board and the principles of Governmental Accounting Standards Board Statements 67 and 68. The valuations were also in accordance with the pension funding policy adopted by the TCRS Board of Trustees. I am a Member of the American Academy of Actuaries with experience in performing valuations for public retirement systems; all calculations were performed either by me or by other qualified actuaries under my direct supervision.

Based upon the valuation results and the contribution rates adopted by the Board of Trustees, it is our opinion that the Tennessee Consolidated Retirement System continues to fund its liabilities in accordance with standard actuarial principles of advance funding, continuing a program first adopted in 1975.

Sincerely,



Justin C. Thacker, F.S.A.

The following assumptions were adopted by the Board of Trustees for use with the July 1, 2013 valuation based on the consulting actuary's recommendations resulting from the June 30, 2012 actuarial experience study.

### General Actuarial Methods

- **Actuarial Cost Method (Frozen Entry Age)** — The state and teacher unfunded accrued liabilities are being funded over a thirteen-year and eight-year period, respectively. The amortization period related to local government unfunded accrued liabilities varies by entity.
- **Treatment of Actuarial Gains and Losses** — Under the Frozen Entry Age Method, any actuarial gains or losses are absorbed into the normal cost, unless the unfunded liability is reestablished.
- **Asset Valuation Method** — Assets are valued on a basis which reflects a ten-year moving average of the fair market value. The actuarial value of assets must be within 80-120 percent of the market value of assets.
- **Valuation Data** — The administrative staff of TCRS furnishes the actuary with demographic data relating to the active life members and the retired life members. The fair value of system assets are also provided by retirement system staff. All data is reviewed for reasonableness and consistency from year to year, but is not audited by the actuary.
- **Post-Retirement Adjustments** — Retirement benefits are assumed to increase at the geometric rate of 2.5 percent annually, reflecting the 1997 adoption of compounded cost-of-living adjustments.

### Economic Assumptions

- **Investment Return Rate** — 7.5 percent per annum, compounded annually.
- **Employee Salary Increases** — Graded scale that reflects the plan experience pattern of declining escalation rates as participant ages increase. No explicit assumption is made regarding the portion attributable to the effects of inflation on salaries. Active membership is assumed to remain constant. For the legacy pension plan, increase in Social Security Wage Base — 3.5 percent annual increase.

(continued)



**Decrement Assumptions**

**Post-Retirement Mortality** — Specifically adopted tables have been created to accurately reflect patterns that occur among TCRS retirees. Sample rates are below.

Male		
Age	Teachers	State and Political Subdivisions
Age 50	0.2%	0.3%
Age 60	0.4%	0.9%
Age 70	1.4%	2.0%

Female		
Age	Teachers	State and Political Subdivisions
Age 50	0.1%	0.2%
Age 60	0.4%	0.7%
Age 70	0.9%	1.2%

**Pre-Retirement Mortality** — All groups are based on the 2012 Static Non-annuitant mortality table published by the IRS.

**Withdrawal Due to Disability** — Sample rates of disability based on experience:

Male			
Age	Teachers	State	Political Subdivisions
Age 30	0.01%	0.07%	0.03%
Age 40	0.08%	0.16%	0.08%
Age 50	0.17%	0.27%	0.38%

Female			
Age	Teachers	State	Political Subdivisions
Age 30	0.01%	0.04%	0.03%
Age 40	0.08%	0.14%	0.08%
Age 50	0.17%	0.33%	0.38%

**Turnover Assumption** — Tables for probabilities of separation due to termination of employment are developed utilizing a “two-year select and ultimate” approach.

Teachers			
	1st Year Employment	2nd Year Employment	Ultimate
<b>Male</b>			
Age 30	18.0%	13.5%	6.0%
Age 40	18.0%	13.5%	2.0%
Age 50	19.7%	14.2%	2.0%
<b>Female</b>			
Age 30	18.0%	13.5%	7.6%
Age 40	18.0%	13.5%	2.3%
Age 50	19.7%	14.2%	1.6%

State			
	1st Year Employment	2nd Year Employment	Ultimate
<b>Male</b>			
Age 30	23.0%	18.6%	9.6%
Age 40	18.6%	13.8%	2.6%
Age 50	14.8%	11.1%	2.2%
<b>Female</b>			
Age 30	23.0%	18.6%	10.3%
Age 40	18.6%	13.8%	3.4%
Age 50	14.8%	11.1%	2.3%

Political Subdivisions			
	1st Year Employment	2nd Year Employment	Ultimate
<b>Male</b>			
Age 30	21.8%	17.9%	7.4%
Age 40	19.2%	15.9%	3.5%
Age 50	17.0%	13.0%	2.8%
<b>Female</b>			
Age 30	21.8%	17.9%	11.1%
Age 40	19.2%	15.9%	5.4%
Age 50	17.0%	13.0%	3.8%

(continued)

**Retirement** — The probabilities of retirement for members eligible to retire:

In addition, for members younger than age 60, a loading factor of 12.5 percent for teachers and 7.5 percent for state and political subdivision employees is added during the year the member is first eligible for unreduced retirement. After age 60, for those members with 15 or more years of service, an 8.0 percent load is added for teachers and 2.0 percent for state employees and political subdivision employees.

<b>Male</b>			
<b>Age</b>	<b>Teachers</b>	<b>State</b>	<b>Political Subdivisions</b>
Age 60	15.0%	8.5%	10.5%
Age 61	16.0%	11.0%	15.0%
Age 62	22.0%	16.0%	20.0%
Age 63	16.0%	12.0%	17.5%
Age 64	18.0%	14.0%	17.5%
Age 65	35.0%	22.0%	24.0%
Age 70	16.0%	15.5%	18.0%
Age 75	100.0%	100.0%	100.0%

<b>Female</b>			
<b>Age</b>	<b>Teachers</b>	<b>State</b>	<b>Political Subdivisions</b>
Age 60	17.0%	9.0%	11.0%
Age 61	20.0%	12.0%	13.0%
Age 62	26.0%	18.0%	18.0%
Age 63	19.5%	12.0%	16.0%
Age 64	24.0%	14.0%	16.0%
Age 65	37.5%	22.0%	22.0%
Age 70	34.0%	17.0%	19.0%
Age 75	100.0%	100.0%	100.0%



**SCHEDULE OF ACTIVE MEMBER VALUATION DATA**

	<b>Actuarial Valuation July 1</b>	<b>Number</b>	<b>Annual Payroll In Thousands</b>	<b>Average Annual Pay</b>	<b>Average Annual Percentage Increase In Average Pay</b>
2007	SETHEEPP	136,284	\$ 5,739,878	\$ 42,117	3.01%
	PSPP	76,441	2,084,945	27,275	3.40%
2009	SETHEEPP	136,123	6,052,325	44,462	2.78%
	PSPP	78,827	2,284,284	28,978	3.12%
2011	SETHEEPP	135,569	6,057,161	44,680	0.25%
	PSPP	79,507	2,356,126	29,634	1.13%
2013	SETHEEPP	132,900	6,236,930	46,929	2.48%
	PSPP	77,064	2,374,948	30,818	1.99%
2015	TLPP	69,125	3,542,059	51,241	0.84%
	TRP	5,524	225,219	40,771	N/A
	PERP	134,426	4,987,326	37,101	1.70%

**SCHEDULE OF RETIRED MEMBER VALUATION DATA**

	<b>Actuarial Valuation July 1</b>	<b>Number</b>	<b>Annual Allowances In Thousands</b>	<b>Average Annual Allowances</b>	<b>Average Annual Percentage Increase In Annual Allowances</b>
2007	SETHEEPP	70,113	\$ 1,103,826	\$ 15,744	4.80%
	PSPP	28,117	188,173	6,692	4.41%
2009	SETHEEPP	76,720	1,266,979	16,514	2.45%
	PSPP	31,155	219,860	7,057	2.73%
2011	SETHEEPP	82,456	1,442,780	17,498	2.98%
	PSPP	34,129	257,105	7,533	3.37%
2013	SETHEEPP	90,414	1,682,792	18,612	2.96%
	PSPP	37,157	286,338	7,706	3.37%
2015	TLPP	47,979	1,103,163	22,993	1.30%
	TRP	0	0	0	N/A
	PERP	94,704	1,143,883	12,079	1.60%

Legislative changes changed the plans presented beginning July 1, 2014. The July 1, 2015 Actuarial Valuation was the first performed after this change.

- SETHEEPPP - State Employees, Teachers, Higher Education Employees Pension Plan
- PSPP - Political Subdivisions Pension Plan
- TLPP - Teacher Legacy Pension Plan
- TRP - Teacher Retirement Plan
- PERP - Public Employee Retirement Plan

(continued)

## SCHEDULE OF RETIRED MEMBER ACTIVITY

	Actuarial Valuation July 1	Added to Rolls		Removed from Rolls		Rolls - End of Year		Percentage Increase in Annual Allowances	Average Annual Allowances
		No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances		
2007	SETHEEPP	9,427	\$ 219,034	3,818	\$ 40,794	70,703	\$ 1,117,789	18.97%	\$ 15,810
	PSPP	4,396	38,751	1,668	7,815	27,527	174,211	21.59%	6,329
2009	SETHEEPP	10,677	212,772	4,070	49,047	77,310	1,281,514	14.65%	16,576
	PSPP	4,752	39,522	1,714	8,407	30,565	205,326	17.86%	6,718
2011	SETHEEPP	10,090	233,149	4,359	56,689	83,041	1,457,974	13.77%	17,557
	PSPP	4,955	47,632	1,976	11,048	33,544	241,910	17.82%	7,212
2013	SETHEEPP	12,199	289,437	4,826	64,619	90,414	1,682,792	15.42%	18,612
	PSPP	5,858	56,987	2,245	12,559	37,157	286,338	18.37%	7,706
2015	TLPP	6,582	167,537	2,376	45,115	47,979	1,103,163	12.48%	22,993
	TRP	0	0	0	0	0	0	N/A	N/A
	PERP	15,885	203,829	4,979	48,335	94,704	1,143,883	15.73%	12,079

Legislative changes changed the plans presented beginning July 1, 2014. The July 1, 2015 Actuarial Valuation was the first performed after this change.

Note: Timing differences exist between the data utilized for statistical information and that used for actuarial valuation purposes.

## ACTUARIAL VS. RECOMMENDED CONTRIBUTION RATES

The Board adopted the contribution rates as recommended by the actuary.

SETHEEPP – State Employees, Teachers, Higher Education Employees Pension Plan

PSPP – Political Subdivisions Pension Plan

TLPP - Teacher Legacy Pension Plan

TRP - Teacher Retirement Plan

PERP - Public Employee Retirement Plan



**ACTUARIAL BALANCE SHEET  
as of July 1, 2015**

	<b>Teacher Legacy Pension Plan</b>	<b>Teacher Retirement Plan</b>	<b>Public Employee Retirement Plan</b>	<b>Total</b>
<b>ASSETS</b>				
Present assets creditable to:				
Employer accumulation fund	\$17,699,311,040	\$5,384,662	\$19,929,128,545	\$37,633,824,247
Members' accumulation fund	3,340,879,458	10,360,690	1,753,721,976	5,104,962,124
<b>Total present assets</b>	<b>21,040,190,498</b>	<b>15,745,352</b>	<b>21,682,850,521</b>	<b>42,738,786,371</b>
Present value of prospective contributions payable to:				
Employer accumulation fund				
Normal	1,851,614,510	26,131,783	2,810,980,429	4,688,726,722
Accrued liability	268,857,872	(1,092,784)	1,565,808,774	1,833,573,862
<b>Total employer accumulation</b>	<b>2,120,472,382</b>	<b>25,038,999</b>	<b>4,376,789,203</b>	<b>6,522,300,584</b>
Member's accumulation fund	1,785,604,938	140,523,579	667,469,121	2,593,597,638
<b>Total prospective contributions</b>	<b>3,906,077,320</b>	<b>165,562,578</b>	<b>5,044,258,324</b>	<b>9,115,898,222</b>
<b>TOTAL ASSETS</b>	<b>\$24,946,267,818</b>	<b>\$181,307,930</b>	<b>\$26,727,108,845</b>	<b>\$51,854,684,593</b>
<b>LIABILITIES</b>				
Present value of prospective benefits payable on account of:				
Present retired members and beneficiaries	12,534,489,777	-	12,202,018,320	24,736,508,097
Present active members	11,961,198,008	180,762,543	12,860,374,684	25,002,335,235
Former members	450,580,033	545,387	1,664,715,841	2,115,841,261
<b>TOTAL LIABILITIES</b>	<b>\$24,946,267,818</b>	<b>\$181,307,930</b>	<b>\$26,727,108,845</b>	<b>\$51,854,684,593</b>



## Short-Term Solvency Test

The financing objective of the Tennessee Consolidated Retirement System is to pay for the benefits provided by the plan through contributions that remain approximately level from year to year as a percentage of payroll, except that the strategy to fund the unfunded accrued liability is to make level-dollar payments over an established amortization period. A short-term solvency test is one means of checking a system's progress under its funding program. In a short-term solvency test, the plan's present assets are compared with: (1) active member contributions on deposit; (2) the liabilities for future benefits to

present retired lives; and (3) the liabilities for service already rendered by active members. In a system that has been following the approach of level percent of payroll financing for some time, the liabilities for active member contributions on deposit (liability 1) and the liabilities for future benefits to present retired lives (liability 2) should be fully covered by present assets. In addition, the liabilities for service already rendered by active members (liability 3) should be partially covered by the remainder of present assets. Generally, if the system has been using level cost financing, the funded portion of liability 3 will increase over time.

Dollar Amounts Expressed in Millions

Actuarial Valuation July 1	Actuarial Accrued Liabilities for:			Valuation Assets	Portion of Actuarial Accrued Liabilities Covered by Assets		
	(1) Active Member Contributions	(2) Retirees and Beneficiaries	(3) Active Members (Employer Financed)		(1)	(2)	(3)
2009 SETHEEP	\$3,559.8	\$14,122.8	\$11,372.4	\$26,335.2	100%	100%	76%
PSPP	1,011.3	2,190.0	2,942.4	5,304.5	100%	100%	71%
Total	\$4,571.1	\$16,312.8	\$14,314.8	\$31,639.7	100%	100%	75%
2011 SETHEEP	\$3,707.0	\$15,941.3	\$13,059.3	\$30,118.2	100%	100%	80%
PSPP	1,100.8	2,560.6	3,700.3	6,562.6	100%	100%	78%
Total	\$4,807.8	\$18,501.9	\$16,759.6	\$36,680.8	100%	100%	80%
2013 SETHEEP	\$3,759.9	\$18,747.4	\$11,616.3	\$31,851.0	100%	100%	80%
PSPP	1,196.3	\$3,075.7	\$1,991.6	\$7,398.3	100%	100%	100%
Total	\$4,956.2	\$21,823.1	\$13,607.9	\$39,249.3	100%	100%	92%
2015 TLPP	\$3,340.9	\$12,534.5	\$5,433.7	\$21,040.2	100%	100%	95%
TRP	10.4	0	4.3	15.7	100%	100%	100%
PERP	1,753.7	12,202.0	9,292.9	21,682.8	100%	100%	83%
Total	\$5,105.0	\$24,736.5	\$14,730.9	\$42,738.7	100%	100%	88%

SETHEEPP – State Employees, Teachers, Higher Education Employees Pension Plan

PSPP – Political Subdivisions Pension Plan

TLPP - Teacher Legacy Pension Plan

TRP - Teacher Retirement Plan

PERP - Public Employee Retirement Plan



The unfunded accrued liability represents the excess of the accrued actuarial liability over the actuarial value of assets. For funding purposes, the Board of Trustees of TCRS has adopted the frozen initial liability method.

Under this method, the unfunded accrued liability is being funded by level-dollar contributions. Also, actuarial gains and losses are absorbed in normal cost rather than as part of the unfunded liability. The statute governing TCRS allows the Board of Trustees to reestablish the unfunded accrued liability for actuarial gains and losses.

For the July 1, 2013 actuarial valuation, the Board reestablished the unfunded accrued liability. In an inflationary economy where the covered payroll

continues to grow, the level-dollar amounts which are being contributed to fund the unfunded accrued liability will, if expressed as a percentage of payroll, continue to decrease.

While concern is generally expressed regarding the dollar amount of the unfunded accrued liability, an analysis should also include the method being used to fund this liability as well as a review of this liability expressed as a percentage of active member payroll. The smaller the ratio of unfunded liabilities to the active member payroll, the stronger the system. A review of this ratio over a period of years will give an indication of whether the system is becoming financially stronger or weaker with respect to its unfunded liabilities.

**SUMMARY OF ACCRUED AND UNFUNDED ACCRUED LIABILITIES**  
*Dollar Amounts Expressed in Millions*

Actuarial Valuation Jul 1	Actuarial Accrued Liabilities (AAL)	Valuation Assets	Ratio Assets to AAL	Unfunded Actuarial Accrued Liabilities (UAAL)	Active Member Payroll	UAAL as a Percentage of Active Member Payroll
2011	\$ 40,069.3	\$ 36,680.8	91.54%	\$ 3,388.5	\$ 8,413.3	40.28%
2013	41,913.4	39,249.3	93.64%	2,664.1	8,611.9	30.94%
2015	44,572.4	42,738.8	95.89%	1,833.6	8,754.6	20.94%

Notes:

This schedule is the aggregate of all TCRS plans.



SELECTED ACTUARIAL FUNDING INFORMATION

Actuarial Valuation Year	Earnings Assumptions	Salary Assumptions	Unfunded Liability (Asset)		State Amortization Period
			SETHEEP	PSPP	
2005	7.50%	4.75% (2)	\$ 39,806,610	\$ 326,114,462	10
2007	7.50%	4.75% (2)	1,025,156,148	577,645,568	20
2009	7.50%	4.75% (2)	2,719,767,478	839,320,076	20
2011	7.50%	4.75% (2)	2,589,446,292	799,102,966	9
2013	7.50%	4.25% (2)	2,272,526,399	391,589,555	13

Actuarial Valuation Year	Earnings Assumptions	Salary Assumptions	Unfunded Liability (Asset)			State Amortization Period
			TLPP	TRP	PERP	
2015 (3)	7.50%	4.25% (2)	\$ 268,857,872	\$ (1,092,784)	\$ 1,565,808,774	(1)

Notes:

(1) At each actuarial valuation, the new tier of unfunded liability is established over a period not to exceed 20 years per the TCRS funding policy.

The tier for prior years is amortized over a period not to exceed the remaining period. At 2015, the effective amortization period for all tiers for the state is 14.37 years.

(2) Graded Scale

(3) The information in this schedule is based upon legislative changes. The legislative changes changed the plans presented beginning July 1, 2014.

GAIN AND LOSS ANALYSIS, JULY 1, 2015 VALUATION

	Consolidated State	Teacher
<b>Contribution Rate</b>		
Effective Employer Contribution Rate Pursuant to 2013 Valuation	15.14%	9.04%
<b>Investment Results</b>		
	1.00%	0.92%
Salary Increases: The annual weighted-average rate of salary increase during the 2013-2015 period was below the assumed age-based rate used in preparing the 2013 valuation report. This resulted in a reduction in the contribution rate.	-0.26%	-0.94%
New Entrants: Includes the effect where normal cost for new entrants since the previous valuation differs from the normal cost of the group.	-0.29%	0.07%
Cost of Living Escalation: COLA in 2014 and 2015 were 1.5% and 1.0%, respectively for combined effect of 1.2%, which is less than the assumed 2.5% per year.	-1.16%	-0.93%
Prior Service Purchases: Employee purchases of prior service credits result in liabilities to the plan that are not fully offset by related employee contributions	0.10%	0.10%
Effect of turnover on total payroll: Turnover during the 2013-2015 period was above the assumed rates, which resulted in lower payroll than expected for the 2015 valuation. The lower payroll base led to an increase in the contribution rate.	1.05%	0.34%
Other	0.59%	-0.43%
Re-amortization of unfunded liability	-1.03%	0.87%
Effective Employer Contribution Rate Pursuant to 2015 Valuation	15.14%	9.04%

## HISTORY AND ADMINISTRATION

The TCRS was established in 1972 by an Act of the Tennessee General Assembly. Seven existing retirement systems were consolidated to provide retirement, disability and death benefits to state employees, public school teachers, higher education employees and the employees of participating local governments. State laws governing the plan may be found in Chapters 34-37, 39 of Title 8, Tennessee Code Annotated. Amendments to the plan can only be made by legislation enacted by the General Assembly of the State of Tennessee.

A 20-member Board of Trustees has the responsibility to manage and oversee the operation of the consolidated system. The Board consists of nine ex-officio members from the executive, legislative and judicial branches of state government, nine representatives of the active TCRS membership and two representatives for retirees. Employee representation consists of three teachers, one from each grand division of the state; two state employees from departments other than those represented by ex-officio members; three representatives of local governments; one public safety officer; one retired state employee representative; and one retired teacher representative. Local government representatives are appointed for two-year terms by each of the following organizations: the Tennessee County Services Association, the Tennessee Municipal League and the Tennessee County Officials Association. All employee representatives must be vested members of TCRS.

TCRS is administered by the Treasury Department under the legislative branch of state government. By state law, the State Treasurer serves as chairman of the Board of Trustees and as custodian of the funds of the system. The Director of the retirement system is appointed by the Treasurer and serves as the chief administrative officer of the plan.

The state is responsible for the pension cost of state employees; pension costs for teachers are the responsibility of the local education agencies

in Tennessee; costs for the participation of local government employees are paid by political subdivisions. Administrative expenses are paid from employers' account balances. The operating budget is funded through fees charged to the employer.

## MEMBERSHIP

Membership in the retirement system is a condition of employment for full-time state employees, K-12 teachers, higher education general employees and the employees of participating local governments. Membership is optional for part-time state employees and the part-time employees of political subdivisions which have authorized such coverage.

Interim teachers and part-time teachers have optional membership. The faculty employees of institutions of higher education may elect participation in either TCRS or an optional retirement program (ORP), a defined contribution plan for higher education faculty.

State employees, higher education employees and K-12 public school teachers hired after June 30, 2014 will participate in a Hybrid Pension Plan for State Employees and Teachers.

## CONTRIBUTIONS

TCRS membership became noncontributory on July 1, 1981 for most state employees, teachers in state supported institutions of higher education and teachers employed in the Department of Education. At that time, the contributions, up to 5.0 percent of compensation payable to these employees, were assumed by the state, but this amount continued to be credited to the individual members' accounts from employer funds. State employees hired after July 1, 1981 join TCRS as noncontributory members with no funds credited to their individual accounts. Public school teachers contribute at a rate of 5.0 percent of gross salary. State employees, teachers in state supported institutions of higher education and teachers employed by the Department of Education hired after June 30, 2014 contribute at a rate of 5.0 percent of gross salary.

*(continued)*

Participating political subdivisions may either adopt noncontributory retirement provisions or require employee contributions, at 2.5% or 5.0% of salary. The contribution rate for local government employees is 5.0 percent up to the Social Security wage base and 5.5 percent above that base, unless the employing government has authorized a level 5.0 percent rate.

Individual accounts are maintained for all contributory members with interest credited annually at a rate of 5.0 percent. Since the TCRS is a defined benefit plan, benefits are based upon the member's average final compensation and years of creditable service. The member's account balance including interest accrued has no bearing on the monthly benefit amount payable at retirement. Account balances plus interest are fully refundable upon termination of service or death.

Contributory members are covered by Section 414(h) of the Internal Revenue Code. Under this provision, retirement contributions are made on a tax-deferred basis, with income tax due only when contributions are returned to members as benefits or refunds. Political subdivisions may adopt the 414(h) provision for their employees.

The state also makes contributions on behalf of higher education faculty members who select membership in the ORP. These contributions are equal to 10 percent of salary up to Social Security wage base and 11 percent of any excess salary.

For ORP participants hired after June 30, 2014, the state will contribute 9.0 percent of salary to the ORP. The employee will contribute 5.0 percent of gross salary to the ORP.

## BENEFITS

### General

TCRS provides three valuable benefits to its members: disability, death and service retirement benefits. Disability benefits are available to qualified TCRS members who become totally and permanently disabled before meeting the requirements for service retirement. Two types of disability retirement are available: ordinary and accidental.

To qualify for ordinary disability, a member must have a minimum of five years of TCRS service credit. The ordinary disability benefit is equal to 90 percent of what the member would receive under service retirement. If a disabled retiree has less than 20 years of service credit, the service is projected to age 60 or 20 years, whichever comes first. When service is projected, the actual and projected service combined cannot exceed 20 years. If the member's actual service credit exceeds 20 years, the benefit is based on actual service only.

There is no minimum service requirement to qualify for an accidental disability benefit. However, the disability must be the result of a job-related accident that occurs without negligence on the part of the member during the performance of duty. Prior to the onset of Social Security benefits, an accidental disability benefit is equal to 50 percent of the member's average final compensation (AFC). Once Social Security benefits begin, the accidental benefit is 33.3 percent of AFC. For members joining TCRS on or after July 1, 1997, accidental disability benefits are determined in the same manner as ordinary disability using the projection of service method. Disability benefits are increased by 5.0 percent for state employees, teachers and employees of participating political subdivisions which have authorized the 5.0 percent benefit improvement. The accidental benefit is adjusted if the member's combined benefits from Social Security and/or workers' compensation exceed 75 percent of his AFC.

*(continued)*

One of several death benefits may be payable to the designated beneficiary of an active member who dies prior to retirement. The type of death benefit payable will be determined by whether or not death occurred while in service, who is named as beneficiary and the member's length of service.

A member may designate one or more persons, his estate, an institution or any combination of such as his beneficiary. However, estates, institutions and/or multiple beneficiaries are only eligible for a lump-sum refund of the member's accumulated contributions and interest unless one of the beneficiaries named is the surviving spouse. Other death benefits offered by TCRS include a 100 percent Joint and Surviving Spouse Annuity after ten years of service, a 100 percent Joint and Survivor Annuity for any beneficiary and a Line-of-Duty Benefit. Any beneficiary of a member who had ten years of service and who is eligible for a lump-sum death benefit may elect a benefit to be paid over ten years.

#### Legacy Plan for Members Before July 1, 2014

All members hired prior to July 1, 2014, with the exception of state judges, joining TCRS after 1976 enter the same membership group. The benefit formula for this group provides 1.5 percent of AFC computed over five years for each year of service credit. If a member's AFC exceeds the Social Security integration level (SSIL) applicable at retirement, the formula provides an additional .25 percent of the amount of the excess for each service year. These benefits are increased by 5.0 percent for state employees, teachers and employees of participating political subdivisions which have authorized the 5.0 percent benefit improvement. State judges joining TCRS after September 1, 1990 become Group IV members. The benefit formula for Group IV members is 2.5 percent of AFC computed over five years for each year of service credit.

Members become eligible for regular service retirement at age 60 if vested or at any age with 30 years. Vested members are eligible for reduced early retirement benefits when they have reached age 55 or have completed 25 years of service. Members joining TCRS after June 30, 1979 attain vesting rights after five years of service; the vesting period for members who joined prior to July 1, 1979 is four years. Five-year vesting and 25-year retirement are benefits that are optional to local governments. Otherwise, vesting for local governments is ten years of service.

#### Hybrid Plan for Members After June 30, 2014

State employees, higher education employees and K-12 teachers, with the exception of state judges, the State Attorney General, elected District Attorneys General, and elected Public Defenders, becoming members after June 30, 2014 enter the same membership group. The benefit formula for this group provides 1.0 percent of AFC computed over five years for each year of service credit. The benefit formula for State judges, the State Attorney General, elected District Attorneys General, and elected Public Defenders provides 1.6 percent of AFC computed over five years for each year of service credit. Local governments have the option to join this plan. The hybrid plan also has a defined contribution component.

Members become eligible for regular service retirement at age 65 if vested or the Rule of 90. The Rule of 90 refers to a combination of age and service that total 90. Vested members are eligible for reduced early retirement benefits at age 60 if vested or the Rule of 80. Members attain vesting rights after five years of service.

## SERVICES FOR ACTIVE MEMBERS

TCRS provides a number of services for active members through its various sections. Member self-service is available at [www.mytcrs.com](http://www.mytcrs.com). Detailed member information, including salary and service history, is available on the secured portal.

### *Outreach*

- TCRS staff is available to conduct employee presentations on all aspects of the retirement system.
- Employer seminars are conducted biennially to educate payroll officers on legislation affecting TCRS and inform them of the employer contribution rates effective for the next fiscal year.

### *Membership*

- Comprehensive membership statements are provided to all members annually.
- Computer-generated membership letters are mailed to all new members.
- Membership booklets are available to members upon request.
- Member self-service at [www.mytcrs.com](http://www.mytcrs.com)

### *Prior Service*

- An automated calculation and eligibility system generates billings for members who wish to establish prior service.
- An installment program is available to purchase certain types of prior service.
- Prior Service may be purchased with a rollover from a tax-deferred 401(a) plan, 401(k) plan, 403(b) plan, 457 plan or a traditional or Roth IRA.

### *Benefits*

- RetireReady TN website - TCRS and Deferred Compensation Information
- Customer Service Call Center
- Counseling Services - Retirement Counselors available to meet in all regions of the state

## SERVICES FOR RETIRED MEMBERS

A number of services are made available to TCRS retirees.

- Retiree identification cards
- Semiannual retiree newsletter: The Retiree Advisor
- Direct deposit or debit card payments
- Deduction of medical insurance
- Deduction of dental insurance
- Deduction of Medicare supplement coverage
- Income tax information
- Certification of monthly benefits
- Certification of student discounts
- Retiree self-service at [www.mytcrs.com](http://www.mytcrs.com) allows a member to update account information, view and change direct deposit and tax withholding information, and a number of other easy actions.

## SERVICES FOR EMPLOYERS

- Accounting entries, notes, and required supplementary information regarding pensions to comply with GASB Standard 68.
- Available online at [www.treasury.tn.gov/GASB68](http://www.treasury.tn.gov/GASB68)
- Actuarial Report
- Employer education regarding reporting and participation in TCRS.



**TCRS Legacy Plan and Social Security Benefits  
for Calendar Year 2016**

Five-Year AFC*	Projected Annual Retirement Income	15 Years Service	% of AFC	20 Years Service	% of AFC	25 Years Service	% of AFC	30 Years Service	% of AFC	35 Years Service	% of AFC
\$15,000	TCRS	\$ 3,544		\$ 4,725		\$ 5,906		\$ 7,088		\$ 8,269	
	Social Security	9,708		9,708		9,708		9,708		9,708	
	Total	\$ 13,252	88.3%	\$ 14,433	96.2%	\$ 15,614	104.1%	\$ 16,796	112.0%	\$ 17,977	119.8%
\$20,000	TCRS	\$ 4,725		\$ 6,300		\$ 7,875		\$ 9,450		\$ 11,025	
	Social Security	11,184		11,184		11,184		11,184		11,184	
	Total	\$ 15,909	79.5%	\$ 17,484	87.4%	\$ 19,059	95.3%	\$ 20,634	103.2%	\$ 22,209	111.0%
\$25,000	TCRS	\$ 5,906		\$ 7,875		\$ 9,844		\$ 11,813		\$ 13,781	
	Social Security	12,660		12,660		12,660		12,660		12,660	
	Total	\$ 18,566	74.3%	\$ 20,535	82.1%	\$ 22,504	90.0%	\$ 24,473	97.9%	\$ 26,441	105.8%
\$30,000	TCRS	\$ 7,088		\$ 9,450		\$ 11,813		\$ 14,175		\$ 16,538	
	Social Security	14,124		14,124		14,124		14,124		14,124	
	Total	\$ 21,212	70.7%	\$ 23,574	78.6%	\$ 25,937	86.5%	\$ 28,299	94.3%	\$ 30,662	102.2%
\$35,000	TCRS	\$ 8,269		\$ 11,025		\$ 13,781		\$ 16,538		\$ 19,294	
	Social Security	15,600		15,600		15,600		15,600		15,600	
	Total	\$ 23,869	68.2%	\$ 26,625	76.1%	\$ 29,381	83.9%	\$ 32,138	91.8%	\$ 34,894	99.7%
\$40,000	TCRS	\$ 9,450		\$ 12,600		\$ 15,750		\$ 18,900		\$ 22,050	
	Social Security	17,076		17,076		17,076		17,076		17,076	
	Total	\$ 26,526	66.3%	\$ 29,676	74.2%	\$ 32,826	82.1%	\$ 35,976	89.9%	\$ 39,126	97.8%
\$45,000	TCRS	\$ 10,631		\$ 14,175		\$ 17,719		\$ 21,263		\$ 24,806	
	Social Security	18,540		18,540		18,540		18,540		18,540	
	Total	\$ 29,171	64.8%	\$ 32,715	72.7%	\$ 36,259	80.6%	\$ 39,803	88.5%	\$ 43,346	96.3%
\$50,000	TCRS	\$ 11,813		\$ 15,750		\$ 19,688		\$ 23,625		\$ 27,563	
	Social Security	20,016		20,016		20,016		20,016		20,016	
	Total	\$ 31,829	63.7%	\$ 35,766	71.5%	\$ 39,704	79.4%	\$ 43,641	87.3%	\$ 47,579	95.2%
\$55,000	TCRS	\$ 12,994		\$ 17,325		\$ 21,656		\$ 25,988		\$ 30,319	
	Social Security	21,492		21,492		21,492		21,492		21,492	
	Total	\$ 34,486	62.7%	\$ 38,817	70.6%	\$ 43,148	78.5%	\$ 47,480	86.3%	\$ 51,811	94.2%
\$60,000	TCRS	\$ 14,175		\$ 18,900		\$ 23,625		\$ 28,350		\$ 33,075	
	Social Security	22,944		22,944		22,944		22,944		22,944	
	Total	\$ 37,119	61.9%	\$ 41,844	69.7%	\$ 46,569	77.6%	\$ 51,294	85.5%	\$ 56,019	93.4%
\$65,000	TCRS	\$ 15,356		\$ 20,475		\$ 25,594		\$ 30,713		\$ 35,831	
	Social Security	23,640		23,640		23,640		23,640		23,640	
	Total	\$ 38,996	60.0%	\$ 44,115	67.9%	\$ 49,234	75.7%	\$ 54,353	83.6%	\$ 59,471	91.5%
\$70,000	TCRS	\$ 16,538		\$ 22,050		\$ 27,563		\$ 33,075		\$ 38,588	
	Social Security	24,324		24,324		24,324		24,324		24,324	
	Total	\$ 40,862	58.4%	\$ 46,374	66.2%	\$ 51,887	74.1%	\$ 57,399	82.0%	\$ 62,912	89.9%

\* Average Final Compensation

Social security benefits have been calculated by Bryan, Pendleton, Swats & McAllister, actuarial consultants for the TCRS, utilizing the following assumptions: (1) retirement is taking place at age 65 in 2016; (2) the retiree has worked a full career (TCRS plus other employers, if necessary) of 35 years or more; and (3) salary increases throughout the retiree's career have followed the same pattern as National Average Earnings.

**1972**

Benefit formula improved from 1.12 percent of salary up to the SSIL to 1.5 percent of salary up to the SSIL.

**1973**

Annual cost-of-living increase based on the CPI with a cap of 1.5 percent adopted for retirees.

**1974**

Disability retirement eligibility requirement reduced from ten years to five years of service.

Maximum annual cost-of-living increase raised to 3.0 percent.

Provision to increase retirees' benefits whenever the benefit formula is improved.

Service credit authorized for unused accumulated sick leave.

**1976**

Service retirement eligibility requirements reduced from age 65 or 35 years of service to age 60 or 30 years of service.

Early retirement eligibility requirements reduced from age 60 or 30 years of service to age 55.

**1978**

A bonus cost-of-living increase granted to retirees at a lump-sum cost of \$15.3 million.

An optional retirement plan established for teachers in the Board of Regents system.

**1980**

Death benefits for members dying in-service with ten years of service improved by offering a 100 percent joint and survivor annuity of the member's accrued benefit for the spouse.

**1981**

Noncontributory retirement for state employees and higher education employees adopted. Employees' contributions, up to 5.0 percent, were assumed by the state.

**1983**

An actuarially-reduced retirement benefit at any age with 25 years of service authorized.

**1984**

Credit for out-of-state service for the purpose of determining retirement eligibility authorized.

Retirement credit for armed conflict approved.

Part-time employees permitted to participate in TCRS and members allowed to establish credit for previous part-time employment.

**1985**

\$22 million ad-hoc increase granted to retirees.

**1987**

Service credit for half of peacetime military service made available.

\$17 million ad-hoc increase granted to retirees.

Retirement incentive for state employees.

Section 414(h) of the IRC adopted, allowing employee contributions to be made on a tax-deferred basis.

**1990**

Retirement incentive for state employees.

**1991**

3.6 percent indexing of salaries for noncontributory employees extended one year. Each succeeding year up to 1997, the 3.6 percent indexing was extended. In 1997, it was extended indefinitely.

*(continued)*

**1992**

Minimum number of years required to qualify for retirement was reduced from ten years to five years.

**1993**

Salary portability for service in different classifications authorized effective January 1, 1994.

Benefit improvement up to 5.0 percent authorized.

**1997**

Compounded COLA for retirees approved.

**1998**

Group 2 and Group 3 service requirements amended to permit service retirement with 30 years of service, regardless of age.

Group 1 and Prior Class C benefit limitations increased to 80 percent.

Mandatory retirement established with supplemental bridge benefit for all state public safety officers.

**1999**

Group 1 benefit maximum increased to 90 percent.

**2000**

Group 2 benefit maximum increased to 80 percent.

**2001**

Line-of-Duty Death Benefits adopted to guarantee a minimum \$50,000 death benefit.

**2005**

Return-to-Work statutes were reformed, including a temporary employment increase to 120 days.

**2006**

Ad-hoc increase granted to members retired prior to 1989.

**2007**

Public Safety Officer benefits were enhanced.

**2012**

New plan options offered to local governments.

**2013**

Hybrid plan enacted for state employees and teachers hired after July 1, 2014.

# *Statistical Section*

Statistical Introduction

Historical Fair Value

Analysis of Member, Employer, and Stabilization Reserves

Schedules of Changes in Net Position

Schedules of Benefit Expenses

Schedules of Active Members

Schedules of Retired Members

Retired Members by Geographical Distribution

Average Benefit Payments Schedule

Prior Service Established

Prior Service Installment Plan

Refund Activity and Political Subdivision Participation

Historical Employer Contribution Rates

Schedules of Principal Participating Employers

Introduction to Political Subdivision Participation

Optional Provisions for Political Subdivisions

Local Government Plan Options

Political Subdivision Participants



## STATISTICAL SECTION OVERVIEW

The statistical section presents additional information to provide financial statement users with added historical perspective, context, and detail to assist in using the information in the financial statements, notes to the financial statements, and required supplementary information to understand and assess the system's financial condition.

### FINANCIAL TRENDS

The schedules presented on pages 82-85 show financial trends information that assists users in understanding and assessing how the system's financial position has changed over time. The financial trend schedules presented are:

- Historical Fair Value
- Analysis of Member and Employer Reserves
- Schedules of Changes in Net Position
- Schedules of Benefit Expenses

## OPERATING INFORMATION

The remaining schedules presented on pages 94-123 contain benefits, service, and employer data to help the reader understand how the System's financial report relates to the services of the system and the activities it performs. In addition, a description of political subdivision participation and a listing of participating entities have been included in this section.

**HISTORICAL FAIR VALUE**  
**FISCAL YEARS 2007-2016**  
*EXPRESSED IN THOUSANDS*

<u>As of June 30</u>	<u>Fair Value</u>
2007	\$32,365,969
2008	31,634,129
2009	26,369,226
2010	28,574,195
2011	33,663,308
2012	34,912,773
2013	37,564,905
2014	42,905,157
2015	43,243,941
2016	43,306,209



ANALYSIS OF RESERVES  
FOR THE YEAR ENDED JUNE 30, 2016

The legislation which created the TCRS established two funds, the Member Reserve Fund and the Employer Reserve Fund, to account for the financial transactions of the pension plans. The Member Reserve Fund represents the accumulation of employee contributions plus interest. The Employer Reserve Fund represents the accumulation of employer contributions, investment income and transfers from the Member Reserve Fund for retirees. Benefit payments and interest credited to members' accounts are reductions to the Employer Reserve Fund. The Stabilization Reserve was created effective July 1, 2014 as part of the benefit plan adopted under the Teacher Retirement Plan and for employers under the Public Retirement Employee Plan that have adopted the new benefit structure. Under these plans, contributions in excess of the actuarially determined-contribution (ADC) rate are set aside in this reserve to help keep contribution rates stable.

	<b>Public Employee Retirement Plan</b>	<b>Teacher Retirement Plan</b>	<b>Teacher Legacy Pension Plan</b>	<b>Total</b>
<i>June 30, 2015 Member Reserve Fund</i>	\$ 1,753,110,163	\$ 10,355,546	\$ 3,338,742,635	\$ 5,102,208,344
Member Contributions	90,919,062	21,855,921	181,763,296	294,538,279
Employer Provided Contributions	11,474,390	-	14,525	11,488,915
Interest	82,726,597	513,157	161,735,252	244,975,006
Refunded Account Balances	(22,813,102)	(283,116)	(22,191,837)	(45,288,055)
Transfers to Employer Fund of Retiring Members' Accounts	(309,888,386)	(4,697)	(435,937,310)	(745,830,393)
<i>June 30, 2016 Member Reserve Fund</i>	\$ 1,605,528,724	\$ 32,436,811	\$ 3,224,126,561	\$ 4,862,092,096
<i>June 30, 2015 Employer Reserve Fund</i>	\$ 20,185,285,175	\$ 5,092,746	\$ 17,946,134,402	\$ 38,136,512,323
Employer Contributions	649,810,377	10,952,602	327,521,593	988,284,572
Other Contributions	2,158,081	-	-	2,158,081
Investment Income	581,235,132	838,228	560,785,122	1,142,858,482
Transfers from Retiring Members' Account	309,888,386	4,697	435,937,310	745,830,393
Employer Provided Contributions	(11,474,390)	-	(14,525)	(11,488,915)
Interest Credited to Members' Account	(82,726,597)	(513,157)	(161,735,252)	(244,975,006)
Lump-Sum Death Benefits	(3,292,441)	-	(2,312,140)	(5,604,581)
Retirement and Survivors Annuities	(1,193,590,487)	(351)	(1,113,510,051)	(2,307,100,889)
Administrative Expenses	(12,465,980)	(819,972)	(6,893,993)	(20,179,945)
<i>June 30, 2016 Employer Reserve Fund</i>	\$ 20,424,827,256	\$ 15,554,793	\$ 17,985,912,466	\$ 38,426,294,515
<i>June 30, 2015 Stabilization Reserve Fund</i>	\$ 1,987,839	\$ 3,232,080	-	\$ 5,219,919
Employer Contributions	5,715,218	6,585,987	-	12,301,205
Investment Income	128,509	173,056	-	301,565
<i>June 30, 2016 Stabilization Reserve Fund</i>	\$ 7,831,566	\$ 9,991,123	-	\$ 17,822,689
<i>June 30, 2016 Assets held in Trust for Pension Benefits</i>	\$ 22,038,187,546	\$ 57,982,727	\$ 21,210,039,027	\$ 43,306,209,300

**SCHEDULES OF CHANGES IN NET POSITION**  
**EXPRESSED IN THOUSANDS**

	Additions				Deductions			Total Change in Net Position
	Member Contributions	Employer Contributions	Other Contributions	Investment Income	Deductions	Administrative Expenses	Refunds	
<b>Public Employee Retirement Plan</b>								
6/30/2016	\$ 90,919	\$ 655,525	\$ 2,158	\$ 581,363	\$ 1,196,884	\$ 12,466	\$ 22,812	\$ 97,803
6/30/2015	77,020	664,834	384	664,440	1,121,540	9,148	25,790	250,200
6/30/2014	75,030	686,219	-	3,105,782	1,046,202	7,294	31,720	2,781,815
<b>Teacher Retirement Plan</b>								
6/30/2016	\$ 21,856	\$ 17,539	\$ -	\$ 1,012	\$ -	\$ 820	\$ 284	\$ 39,303
6/30/2015	10,390	8,310	-	295	-	280	35	18,680
6/30/2014	-	-	-	-	-	-	-	-
<b>Teacher Legacy Pension Plan</b>								
6/30/2016	\$ 181,763	\$ 327,522	\$ -	\$ 560,785	\$ 1,115,822	\$ 6,894	\$ 22,192	\$ (74,838)
6/30/2015	187,122	338,301	-	646,527	1,074,274	5,636	22,136	69,904
6/30/2014	95,521	348,475	-	3,054,118	1,014,688	2,663	22,326	2,558,437

As a result of plan reporting changes due to legislative enactments and GASB pronouncements, historical information is available for three years.

Additional years will be added in the future.





**SCHEDULES OF BENEFIT EXPENSES  
EXPRESSED IN THOUSANDS**

Year Ending	Service Retirement	Disability Retirement	Survivor Benefits	Death Benefits	Total Benefits	Refunds	Total
<b>Public Employee Retirement Plan</b>							
6/30/2016	\$1,089,920	\$28,207	\$75,464	\$3,293	\$1,196,884	\$22,812	\$1,219,696
6/30/2015	1,021,247	26,430	70,709	3,154	1,121,540	25,790	1,147,330
6/30/2014	953,255	24,670	66,002	2,275	1,046,202	31,720	1,077,922
<b>Teacher Retirement Plan</b>							
6/30/2016	\$-	\$-	\$-	\$-	\$-	\$284	\$284
6/30/2015	-	-	-	-	-	35	35
6/30/2014	-	-	-	-	-	-	-
<b>Teacher Legacy Pension Plan</b>							
6/30/2016	\$1,016,794	\$26,315	\$70,401	\$2,312	\$1,115,822	\$22,192	\$1,138,014
6/30/2015	978,801	25,331	67,771	2,371	1,074,274	22,136	1,096,410
6/30/2014	925,061	23,940	64,050	1,637	1,014,688	22,326	1,037,014

As a result of plan reporting changes due to legislative enactments and GASB pronouncements, historical information is available for three years.

Additional years will be added in the future.

**SCHEDULES OF ACTIVE MEMBERS**  
*by Service Credit*

Years of Service	Teachers Legacy Pension Plan	Public Employee Retirement Plan			
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	Total
0-4	9,653	6,315	3,016	25,331	44,315
5-9	15,926	6,420	3,494	16,861	42,701
10-14	13,271	6,864	2,463	12,798	35,396
15-19	11,527	4,913	1,796	10,153	28,389
20-24	7,555	2,930	1,303	5,894	17,682
25-29	4,048	2,506	1,079	3,796	11,429
30-34	2,188	1,862	654	1,617	6,321
35-39	1,086	847	397	803	3,133
40-44	290	326	193	228	1,037
Over 44	70	87	44	65	266
<b>Total</b>	<b>65,614</b>	<b>33,070</b>	<b>14,439</b>	<b>77,546</b>	<b>190,669</b>

Years of Service	Teachers Hybrid Pension Plan	Hybrid Public Employee Retirement Plan			
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	Total
0-4	10,418	7,928	2,870	624	21,840
5-9	478	158	54	46	736
10-14	167	72	22	25	286
15-19	66	29	10	11	116
20-24	23	13	8	4	48
25-29	5	5	2	1	13
30-34	2	1	0	1	4
35-39	0	2	0	0	2
40-44	0	0	0	0	0
Over 44	0	0	0	0	0
<b>Total</b>	<b>11,159</b>	<b>8,208</b>	<b>2,966</b>	<b>712</b>	<b>23,045</b>

TCRS is a consolidated plan, therefore, employees shown on the hybrid schedule with more than 4 years of service worked for an employer prior to the implementation of the hybrid plan design.



**SCHEDULES OF ACTIVE MEMBERS**  
*By Enrollment Date*

Date of Membership	Teachers Legacy Pension Plan	Public Employee Retirement Plan			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
1940's	0	0	1	0	1
1950's	0	2	2	2	6
1960's	47	42	12	8	109
1970's	1,121	900	382	478	2,881
1980's	5,026	4,263	1,649	2,907	13,845
1990's	16,150	6,573	2,528	11,047	36,298
2000's	27,225	12,867	4,486	26,847	71,425
2010's	16,045	8,423	5,379	36,257	66,104
<b>Total</b>	<b>65,614</b>	<b>33,070</b>	<b>14,439</b>	<b>77,546</b>	<b>190,669</b>

Date of Membership	Teachers Hybrid Pension Plan	Hybrid Public Employee Retirement Plan			Total
	Teachers	State Employees	Higher Education Employees	Public Subdivision Employees	
2010's	11,159	8,208	2,966	712	23,045
<b>Total</b>	<b>11,159</b>	<b>8,208</b>	<b>2,966</b>	<b>712</b>	<b>23,045</b>

**SCHEDULES OF ACTIVE MEMBERS**  
*by Current Age*

Current Age	Teacher Legacy Pension Plan	Public Employee Retirement Plan			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
Less than 20	4	16	0	69	89
20-24	36	222	44	2,206	2,508
25-29	5,468	1,627	555	5,143	12,793
30-34	8,790	2,679	965	6,012	18,446
35-39	10,011	3,455	1,363	7,566	22,395
40-44	10,725	3,984	1,489	9,044	25,242
45-49	10,578	4,559	1,872	11,118	28,127
50-54	7,783	5,075	2,331	11,748	26,937
55-59	6,667	5,168	2,510	11,208	25,553
60-64	4,138	3,992	2,055	8,171	18,356
65-69	1,181	1,642	869	3,298	6,990
70 and above	233	651	386	1,963	3,233
<b>Total</b>	<b>65,614</b>	<b>33,070</b>	<b>14,439</b>	<b>77,546</b>	<b>190,669</b>

Current Age	Teachers Hybrid Pension Plan	Hybrid Public Employee Retirement Plan			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
Less than 20	3	99	5	4	111
20-24	1,673	1,174	214	71	3,132
25-29	4,046	1,943	553	106	6,648
30-34	1,644	1,329	464	95	3,532
35-39	1,218	930	408	93	2,649
40-44	899	771	326	90	2,086
45-49	768	671	332	87	1,858
50-54	457	556	290	77	1,380
55-59	284	444	243	54	1,025
60-64	130	227	93	23	473
65-69	30	46	26	8	110
70 and above	7	18	12	4	41
<b>Total</b>	<b>11,159</b>	<b>8,208</b>	<b>2,966</b>	<b>712</b>	<b>23,045</b>



SCHEDULES OF ACTIVE MEMBERS  
FOR THE YEAR ENDED JUNE 30, 2016

SCHEDULES OF ACTIVE MEMBERS  
*by Age at Enrollment*

Age at Enrollment	Teachers Legacy Pension Plan	Public Employee Retirement Plan			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
Less than 20	121	829	216	1,231	2,397
20 - 24	22,719	6,481	2,232	11,050	42,482
25 - 29	18,237	7,795	2,736	12,409	41,177
30 - 34	9,028	5,046	2,253	11,607	27,934
35 - 39	6,754	4,119	1,966	11,913	24,752
40 - 44	4,523	3,250	1,717	10,340	19,830
45 - 49	2,350	2,417	1,357	7,579	13,703
50 - 54	1,186	1,667	1,068	5,414	9,335
55 - 59	484	976	604	3,426	5,490
60 - 64	157	353	219	1,639	2,368
65 - 69	34	110	56	620	820
70 and above	21	27	15	318	381
<b>Total</b>	<b>65,614</b>	<b>33,070</b>	<b>14,439</b>	<b>77,546</b>	<b>190,669</b>

Age at Enrollment	Teachers Hybrid Pension Plan	Hybrid- Public Employee Retirement Plan			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
Less than 20	22	214	16	9	261
20 - 24	3,491	1,623	344	121	5,579
25 - 29	3,028	1,944	591	110	5,673
30 - 34	1,454	1,255	458	96	3,263
35 - 39	1,058	836	395	88	2,377
40 - 44	803	694	312	93	1,902
45 - 49	612	590	298	63	1,563
50 - 54	356	491	263	61	1,171
55 - 59	221	371	197	47	836
60 - 64	91	137	66	15	309
65 - 69	17	40	17	6	80
70 and above	6	13	9	3	31
<b>Total</b>	<b>11,159</b>	<b>8,208</b>	<b>2,966</b>	<b>712</b>	<b>23,045</b>

SCHEDULES OF ACTIVE MEMBERS  
by Salary

<u>Annual Salary</u>	<u>Teachers Legacy Pension Plan</u>	<u>Public Employee Retirement Plan</u>			<u>Total</u>
	<u>Teachers</u>	<u>State Employees</u>	<u>Higher Education Employees</u>	<u>Political Subdivision Employees</u>	
Less than \$10,000	57	404	102	4,142	4,705
\$10,000-\$19,999	177	718	402	16,990	18,287
\$20,000-\$29,999	559	4,600	2,489	15,960	23,608
\$30,000-\$39,999	6,339	8,913	3,565	15,632	34,449
\$40,000-\$49,999	22,648	6,825	2,576	10,378	42,427
\$50,000+	<u>35,834</u>	<u>11,610</u>	<u>5,305</u>	<u>14,444</u>	<u>67,193</u>
<b>Total</b>	<b><u>65,614</u></b>	<b><u>33,070</u></b>	<b><u>14,439</u></b>	<b><u>77,546</u></b>	<b><u>190,669</u></b>

<u>Annual Salary</u>	<u>Teachers Hybrid Pension Plan</u>	<u>Hybrid Public Employee Retirement Plan</u>			<u>Total</u>
	<u>Teachers</u>	<u>State Employees</u>	<u>Higher Education Employees</u>	<u>Political Subdivision Employees</u>	
Less than \$10,000	141	2,084	504	213	2,942
\$10,000-\$19,999	542	1,651	527	194	2,914
\$20,000-\$29,999	571	1,755	731	137	3,194
\$30,000-\$39,999	4,680	1,392	485	64	6,621
\$40,000-\$49,999	3,630	606	332	48	4,616
\$50,000+	<u>1,595</u>	<u>720</u>	<u>387</u>	<u>56</u>	<u>2,758</u>
<b>Total</b>	<b><u>11,159</u></b>	<b><u>8,208</u></b>	<b><u>2,966</u></b>	<b><u>712</u></b>	<b><u>23,045</u></b>

**ACTIVE MEMBERS**  
*Fiscal Years 2011-2016*

Year	Teacher Legacy Pension Plan	Teachers Retirement Plan	Public Employee Retirement Plan						Total
	Teachers	Teachers (Hybrid)	State Employees	State Employees (Hybrid)	Higher Education Employees	Higher Education Employees (Hybrid)	Political Subdivision Employees	Political Subdivision Employees (Hybrid)	
2011	79,583	-	42,142	-	16,409	-	81,780	-	219,914
2012	73,449	-	42,171	-	16,693	-	78,180	-	210,493
2013	73,306	-	41,856	-	16,590	-	77,815	-	209,567
2014	78,506	-	40,581	-	16,829	-	78,144	-	214,060
2015	69,230	11,516	38,322	6,304	16,244	2,310	87,800	52	231,778
2016	65,614	11,159	33,070	8,208	14,439	2,966	77,546	712	213,714

SCHEDULE OF RETIRED MEMBERS

*By Type of Benefit Plan*

Benefit Plan	Teacher Retirement Plan	Public Employee Retirement Plan - Hybrid			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
Regular	1	1	0	6	8
Option I	0	0	0	1	1
Option II	0	0	0	0	0
Option III	0	0	0	1	1
Option IV	0	0	0	0	0
S.S. Leveling	0	0	0	0	0
Others	0	1	0	0	1
<b>Total</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>8</b>	<b>11</b>

Benefit Plan	Teachers Legacy Pension Plan	Public Employee Retirement Plan - Legacy			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
Regular	29,560	19,875	8,104	27,908	85,447
Option I	3,967	5,961	2,640	6,086	18,654
Option II	1,430	1,661	773	1,468	5,332
Option III	4,949	5,238	1,666	4,915	16,768
Option IV	4,005	3,126	1,166	2,226	10,523
S.S. Leveling	4,594	2,765	594	2,088	10,041
Others	857	830	309	543	2,539
<b>Total</b>	<b>49,362</b>	<b>39,456</b>	<b>15,252</b>	<b>45,234</b>	<b>149,304</b>





**SCHEDULE OF RETIRED MEMBERS**  
*By Type of Retirement*

Type of Retirement	Teacher Retirement Plan	Public Employee Retirement Plan - Hybrid			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
<b>Retirees:</b>					
Early Retirement	0	0	0	3	3
Service Retirement	0	2	0	5	7
Disability	1	0	0	0	1
Total Retirees	1	2	0	8	11
Survivors	0	0	0	0	0
<b>Total</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>8</b>	<b>11</b>

Type of Retirement	Teachers Legacy Pension Plan	Public Employee Retirement Plan - Legacy			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
Early Retirement	6,171	5,438	2,300	6,417	20,326
Service Retirement	41,615	31,161	12,024	35,671	120,471
Disability	1,273	2,093	693	2,589	6,648
Total Retirees	49,059	38,692	15,017	44,677	147,445
Survivors	303	764	235	557	1,859
<b>Total</b>	<b>49,362</b>	<b>39,456</b>	<b>15,252</b>	<b>45,234</b>	<b>149,304</b>

**SCHEDULE OF RETIRED MEMBERS**  
*By Average Monthly Benefits*

**STATE EMPLOYEES LEGACY PENSION PLAN**

Average Monthly Benefit	Number of Retirees	Type of Retirement				Option Selected						
		Service	Early	Disability	Survivor	Regular	I	II	III	IV	SS Leveling	Other
0-500	11,935	8,576	2,422	685	252	6,638	1,893	417	1,591	720	571	105
501-1,000	8,472	5,601	1,654	1,030	187	4,560	1,350	327	1,062	618	425	130
1,001-1,500	6,085	4,890	781	298	116	2,932	858	266	850	464	587	128
1,501-2,000	4,719	4,239	349	55	76	2,191	585	191	682	433	509	128
2,001-2,500	3,235	3,034	132	18	51	1,473	419	137	412	338	372	84
2,501-3,000	2,003	1,933	42	4	24	874	286	101	278	223	174	67
3,001-3,500	1,163	1,104	36	1	22	480	203	83	140	138	81	38
3,501-4,000	667	644	10	-	13	273	115	46	116	65	21	31
Over 4,000	1,177	1,140	12	2	23	454	252	93	107	127	25	119
	39,456	31,161	5,438	2,093	764	19,875	5,961	1,661	5,238	3,126	2,765	830

**TEACHERS LEGACY PENSION PLAN**

Average Monthly Benefit	Number of Retirees	Type of Retirement				Option Selected						
		Service	Early	Disability	Survivor	Regular	I	II	III	IV	SS Leveling	Other
0-500	4,625	3,553	931	118	23	2,826	524	171	527	290	231	56
501-1,000	6,012	3,725	1,833	398	56	3,572	697	190	681	473	327	72
1,001-1,500	7,348	5,091	1,714	484	59	4,143	706	212	830	566	790	101
1,501-2,000	9,028	7,759	1,003	204	62	4,787	683	217	1,083	826	1,258	174
2,001-2,500	9,635	9,060	473	58	44	5,867	567	234	974	867	926	200
2,501-3,000	6,114	5,925	152	9	28	4,026	326	170	442	466	563	121
3,001-3,500	3,089	3,032	42	2	13	1,989	212	94	210	242	292	50
3,501-4,000	1,698	1,672	16	-	10	1,127	124	53	114	123	127	30
Over 4,000	1,813	1,798	7	-	8	1,223	128	89	88	152	80	53
	49,362	41,615	6,171	1,273	303	29,560	3,967	1,430	4,949	4,005	4,594	857

**HIGHER EDUCATION LEGACY PENSION PLAN**

Average Monthly Benefit	Number of Retirees	Type of Retirement				Option Selected						
		Service	Early	Disability	Survivor	Regular	I	II	III	IV	SS Leveling	Other
0-500	4,820	3,476	1,049	227	68	2,914	749	201	484	247	164	61
501-1,000	3,422	2,314	727	333	48	2,015	527	142	340	220	113	65
1,001-1,500	2,329	1,901	293	101	34	1,188	382	122	263	209	110	55
1,501-2,000	1,469	1,289	134	24	22	651	270	90	194	139	86	39
2,001-2,500	913	834	53	7	19	382	168	42	126	122	50	23
2,501-3,000	650	618	22	1	9	275	129	41	87	65	36	17
3,001-3,500	424	404	10	-	10	170	96	31	50	48	14	15
3,501-4,000	349	334	9	-	6	148	87	19	47	28	12	8
Over 4,000	876	854	3	-	19	361	232	85	75	88	9	26
	15,252	12,024	2,300	693	235	8,104	2,640	773	1,666	1,166	594	309

(continued)

**SCHEDULE OF RETIRED MEMBERS**  
*By Average Monthly Benefits (continued)*

POLITICAL SUBDIVISION LEGACY PENSION PLAN												
Average Monthly Benefit	Number of Retirees	Type of Retirement				Option Selected						
		Service	Early	Disability	Survivor	Regular	I	II	III	IV	SS Leveling Other	
0-500	25,078	19,084	4,254	1,472	268	16,417	3,283	691	2,551	1,056	869	211
501-1,000	10,762	8,291	1,443	875	153	6,916	1,403	307	1,101	492	393	150
1,001-1,500	4,527	3,798	467	197	65	2,446	640	194	583	275	310	79
1,501-2,000	2,266	2,039	152	35	40	1,059	330	107	334	164	223	49
2,001-2,500	1,231	1,142	70	5	14	506	193	64	199	101	139	29
2,501-3,000	604	574	18	4	8	240	104	39	69	59	82	11
3,001-3,500	339	326	9	1	3	118	58	35	43	38	39	8
3,501-4,000	162	155	2	-	5	73	29	9	17	12	19	3
Over 4,000	265	262	2	-	1	133	46	22	18	29	14	3
	45,234	35,671	6,417	2,589	557	27,908	6,086	1,468	4,915	2,226	2,088	543

STATE HYBRID RETIREMENT PLAN												
Average Monthly Benefit	Number of Retirees	Type of Retirement				Option Selected						
		Service	Early	Disability	Survivor	Regular	I	II	III	IV	SS Leveling Other	
0-500	2	2	-	-	-	1	1	-	-	-	-	-

TEACHER RETIREMENT PLAN												
Average Monthly Benefit	Number of Retirees	Type of Retirement				Option Selected						
		Service	Early	Disability	Survivor	Regular	I	II	III	IV	SS Leveling Other	
0-500	1	-	-	1	-	1	-	-	-	-	-	-

POLITICAL SUBDIVISION HYBRID RETIREMENT PLAN												
Average Monthly Benefit	Number of Retirees	Type of Retirement				Option Selected						
		Service	Early	Disability	Survivor	Regular	I	II	III	IV	SS Leveling Other	
0-500	8	5	3	-	-	6	1	-	1	-	-	-

**SCHEDULE OF RETIRED MEMBERS**

*By Current Age*

Current Age	Teacher Retirement Plan	Public Employee Retirement Plan - Hybrid			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
Under 40	-	-	-	-	-
40-44	-	-	-	-	-
45-49	1	-	-	-	1
50-54	-	1	-	-	1
55-59	-	-	-	3	3
60-64	-	-	-	2	2
65-69	-	1	-	3	4
70-74	-	-	-	-	-
75-79	-	-	-	-	-
80-84	-	-	-	-	-
85-89	-	-	-	-	-
90-94	-	-	-	-	-
95-99	-	-	-	-	-
Over 99	-	-	-	-	-
<b>Total</b>	<b>1</b>	<b>2</b>	<b>-</b>	<b>8</b>	<b>11</b>

(continued)



**SCHEDULE OF RETIRED MEMBERS**  
*By Current Age (continued)*

Current Age	Teachers Legacy Pension Plan	Public Employee Retirement Plan - Legacy			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
Under 40	157	80	27	122	386
40-44	102	50	20	126	298
45-49	199	119	65	210	593
50-54	682	488	208	688	2,066
55-59	3,107	2,909	914	2,949	9,879
60-64	7,014	9,056	2,357	7,824	26,251
65-69	9,736	14,181	3,555	11,391	38,863
70-74	6,908	8,913	3,011	8,386	27,218
75-79	4,922	5,656	2,251	6,286	19,115
80-84	3,447	3,867	1,550	4,158	13,022
85-89	2,048	2,555	837	2,064	7,504
90-94	886	1,083	364	775	3,108
95-99	230	312	87	220	849
Over 99	18	93	6	35	152
<b>Total</b>	<b>39,456</b>	<b>49,362</b>	<b>15,252</b>	<b>45,234</b>	<b>149,304</b>

**SCHEDULE OF RETIRED MEMBERS**

*By Date of Retirement*

Date of Retirement	Teacher Retirement Plan	Public Employee Retirement Plan - Hybrid			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
2010's	1	2	0	8	11
<b>Total</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>8</b>	<b>11</b>

Date of Retirement	Teachers Legacy Pension Plan	Public Employee Retirement Plan - Legacy			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
1950's	3	1	0	0	4
1960's	19	7	0	0	26
1970's	402	247	45	142	836
1980's	2,895	1,968	591	1,533	6,987
1990's	9,082	7,390	2,936	6,796	26,204
2000's	18,964	14,057	6,177	16,622	55,820
2010's	17,997	15,786	5,503	20,141	59,427
<b>Total</b>	<b>49,362</b>	<b>39,456</b>	<b>15,252</b>	<b>45,234</b>	<b>149,304</b>

**SCHEDULE OF RETIRED MEMBERS**  
*Based on Service Credit at Retirement*

Years Of Service	Teacher Retirement Plan	Public Employee Retirement Plan - Hybrid			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
Under 10	1	2	0	8	11
<b>Total</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>8</b>	<b>11</b>

Years Of Service	Teachers Legacy Pension Plan	Public Employee Retirement Plan - Legacy			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
Under 10	4,471	9,263	3,224	14,693	31,651
10-14	3,904	5,801	2,390	8,354	20,449
15-19	4,438	4,419	1,878	6,689	17,424
20-24	5,582	4,464	1,774	5,572	17,392
25-29	6,738	4,090	1,709	4,286	16,823
30-34	14,715	6,771	2,452	3,882	27,820
35-39	6,534	2,855	1,174	1,250	11,813
40-44	2,580	1,383	497	409	4,869
Over 44	400	410	154	99	1,063
<b>Total</b>	<b>49,362</b>	<b>39,456</b>	<b>15,252</b>	<b>45,234</b>	<b>149,304</b>

RETIRED MEMBERS BY GEOGRAPHICAL DISTRIBUTION  
FOR THE YEAR ENDED JUNE 30, 2016



UNITED STATES

Alabama	912
Alaska	20
American Samoa	1
Arizona	187
Arkansas	481
Armed Forces Europe	1
Armed Forces Pacific	2
California	243
Colorado	139
Connecticut	22
Delaware	10
District of Columbia	18
Florida	1,793
Georgia	1,441
Hawaii	18
Idaho	29
Illinois	184
Indiana	180
Iowa	32
Kansas	56
Kentucky	827
Louisiana	102
Maine	32
Maryland	101
Massachusetts	36
Michigan	144
Minnesota	28
Mississippi	1,452
Missouri	211
Montana	17
Nebraska	14
Nevada	63
New Hampshire	23
New Jersey	31
New Mexico	64

New York	84
North Carolina	764
North Dakota	5
Ohio	206
Oklahoma	97
Oregon	70
Pennsylvania	110
Puerto Rico	3
Rhode Island	7
South Carolina	428
South Dakota	18
Tennessee	137,057
Texas	621
Utah	34
Vermont	7
Virginia	660
Washington	87
West Virginia	46
Wisconsin	42
Wyoming	12
Total U.S.	<u>149,272</u>

INTERNATIONAL COUNTRIES

Australia	2
Brazil	1
Canada-Manitoba	1
Canada-New Brunswick	3
Canada-Newfoundland	1
Canada-Nova Scotia	1
Canada-Ontario	3
Canada-Prince Edward Island	1
Chile	3
Ecuador	1
Germany	2
Ghana	1
Greece	3
Ireland	1
Japan	1
Kenya	1
Philippines	1
Poland	1
Spain	1
Thailand	3
Total Foreign Countries	<u>32</u>
Total U.S.	<u>149,272</u>
Total U.S. & Foreign	<u>149,304</u>





TENNESSEE COUNTIES

Anderson	2,123	Hamilton	6,605	Morgan	611
Bedford	765	Hancock	144	Obion	933
Benton	503	Hardeman	1,107	Overton	555
Bledsoe	504	Hardin	708	Perry	294
Blount	3,223	Hawkins	3,363	Pickett	134
Bradley	1,858	Haywood	642	Polk	312
Campbell	1,023	Henderson	483	Putnam	2,754
Cannon	421	Henry	983	Rhea	741
Carroll	792	Hickman	707	Roane	1,618
Carter	4,085	Houston	133	Robertson	1,354
Cheatham	701	Humphreys	530	Rutherford	4,141
Chester	432	Jackson	232	Scott	561
Claiborne	803	Jefferson	1,412	Sequatchie	340
Clay	153	Johnson	583	Sevier	1,560
Cocke	810	Knox	8,600	Shelby	14,679
Coffee	1,178	Lake	297	Smith	421
Crockett	392	Lauderdale	949	Stewart	358
Cumberland	1,149	Lawrence	1,074	Sullivan	1,891
Davidson	12,760	Lewis	314	Sumner	3,098
Decatur	319	Lincoln	789	Tipton	1,079
DeKalb	416	Loudon	1,058	Trousdale	183
Dickson	1,054	Macon	311	Unicoi	504
Dyer	720	Madison	3,041	Union	312
Fayette	916	Marion	550	Van Buren	205
Fentress	472	Marshall	639	Warren	1,056
Franklin	961	Maury	1,458	Washington	1,662
Gibson	1,540	McMinn	1,068	Wayne	427
Giles	572	McNairy	693	Weakley	1,202
Grainger	436	Meigs	223	White	722
Greene	2,487	Monroe	846	Williamson	3,056
Grundy	362	Montgomery	3,083	Wilson	2,282
Hamblen	1,361	Moore	96	Total	<u>137,057</u>

**AVERAGE BENEFIT PAYMENT SCHEDULE**

***Fiscal Year of Retirement***

**Teacher Retirement Plan**

**Years of Service Credit**

	Less than 15	15-19	20-24	25-29	30 or more
2016 Average Monthly Benefit	\$39	\$0	\$0	\$0	\$0
Number of Retirees	1	0	0	0	0
Average Final Salary	\$39,323	\$0	\$0	\$0	\$0

**Teacher Legacy Pension Plan**

**Years of Service Credit**

	Less than 15	15-19	20-24	25-29	30 or more
2016 Average Monthly Benefit	\$560	\$1,236	\$1,649	\$2,049	\$2,861
Number of Retirees	419	293	307	252	819
Average Final Salary	\$50,475	\$56,829	\$59,450	\$60,584	\$63,054
2015 Average Monthly Benefit	\$559	\$1,210	\$1,665	\$2,164	\$2,913
Number of Retirees	615	325	310	287	933
Average Final Salary	\$47,585	\$55,579	\$58,381	\$61,788	\$62,088
2014 Average Monthly Benefit	\$597	\$1,181	\$1,638	\$2,031	\$2,831
Number of Retirees	603	353	381	366	1,208
Average Final Salary	\$50,229	\$54,057	\$57,303	\$58,146	\$59,562
2013 Average Monthly Benefit	\$582	\$1,203	\$1,650	\$2,053	\$2,902
Number of Retirees	610	356	369	384	1,249
Average Final Salary	\$48,362	\$54,264	\$57,227	\$58,569	\$60,506
2012 Average Monthly Benefit	\$616	\$1,106	\$1,488	\$1,966	\$2,826
Number of Retirees	481	292	374	394	1,545
Average Final Salary	\$46,660	\$51,597	\$53,834	\$57,447	\$60,031
2011 Average Monthly Benefit	\$606	\$1,184	\$1,578	\$2,025	\$2,864
Number of Retirees	494	276	332	354	1,268
Average Final Salary	\$48,458	\$49,738	\$53,397	\$560,021	\$57,462
2010 Average Monthly Benefit	\$566	\$1,213	\$1,609	\$2,024	\$2,778
Number of Retirees	398	186	244	270	1,140
Average Final Salary	\$45,447	\$51,661	\$53,128	\$55,212	\$56,237

Note: This schedule represents the average monthly benefits under the maximum plan of members retiring with an unreduced service retirement benefit. It excludes members retiring with a reduced early retirement benefit or under disability.

(continued)



**AVERAGE BENEFIT PAYMENT SCHEDULE**  
*Fiscal Year of Retirement (Continued)*

**Teacher Legacy Pension Plan**

**Years of Service Credit (continued)**

	Less than 15	15-19	20-24	25-29	30 or more
2009 Average Monthly Benefit	\$533	\$1,184	\$1,578	\$2,025	\$2,864
Number of Retirees	386	170	224	210	1,073
Average Final Salary	\$43,605	\$50,281	\$52,896	\$54,562	\$56,091
2008 Average Monthly Benefit	\$527	\$1,127	\$1,491	\$1,899	\$2,608
Number of Retirees	326	189	245	224	1,114
Average Final Salary	\$44,225	\$48,280	\$49,981	\$50,892	\$53,130
2007 Average Monthly Benefit	\$513	\$1,047	\$1,502	\$2,031	\$2,675
Number of Retirees	376	172	227	271	1,209
Average Final Salary	\$42,067	\$44,361	\$48,552	\$52,048	\$53,305

Note: This schedule represents the average monthly benefits under the maximum plan of members retiring with an unreduced service retirement benefit. It excludes members retiring with a reduced early retirement benefit or under disability.

(continued)

**AVERAGE BENEFIT PAYMENT SCHEDULE**  
*Fiscal Year of Retirement*

**Public Employee Retirement Plan-Hybrid**  
**Years of Service Credit**

	<b>Less than 15</b>	<b>15-19</b>	<b>20-24</b>	<b>25-29</b>	<b>30 or more</b>
2016 Average Monthly Benefit	\$44	\$0	\$0	\$0	\$0
Number of Retirees	7	0	0	0	0
Average Final Salary	\$40,555	\$0	\$0	\$0	\$0
2015 Average Monthly Benefit	\$12	\$0	\$0	\$0	\$0
Number of Retirees	3	0	0	0	0
Average Final Salary	\$21,407	\$0	\$0	\$0	\$0

Note: This schedule represents the average monthly benefits under the maximum plan of members retiring with an unreduced service retirement benefit. It excludes members retiring with a reduced early retirement benefit or under disability.

(continued)



AVERAGE BENEFIT PAYMENTS SCHEDULE  
(CONTINUED)

**Public Employee Retirement Plan**  
**Years of Service Credit**

	<b>Less than 15</b>	<b>15-19</b>	<b>20-24</b>	<b>25-29</b>	<b>30 or more</b>
2016 Average Monthly Benefit	\$349	\$798	\$1,103	\$1,442	\$2,358
Number of Retirees	3005	817	705	647	1613
Average Final Salary	\$40,317	\$38,188	\$40,955	\$43,146	\$54,086
2015 Average Monthly Benefit	\$330	\$836	\$1,221	\$1,525	\$2,430
Number of Retirees	4061	979	722	652	1359
Average Final Salary	\$38,227	\$39,060	\$43,818	\$44,974	\$54,180
2014 Average Monthly Benefit	\$334	\$785	\$1,114	\$1,383	\$2,369
Number of Retirees	3015	791	652	619	1255
Average Final Salary	\$36,854	\$36,222	\$40,001	\$41,756	\$52,550
2013 Average Monthly Benefit	\$614	\$1,092	\$1,481	\$1,881	\$2,738
Number of Retirees	407	280	334	353	1378
Average Final Salary	\$46,769	\$49,354	\$53,058	\$55,092	\$57,753
2012 Average Monthly Benefit	\$582	\$1,103	\$1,501	\$1,897	\$2,681
Number of Retirees	331	183	236	270	1236
Average Final Salary	\$44,398	\$50,377	\$52,612	\$54,326	\$56,256
2011 Average Monthly Benefit	\$565	\$1,082	\$1,493	\$1,915	\$2,676
Number of Retirees	309	164	232	202	1176
Average Final Salary	\$42,450	\$49,216	\$51,838	\$53,713	\$55,888
2010 Average Monthly Benefit	\$539	\$1,015	\$1,409	\$1,751	\$2,517
Number of Retirees	266	184	254	209	1200
Average Final Salary	\$43,211	\$45,696	\$49,578	\$50,258	\$53,324
2009 Average Monthly Benefit	\$527	\$919	\$1,399	\$1,845	\$2,576
Number of Retirees	304	180	232	244	1326
Average Final Salary	\$40,580	\$43,283	\$47,942	\$50,179	\$53,562
2008 Average Monthly Benefit	\$590	\$1,061	\$1,431	\$1,898	\$2,540
Number of Retirees	261	128	259	248	1267
Average Final Salary	\$42,054	\$45,276	\$47,284	\$50,986	\$51,780
2007 Average Monthly Benefit	\$541	\$1,028	\$1,381	\$1,799	\$2,522
Number of Retirees	227	138	189	240	1254
Average Final Salary	\$38,959	\$43,478	\$45,749	\$47,470	\$50,498

Note: This schedule represents the average monthly benefits under the maximum plan of members retiring with an unreduced service retirement benefit. It excludes members retiring with a reduced early retirement benefit or under disability.

**PRIOR SERVICE ACTIVITY**  
*July 1, 2015 through June 30, 2016*

<b>Legacy State:</b>	<b>Type of Service</b>	<b>No of Members</b>	<b>Years of Service</b>	<b>Amount</b>
	Backpayment	15	62	\$ 435,341
	Military	1	3	573
	Redeposit	13	70	231,955
	Totals	29	135	667,869
<b>Legacy Teachers:</b>	<b>Type of Service</b>	<b>No of Members</b>	<b>Years of Service</b>	<b>Amount</b>
	Backpayment	40	96	\$ 558,683
	Military	0	0	-
	Redeposit	52	282	1,343,409
	Totals	92	378	1,902,092
<b>Legacy Higher Education:</b>	<b>Type of Service</b>	<b>No of Members</b>	<b>Years of Service</b>	<b>Amount</b>
	Backpayment	50	223	\$ 2,018,414
	Military	0	0	-
	Redeposit	3	13	57,663
	Totals	53	236	2,076,077
<b>Legacy Political Subdivisions:</b>	<b>Type of Service</b>	<b>No of Members</b>	<b>Years of Service</b>	<b>Amount</b>
	Backpayment	196	164	\$ 212,821
	Military	1	2	5,941
	Redeposit	32	110	364,811
	Totals	229	277	583,573
<b>Hybrid Higher Education:</b>	<b>Type of Service</b>	<b>No of Members</b>	<b>Years of Service</b>	<b>Amount</b>
	Backpayment	2	1	\$ 367
	Military	1	2	-
	Redeposit	0	0	-
	Totals	3	3	367
<b>Hybrid State:</b>	<b>Type of Service</b>	<b>No of Members</b>	<b>Years of Service</b>	<b>Amount</b>
	Backpayment	0	0	\$ -
	Military	1	4	-
	Redeposit	0	0	-
	Totals	1	4	-
<b>Grand Totals:</b>	<b>Type of Service</b>	<b>No of Members</b>	<b>Years of Service</b>	<b>Amount</b>
	Backpayment	303	547	\$ 3,225,626
	Military	4	10	6,514
	Redeposit	100	475	1,997,838
	Totals	407	1,033	5,229,978

Treasury allows members to establish their prior service by making monthly installment payments in the form of Automated Clearing House (ACH) withdrawals from a designated bank account. Service is credited to the member's account once the balance has been paid off. Examples of service types which are eligible to be purchased through installment payments are previously withdrawn service, peacetime military service, educational leave, and enrollment service for new participating employers. When a member is billed for prior service, a statement is generated showing a lump sum payment. In addition, installment information is given with regard to financing over six (6) to sixty (60) months. The member may elect to finance the entire amount or elect to make a down payment and finance the balance. The member may choose, at any time, to pay off the remaining balance.

**Prior Service Established  
For the Year Ended June 30, 2016**

	Type of Service	Number of Members	Years of Service	Amount
<b>State:</b>	Backpayment	3	5	\$ 2,456
	Redeposit	<u>6</u>	<u>13</u>	<u>32,693</u>
	<b>Totals</b>	<b>9</b>	<b>18</b>	<b>\$ 35,149</b>
<b>Teachers:</b>	Backpayment	6	6	\$ 1,923
	Redeposit	<u>17</u>	<u>46</u>	<u>\$26,936</u>
	<b>Totals</b>	<b>23</b>	<b>52</b>	<b>\$ 859</b>
<b>Higher Education:</b>	Backpayment	1	1	\$ 4,303
	Redeposit	<u>2</u>	<u>7</u>	<u>820</u>
	<b>Totals</b>	<b>3</b>	<b>8</b>	<b>\$ 5,123</b>
<b>Political Subdivisions:</b>	Backpayment	6	24	\$ 6,462
	Redeposit	<u>10</u>	<u>36</u>	<u>10,255</u>
	<b>Totals</b>	<b>16</b>	<b>60</b>	<b>\$ 16,717</b>
<b>Grand Totals:</b>	Backpayment	16	32	\$ 15,144
	Redeposit	<u>35</u>	<u>102</u>	<u>70,704</u>
	<b>Totals</b>	<b>51</b>	<b>138</b>	<b>\$ 85,848</b>

## Refund Activity

<b>For the Year Ended June 30</b>	<b>Number of Refunds Processed</b>	<b>Amount Refunded</b>
2007	4,830	\$36,343,972
2008	6,569	45,975,984
2009	3,896	32,029,927
2010	5,154	36,422,653
2011	4,500	35,539,393
2012	4,349	40,091,553
2013	4,122	39,517,877
2014	5,683	54,045,937
2015	4,934	47,961,414
2016	4,593	54,392,689

Political Subdivision Participation  
Schedule by Category

<b>Year Ended June 30</b>	<b>Number of Cities</b>	<b>Number of Counties</b>	<b>Political Subdivisions</b>	<b>Total</b>
2006	173	88	196	457
2007	177	88	202	467
2008	177	89	207	473
2009	177	89	216	482
2010	177	89	220	486
2011	176	89	218	483
2012	178	89	221	488
2013	177	88	222	487
2014	177	88	224	489
2015	178	87	232	497
2016	179	87	235	501



**Historical Employer Contribution Rates**  
*Expressed as a Percentage of Salary*

**HISTORICAL EMPLOYER CONTRIBUTION RATES**  
*Expressed as a Percentage of Salary*

Year Ended	State Employees		Teachers	
	Legacy	Hybrid	Legacy	Hybrid
June 30				
2007	13.62%	N/A	6.13%	N/A
2008	13.62%	N/A	6.24%	N/A
2009	13.02%	N/A	6.42%	N/A
2010	13.02%	N/A	6.42%	N/A
2011	14.91%	N/A	9.05%	N/A
2012	14.91%	N/A	9.05%	N/A
2013	15.03%	N/A	8.88%	N/A
2014	15.03%	N/A	8.88%	N/A
2015	15.03%	4.00	9.04%	4.00
2016	15.03%	4.00	9.04%	4.00

The employer contribution rates for political subdivisions are individually determined based on the biennial actuarial valuation of each political subdivision.



**PRINCIPAL PARTICIPATING EMPLOYERS**  
*Current Year and Nine Years Ago*

**Teacher Legacy Pension Plan**

	2016			2007			
	Covered		Percentage of Total System	Covered		Percentage of Total System	
	Employees	Rank		Employees	Rank		
<b><u>Participating Government</u></b>							
Shelby County Schools	5,722	1	8.72%	Memphis City Schools	8,756	1	12.48%
Davidson County Schools	5,104	2	7.78%	Davidson County Schools	5,778	2	8.24%
Knox County Schools	4,123	3	6.28%	Knox County Schools	4,640	3	6.61%
Rutherford County Schools	2,719	4	4.14%	Shelby County Schools	3,237	4	4.61%
Hamilton County Schools	2,715	5	4.14%	Hamilton County Schools	3,081	5	4.39%
Williamson County Schools	2,239	6	3.41%	Rutherford County Schools	2,521	6	3.59%
Sumner County Schools	1,947	7	2.97%	Montgomery County Schools	2,194	7	3.13%
Montgomery County Schools	1,895	8	2.89%	Sumner County Schools	1,949	8	2.78%
Sevier County Schools	1,086	9	1.66%	Jackson-Madison County Schools	1,253	9	1.79%
Wilson County Schools	997	10	1.52%	Williamson County Schools	998	10	1.42%
Others	37,067		56.49%	Others	36,736		52.37%
	<u>65,614</u>		<u>100.00%</u>		<u>70,145</u>		<u>100.00%</u>

**Teacher Retirement Plan**

	2016			2007		
	Covered		Percentage of Total System	Covered		Percentage of Total System
	Employees	Rank		Employees	Rank	
<b><u>Participating Government</u></b>						
Davidson County Schools	1,254	1	11.24%	(1)		
Shelby County Schools	1,115	2	9.99%			
Knox County Schools	765	3	6.86%			
Hamilton County Schools	655	4	5.87%			
Williamson County Schools	536	5	4.80%			
Montgomery County Schools	497	6	4.45%			
Rutherford County Schools	451	7	4.04%			
Sumner County Schools	279	8	2.50%			
Wilson County Schools	177	9	1.59%			
Jackson-Madison County Schools	158	10	1.42%			
Others	5,272		47.24%			
	<u>11,159</u>		<u>100.00%</u>			

(1) The Teacher Retirement Plan became effective for teachers July 1, 2014, therefore, this information is not applicable.

(continued)

**PRINCIPAL PARTICIPATING EMPLOYERS**  
*Current Year and Nine Years Ago (continued)*

**Hybrid Public Employee Retirement Plan**

	2016			2007		
	Covered		Percentage of Total System	Covered		Percentage of Total System
	Employees	Rank		Employees	Rank	
<b><u>Participating Government</u></b>				<b><u>Participating Government</u></b>		
State Employee Hybrid	11,174	1	94.01%	(1)		
Hamilton County-Hybrid	139	2	1.17%			
Weakley County-Hybrid	91	3	0.77%			
Roane County Government	54	4	0.45%			
Coffee County Board of Ed	53	5	0.45%			
Others	375		3.15%			
Total	11,886		100.00%			

**Public Employee Retirement Plan**

	2016			2007			
	Covered		Percentage of Total System	Covered		Percent- age of Total System	
	Employees	Rank		Employees	Rank		
<b><u>Participating Government</u></b>				<b><u>Participating Government</u></b>			
State	46,776	1	37.40%	State	68,038	1	42.97%
Shelby County Unified School District	3,818	2	3.05%	Memphis City Schools	5,095	2	3.22%
Hamilton County	2,626	3	2.10%	Hamilton County	3,944	3	2.49%
Rutherford County	2,566	4	2.05%	Montgomery County	2,397	4	1.51%
Montgomery County	2,517	5	2.01%	Rutherford County	2,394	5	1.51%
Others	66,752		53.38%	Others	76,477		48.30%
Total	125,055		100.00%	Total	158,345		100.00%

(1) The Hybrid Public Employee retirement Plan became effective for state employees and for political subdivisions that adopted the plan July 1, 2014, therefore, this information is not applicable.

**Participants**

TCRS has established pension plans for four groups of public employees: state employees, higher education employees, teachers and the employees of governmental entities (political subdivisions). Employees of political subdivisions may participate in TCRS if the entity’s governing body authorizes participation and accepts all liability associated with coverage for their employees.

Participation is subject to the approval of the Board of Trustees. At June 30, 2015, there were 501 political subdivisions participating in TCRS.

Participation as of June 30, 2016:

Cities	179
Counties	87
Utility Districts	71
Special School Districts	19
Local Education Agencies	6
Joint Ventures	22
Housing Authorities	12
911 Emergency Communication Districts	48
Miscellaneous Authorities	<u>57</u>
Total	501

**Administration**

TCRS administers the pension plan for political subdivisions in accordance with state statute. Each employer is responsible for the pension cost for its employees. The cost is not shared with other political subdivisions nor with the state. A separate fund balance is maintained by the retirement system for each participating political subdivision and employer contribution rates are determined individually.

**Application**

To apply for TCRS participation, the chief governing body of the political subdivision must first pass a resolution authorizing an actuarial study to estimate the potential cost of participation. Once the governing body has had an opportunity to review the estimated pension cost and liability, a second resolution must then be passed in order to authorize TCRS participation. Political subdivisions electing TCRS coverage accept the liability for pension benefits to be accrued by their employees.

**Coverage**

A political subdivision is required to offer coverage under the same terms and conditions to all the employees of each of its departments and agencies.

Political subdivisions have the option of purchasing or allowing their employees to purchase, retirement credit for service rendered prior to the employer’s date of participation. The amount of prior service allowed may be limited.

Political subdivisions opting to join TCRS do so under the plan provisions that exist at the time of their participation. Subsequent legislative changes, however, are optional if they result in increased cost to the political subdivision. These optional improvements may be adopted by resolutions approved by the chief governing body.

**THE TCRS PROVIDES  
THE ADMINISTRATION  
OF A RETIREMENT  
PROGRAM FOR 501  
LOCAL GOVERNMENTS.**

### Membership

- Optional membership for part-time employees
- Reduce vesting requirement to qualify for retirement benefits from 10 years to five years
- Increase vesting requirement to qualify for retirement benefits from five years to 10 years

### Contributions

- Employee contributions at a level five percent both below and above the Social Security wage base
- Exclusion of employee contributions from taxable income under 414(h) provisions of the Internal Revenue Code
- Noncontributory retirement plan
- Discontinue noncontributory retirement plan and implement contributory retirement plan for new employees
- Extension of 3.6 percent indexing feature for noncontributory members' salaries used in calculating the average final compensation

### Creditable Service

- Credit for service credit lost as a result of advanced age
- Service credit for unused sick leave
- Service credit for military service during periods of armed conflict at no cost to the employee
- Service credit for periods of temporary disability during which the employee was receiving workers' compensation payments based on covered employment
- Service credit purchase for peacetime military service between October 15, 1940 and May 7, 1975
- Purchase of service credit for probation period

### Survivor Benefits

- 100 percent joint and survivor spouse death benefit for members with 10 years of service
- Provide inactive members with certain death and disability benefits
- 50 percent of five year average salary benefits for surviving spouse for members killed in the line of duty

### Retirement Benefits

- Provide current retirees and members a five percent increase in base retirement benefit
- Discontinue five percent increase in base retirement benefit for new employees
- The actuarial equivalent of an age 65 benefit for employees retiring after age 65
- 25-year retirement with actuarially reduced benefits
- Minimum benefit level increase to \$8, \$14, \$20 per year of service
- Mandatory retirement with supplemental bridge benefit for public safety officers
- Service retirement at age 55 with 25 years of service for public safety officers
- Discontinue enhanced public safety officer benefits for new public safety officers

### Retired Members

- Exclusion of cost-of-living adjustments at the date of participation for all employees or at a later date for new employees
- Compounded cost-of-living adjustment (COLA) to current and future retirees

**Tennessee Consolidated Retirement System  
Local Government Plan Options  
Effective July 1, 2012**

**Original Defined Benefit Plan**

- Calculation includes a 1.50% multiplier
- Benefit Formula: Years of Service x AFC x 1.50% + 5% Benefit Improvement
- Retirement Requirements:
  - ◆ Service Retirement: A penalty free benefit if the member is age 60 and vested or has thirty (30) years of service regardless of age
  - ◆ Early Retirement: A reduced benefit if the member is age 55 and vested
  - ◆ 25-Year Early: A reduced benefit if the member is under the age of 55 and has at least 25 years of service

**Alternate Defined Benefit Plan**

- Calculation includes a 1.40% multiplier
- Benefit Formula: Years of Service x AFC x 1.40%
- Retirement Requirements:
  - ◆ Service Retirement: A penalty free benefit if the member is age 65 and vested, or meets the “Rule of 90” (years of service plus age at retirement equal 90 or above)
  - ◆ Early Retirement: A reduced benefit if the member is age 60 and vested, or meets the “Rule of 80” (years of service plus age at retirement equal 80 or above, but equal less than 90)

**Local Government Hybrid Plan**

- Calculation includes a 1.00% multiplier
- Benefit Formula: Years of Service x AFC x 1.00%
- Retirement Requirements:
  - ◆ Service Retirement: A penalty free benefit if the member is age 65 and vested, or meets the “Rule of 90” (years of service plus age at retirement equal 90 or above)
  - ◆ Early Retirement: A reduced benefit if the member is age 60 and vested, or meets the “Rule of 80” (years of service plus age at retirement equal 80 or above, but equal less than 90)

**Employee Contribution Funding Options**

(Applicable to all plans listed above.)

- Employer may elect to pay 0.0%, 2.5% or 5.0% of employee contributions

(continued)

Tennessee Consolidated Retirement System  
State and Teacher Hybrid Plan (Optional for Local Governments)  
Effective July 1, 2014

- Calculation includes a 1.00% multiplier
- Benefit Formula: Years of Service x AFC x 1.00%
- Retirement Requirements:
  - ◆ Service Retirement: A penalty free benefit if the member is age 65 and vested, or meets the “Rule of 90” (years of service plus age at retirement equal 90 or above)
  - ◆ Early Retirement: A reduced benefit if the member is age 60 and vested, or meets the “Rule of 80” (years of service plus age at retirement equal 80 or above, but equal less than 90)
- Contribution Rates:
  - ◆ Employee Contribution Rate: 5.00%
  - ◆ Employer Contribution Rate: 4.00%
- Unfunded Liability Controls:
  - ◆ If Defined Benefit component employer cost exceeds 4% of payroll or if the target unfunded liabilities are exceeded for the Defined Benefit component plan, the following adjustments will automatically occur in the following sequence:
    - ◇ Utilize funds in the actuarial stabilization account
    - ◇ Reduce or suspend the maximum 3% annual COLA
    - ◇ Shift some or all of the Defined Contribution employer contribution to the Defined Benefit plan
    - ◇ Increase employee contribution to Defined Benefit plan by 1% of payroll
    - ◇ Reduce future service accrual below 1%
    - ◇ Freeze plan, no future accruals

When employer cost is restored to 4% of payroll and unfunded liabilities do not exceed target maximum unfunded liabilities, then adjustments previously made are restored on a prospective basis.

## 911 EMERGENCY COMMUNICATIONS DISTRICTS

Campbell Co.	Fayette Co.	Hardin Co.	Macon Co.	Roane Co.	Tipton Co.
Carroll Co.	Fentress Co.	Hawkins Co.	Madison Co.	Robertson Co.	Union Co.
Carter Co.	Gibson Co.	Humphreys Co.	Marshall Co.	Rutherford Co.	Van Buren Co.
Cheatham Co.	Grainger Co.	Jefferson Co.	Maury Co.	Scott Co.	Warren Co.
Chester Co.	Greene Co.	Johnson Co.	McNairy Co.	Sequatchie Co.	Washington Co.
Claiborne Co.	Hamblen Co.	Lauderdale Co.	Monroe Co.	Sevier Co.	Weakley Co.
Cocke Co.	Hamilton Co.	Lawrence Co.	Montgomery Co.	Shelby Co.	White Co.
DeKalb Co.	Hardeman Co.	Loudon Co.	Overton Co.	Sullivan Co.	Wilson Co.

## CITIES

Adams	Collegedale	Gainesboro	Lawrenceburg	Munford	South Carthage
Alamo	Collierville**	Gatlinburg	Lebanon	Murfreesboro*	South Fulton**
Alcoa	Collinwood	Gleason	Lenoir City*	New Johnsonville	South Pittsburg
Ashland City	Cookeville	Goodlettsville	Linden	New Tazewell	Sparta
Athens*	Coopertown**	Gordonsville	Livingston	Newport	Spencer
Atoka	Cornersville	Greenbrier	Lobelville	Nolensville	Spring City
Atwood	Covington	Greeneville	Lookout Mountain	Norris	Spring Hill
Baileytown	Cowan	Greenfield	Loretto	Oak Hill	Springfield
Baxter	Crossville**	Harriman	Loudon	Oak Ridge	Surgoinsville
Belle Meade**	Cumberland	Harrogate	Luttrell	Oakland	Sweetwater
Bells	Dandridge	Hartsville	Madisonville	Obion	Tazewell
Benton	Dayton	Henderson	Manchester	Oliver Springs	Tellico Plains
Big Sandy	Decatur	Hendersonville	Martin	Paris	Townsend
Bluff City	Decaturville	Hohenwald	Maryville	Parsons	Tracy City**
Bolivar	Decherd	Humboldt	Maury City	Pegram	Trenton
Bradford	Dickson	Huntington	Maynardville	Pikeville	Tullahoma
Brentwood	Dover	Huntland	McEwen	Pittman Center	Tusculum
Brighton	Ducktown	Jacksboro	McKenzie	Pleasant View	Unicoi
Bristol	Dunlap	Jackson	McMinnville	Portland	Union City
Brownsville	Dyer	Jamestown	Medina	Puryear	Vanleer
Byrdstown	East Ridge	Jefferson City	Middleton	Red Bank	Vonore
Camden	Elizabethton	Johnson City**	Milan	Ripley	Watauga
Carthage	Elkton**	Jonesborough	Millersville	Rockwood	Waverly
Caryville	Erin	Kenton	Millington	Rogersville*	Waynesboro
Centerville	Erwin	Kimball	Monterey	Rutherford	Westmoreland
Charleston	Estill Springs	Kingsport**	Morrison	Rutledge	White Bluff
Charlotte	Etowah	Kingston	Morristown	Savannah**	White House
Church Hill	Fairview	Kingston Springs	Moscow**	Selmer	White Pine
Clarksville	Fayetteville	Lafayette	Mosheim	Sevierville	Whiteville
Cleveland	Forest Hills**	Lafollette	Mountain City	Signal Mountain	Whitwell
Clifton	Friendship	Lake City	Mt. Carmel	Soddy Daisy	Woodbury
Clinton	Friendsville	Lakeland**	Mt. Juliet	Somerville	

\*All departments not covered by TCRS.

\*\*Plan closed to new hires.

(continued)



**COUNTIES**

Anderson	Coffee**	Hamilton	Lewis	Obion	Stewart
Bedford	Crockett	Hardeman	Lincoln	Overton	Sullivan
Benton	Cumberland	Hardin	Loudon	Perry	Sumner
Bledsoe	Decatur	Hawkins	Macon	Pickett	Tipton
Blount	DeKalb	Haywood	Madison**	Polk	Trousdale
Bradley	Dickson	Henderson	Marion	Putnam	Unicoi
Campbell	Fayette	Henry	Marshall	Rhea*	Union
Cannon	Fentress	Hickman	Maury	Roane	Van Buren
Carroll	Franklin	Humphreys	McMinn	Robertson	Warren
Carter	Gibson	Jackson	McNairy	Rutherford	Washington
Cheatham	Giles	Jefferson	Meigs**	Scott	Wayne
Chester	Grainger	Johnson	Monroe	Sequatchie	Weakley
Claiborne	Greene	Lake	Montgomery	Sevier	White
Clay	Grundy	Lauderdale	Moore*	Shelby*	Williamson
Cocke	Hamblen	Lawrence	Morgan	Smith	Wilson

**HOUSING AUTHORITY**

Bristol	Cookeville	Hohenwald	Maryville	Morristown	Rogersville**
Clinton	Hartsville	Lawrenceburg	Memphis	Rockwood	South Pittsburg
Sweetwater					

**JOINT VENTURES**

Argie Cooper Public Library	Lawrence County Library
Bradley-Cleveland Civil Defense	Linebaugh Public Library
Bradley-Cleveland Community Service Agency	Morristown/Hamblen County Landfill
Clarksville/Montgomery County Public Library	Sevier Solid Waste
Clarksville/Montgomery County Regional Planning	Smyrna/Rutherford County Airport Authority
Cleveland/Bradley County E-911	Tellico Area Service System
Edward Gauche Fisher Public Library	TriCities Airport Authority
Fayetteville/Lincoln County Public Library	Tri-County Vocational School
Gorham/MacBane Public Library	W. G. Rhea Public Library
Jackson/Madison County Library**	Washington County/Johnson City Animal Control Center
Johnson City/Washington County EMS	Wilson Emergency Management Agency
Kinser Park	

**BOARDS OF EDUCATION PARTICIPATING SEPARATELY FROM GOVERNING BODY**

Arlington Community Schools	Collierville Schools Board of Education
Bartlett City Board of Education	Germantown Board of Education
Coffee County Board of Education	Millington City Schools Board of Education

\*All departments not covered by TCRS.  
 \*\*Plan closed to new hires.

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### MISCELLANEOUS AGENCIES

Anderson County Economic Development Association	South Central Tennessee Workforce Board
Anderson County Water Authority	Southeast Tennessee Community Service Agency
Beech River Watershed	Southeast Tennessee Development District
Blount County Fire Protection District	Southeast Tennessee Human Resource Agency
Blount County Library	Southwest Tennessee Community Service Agency
Books from Birth	Southwest Tennessee Development District
Carter County Tomorrow	Southwest Tennessee Human Resource Agency
Cocke County Partnership, Inc.	Tennessee Association of Assessing Officers
County Officials Association of Tennessee	Tennessee Association of County Mayors
Delta Human Resource Agency	Tennessee Athletics Association**
Douglas Cherokee Economic Authority	Tennessee County Commissioners Association
East Tennessee Community Service Agency	Tennessee County Highway Officials Association
Fayetteville-Lincoln County Industrial Development Board	Tennessee County Services Association
First Tennessee Development District	Tennessee Duck River Development Agency
First Tennessee Human Resource Agency	Tennessee Education Association
Four Lake Regional Industrial Development Authority	Tennessee Elk River Development Agency**
Greater Nashville Regional Council	Tennessee Historical Society
Hamilton County Community Service Agency	Tennessee Municipal Bond Fund
Knox County Community Services Agency	Tennessee Municipal League
Loudon County Economic Development Agency	Tennessee Municipal League Risk Management Pool
McMinn County Economic Development District	Tennessee Organization of School Superintendents**
Mid-Cumberland Community Service Agency	Tennessee School Board Association
Networks Sullivan Partnership	Tennessee Secondary School Athletic Association
Northeast Community Service Agency	Tennessee Sheriffs Association
Northwest Tennessee Community Service Agency	Tennessee State Employees Association
Sequatchie Valley Planning and Development District	Tennessee Veterans Home Board
Sevier County Economic Development Council	Upper Cumberland Community Services Agency
Shelby County Community Service Agency	Upper Cumberland Human Resource Agency
South Central Human Resource Agency**	Upper East Tennessee Human Development Agency
South Central Tennessee Community Services Agency	Workforce Solutions
South Central Tennessee Development District	

### SPECIAL SCHOOL DISTRICTS

Bradford	Lebanon	Paris
Clinch Powell Education Coop.	Little Tennessee Valley Education Coop.	South Carroll Special School District
Elizabethton Board of Education	McKenzie	Trenton
Franklin	Memphis	Union City Board of Education
Gibson County School District	Milan	West Carroll County
Hollow Rock-Bruceton	Oak Ridge Board of Education	
Huntingdon	Oneida	

\*All departments not covered by TCRS.

\*\*Plan closed to new hires.

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**UTLITIY DISTRICTS**

Alpha-Talbott	Lakeview
Arthur Shawnee	Lincoln County Board of Public Utilities
Big Creek	Loudon
Bloomington	Madison Suburban Utility District
Bondecroft	Middle Tennessee
Bristol Electric System	New Market
Cagle Fredonia Utility District	North Utility District of Decatur and Benton Counties
Castalian Springs/Bethpage	Northeast Henry County
Chuckey Utility District	O'Connor Utility District
Citizen's Gas	Oak Ridge
Consolidated Utility District/Rutherford County	Old Gainesboro Road
County Wide	Old Hickory
Crab Orchard	Paris-Henry Utility District
Cross Anchor Utility District	Persia
Cumberland Utility District-Roane and Morgan Counties	Plateau
DeWhite	Poplar Grove
Double Springs	Quebec-Walling
Dyersburg Suburban	Reelfoot Lake Regional
East Fork	Riceville
East Montgomery	River Road
East Side	Roane Mountain Utility District
Fall Creek Falls	Russellville Whitesburg Utility District
First Carter County	Savannah Valley
First Hawkins County	Second South Cheatham Utility District
First Tipton County	Sevier County
Gladeville	Siam
Glen Hills	Smith
Greater Dickson Gas Authority	Sneedville
Greeneville Light and Power	Soddy Daisy-Falling Water
Hampton South	Elizabethton
Hardeman-Fayette County	Sylvia-Tennessee City Pond Water
Harriman**	Upper Cumberland Utility District
Hendersonville Weakley County	Municipal Electric
Hixson	Webb Creek
Jackson County	West Knox**
Johnson City Power Board	West Overton
Lake County	

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