

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, 2017

Prepared by:
State of Tennessee
Department of Treasury
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Nashville, TN 37243-0201
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David H. Lillard, Jr., State Treasurer
Jamie Wayman, TCRS Director



TABLE OF CONTENTS

Introduction

Chairman of the Board's Letter	1
Professional Awards	2
Letter of Transmittal	3
Administration and Mission	6
The Council on Pensions and Insurance	7
The Board of Trustees	11
Professional Consultants	14
Treasury Department Executive Staff	17
Organization Chart	18

Financial Section

Independent Auditor's Report	19
Management's Discussion and Analysis	22
Financial Statements:	
Statements of Fiduciary Net Position	27
Statements of Changes in Fiduciary Net Position	28
Notes to the Financial Statements	29
Required Supplementary Information:	
Schedule of Changes in Net Pension Liability	
Teacher Legacy Pension Plan	46
Teacher Retirement Plan	47
Schedule of Net Pension Liability	
Teacher Legacy Pension Plan	48
Teacher Retirement Plan	49
Schedule of Contributions	
Teacher Legacy Pension Plan	50
Teacher Retirement Plan	51
Schedule of Investment Returns	
Public Employee Retirement Plan, Teacher Legacy Pension Plan, and Teacher Retirement Plan	52
Notes to Required Supplementary Information for Cost-Sharing Plans	53
Schedule of Administrative Expenses	54
Schedule of Investment Expenses	55
Schedule of Expenses for Consultants	56

(continued)



TABLE OF CONTENTS

Investment Section

Report by Investment Consultant	57
Letter from TCRS Chief Investment Officer	58
Statutory Investment Authority	59
Investment Performance Review	60
Asset Allocation	61
Largest Holdings	62
Investment Summary	63
Schedules of Investment Fees and Commissions	65

Actuarial Section

Actuarial Introduction	68
Actuary's Certification Letter	69
Summary of Actuarial Assumptions and Methods	71
Actuarial Data	74
Actuarial Balance Sheet	76
Short-Term Solvency Test	77
Summary of Accrued and Unfunded Accrued Liabilities	78
Selected Actuarial Funding Information	79
Analysis of Financial Experience	80
Plan Summary	81
Services for Active and Retired Members	84
Sample Benefit Calculations	85
Major Legislative Improvements	86

Statistical Section

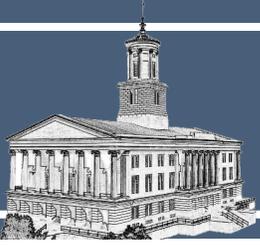
Statistical Introduction	88
Historical Fair Value	89
Analysis of Reserves	90
Schedules of Changes in Net Position	91
Schedules of Benefit Expenses	92
Schedules of Active Members	93
Schedules of Retired Members	99
Retired Members by Geographical Distribution	107
Average Benefit Payments Schedule	109
Prior Service Established	113
Prior Service Installment Plan	114
Refund Activity and Political Subdivision Participation	115

(continued)



Statistical Section (continued)

Historical Employer Contribution Rates	116
Schedules of Principal Participating Employers	117
Introduction to Political Subdivision Participation	119
Optional Provisions for Political Subdivisions	120
Local Government Plan Options	121
Political Subdivision Participants	123



Introduction

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

Organizational Chart





State of Tennessee

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

December 21, 2017

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 thirtieth 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.

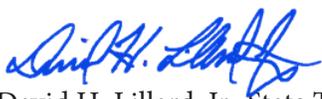
Administration: TCRS has upgraded its pension administration system with a goal of providing enhanced operational efficiency and better access to information for our members. This web-based system allows active members and retirees access to real-time information, adjust tax withholding, bank account 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>.

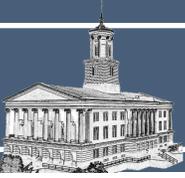
Investments: The 2017 fiscal year was a good period for investors and TCRS portfolio experienced a strong gain of 11.42 percent with an annualized gain of 8.70 percent for the five-year period. The one-year and the five-year returns each exceeded the actuarially required rate of return and the portfolio 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.

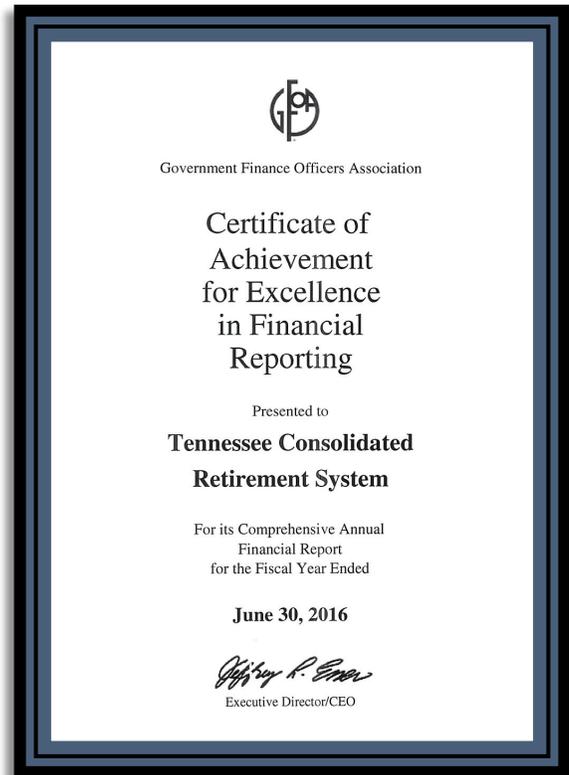
Sincerely,

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



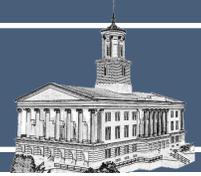
**CERTIFICATE OF ACHIEVEMENT FOR EXCELLENCE
IN FINANCIAL REPORTING**

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, 2016. This was the 29th 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, 2016. 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

JAMIE WAYMAN
DIRECTOR

December 21, 2017

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, 2017. 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.

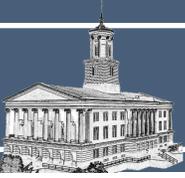
This report has been prepared in accordance with generally accepted accounting principles as promulgated or adopted by the Governmental Accounting Standards Board and the American Institute of Certified Public Accountants. Specific accounting treatments are detailed in the Notes to the Financial Statements 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 521 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.

(continued)



Beginning July 1, 2014, new hire state employees and K-12 teachers participate in the hybrid retirement plan. The plan combines components of a defined benefit plan through TCRS and a defined contribution plan through the 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 to determine the funding requirements for the employers participating in TCRS. On June 30, 2016, the plan had the following funded ratios on an actuarial basis for the legacy plan: state employees, 90.00 percent; K-12 teachers, 99.3 percent; and political subdivisions in aggregate 99.50 percent. On a market value basis, the legacy plan had the following funded ratios: state employees, 91.26 percent; K-12 teachers, 99.81 percent; and political subdivisions in aggregate 99.94 percent. On June 30, 2016, the plan had the following funded ratios on an actuarial basis for the hybrid retirement plan: state employees, 106.73 percent and K-12 teachers, 104.88 percent. On a market value basis, the hybrid retirement plan had the following funded ratios: state employees, 142.55 percent and K-12 teachers, 127.46 percent. Experience studies are performed on a quadrennial basis. The results of the June 30, 2012 experience study have been incorporated into the June 30, 2015 actuarial valuation which produced employer contribution rates for the period July 1, 2016-June 30, 2017.

The TCRS is invested in the Tennessee Retiree Group Trust. The TRGT 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 2017 was 11.42 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. At the September 2017 TCRS Board of Trustees meeting, the board reviewed the results of the June 30, 2016 experience study and lowered the investment rate of return to 7.25 percent.

The current TCRS Investment Policy can be found at www.treasury.tn.gov/tcrs. TCRS pension funds represent 99.75 percent of the TRGT. For fiscal year 2017, the TRGT investments provided a 11.42 percent rate of return. The annualized rate of return was 5.78 percent over the past three years and 8.70 percent over the past five years. For further information

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on investments of TRGT, please refer to the State of Tennessee's Treasurer's Report at <http://treasury.tn.gov/>.

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, 2016. This was the twenty-ninth 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 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.

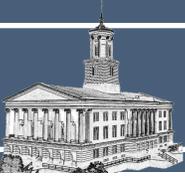
The dedicated effort of the Treasury Department team to assemble the information contained in this publication is hereby acknowledged with our sincerest appreciation. The report will be provided to state legislators, members of the Board of Trustees, state officials, participating employers and other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

A handwritten signature in cursive script that reads "Jamie Wayman".

Jamie Wayman
TCRS Director

A handwritten signature in cursive script 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.

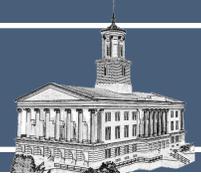
Other divisions within the Treasury Department, which support the operations of TCRS, include Information Systems, Accounting, Management Services, Financial Empowerment, Internal Audit, and Human Resources. Through these divisions, data processing services, accounting services, records maintenance,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

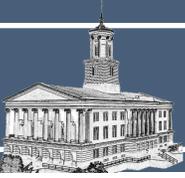
Created as a legislative oversight committee, the Council on Pensions and Insurance develops, recommends and establishes pension and retirement standards and maintains a progressive state policy on retirement. Additionally, the Council reviews legislation affecting state-provided insurance programs for 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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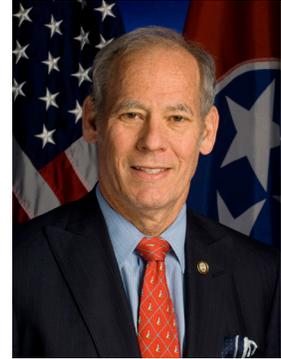
NON-VOTING MEMBERS



David H. Lillard, Jr.
State Treasurer



Jamie Wayman
TCRS Director



Justin Wilson
Comptroller of the Treasury



Rebecca Hunter
*Commissioner of
Human Resources*



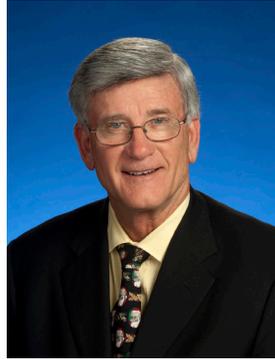
Larry Martin
*Commissioner of
Finance and Administration*



VOTING MEMBERS - SENATORS



**Lieutenant Governor
Randy McNally**
Speaker of the Senate



**Senator
Todd Gardenhire**



**Senator
Thelma Harper**



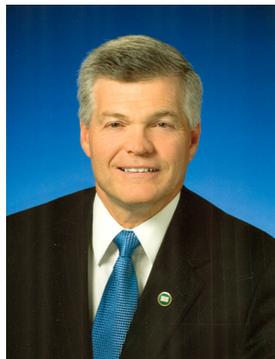
**Senator
Mark Norris**



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



**Senator
John Stevens**
*Finance, Ways and Means
First Vice-Chair*

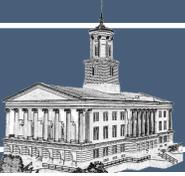


**Senator
Jim Tracy**
Speaker's Designee



**Senator
Bo Watson**
*Council Co-Chair
Finance, Ways and Means Chair*

(continued)



VOTING MEMBERS - REPRESENTATIVES



**Speaker
Beth Harwell**
House of Representatives



**Representative
Kevin Brooks**
*Finance, Ways and Means
Vice-Chair*



**Representative
Kent Calfee**
Speaker's Designee



**Representative
Karen Camper**



**Representative
Craig Fitzhugh**



**Representative
Gerald McCormick**
*Finance, Ways and Means
Sub-Committee Chair*



**Representative
Steve McDaniel**



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



THE BOARD OF TRUSTEES

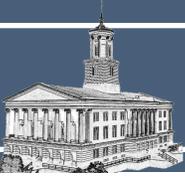
The Tennessee Consolidated Retirement System Board of Trustees is responsible for the general administration and proper operation of TCRS within the requirements and provisions of state statute (T.C.A., Title 8, Chapters 34-37). The 20-member Board meets quarterly and is subject to the call of the chair 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.



EX-OFFICIO MEMBERS



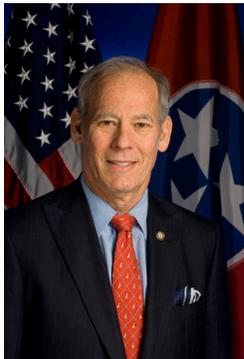
David H. Lillard, Jr.
State Treasurer



Jamie Wayman
TCRS Director



Tre Hargett
Secretary of State



Justin Wilson
Comptroller of the Treasury



**Senator
Bo Watson**
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



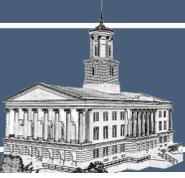
Paul Todd Varble
Public Safety
Term Expires: June 30, 2019



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



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



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 65-67.

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

**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

Steve Jacobs
Cornerstone Real Estate Advisers LLC
Hartford, Connecticut

Daniel Valpano
J.P. Morgan Investment Management, Inc.
New York, New York

**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.

Jeffrey Braemer
TimesSquare Capital Management
New York, New York

Thomas Clancy
Fiera Capital
Boston, Massachusetts

Sue Curran
Fidelity Institutional Asset Management
Smithfield, Rhode Island

Laura Esposito
TT International
New York, New York

Jill Farrell
American Century Investments
Kansas City, Missouri

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

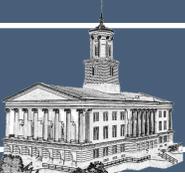
Dawn Henry
State Street Global Advisors
Stamford, Connecticut

Robert Job
PanAgora Asset Management, Inc.
Boston, Massachusetts

Thomas Leventhorpe
J.P. Morgan Asset Management
New York, New York

Susan Marshall
Baring Asset Management, Inc.
Boston, Massachusetts

(continued)



Wilson Phillips
Marathon Asset Management
London

Todd Rittenhouse
Mondrian Investment Partners
Philadelphia, Pennsylvania

Adam Waclawsky
Acadian Asset Management
Boston, Massachusetts

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

Eva Misra, M.D.
Knoxville, TN

CONSULTING ACTUARY

An independent consulting firm performs an actuarial valuation every year 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, LL.M.
 Chief Operating Officer MaryJo Price
 Communications Director Shelli King
 Government and Legislative Affairs Manager Whitney Goetz
 Executive Assistant to the Treasurer Heather Szczepczenski

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

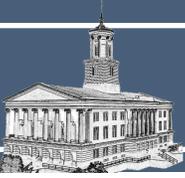
RETIREMENT ADMINISTRATION

TCRS Director Jamie Wayman, CPA, CEBS
 TCRS Assistant Director Erica Nale
 Administrator of Old Age and Survivors Insurance Mary Griffin, JD
 Manager of Member Benefits Mia Robinson
 Manager of Financial Services Amy Whitehead

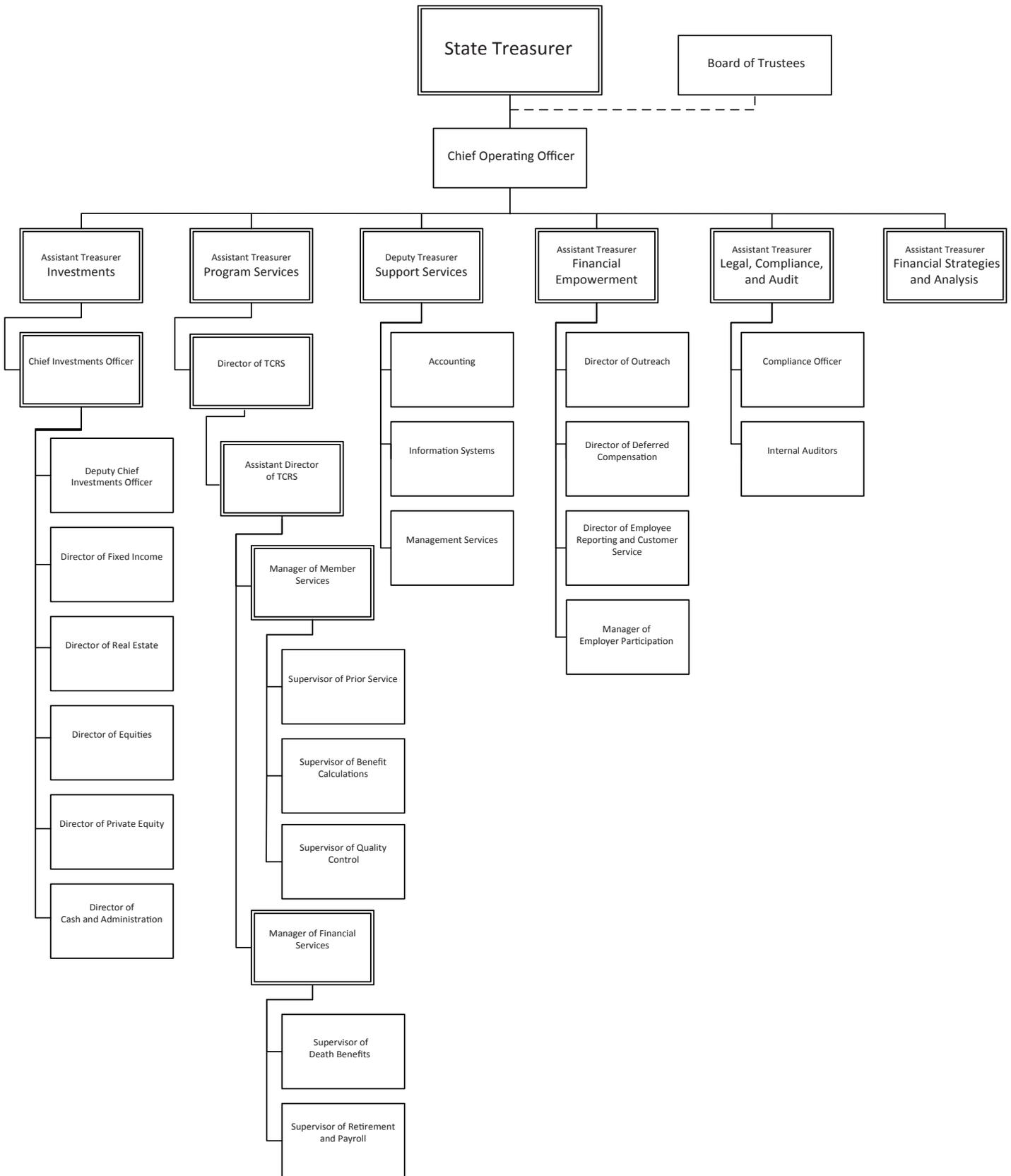
TREASURY DIVISIONS

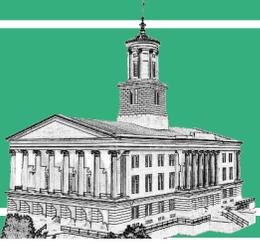
Deputy Treasurer, Support Services Rick DuBray, CPA
 Assistant Treasurer, Financial Empowerment Joy Harris
 Assistant Treasurer, Financial Strategies and Analysis Jill Bachus, CPA
 Assistant Treasurer, Legal, Compliance and Audit Christy A. Allen
 Assistant Treasurer, Program Services Steve Summerall
 Compliance Officer Jennifer Selliers
 Director of Deferred Compensation Kaci Lantz, CFP®
 Senior Director of Financial Strategies and Analysis Kim Morrow, CPA
 Director of Accounting Brian Derrick, CPA
 Deputy 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.*



ORGANIZATIONAL CHART





Financial Section

Independent Auditor's Report

Management's Discussion and Analysis

Financial Statements

Notes to the Financial Statements

Required Supplementary Information

Notes to Required Supplementary Information

Schedule of Administrative Expenses

Schedule of Investment Expenses

Schedule of Expenses for Consultants





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, 2017, 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, 2017, 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, 2017, 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 financial

(continued)



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 14, 2017, 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.



Deborah V. Loveless, CPA
Director
December 14, 2017



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, 2017. This section should be read in conjunction with the Independent Auditor's Report, the audited financial statements, and the accompanying notes.

FINANCIAL HIGHLIGHTS

- The net position for the TCRS plans (total assets minus total liabilities) at June 30, 2017 was \$47 billion, increasing \$3.7 billion (8.6 percent) from the plan net position at June 30, 2016. The net position is restricted for future benefit obligations. This increase in plan net position is mainly due to an increase in investment income.
- Net investment income for fiscal year 2017 was \$4.8 billion. During fiscal year 2017, the TCRS received a time-weighted rate of return on its portfolio of 11.42 percent, compared to 2.8 percent for fiscal year 2016.
- Contribution revenue for fiscal year 2017 totaled \$1.3 billion, representing an increase of 2.4 percent compared to fiscal year 2016.
- Total benefits and refunds paid for fiscal year 2017 were \$2.5 billion, representing an increase of 3.9 percent over fiscal year 2016 total benefits and refunds paid of \$2.4 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 2016.
- Total administrative expenses for fiscal year 2017 were \$18.5 million, representing a decrease of 8.3 percent from fiscal year 2016 administrative expenses of \$20.2 million.

OVERVIEW OF THE FINANCIAL STATEMENTS

The TCRS financial statements consist of the *Statement of Fiduciary Net Position*, the *Statement of Changes in Fiduciary Net Position*, and the *Notes to the Financial Statements*. In addition, *Required Supplementary Information* and the *Notes to the Required Supplementary Information* are presented, which includes this *Management's Discussion and Analysis*. These financial statements, notes to the financial statements and required supplementary information were prepared in conformity with GASB Statement No. 67, Financial Reporting for Pension Plans. Collectively, this information presents the combined net position held in trust for pensions for each of the plans administered by TCRS as of June 30, 2017.

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

(continued)



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, 2017, the TCRS had a net position (total assets in excess of total liabilities) of \$47 billion, an increase of \$3.7 billion (8.6 percent) from \$43.3 billion at June 30, 2016. 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

	June 30, 2017	June 30, 2016	Increase (Decrease) Amount	Percentage Change
ASSETS				
Cash and cash equivalents	\$ 24,768,075	\$ 24,779,761	\$ (11,686)	(0.0)%
Cash collateral for securities on loan	4,990,488,199	7,514,864,420	(2,524,376,221)	(33.6)%
Member and employer receivables	109,148,248	100,314,218	8,834,030	8.8%
Investments	46,886,335,337	43,182,757,359	3,703,577,978	8.6%
Capital assets	24,320,120	28,034,008	(3,713,888)	(13.2)%
TOTAL ASSETS	<u>52,035,059,979</u>	<u>50,850,749,766</u>	<u>1,184,310,213</u>	2.3%
LIABILITIES				
Death benefits, refunds and other payables	30,320,143	29,676,046	644,097	2.2%
Cash collateral for securities on loan	4,990,488,199	7,514,864,420	(2,524,376,221)	(33.6)%
TOTAL LIABILITIES	<u>5,020,808,342</u>	<u>7,544,540,466</u>	<u>(2,523,732,124)</u>	(33.5)%
NET POSITION RESTRICTED FOR PENSIONS	<u>\$ 47,014,251,637</u>	<u>\$ 43,306,209,300</u>	<u>\$ 3,708,042,337</u>	8.6%

(continued)



ANALYSIS OF REVENUES AND EXPENSES

Employer contribution rates for the TCRS did increase during fiscal year 2017; therefore, the 2.4 percent increase in contributions from fiscal year 2016 to fiscal year 2017 was due to increases in rates in addition to increases in salaries. Gross investment income for fiscal year 2017 increased \$3.7 billion (320 percent) over fiscal year 2016.

Investment expenses for fiscal year 2017 totaled \$86.3 million for a 31 percent increase over fiscal year 2016. These expenses were split between portfolio management investment expenses of \$54 million and \$32.3 million in expenses attributed to the securities lending program. The TCRS investment portfolio earned a time-weighted rate of return of 11.42 percent and net investment income of \$4.8 billion.

Total benefits paid during the year ended June 30, 2017 were \$2.4 billion, an increase of 4.2 percent over fiscal year 2016 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 2016. Total refunds paid decreased \$5.3 million, a decrease of 11.8 percent, in fiscal year 2017 from fiscal year 2016. This decrease can be attributed to a decrease in the number of refunds requested in fiscal year 2017.

Administrative expenses for the year ended June 30, 2017 were \$18.5 million, a decrease of 8.3 percent from fiscal year 2016 administrative expenses. During 2017, contractual payments to consulting firms related to Concord implementation were reduced which contributed to the decrease in administrative costs.

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

Revenue by Type

(expressed in thousands)

	Year ended June 30, 2017		Year ended June 30, 2016	
	Amount	% of Total	Amount	% of Total
Employee Contributions	317,297	5.2%	294,538	12.1%
Employer Contributions	1,008,397	16.3%	1,000,586	41.0%
Other Contributions	2,458	0.0%	2,158	0.1%
Net Investment Income	4,848,947	78.5%	1,143,160	46.8%
Total	<u>6,177,099</u>	<u>100.0%</u>	<u>2,440,442</u>	<u>100.0%</u>

Expenses by Type

(expressed in thousands)

	Year ended June 30, 2017		Year ended June 30, 2016	
	Amount	% of Total	Amount	% of Total
Benefit Payments	2,410,600	97.6%	2,312,706	97.3%
Refunds	39,944	1.6%	45,288	1.9%
Administrative	18,512	0.8%	20,180	0.8%
Total	<u>2,469,056</u>	<u>100.0%</u>	<u>2,378,174</u>	<u>100.0%</u>

(continued)



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

	For the Year Ended June 30, 2017	For the Year Ended June 30, 2016	FY17 - FY16 Increase (Decrease) Amount	FY17 - FY16 Percentage Change
ADDITIONS				
Contributions	\$ 1,328,151,535	\$ 1,297,282,137	\$ 30,869,398	2.4%
Investment income	4,877,585,997	1,161,002,153	3,716,583,844	320.1%
Less: Investment expense	(54,002,916)	(48,199,939)	5,802,977	12.0%
Net income from securities lending activities	25,364,129	30,357,833	(4,993,704)	(16.4)%
Net investment income	4,848,947,210	1,143,160,047	3,705,787,163	324.2%
TOTAL ADDITIONS	6,177,098,745	2,440,442,184	3,736,656,561	153.1%
DEDUCTIONS				
Annuity benefits	2,404,729,599	2,307,100,889	97,628,710	4.2%
Death benefits	5,871,023	5,604,581	266,442	4.8%
Refunds	39,943,710	45,288,055	(5,344,345)	(11.8)%
Administrative expenses	18,512,076	20,179,945	(1,667,869)	(8.3)%
TOTAL DEDUCTIONS	2,469,056,408	2,378,173,470	90,882,938	3.8%
NET INCREASE (DECREASE)	3,708,042,337	62,268,714	3,645,773,623	5,854.9%
NET POSITION RESTRICTED FOR PENSIONS				
BEGINNING OF YEAR	43,306,209,300	43,243,940,586	62,268,714	0.1%
END OF YEAR	\$ 47,014,251,637	\$ 43,306,209,300	\$ 3,708,042,337	8.6%

(continued)



ECONOMIC FACTORS, FUTURE FUNDING PROVISIONS, OVERALL OUTLOOK

For the year ended June 30, 2017 the portfolio delivered a return of 11.42 percent which was above the actuarial assumed return of 7.5 percent. The fund gained 5.8 percent for the trailing three-year period and 8.7 percent for the trailing five-year period. According to the Verus performance benchmark, the fund beat 66 percent of its peers for the trailing three-year period and 38 percent for the trailing five-year period.

Wide performance differences in risky assets versus safer assets were the key feature of the investment landscape for the year. Public equity portfolios led the way with returns of 18.1 percent for U.S. stocks, 20.9 percent for developed international stocks and 20.8 percent for stocks in emerging international countries. The Canadian equity portfolio also returned 12.7 percent.

Alternative asset portfolios also generated strong returns. The Traditional Private Equity portfolio gained 16.3 percent. The Strategic Lending, non-investment grade, bond portfolio gained 11.3 percent.

Fixed income portfolios lagged equity portfolios considerably for the year with a small loss of 0.8 percent for the nominal fixed income portfolio and a decline of 0.7 percent for the Treasury Inflation Protected portfolio.

An actuarial valuation was performed as of June 30, 2015 that determined the employer contribution rates for the period July 1, 2016 through June 30, 2017. 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 June 30, 2015 actuarial valuation.

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.



STATEMENT OF FIDUCIARY NET POSITION
JUNE 30, 2017



STATEMENT OF FIDUCIARY NET POSITION
JUNE 30, 2017

(Expressed in Thousands)

	<u>Public Employee Retirement Plan</u>	<u>Teacher Retirement Plan</u>	<u>Teacher Legacy Pension Plan</u>	<u>Total</u>
ASSETS				
Cash and cash equivalents	\$ 12,644	\$ 63	\$ 12,061	\$ 24,768
Cash collateral for securities on loan	2,547,733	12,622	2,430,133	4,990,488
Receivables				
Member receivable	8,483	3,472	19,741	31,696
Employer receivable	39,804	2,776	34,872	77,452
Total receivables	48,287	6,248	54,613	109,148
Investment in Tennessee Retiree Group Trust	23,936,307	118,583	22,831,445	46,886,335
Capital assets (net)	12,417	61	11,843	24,321
TOTAL ASSETS	26,557,388	137,577	25,340,095	52,035,060
LIABILITIES				
Accounts payable				
Death benefits and refunds payable	1,473	175	2,140	3,788
Federal withholding payable	8,939	44	8,527	17,510
Retiree insurance premium payable	4,500	22	4,292	8,814
Other	106	1	101	208
Cash collateral for securities on loan	2,547,733	12,622	2,430,133	4,990,488
TOTAL LIABILITIES	2,562,751	12,864	2,445,193	5,020,808
NET POSITION RESTRICTED FOR PENSIONS	\$ 23,994,637	\$ 124,713	\$ 22,894,902	\$ 47,014,252

See accompanying Notes to the Financial Statements.



STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED JUNE 30, 2017



STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED JUNE 30, 2017

(Expressed in Thousands)

	Public Employee Retirement Plan	Teacher Retirement Plan	Teacher Legacy Pension Plan	Total
ADDITIONS				
Contributions				
Member contributions	\$ 106,509	\$ 32,848	\$ 177,940	\$ 317,297
Employer contributions	662,559	26,262	319,576	1,008,397
Other contributions	2,458	0	0	2,458
Total contributions	771,526	59,110	497,516	1,328,152
Investment income	2,487,909	10,116	2,379,561	4,877,586
Less: Investment expense	(27,543)	(109)	(26,351)	(54,003)
Net income from investing activities	2,460,366	10,007	2,353,210	4,823,583
Securities lending activities				
Securities lending income	29,433	117	28,159	57,709
Less: Securities lending expense	(16,497)	(66)	(15,782)	(32,345)
Net income from securities lending activities	12,936	51	12,377	25,364
Net investment income	2,473,302	10,058	2,365,587	4,848,947
TOTAL ADDITIONS	3,244,828	69,168	2,863,103	6,177,099
DEDUCTIONS				
Annuity benefits	1,251,918	1	1,152,810	2,404,729
Death benefits	3,682	5	2,184	5,871
Refunds	21,030	1,015	17,899	39,944
Administrative expense	11,748	1,417	5,347	18,512
TOTAL DEDUCTIONS	1,288,378	2,438	1,178,240	2,469,056
NET INCREASE (DECREASE)	1,956,450	66,730	1,684,863	3,708,043
FIDUCIARY NET POSITION RESTRICTED FOR PENSIONS				
BEGINNING OF YEAR	22,038,187	57,983	21,210,039	43,306,209
END OF YEAR	\$ 23,994,637	\$ 124,713	\$ 22,894,902	\$ 47,014,252

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.

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: Assets of the TCRS are invested in the Tennessee Retiree Group Trust (TRGT). As of June 30, 2017, the TCRS owns 99.75 percent of the net asset value in the TRGT. 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.

The fair value of assets of the TRGT held at June 30, 2017 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

(continued)



markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements).

- 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 principles 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)



NOTES TO THE FINANCIAL STATEMENTS
JUNE 30, 2017 (CONTINUED)



INVESTMENTS MEASURED AT FAIR VALUE

As of June 30, 2017

Expressed in Thousands

Investments at Fair Value Level	GAAP Hierarchy Level 1	GAAP Hierarchy Level 2	GAAP Hierarchy Level 3	NAV	Total Investments
Common Stock	\$ 22,203,415		\$ 42		\$ 22,203,457
Real Estate	515,000		2,825,131	709,315	4,049,446
Limited Partnership Units	9,974		248,977	3,473,687	3,732,638
Mutual Funds	2,252,256			260,318	2,512,574
Depository Receipts	79,036				79,036
Rights	647				647
Warrants	25				25
US Government Issues	5,252,407	\$ 169,543			5,421,950
Agency Securities		3,037,478			3,037,478
Corporate Bonds		3,730,899	22,211		3,753,110
Municipals		124,409			124,409
Other Asset Backed		303,464	64,033		367,497
CMO's		656,702	76,790		733,492
Auto Loans and Receivables		158,417			158,417
Preferred Stock	58,009	6,210			64,219
Derivative Instruments			393		393
TOTAL TRGT INVESTMENTS AT FAIR VALUE	30,370,769	8,187,122	3,237,577	4,443,320	46,238,788
Cash and Cash Equivalents					625,725
Cash Collateral on Loaned Securities					5,003,218
Other Receivables					79,317
Investment Income Receivable					149,815
Futures Receivable					104,917
TOTAL ASSETS OF THE TRGT					\$ 52,201,780

(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	74	\$ 3,473,687	Various	N/A	Various transfer and sale restrictions
Mutual Funds	International Public Equities	23	\$ 260,318	N/A	May Redeem all or part of the shares with at least fifteen (15) days written notice	Redemptions may be distributed in cash, in-kind or a combination and are subject to further restrictions by the fund’s trustees
Real Estate	Real Estate Commingled Investments	19	\$ 709,315	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, secondary, 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, 2017, 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.

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 \$24.3 million at year end and

(continued)



is being amortized using the straight line method over the ten year estimated life of the system. The amortization expense for the current year was \$3.7 million.

B: PLAN DESCRIPTIONS

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

At June 30, 2017, there were three defined benefit pension plans within the TCRS. The Public Employee Retirement Plan is an agent, multiple-employer defined benefit pension plan for state government employees and for political subdivisions electing to participate in the TCRS. The Teacher Legacy Pension Plan is a cost-sharing, multiple-employer defined benefit pension plan for teachers of local education agencies (LEAs). The Teacher Legacy Pension Plan closed to new membership on June 30, 2014, but will continue providing benefits to existing members and retirees. Beginning July 1, 2014, the Teacher Retirement Plan became effective for teachers employed by LEAs after June 30, 2014. The Teacher Retirement Plan is a separate cost sharing, multiple employer defined benefit pension plan.

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

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

Plan membership: At June 30, 2017 the membership of the pension plans consisted of the following:

	<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	103,277	2	50,230	153,509
Inactive Employees Entitled to But Not Yet Receiving Benefits	118,966	3,378	30,762	153,106
Active Plan Members	139,397	15,608	62,320	217,325
Total membership	<u>361,640</u>	<u>18,988</u>	<u>143,312</u>	<u>523,940</u>
Number of participating employers	576	229	225	805

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 2nd of July of the previous year. The COLA is based on the change in the consumer price index (CPI) during the prior calendar year, capped at 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 2nd of July of the previous year. The COLA is based on the change in the consumer price index (CPI) during the prior calendar year, capped at 3 percent, and applied to the current benefit. No COLA is granted if the change in the CPI is less than one-half percent. A one percent COLA is granted if the CPI change is between one-half percent and one percent. The Teacher Retirement Plan includes provisions to control employer contributions and unfunded liabilities. As such, plan provisions are automatically changed when employer contributions and unfunded liabilities exceed statutory limits.

Public Employee Retirement Plan

For state employees, there are two major tiers of benefits and eligibility requirements. State employees becoming members before July 1, 2014 are eligible to retire at age 60 with 5 years of service credit or after 30 years of service credit regardless of age. State employees becoming members after June 30, 2014 are eligible to retire at age 65 with five years of service or pursuant to the rule of 90 where age and years of service total 90. Plan 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 2nd 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

(continued)



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 2nd 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, 2017, the required ADC for LEAs was 9.04 percent of covered-employee payroll.

For the Teacher Retirement Plan, LEAs are required by statute to contribute greater of the ADC or 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, 2017, the required ADC for LEAs was 1.56 percent of covered-employee payroll while actual contributions were 4 percent of covered-employee payroll.

For the Public Employee Retirement Plan, each governmental entity is required by statute to contribute the ADC except that the contribution rate for state employees hired after June 30, 2014 is the greater of the ADC or 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, 2017, the required ADC varied for each participating employer, with approximately ninety-six percent of all employer rates less than 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

(continued)



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 comingled 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, 2017, there was \$27,700,444 in the stabilization reserve on behalf of the Teachers Retirement Plan and \$24,354,549 in the various stabilization reserves on behalf of the Public Employee Retirement Plan.

C: 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 trustees 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. As of June 30, 2017, the TCRS owns 99.75 percent of the net asset value in the TRGT.

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%) 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%) of the total funds of the trust.
- c. Within the restrictions in (a) and (b) above, fifteen percent (15%) of the total of the funds of the retirement system may be invested in securities of the same kinds, classes, and investment grades as those otherwise eligible for investment in various approved foreign countries. However upon action of the TCRS Board of Trustees with subsequent approval by the Council on Pensions and Insurance, limit has been authorized at an amount not to exceed twenty-five percent (25%).
- 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%) of total assets.

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f. The total sum invested in alternative investments shall not exceed forty percent (40%) 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 (10%) of the market value of the TRGT's total assets. 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, 2017:

Authorized Asset Class	Target Allocation
U.S. equity	31%
Canadian equity	2%
Developed market international equity	13%
Emerging market international equity	4%
Private equity	7%
U.S. fixed income	25%
Strategic lending	7%
Real estate	10%
Short-term securities	1%
Total	100%

Securities Lending: The TRGT is authorized to engage in securities lending agreements 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 collateral as either cash or securities. 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 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.

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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. Our securities lending agent manages the average maturities of securities on loan against the average maturities of securities on collateral invested. The maturity gap has a limit of 33 days. This is monitored by investment staff on a periodic basis to ensure compliance.

At June 30, 2017, the TRGT had the following securities on loan and received the collateral as shown below:

SECURITIES LENDING

As of June 30, 2017

Fair Value of Securities on Loan

Securities on Loan	Fair Value of Securities on Loan	Cash/Non-Cash Collateral Received
Fixed	\$ 2,338,498,017	\$ 2,391,592,380
Equity	2,723,975,549	2,785,821,975
Total	\$ 5,062,473,566	\$ 5,177,414,355

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

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.treasury.tn.gov>.

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At June 30, 2017, the TRGT had the following investments:

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

As of June 30, 2017

Expressed in Thousands

Rating	Fair Value (in thousands)	Percentage of Total Investments
P-1	\$ 3,059	0.01%
AAA	489,032	1.06%
AA	389,599	0.84%
A	881,900	1.91%
BBB	2,338,128	5.06%
BB	274,236	0.59%
B	63,729	0.14%
CCC	55,459	0.12%
CC	871	0.00%
D	25,659	0.06%
NR	3,529,507	7.63%
	<u>\$ 8,051,179</u>	
U. S. Government Agencies and Obligations explicitly guaranteed by the U. S. Government	6,116,004	
Total Fixed Income Securities	<u>\$ 14,167,183</u>	
Equity	24,805,713	
Real Estate	4,049,446	
Private Equities	1,862,282	
Strategic Lending	1,860,382	
Preferred Stock not Classified as Fixed Income	64,219	
Derivative Instruments (not rated)	393	
Add Back Short term investment fund with custodian (NR)	(3,005)	
Add Back Short term investments classified as cash (NR)	(567,825)	
Total Investments of the TRGT	<u><u>\$ 46,238,788</u></u>	

(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, 2017.

EFFECTIVE DURATION OF DEBT INVESTMENTS

As of June 30, 2017

Expressed in Thousands

Investment Type	Fair Value As of June 30, 2017	Effective Duration (years)
Government Agencies	\$ 413,913	1.92
Government Bonds	3,690,363	13.87
Government Inflation Indexed	1,618,067	7.88
Government Mortgage Backed	3,473,525	4.46
Government Asset Backed	46,243	5.19
Municipal Bonds	124,409	9.95
Commercial Mortgage Backed	297,445	1.94
Corporate Asset Backed Securities	479,670	1.07
Corporate Bonds	3,753,110	9.08
Short Term Investments	270,438	0.00
Total TRGT Debt Investments	\$ \$14,167,183	8.22

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, 2017 was \$297,444,710 of which \$158,220,655 were CMOs that are generally more sensitive to interest rate changes.

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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, 2017

Expressed in Thousands

Currency	Total Fair Value June 30, 2017	Equity	Cash
Australian Dollar	\$ 335,353	\$ 335,022	\$ 331
British Pound Sterling	1,238,766	1,234,829	3,937
Canadian Dollar	1,027,138	1,026,139	999
Danish Krone	167,342	167,064	278
Euro Currency	2,030,838	2,017,503	13,335
Hong Kong Dollar	224,799	224,559	240
Japanese Yen	1,633,558	1,623,508	10,050
New Israeli shekel	13,954	13,843	111
New Zealand Dollar	10,887	10,626	261
Norwegian Krone	37,735	37,460	275
Singapore Dollar	85,027	84,877	150
Swedish Krona	180,566	180,139	427
Swiss Franc	614,822	613,645	1,177
Total	\$ 7,600,785	\$ 7,569,214	\$ 31,571

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 \$31,571,026 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 11.295 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, 2017, 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.

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 sell-

(continued)



NOTES TO THE FINANCIAL STATEMENTS
JUNE 30, 2017 (CONTINUED)



ing 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. Foreign currency forward contracts expose the TRGT 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, 2017

Expressed in thousands

	Changes in Fair Value		Fair Value at June 30, 2017			
	Financial Statement Classification	Amount	Financial Statement Classification	Amount	Notional Amount	Currency
Foreign Currency						
Forward Contracts		\$ (7)		\$ (7)	2,121	AUD
		107		107	6,426	EUR
		<u>293</u>		<u>293</u>	4,916,610	JPY
	Investment Income	\$ 393	Derivative Instruments	\$ 393		
Futures Contracts						
	Investment Income	\$ 19,198	Derivative Instruments Payable	\$ (4,393)	\$ 1,042,357	
TBA Mortgage Backed Securities						
	Investment Income	\$ (173)	Derivative Instruments	\$ (173)	\$ 43,702	

(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 \$7,772,110,343 at June 30, 2017. 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 \$3,477,792,988 in private equity, strategic lending, and real estate commitments at year end.

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

The components of net pension liability (asset) at June 30, 2017, were as follows:

	<u>Teacher Legacy Pension Plan</u>	<u>Teacher Retirement Plan</u>
Total Pension Liability	\$ 22,613,772,994	\$ 95,156,804
Plan Fiduciary Net Position	<u>(22,894,902,319)</u>	<u>(124,712,519)</u>
Net Pension Liability (Asset)	<u>\$ (281,129,325)</u>	<u>\$ (29,555,715)</u>
Percent of Net Position to Pension Liability	101.24%	131.06%

(continued)



NOTES TO THE FINANCIAL STATEMENTS
JUNE 30, 2017 (CONTINUED)



Actuarial assumptions: The total pension liability was determined by an actuarial valuation as of June 30, 2016 rolled-forward to a measurement date and a reporting date of June 30, 2017, using the following actuarial assumptions applied to all prior periods included in the measurement:

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

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

The actuarial assumptions used in the June 30, 2016 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. The target allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

Authorized Asset Class	Long-Term Expected Real Rate of Return	Target Allocation
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.

(continued)



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 (asset) for LEAs using the discount rate of 7.5 percent, as well as what its net pension liability (asset) 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	\$ 2,598,933,642	\$ (281,129,325)	\$ (2,667,723,289)
Teacher Retirement Plan	\$ 422,374	\$ (29,555,715)	\$ (51,682,432)



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

Total pension liability	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Service Cost	\$ 351,528,106	\$ 359,568,654	\$ 393,173,920	\$ 404,576,942
Interest	1,618,619,959	1,582,470,751	1,578,251,721	1,483,656,307
Change of benefit terms	0	0	0	0
Difference between expected and actual experience	(296,555,977)	(764,354,573)	46,576,630	0
Change of assumptions	0	0	0	0
Benefit payments, including refunds of member contributions	<u>(1,172,892,841)</u>	<u>(1,138,014,028)</u>	<u>(1,096,410,122)</u>	<u>(1,037,013,093)</u>
Net change in total pension liability	500,699,247	39,670,804	921,592,149	851,220,156
Total pension liability - beginning	<u>22,113,073,747</u>	<u>22,073,402,943</u>	<u>21,151,810,794</u>	<u>20,300,590,638</u>
Total pension liability - ending (a)	<u>22,613,772,994</u>	<u>22,113,073,747</u>	<u>22,073,402,943</u>	<u>21,151,810,794</u>
Plan fiduciary net position				
Contributions-employer	319,576,407	327,521,593	338,301,211	348,474,887
Contributions-members	177,940,219	181,763,296	187,121,567	195,520,938
Net investment income	2,365,586,643	560,785,122	646,526,936	3,054,117,821
Benefit payments, including refunds of member contributions	(1,172,892,841)	(1,138,014,028)	(1,096,410,122)	(1,037,013,093)
Administrative expense	<u>(5,347,136)</u>	<u>(6,893,993)</u>	<u>(5,635,689)</u>	<u>(2,663,319)</u>
Net change in plan fiduciary net position	1,684,863,292	(74,838,010)	69,903,903	2,558,437,234
Plan fiduciary net position - beginning	<u>21,210,039,027</u>	<u>21,284,877,037</u>	<u>21,214,973,134</u>	<u>18,656,535,899</u>
Plan fiduciary net position - ending (b)	<u>22,894,902,319</u>	<u>21,210,039,027</u>	<u>21,284,877,037</u>	<u>21,214,973,134</u>
Net pension liability (asset)- ending (a) - (b)	<u>\$ (281,129,325)</u>	<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.

(continued)



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

	2017	2016	2015
Total pension liability			
Service Cost	\$ 43,440,149	\$ 28,980,449	\$ 15,581,497
Interest	5,159,135	2,175,079	583,011
Change of benefit terms	0	0	0
Difference between expected and actual experience	2,054,643	(1,477,409)	0
Change of assumptions	0	0	0
Benefit payments, including refunds of member contributions	(1,021,752)	(283,467)	(34,531)
Net change in total pension liability	<u>49,632,175</u>	<u>29,394,652</u>	<u>16,129,977</u>
Total pension liability - beginning	<u>45,524,629</u>	<u>16,129,977</u>	<u>0</u>
Total pension liability - ending (a)	<u>95,156,804</u>	<u>45,524,629</u>	<u>16,129,977</u>
Plan fiduciary net position			
Contributions-employer	26,262,053	17,538,589	8,310,132
Contributions-members	32,848,220	21,855,921	10,390,077
Net investment income	10,058,396	1,011,283	294,742
Benefit payments, including refunds of member contributions	(1,021,752)	(283,467)	(34,531)
Administrative expense	(1,417,125)	(819,972)	(280,047)
Net change in plan fiduciary net position	<u>66,729,792</u>	<u>39,302,354</u>	<u>18,680,373</u>
Plan fiduciary net position - beginning	<u>57,982,727</u>	<u>18,680,373</u>	<u>0</u>
Plan fiduciary net position - ending (b)	<u>124,712,519</u>	<u>57,982,727</u>	<u>18,680,373</u>
Net pension liability (asset) - ending (a) - (b)	<u>\$ (29,555,715)</u>	<u>\$ (12,458,098)</u>	<u>\$ (2,550,396)</u>

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

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

	2017	2016	2015	2014
Total pension liability	\$ 22,613,772,994	\$ 22,113,073,747	\$ 22,073,402,943	\$ 21,151,810,794
Plan fiduciary net position	22,894,902,319	21,210,039,027	21,284,877,037	21,214,973,134
Net pension liability (asset)	\$ (281,129,325)	\$ 903,034,720	\$ 788,525,906	\$ (63,162,340)
Plan fiduciary net position as a percentage of the total pension liability	101.24%	95.92%	96.43%	100.30%
Covered payroll	\$ 3,536,976,053	\$ 3,622,228,641	\$ 3,742,270,034	\$ 3,925,131,835
Net pension liability (asset) as a percentage of covered payroll	(7.95%)	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

	2017	2016	2015
Total pension liability	\$ 95,156,804	\$ 45,524,629	\$ 16,129,977
Plan fiduciary net position	124,712,519	57,982,727	18,680,373
Net pension liability (asset)	\$ (29,555,715)	\$ (12,458,098)	\$ (2,550,396)
Plan fiduciary net position as a percentage of the total pension liability	131.06%	127.37%	115.81%
Covered payroll	\$ 655,205,868	\$ 441,775,131	\$ 207,753,299
Net pension liability (asset) as a percentage of covered payroll	(4.51%)	(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

	<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>
2017	\$ 319,576,407	\$ 319,576,407	\$ 0	\$ 3,536,976,053	9.04%
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%

(continued)



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

	Actuarially- Determined Contribution	Contributions in Relation to the Actuarially- Determined Contribution	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a Percentage of Covered Payroll
2017	\$ 10,221,212	\$ 26,262,053	\$ (16,040,841)	\$ 655,205,868	4.01%
2016	11,044,378	17,538,589	(6,494,211)	441,775,131	3.97%
2015	5,193,832	8,310,132	(3,116,300)	207,753,299	4.00%

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

(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>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Annual money-weighted rate of return, net of investment expense	11.30%	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.



Method and assumptions used in calculations of actuarially determined contributions.

The actuarially determined contributions for the fiscal year ended June 30, 2017 for Local Education Agencies for the Teacher Legacy Plan were calculated as a result of an actuarial valuation performed as of June 30, 2015. The actuarially determined contributions for the fiscal year ended June 30, 2017 for Local Education Agencies for the Teacher Retirement Plan were calculated as a result of an actuarial valuation performed as of June 30, 2015. The following actuarial methods and assumptions were used to determine contribution rates reported in the schedule:

	<u>Teacher Legacy Pension Plan</u>	<u>Teacher Retirement Plan</u>
Actuarial cost method	Entry Age Normal	Entry Age Normal
Amortization method	Level Dollar Amortization	Level Dollar Amortization
Remaining amortization period	4.72 years	N/A
Inflation	3.0 percent	3.0 percent
Salary increases	Graded salary ranges from 8.97 percent to 3.71 percent, including inflation, averaging 4.25 percent	Graded salary ranges from 8.97 percent to 3.71 percent, including inflation, averaging 4.25 percent
Investment rate of returns	7.50 percent, net of pension plan investment expense, including inflation	7.50 percent, net of pension plan investment expense, including inflation



SCHEDULE OF ADMINISTRATIVE EXPENSES
FOR THE YEAR ENDED JUNE 30, 2017



SCHEDULE OF ADMINISTRATIVE EXPENSES
For the Year Ended June 30, 2017

	<u>Public Employee Retirement Plan</u>	<u>Teacher Retirement Plan</u>	<u>Teacher Legacy Pension Plan</u>	<u>TOTAL</u>
PERSONNEL SERVICES				
Salaries and wages	\$ 1,912,041	\$ 230,648	\$ 870,285	\$ 3,012,974
Employee benefits	801,981	96,742	365,030	1,263,753
TOTAL PERSONNEL SERVICES	<u>2,714,022</u>	<u>327,390</u>	<u>1,235,315</u>	<u>4,276,727</u>
PROFESSIONAL SERVICES				
Accounting	315,761	38,090	143,722	497,573
Actuarial services	262,436	31,657	119,450	413,543
Information systems	3,424,368	413,077	1,558,635	5,396,080
Management services	96,073	11,589	43,729	151,391
Medical review	15,991	1,929	7,279	25,199
Administrative, Internal Audit, Legal, Personnel	1,403,790	169,339	638,949	2,212,078
TOTAL PROFESSIONAL SERVICES	<u>5,518,419</u>	<u>665,681</u>	<u>2,511,764</u>	<u>8,695,864</u>
COMMUNICATION				
Travel	21,330	2,573	9,708	33,611
Telephone	128,374	15,486	58,431	202,291
Printing	37,702	4,548	17,160	59,410
Postage	145,734	17,580	66,332	229,646
TOTAL COMMUNICATION	<u>333,140</u>	<u>40,187</u>	<u>151,631</u>	<u>524,958</u>
MISCELLANEOUS				
Office space	90,956	10,972	41,399	143,327
Supplies and maintenance	47,592	5,741	21,662	74,995
Amortization of intangible assets	2,356,844	284,303	1,072,741	3,713,888
Other services and charges	686,841	82,853	312,623	1,082,317
TOTAL MISCELLANEOUS	<u>3,182,233</u>	<u>383,869</u>	<u>1,448,425</u>	<u>5,014,527</u>
TOTAL ADMINISTRATIVE EXPENSES	<u>\$ 11,747,814</u>	<u>\$ 1,417,127</u>	<u>\$ 5,347,135</u>	<u>\$ 18,512,076</u>



SCHEDULE OF INVESTMENT EXPENSES
FOR THE YEAR ENDED JUNE 30, 2017



The Tennessee Consolidated Retirement System (TCRS) is a participant in the Tennessee Retiree Group Trust (TRGT) and owns 99.75% of the net asset value. All TRGT participants share equally in the gains, losses, and expenses of the trust. All participants are charged an annual investment expense of 13 basis points (0.13%) and this amount is deducted from the net asset value NAV of TRGT daily. For financial statement purposes, plan administrative expenses, actual and accrued, are totaled and evaluated against the fee collected. Any amount in excess or a deficiency is rebated to/charged to plan participants based on their date of participation in that fiscal year. The expenses reflected in this schedule reflect all plan administrative expenses for TRGT. The expenses on the Statement of Changes in Fiduciary Net Position reflect the 13 basis point charges accrued throughout the fiscal year less a rebated of excess fees collected. They approximate 99.75% of actual expenses on this schedule.

Direct Expenses:

Salaries and Other Personnel Costs	\$	5,273,130
Travel		122,509
Telephone		41,608
Printing		2,469
Postage		1,388
Office Space		41,137
Supplies and Maintenance		13,323
Other Services and Charges		93,621
Total Direct Expenses		5,589,185

Indirect Expenses

Accounting		568,157
Legal Services		168,069
Data Processing		459,825
Information Systems		265,389
Management Services		69,608
Administration, Internal Audit, Personnel		1,144,012
Total Indirect Expenses		2,675,060

Total Internal Administrative Investment Expenses **8,264,245**

Investment Activity Expenses

Alternative Asset Fees		403,458
External Investment Manager Fees		26,109,994
Investment Consulting Fees		1,571,170
Investment Custodian Fees		2,006,081
Legal Fees		256,629
Real Estate Manager Fees		14,685,662
Other Investment Professional Fees		778,632
Total Investment Activity Expenses		45,811,626

Total Investment Expenses of TRGT **\$ 54,075,871**



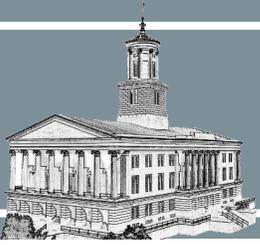
**SCHEDULES OF EXPENSES FOR CONSULTANTS
FOR THE YEAR ENDED JUNE 30, 2017**



**SCHEDULES OF EXPENSES FOR CONSULTANTS
For the Year Ended June 30, 2017**

	<u>Public Employee Retirement Plan</u>	<u>Teacher Retirement Plan</u>	<u>Teacher Legacy Pension Plan</u>	<u>TOTAL</u>
ACTUARIAL SERVICES				
Bryan, Pendleton, Swats and McAllister	\$ 262,436	\$ 31,657	\$ 119,450	\$ 413,543
TOTAL ACTUARIAL SERVICES	<u>262,436</u>	<u>31,657</u>	<u>119,450</u>	<u>413,543</u>
CALL CENTER SERVICES				
Empower	395,542	47,714	180,035	623,291
TOTAL CALL CENTER SERVICES	<u>395,542</u>	<u>47,714</u>	<u>180,035</u>	<u>623,291</u>
INFORMATION SYSTEMS SERVICES				
Deloitte Consulting LLP	742,354	89,549	337,890	1,169,793
The North Highland Company	454,444	54,819	206,845	716,108
TOTAL INFORMATION SYSTEMS SERVICES	<u>1,196,798</u>	<u>144,368</u>	<u>544,735</u>	<u>1,885,901</u>
MEDICAL REVIEW SERVICES				
Suzanne Fletcher, M.D.	6,472	781	2,946	10,199
Thomas Mullady, M.D.	2,903	350	1,321	4,574
Barry Siegel, M.D.	6,210	749	2,827	9,786
Eva Misra	406	49	185	640
TOTAL MEDICAL REVIEW SERVICES	<u>15,991</u>	<u>1,929</u>	<u>7,279</u>	<u>25,199</u>
 TOTAL EXPENSES FOR CONSULTANTS	 <u>\$ 1,870,767</u>	 <u>\$ 225,668</u>	 <u>\$ 851,499</u>	 <u>\$ 2,947,934</u>

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



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 25, 2017

Attn: Mr. Jamie Wayman, Director
 Tennessee Consolidated Retirement System
 Andrew Jackson Building
 Nashville, TN 37243-0230

Re: 2017 CAFR Performance Letter

Dear Jamie:

For the year ended June 30, 2017, TCRS earned a return of 11.42%, beating its policy index (11.38%) and its as-allocated index (11.15%). Strong absolute returns in International Equity (20.84%), U.S. Equity (18.10%) and Private Equity (16.34%) were most additive to the portfolio for the fiscal year, whereas, U.S. Fixed Income (-0.77%) and Inflation Hedge (-0.69%) were detractors from returns. TCRS met or exceeded all of its benchmarks at the asset class level except for Private Equity.

During a fiscal year where equity returns were especially strong and risk was rewarded across markets, TCRS' generally conservative positioning and long duration bias in fixed income impacted its near-term peer rankings. The Plan remained above median in its peer group (InvestorForce's Public DB > \$1 billion) for the three-year period ended June.

As of June 30, 2017, the System's asset allocation and one-year respective returns were:

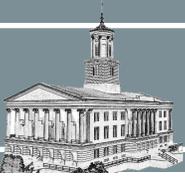
Asset Class	% of Assets	One Year Return
Domestic Equity	33.1%	18.10%
Canada Index Fund	2.0%	12.69%
International Developed Market	14.8%	20.93%
International Emerging Market	4.5%	20.79%
Domestic Fixed Income	25.5%	-0.77%
Inflation-Indexed Fixed Income	3.2%	-0.69%
Real Estate	7.7%	8.91%
Private Equity	3.9%	16.34%
Strategic Lending	4.3%	11.32%
Cash and Cash Equivalents	0.9%	0.74%
Total	100.0%	11.42%

A coordinated uptick in global economic and earnings growth amid low market volatility were central themes during the 2017 fiscal year. For the first time in the recovery, GDP growth rose across regions, especially in the Eurozone and emerging markets. The Fed continued to normalize rates, raising the federal funds rate by 25 bps in December, March, and June. After the election, U.S. equities rallied to end the calendar year, particularly in small cap stocks.

Verus continues to anticipate modest equity returns globally and the potential for increased market volatility as monetary policies shift. TCRS' well-funded, cost-effective Plan incorporates sensible diversification in order to weather a variety of market environments.

Best Regards,

 Margaret S. Jadallah
 Managing Director



DAVID H. LILLARD, JR.
STATE TREASURER

STATE OF TENNESSEE

MARYJO PRICE
CHIEF OPERATING OFFICER

MICHAEL BRAKEBILL
CHIEF INVESTMENT OFFICER



JAMIE WAYMAN
DIRECTOR OF TCRS

TREASURY DEPARTMENT
STATE CAPITOL
NASHVILLE, TENNESSEE 37243-0225

November 7, 2017

I am pleased to present the Investment Section of the TCRS Comprehensive Annual Financial Report for the fiscal year ended June 30, 2017.

The Tennessee Retiree Group Trust (TRGT) was established in 2015 and contained \$47.0 billion in assets as of June 30, 2017. Assets for the TCRS are comingled in the TGRT for investment purposes and TCRS represents \$46.8 billion, or 99.75%, of the TGRT.

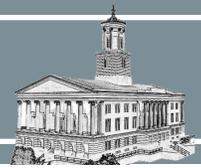
TGRT assets are invested to preserve principal value, to achieve a superior rate of return within acceptable risk levels and to provide the liquidity necessary to pay beneficiaries in a timely manner. The portfolio is diversified among domestic and international stocks and bonds, real estate, private 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 TGRT general investment consultant periodically to determine the optimal, long-term mix of assets to best meet the plan's investment objectives. The investment performance for TCRS was computed using a market value based, time-weighted rate of return and is based on it being a sub-component of the TGRT.

The 2017 fiscal year was a good year for investors and the TGRT gained 11.42% for the fiscal year with an annualized gain of 8.70% for the trailing five-year period. The one-year and the five-year returns each exceeded the actuarial required return and the portfolio was still managed in a manner to protect capital in an adverse environment.

The experienced investment staff of the Tennessee Treasury 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 November 18, 2016.

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 Trustees with the State Treasurer (Treasurer) as custodian, authorized by TCA 8-37-104 adopted this group trust for the purpose of pooling funds of TCRS with other assets in the custody of the Treasurer, solely for investment purposes. The Custodian shall be responsible for the managing and directing the investment of the Group Trust Funds in accordance with the investment policies of the TCRS.

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 2016-2017, no assets were under the control of emerging investment managers.

To assist in the fiduciary responsibility for managing the TRGT portfolio during fiscal year 2017, Verus served as the general investment consultant for TRGT. The Townsend Group served as the real estate investment consultant and Torrey Cove served as the private equity consultant.

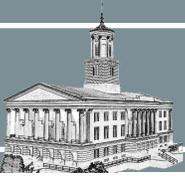
State Street Bank and Trust Company was the master bank custodian for TRGT, providing safekeeping and accounting services for the investment portfolio during fiscal year 2017.

Cost of Investment Operation

The cost to operate the investment program for TRGT is about thirteen basis points (0.13%). 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

Verus provided performance measurement for the TRGT, which had a total return of 11.42% during the fiscal year. Public equities led the performance for the year. International Developed and Emerging equities gained 20.93% and 20.79% respectively, while U.S. and Canadian stocks gained 18.10% and 12.69%. Private equity, Real Estate and Strategic Lending all had strong results with returns of 16.34%, 8.91% and 11.32%. Rising interest rates retarded returns for fixed income assets and the Domestic Fixed Income portfolio lost -0.77% and the Treasury Inflation Protected (TIPs) portfolio lost -0.69%.



TRGT INVESTMENT PERFORMANCE REVIEW

Periods Ending June 30, 2017

	Annualized Returns		
	Current Year	3-Year	5-Year
Pension Plan Portfolio	11.42%	5.78%	8.70%
Policy Index (1)	11.38%	5.88%	8.80%
As-Allocated Index	11.15%	5.73%	8.47%
Domestic Equity	18.10%	8.43%	13.95%
S & P 1500 Index	18.09%	9.51%	14.68%
Canadian Equity	12.69%	-2.50%	4.27%
S & P TSX 60 Index	12.38%	-2.58%	4.19%
Domestic Fixed Income	-0.77%	4.08%	3.80%
Citigroup LPF Index	-1.62%	3.94%	3.11%
Inflation Hedge Bonds	-0.69%	0.81%	0.31%
Citigroup TIPS Index	-0.74%	0.71%	0.26%
International Equity	20.84%	2.70%	9.00%
International Equity Custom Index	20.84%	1.34%	7.68%
Real Estate	8.91%	11.47%	11.05%
NCREIF Index	7.27%	10.58%	10.69%
Private Equity	16.34%	15.23%	15.85%
S & P 500 + 3%	20.17%	13.37%	16.31%
Strategic Lending Portfolio	11.32%	4.48%	
SL Benchmark	10.07%	4.01%	

Verus

Ranking of TCRS Portfolio	<u>Percentile Rankings</u>	<u>Risk Adjusted Basis</u>
	Last three years	34
Last five years	62	48

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

(1) Effective 1/1/17, Policy Index is 31% S&P 1500/ 2% S&P TSX 60/ 13% MSCI EAFE IMI net/ 4% MSCI Emerging Markets net/ 25% Citigroup LPF/ 10% NCREIF 1Q Lag/ 7% S&P 500 + 3% 1Q Lag/ / 7% Strategic Lending/ 1% 91 Day T-Bill.



TRGT ASSET ALLOCATION

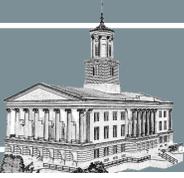
As of June 30, 2017

Expressed in Thousands

Asset Class	Fair Value	Percentage
Domestic Equity	\$ 14,966,170,611	32.4%
Domestic Fixed Income	13,923,680,831	30.1%
International Equity	7,326,968,005	15.8%
International Fixed Income	37,283,215	0.1%
Short-Term Securities	2,212,182,238	4.8%
Real Estate	4,049,446,383	8.8%
Private Equities & Strategic Lending	3,722,663,960	8.0%
Totals	<u>\$ 46,238,395,243</u>	<u>100.0%</u>

This table describes the asset allocation of the entire TRGT investment portfolio. TCRS is comingled with the TRGT portfolio and owns 99.75% of net asset value in TRGT.

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.

**TRGT LARGEST STOCK HOLDINGS***As of June 30, 2017**by Fair Value*

Shares	Security Name	Fair Value
3,841,233	APPLE INC	\$ 553,214,377
424,885	ALPHABET INC CL C	390,292,017
4,312,148	MICROSOFT CORP	297,236,362
1,825,591	FACEBOOK INC A	275,627,729
270,189	AMAZON.COM INC	261,542,952
2,749,502	JPMORGAN CHASE + CO	251,304,483
1,652,058	JOHNSON + JOHNSON	218,550,753
7,241,308	BANK OF AMERICA CORP	175,674,132
1,429,686	PHILIP MORRIS INTERNATIONAL	167,916,621
2,052,886	EXXON MOBIL CORP	165,729,487

TRGT LARGEST BOND HOLDINGS*As of June 30, 2016**by Fair Value*

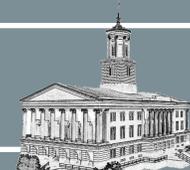
Par Value	Security Name	Yield	Maturity	Moody's Rating	Fair Value
\$ 287,721,533	United States Treasury Note	2.30%	11/15/2026	Aaa	\$ 295,040,000
250,658,116	United States Treasury Note	2.85%	2/15/2046	Aaa	268,836,000
216,957,575	United States Treasury Note	2.85%	8/15/2046	Aaa	245,975,000
185,069,179	United States Treasury Note	0.29%	1/15/2023	Aaa	186,806,857
156,844,455	United States Treasury Index Linked Note	2.29%	8/15/2026	Aaa	167,650,000
149,821,500	United States Treasury Note	1.00%	8/14/2017	Aaa	150,000,000
141,997,145	FED HOME LN DISCOUNT NT	2.84%	5/15/2045	NR	137,590,000
130,315,688	United States Treasury Note	2.27%	2/15/2026	Aaa	137,135,000
140,617,984	United States Treasury Note	2.84%	11/15/2045	Aaa	136,300,000
130,961,321	United States Treasury Note	2.25%	11/15/2025	Aaa	130,946,000

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

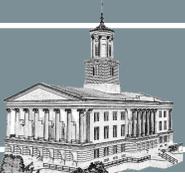


TRGT INVESTMENT SUMMARY

June 30, 2017

	Domestic		International		Total	
	Fair Value	%		%	Fair Value	%
Fixed Income						
Government Bonds	\$ 5,308,429,838	11.34%	0	0.00%	\$ 5,308,429,838	11.34%
Corporate Bonds	3,753,109,962	8.02%	0	0.00%	3,753,109,962	8.02%
Municipal/Provincial Bonds	124,409,319	0.27%	0	0.00%	124,409,319	0.27%
Total Bonds	9,185,949,119	19.63%	0	0.00%	9,185,949,119	19.63%
Corporate Asset Backed	479,670,359	1.02%	0	0.00%	479,670,359	1.02%
Commercial Mortgage Backed	297,444,710	0.64%	0	0.00%	297,444,710	0.64%
Government Agencies	413,912,880	0.88%	0	0.00%	413,912,880	0.88%
Government Mortgage Backed Securities	3,473,524,768	7.42%	0	0.00%	3,473,524,768	7.42%
Government Asset Backed	46,242,995	0.10%	0	0.00%	46,242,995	0.10%
Preferred Stock	26,936,000	0.06%	37,283,215	0.08%	64,219,215	0.14%
Total Fixed Income	13,923,680,831	29.75%	37,283,215	0.08%	13,960,964,046	29.83%
Common Stock						
Consumer Discretionary	1,873,603,362	4.01%	941,110,436	2.02%	2,814,713,798	6.03%
Consumer Staples	1,193,611,031	2.56%	679,931,238	1.46%	1,873,542,269	4.02%
Energy	828,280,614	1.77%	422,099,832	0.90%	1,250,380,446	2.67%
Financials	2,303,124,292	4.92%	1,399,434,888	2.99%	3,702,559,180	7.91%
Healthcare	2,150,209,962	4.59%	766,621,546	1.64%	2,916,831,508	6.23%
Industrials	1,797,733,670	3.84%	1,237,281,844	2.64%	3,035,015,514	6.48%
Information Technology	3,507,280,163	7.49%	661,599,239	1.41%	4,168,879,402	8.90%
Materials	486,987,542	1.04%	581,500,029	1.24%	1,068,487,571	2.28%
Private Placements	0	0.00%	6,876,853	0.01%	6,876,853	0.01%
Rights/Warrants	0	0.00%	671,537	0.00%	671,537	0.00%
Telecommunication Services	264,434,495	0.56%	290,330,012	0.62%	554,764,507	1.18%
Utilities	498,419,385	1.06%	187,734,692	0.40%	686,154,077	1.46%
Depository Receipts	32,377,526	0.07%	46,658,131	0.10%	79,035,657	0.17%
REITS	30,108,569	0.06%	105,117,728	0.22%	135,226,297	0.28%
Total Common Stock	14,966,170,611	31.97%	7,326,968,005	15.65%	22,293,138,616	47.62%

(continued)



INVESTMENT SUMMARY (CONTINUED)

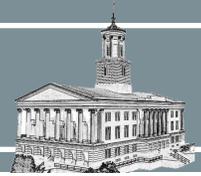


TRGT INVESTMENT SUMMARY (CONTINUED)

June 30, 2017

	Domestic		International		Total	
	Fair Value	%	Fair Value	%	Fair Value	%
Short-term investments						
Commercial Paper	267,433,121	0.57%	0	0.00%	267,433,121	0.57%
Pooled Funds and Mutual Funds	2,515,579,025	5.37%	0	0.00%	2,515,579,025	5.37%
Total Short Term Investments	2,783,012,146	5.94%	0	0.00%	2,783,012,146	5.94%
Real Estate	3,992,869,546	8.53%	56,576,837	0.12%	4,049,446,383	8.65%
Private Equities & Strategic Lending	3,574,278,038	7.64%	148,385,922	0.32%	3,722,663,960	7.96%
Total Investments	39,240,011,172	83.83%	7,569,213,979	16.17%	46,809,225,151	100.00%
Derivatives & Options	393,045		0		393,045	
Short Term Investments Classified as Cash Equivalents	(570,829,908)		0		(570,829,908)	
Total Investments of the Tennessee Retiree Group Trust	\$ 38,669,574,309		\$ 7,569,213,979		\$ 46,238,788,288	

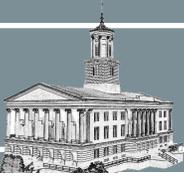
Note: TCRS owns 99.75% of the net asset value of the Tennessee Retiree Group Trust.



TRGT Schedule of Fees

	Average Assets Under Management	Fees
Asset Management		
External Investment Manager Fees	\$ 7.1 Billion	\$ 26,401,405
Real Estate Asset Management	2.8 Billion	14,849,568
Private Equities & Strategic Lending Asset Management	3.7 Billion	<u>0</u>
Total Asset Management		<u>\$ 41,250,973</u>
Other Investment Services Fees		
Custodian Bank	\$ 46.3 Billion	\$ 2,028,471
General Investment Consultant	46.3 Billion	550,000
Real Estate Investment Consultant	3.5 Billion	238,703
Private Equities & Strategic Lending Investment Consultant	3.7 Billion	<u>800,003</u>
Total Investment Services Fees		<u>\$ 3,617,177</u>

(continued)



SCHEDULES OF INVESTMENT FEES AND COMMISSIONS
FOR THE YEAR ENDED JUNE 30, 2017 (CONTINUED)



TRGT Schedules of Commissions

Domestic Exchange Traded Shares

Broker Name	DOMESTIC		
	Number of Shares Traded	Total Commissions	Commission per Share
Instinet, LLC	54,888,932	\$ 1,095,876	0.0400
Capis	6,500,584	260,023	0.0400
Raymond James	11,313,414	226,268	0.0200
RBC Capital Markets Corporation	10,977,277	219,546	0.0200
Evercore Group LLC	9,449,139	188,983	0.0200
Wells Fargo	9,203,449	184,069	0.0200
Sanford C. Bernstein & Company, Inc.	6,458,821	129,176	0.0200
Barclays Capital	6,098,090	121,962	0.0200
UBS Securities LLC	5,436,178	108,724	0.0200
OTHER BROKERS*	28,276,600	636,376	0.0225
Totals	<u>148,602,484</u>	<u>\$ 3,171,003</u>	

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

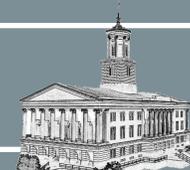
Broker Name	DOMESTIC		
	Number of Shares Traded	Total Commissions	Commission per Share
Barclays Capital	34,629,320	\$ 538,522	0.0156
Morgan Stanley & Company, Inc.	66,855,624	442,491	0.0066
UBS Securities LLC	50,001,753	376,473	0.0075
Goldman Sachs Group, Inc.	46,788,907	350,919	0.0075
Capis	15,534,306	310,686	0.0200
Evercore Group LLC	34,417,923	258,139	0.0075
Bank of America Merrill Lynch	31,631,482	237,237	0.0075
Wells Fargo	29,022,595	217,670	0.0075
Deutsche Bank Securities, Inc.	26,388,136	210,545	0.0080
RBC Capital Markets Corporation	31,895,676	189,412	0.0059
JP Morgan Chase & Company	17,593,812	131,95	0.0075
Cowen Inc.	16,298,549	122,240	0.0075
OTHER BROKERS*	25,582,253	237,469	0.0093
Totals	<u>426,640,336</u>	<u>\$ 3,623,757</u>	

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

(continued)



SCHEDULES OF INVESTMENT FEES AND COMMISSIONS
FOR THE YEAR ENDED JUNE 30, 2017 (CONTINUED)

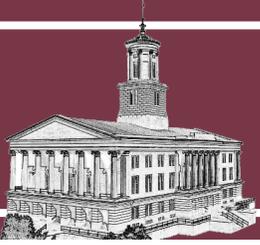


International Exchange Traded Shares

Broker Name	INTERNATIONAL		
	Number of Shares Traded	Total Commissions	Commission per Share
UBS Securities LLC	189,373,290	\$ 913,810	0.0048
Bank of America Merrill Lynch	37,056,888	360,440	0.0097
Goldman Sachs Group, Inc.	35,849,031	359,571	0.0100
Credit Suisse	30,775,954	314,004	0.0102
Morgan Stanley & Company, Inc.	36,396,775	307,424	0.0084
JP Morgan Chase & Company	55,447,937	290,280	0.0052
Citigroup Global Markets, Inc.	44,886,779	263,009	0.0059
Barclays Capital	18,769,460	210,478	0.0112
BNP Paribas	11,596,109	210,308	0.0181
Instinet, LLC	58,925,746	197,792	0.0034
SMBC NIKKO Securities America, Inc.	8,519,035	181,754	0.0213
Mizuho International PLC	7,680,289	175,679	0.0229
CLSA Ltd.	24,572,221	174,090	0.0071
Jefferies and Company, Inc.	20,770,820	174,000	0.0084
Deutsche Bank Securities, Inc.	18,852,212	172,415	0.0091
RBC Capital Markets Corporation	4,062,896	135,600	0.0334
Daiwa Securities Group Inc.	17,286,190	112,393	0.0065
Investment Technology Group	33,004,965	111,774	0.0034
Macquarie Group Limited	13,031,493	100,319	0.0077
OTHER BROKERS*	124,010,916	1,075,855	0.0087
TOTALS	790,869,006	\$ 5,840,996	

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 June 30, 2015 set employer rates effective July 1, 2016 through June 30, 2017. The June 30, 2016 valuation established contribution rates beginning July 1, 2017. The Board of Trustees of the system is responsible for adopting the employer contribution rates after reviewing the actuarial results.

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

Unfunded accrued liability is equal to the excess of the Entry Age Normal Past Service Liability over the valuation assets for each group. A tier approach is utilized with new actuarial gains and losses from each actuarial valuation.

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, 2015 actuarial valuation. The next experience study was performed June 30, 2016. Assumptions developed from the June 30, 2016 experience study will be used for actuarial valuations dated June 30, 2017 and after.

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://www.treasury.tn.gov/tcrs/PDFs/FundingPolicy.pdf>.



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

November 15, 2017

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, 2017 for the Tennessee Consolidated Retirement System was performed as of June 30, 2016. In addition, a valuation for accounting purposes pursuant to GASB 67 and 68 was performed as of June 30, 2016 and was used to satisfy June 30, 2017 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. Actuarial valuations are 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 funding and accounting valuations reflect this change and provide separate reporting for each plan. There have been no significant changes in the level of benefits provided by the plans since the date of the preceding valuation.

In performing the 2016 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
November 15, 2017
Page Two

Certain tables presented in the Comprehensive Annual Financial Report are derived from the 2016 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 2016 actuarial funding valuations were prepared in accordance with accepted actuarial standards, including the overall appropriateness of the assumptions and methods, and conformed to appropriate Standards of Practice as promulgated from time to time by the Actuarial Standards Board. The funding valuations were also in accordance with the pension funding policy adopted by the TCRS Board of Trustees. In addition, the 2016 actuarial valuations for accounting purposes were prepared in accordance with the Governmental Accounting Standards Board Statements 67 and 68. I am a Member of the American Academy of Actuaries and a consulting actuary with Bryan, Pendleton, Swats and McAllister, LLC of Brentwood, Tennessee, with experience in performing valuations for public retirement systems and have met the Qualification Standards of the American Academy of Actuaries. 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 actuarial valuations beginning with the July 1, 2013 valuation. The assumptions used are based on the consulting actuary's recommendations resulting from the June 30, 2012 actuarial experience study.

General Actuarial Methods

- **Actuarial Cost Method (Entry Age Normal)** — Unfunded accrued liability tiers by year are being amortized over various periods not to exceed 20 years using the level dollar amortization method in accordance with the funding policy. The amortization period related to local government unfunded accrued liabilities varies by entity.
- **Treatment of Actuarial Gains and Losses** — Under the Entry Age Normal method, a tier approach is utilized with new actuarial gains and losses from each actuarial valuation. Each new tier of unfunded accrued liabilities is amortized over a period in accordance with the TCRS funding policy.
- **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
Male			
Age 30	18.0%	13.5%	6.0%
Age 40	18.0%	13.5%	2.0%
Age 50	19.7%	14.2%	2.0%
Female			
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
Male			
Age 30	23.0%	18.6%	9.6%
Age 40	18.6%	13.8%	2.6%
Age 50	14.8%	11.1%	2.2%
Female			
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
Male			
Age 30	21.8%	17.9%	7.4%
Age 40	19.2%	15.9%	3.5%
Age 50	17.0%	13.0%	2.8%
Female			
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:

Male			
Age	Teachers	State	Political Subdivisions
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%

Female			
Age	Teachers	State	Political Subdivisions
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%

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.

**SCHEDULE OF ACTIVE MEMBER VALUATION DATA**

	Actuarial Valuation July 1	Number	Annual Payroll In Thousands	Average Annual Pay	Average Annual Percentage Increase In Average Pay
2007	SETHEEPP	136,284	\$ 5,739,878	\$ 42,117	3.01%
	PSPP	79,441	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%
2016	TLPP	65,458	3,465,946	52,949	3.33%
	TRP	11,079	464,122	41,892	2.75%
	PERP	136,524	5,241,126	38,390	3.47%

SCHEDULE OF RETIRED MEMBER VALUATION DATA

	Actuarial Valuation July 1	Number	Annual Allowances In Thousands	Average Annual Allowances	Average Annual Percentage Increase In Annual Allowances
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%
2016	TLPP	49,336	1,142,552	23,159	0.72%
	TRP	1	0	0	N/A
	PERP	100,011	1,218,115	12,180	0.84%

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

(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
2016 TLPP	2,305	58,165	948	18,776	49,336	1,142,552	3.57%	23,159
TRP	1	0	0	0	1	0	N/A	0
PERP	7,884	100,366	2,577	26,134	100,011	1,218,115	6.49%	12,180

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.

Notes applicable to the schedules in this section:

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



ACTUARIAL BALANCE SHEET



**ACTUARIAL BALANCE SHEET
as of July 1, 2016**

	<u>Teacher Legacy Pension Plan</u>	<u>Teacher Retirement Plan</u>	<u>Public Employee Retirement Plan</u>	<u>Total</u>
ASSETS				
Present assets creditable to:				
Employer accumulation fund	\$ 18,452,458,702	\$ 17,287,839	\$ 20,906,161,520	\$ 39,375,908,061
Members' accumulation fund	3,229,342,935	32,614,581	1,606,665,488	4,868,623,004
Total present assets	<u>21,681,801,637</u>	<u>49,902,420</u>	<u>22,512,827,008</u>	<u>44,244,531,065</u>
Present value of prospective contributions payable to:				
Employer accumulation fund				
Normal	1,780,553,988	57,858,514	2,778,823,537	4,617,236,039
Accrued liability	134,716,133	(2,323,148)	1,592,928,253	1,725,321,238
Total employer accumulation	<u>1,915,270,121</u>	<u>55,535,366</u>	<u>4,371,751,790</u>	<u>6,342,557,277</u>
Member's accumulation fund	1,720,744,537	302,202,833	821,196,124	2,844,143,494
Total prospective contributions	<u>3,636,014,658</u>	<u>357,738,199</u>	<u>5,192,947,914</u>	<u>9,186,700,771</u>
TOTAL ASSETS	<u>\$ 25,317,816,295</u>	<u>\$ 407,640,619</u>	<u>\$ 27,705,774,922</u>	<u>\$ 53,431,231,836</u>
LIABILITIES				
Present value of prospective benefits payable on account of:				
Present retired members and beneficiaries	12,858,860,573	-	12,944,180,621	25,803,041,194
Present active members	12,031,441,122	180,762,543	12,904,798,905	25,117,002,570
Former members	427,514,600	545,387	1,705,006,067	2,133,066,054
TOTAL LIABILITIES	<u>\$ 25,317,816,295</u>	<u>\$ 181,307,930</u>	<u>\$ 27,553,985,593</u>	<u>\$ 53,053,109,818</u>



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.

	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)
2007	SETHEEPP	\$ 3,386.8	\$ 12,544.7	\$ 11,308.6	\$ 26,215.0	100%	100%	91%
	PSPP	896.8	1,902.9	2,676.0	4,898.0	100%	100%	78%
	Total	\$ 4,283.6	\$ 14,447.6	\$ 14,314.8	\$ 31,113.0	100%	100%	89%
2009	SETHEEPP	\$ 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	SETHEEPP	\$ 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	SETHEEPP	\$ 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%
2016	TLPP	\$ 3,229.3	\$ 12,858.9	\$ 5,728.3	\$ 21,681.8	100%	100%	98%
	TRP	32.6	0	15.0	49.90	100%	100%	100%
	PERP	1,606.6	12,944.2	9,554.9	22,512.8	100%	100%	83%
	Total	\$ 4,868.5	\$ 25,803.1	\$ 15,298.2	\$ 44,244.5	100%	100%	89%



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
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%
2016	\$ 45,894.7	44,165.2	96.23%	1,726.5	8,334.2	20.72%

Note: 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	PSP	
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

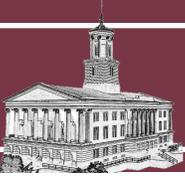
Actuarial Valuation Year	Earnings Assumptions	Salary Assumptions	Unfunded Liability (Asset)			State Amortization Period
			TLPP	TRP	PERP	
2015 (3)	7.50%	4.25% (2)	\$ 268,857,872	\$ (1,092,784)	\$ 1,565,808,774	14.37 (1)
2016	7.50%	4.25% (2)	134,716,133	(2,323,148)	1,592,928,253	8.46 (1)

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.

(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
Contribution Rate		
Effective Employer Contribution Rate Pursuant to 2013 Valuation	15.14%	9.04%
Investment Results		
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%	0.10%
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%

ACTUARIAL VS. RECOMMENDED CONTRIBUTION RATES

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



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 exempt faculty and staff 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.



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. Detailed member information, including salary and service history, is available on the secured portal.

Outreach

- TCRS contracts with Empower Retirement Services 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 at mytcrs.com.
- Computer-generated membership letters are mailed to all new members.
- Membership booklets are available to members on the TCRS website.
- Member self-service can be accessed at 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 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
- Actuarial Report
- Employer education regarding reporting and participation in TCRS.



**TCRS Legacy Plan and Social Security Benefits
for Calendar Year 2017**

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

This chart is based on a date of retirement in 2017. 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 2017; (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

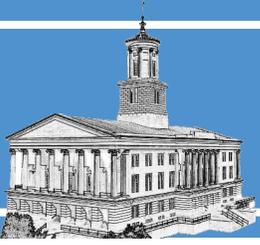
Public Safety Officer benefits were enhanced.

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

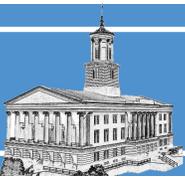
Introduction to Political Subdivision Participation

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.

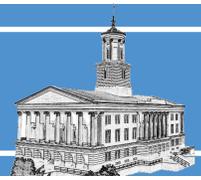
FINANCIAL TRENDS

The schedules presented on pages 89-93 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

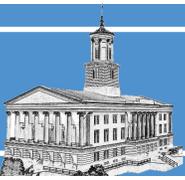
OPERATING INFORMATION

The remaining schedules presented on pages 94-126 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 2008-2017
Expressed in Thousands

<u>As of June 30</u>	<u>Fair Value</u>
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
2017	\$ 47,014,252



ANALYSIS OF RESERVES
FOR THE YEAR ENDED JUNE 30, 2017



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.

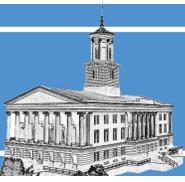
	Public Employee Retirement Plan	Teacher Retirement Plan	Teacher Legacy Pension Plan	Total
<i>June 30, 2016 Member Reserve Fund</i>	\$ 1,605,528,724	\$ 32,436,811	\$ 3,224,126,561	\$ 4,862,092,096
Member Contributions	106,508,457	32,848,220	177,940,219	317,296,896
Employer Provided Contributions	9,885,081	0	14,212	9,899,293
Interest	73,960,493	1,591,665	155,232,447	230,784,605
Refunded Account Balances	(21,029,319)	(1,015,193)	(17,899,198)	(39,943,710)
Transfers to Employer Fund of Retiring Members' Accounts	(134,212,486)	4,397	(189,408,102)	(323,616,191)
<i>June 30, 2017 Member Reserve Fund</i>	1,640,640,950	65,865,900	3,350,006,139	5,056,512,989
<i>June 30, 2016 Employer Reserve Fund</i>	20,424,827,256	15,554,793	17,985,912,466	38,426,294,515
Employer Contributions	647,761,158	10,573,596	319,576,407	977,911,161
Other Contributions	2,457,723	0	0	2,457,723
Investment Income	2,471,576,487	8,037,530	2,365,586,643	4,845,200,660
Transfers from Retiring Members' Account	134,212,486	(4,397)	189,408,102	323,616,191
Employer Provided Contributions	(9,885,081)	0	(14,212)	(9,899,293)
Interest Credited to Members' Account	(73,960,493)	(1,591,665)	(155,232,447)	(230,784,605)
Lump-Sum Death Benefits	(3,681,156)	(5,919)	(2,183,948)	(5,871,023)
Retirement and Survivors Annuities	(1,251,919,264)	(640)	(1,152,809,695)	(2,404,729,599)
Administrative Expenses	(11,747,815)	(1,417,125)	(5,347,136)	(18,512,076)
<i>June 30, 2017 Employer Reserve Fund</i>	22,329,641,301	31,146,173	19,544,896,180	41,905,683,654
<i>June 30, 2016 Stabilization Reserve Fund</i>	7,831,566	9,991,123	0	17,822,689
Employer Contributions	14,797,298	15,688,457	0	30,485,755
Investment Income	1,725,685	2,020,865	0	3,746,550
<i>June 30, 2017 Stabilization Reserve Fund</i>	24,354,549	27,700,445	0	52,054,994
<i>June 30, 2017 Assets held in Trust for Pension Benefits</i>	\$ 23,994,636,800	\$ 124,712,518	\$ 22,894,902,319	\$ 47,014,251,637



SCHEDULES OF CHANGES IN NET POSITION
Expressed in Thousands

Year Ending	Additions				Deductions			Total Change in Net Position
	Member Contributions	Employer Contributions	Other Contributions	Investment Income	Deductions	Administrative Expenses	Refunds	
Public Employee Retirement Plan								
6/30/2017	\$ 106,509	\$ 662,559	\$ 2,458	\$ 2,473,302	\$ 1,255,600	\$ 11,748	\$ 21,030	\$ 1,956,450
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	0	3,105,782	1,046,202	7,294	31,720	2,781,815
Teacher Retirement Plan								
6/30/2017	\$ 32,848	\$ 26,262	\$ 0	\$ 10,058	\$ 6	\$ 1,417	\$ 1,015	\$ 66,730
6/30/2016	21,856	17,539	0	1,012	0	820	284	39,303
6/30/2015	10,390	8,310	0	295	0	280	35	18,680
6/30/2014	0	0	0	0	0	0	0	0
Teacher Legacy Pension Plan								
6/30/2017	\$ 177,940	\$ 319,576	\$ 0	\$ 2,365,587	\$ 1,154,994	\$ 5,347	\$ 17,899	\$ 1,684,863
6/30/2016	181,763	327,522	0	560,785	1,115,822	6,894	22,192	(74,838)
6/30/2015	187,122	338,301	0	646,527	1,074,274	5,636	22,136	69,904
6/30/2014	95,521	348,475	0	3,054,118	1,014,688	2,663	22,326	2,558,437

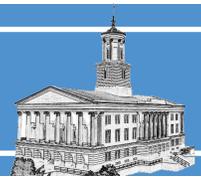
As a result of plan reporting changes due to legislative enactments and GASB pronouncements, historical information is available for four years. Additional years will be added in the future.



SCHEDULES OF BENEFIT EXPENSES
Expressed in Thousands

<u>Year Ending</u>	<u>Service Retirement</u>	<u>Disability Retirement</u>	<u>Survivor Benefits</u>	<u>Death Benefits</u>	<u>Total Benefits</u>	<u>Refunds</u>	<u>Total</u>
Public Employee Retirement Plan							
6/30/2017	\$ 1,143,181	\$ 29,585	\$ 79,152	\$ 3,682	\$ 1,255,600	\$ 21,030	\$ 1,276,630
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
Teacher Retirement Plan							
6/30/2017	\$ 1	\$ 0	\$ 0	\$ 5	\$ 6	\$ 1,015	\$ 1,021
6/30/2016	0	0	0	0	0	284	284
6/30/2015	0	0	0	0	0	35	35
6/30/2014	0	0	0	0	0	0	0
Teacher Legacy Pension Plan							
6/30/2017	\$ 1,052,681	\$ 27,244	\$ 72,885	\$ 2,184	\$ 1,154,994	\$ 17,899	\$ 1,172,893
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 four years. Additional years will be added in the future.

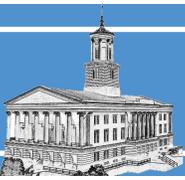


SCHEDULES OF ACTIVE MEMBERS
by Service Credit

Years of Service	Teachers Legacy Pension Plan	Public Employee Retirement Plan			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
0-4	5,803	4,158	1,936	25,575	37,472
5-9	15,178	6,006	3,454	15,502	40,140
10-14	13,722	6,685	2,467	13,111	35,985
15-19	11,425	4,875	1,809	10,090	28,199
20-24	7,884	3,034	1,298	6,268	18,484
25-29	4,243	2,184	1,003	3,676	11,106
30-34	2,228	1,821	626	1,813	6,488
35-39	984	806	370	772	2,932
40-44	286	329	190	255	1,060
Over 44	91	95	53	67	306
Total	61,844	29,993	13,206	77,129	182,172

Years of Service	Teachers Hybrid Pension Plan	Hybrid Public Employee Retirement Plan			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
0-4	14,214	10,536	4,130	1,496	30,376
5-9	722	291	97	91	1,201
10-14	244	117	36	63	460
15-19	100	48	16	28	192
20-24	40	15	7	10	72
25-29	5	3	6	3	17
30-34	3	1	1	1	6
35-39	1	3	0	0	4
40-44	0	0	0	0	0
Over 44	0	0	0	0	0
Total	15,329	11,014	4,293	1,692	32,328

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.



SCHEDULE OF ACTIVE MEMBERS
FOR THE YEAR ENDED JUNE 30, 2017



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	4	0	1	5
1960's	42	36	28	8	114
1970's	841	710	421	521	2,493
1980's	4,875	3,997	1,564	3,790	14,226
1990's	16,291	6,829	2,692	13,395	39,207
2000's	26,135	11,652	4,800	25,362	67,949
2010's	13,660	6,765	3,700	34,052	58,177
Total	61,844	29,993	13,206	77,129	182,172

Date of Membership	Teachers Hybrid Pension Plan	Hybrid Public Employee Retirement Plan			Total
	Teachers	State Employees	Higher Education Employees	Public Subdivision Employees	
1940's	0	0	0	0	0
1950's	0	0	0	0	0
1960's	0	0	0	0	0
1970's	0	2	0	0	2
1980's	2	8	2	8	20
1990's	46	49	22	38	155
2000's	317	224	55	97	693
2010's	14,964	10,731	4,214	1,549	31,458
Total	15,329	11,014	4,293	1,692	32,328

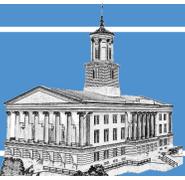


SCHEDULES OF ACTIVE MEMBERS

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	2	3	0	61	66
20-24	4	94	21	2,253	2,372
25-29	3,628	1,105	340	5,314	10,387
30-34	7,875	2,227	814	5,894	16,810
35-39	9,462	3,094	1,237	7,416	21,209
40-44	10,397	3,694	1,370	8,718	24,179
45-49	10,798	4,284	1,738	10,963	27,783
50-54	7,853	4,615	2,094	11,466	26,028
55-59	6,365	4,824	2,354	11,291	24,834
60-64	4,064	3,776	1,993	8,371	18,204
65-69	1,139	1,590	846	3,361	6,936
70 and above	257	687	399	2,021	3,364
Total	61,844	29,993	13,206	77,129	182,172

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	74	2	8	87
20-24	1,727	1,230	274	170	3,401
25-29	5,811	2,658	786	272	9,527
30-34	2,253	1,785	651	235	4,924
35-39	1,723	1,385	570	209	3,887
40-44	1,382	1,032	496	198	3,108
45-49	1,114	994	479	197	2,784
50-54	658	769	431	170	2,028
55-59	402	627	369	132	1,530
60-64	198	343	171	61	773
65-69	50	91	51	25	217
70 and above	8	26	13	15	62
Total	15,329	11,014	4,293	1,692	32,328



SCHEDULES OF ACTIVE MEMBERS
FOR THE YEAR ENDED JUNE 30, 2017



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	110	708	191	1,182	2,191
20 - 24	21,553	5,947	2,062	11,039	40,601
25 - 29	17,340	7,236	2,517	12,410	39,503
30 - 34	8,543	4,551	2,069	11,436	26,599
35 - 39	6,327	3,795	1,816	11,740	23,678
40 - 44	4,187	2,940	1,563	10,159	18,849
45 - 49	2,127	2,156	1,247	7,556	13,086
50 - 54	1,043	1,417	958	5,467	8,885
55 - 59	411	833	530	3,514	5,288
60 - 64	150	288	194	1,718	2,350
65 - 69	43	98	45	642	828
70 and above	10	24	14	266	314
Total	61,844	29,993	13,206	77,129	182,172

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	9	176	18	21	224
20 - 24	4,759	1,932	468	269	7,428
25 - 29	3,990	2,539	806	296	7,631
30 - 34	1,940	1,682	631	215	4,468
35 - 39	1,571	1,226	560	211	3,568
40 - 44	1,209	987	478	192	2,866
45 - 49	901	873	452	167	2,393
50 - 54	507	742	406	138	1,793
55 - 59	290	539	310	109	1,248
60 - 64	119	236	123	45	523
65 - 69	28	64	32	21	145
70 and above	6	18	9	8	41
Total	15,329	11,014	4,293	1,692	32,328



SCHEDULES OF ACTIVE MEMBERS
by Salary

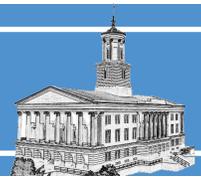
<u>Annual Salary</u>	<u>Teachers Legacy Pension Plan</u>	<u>Public Employee Retirement Plan</u>			<u>Total</u>
	<u>Teachers</u>	<u>State Employees</u>	<u>Higher Education Employees</u>	<u>Political Subdivision Employees</u>	
Less than \$10,000	59	275	76	4,117	4,527
\$10,000-\$19,999	192	416	247	17,805	18,660
\$20,000-\$29,999	561	2,716	1,908	15,935	21,120
\$30,000-\$39,999	4,180	7,728	3,284	16,254	31,446
\$40,000-\$49,999	20,735	6,854	2,631	11,164	41,384
\$50,000+	36,117	12,004	5,060	11,854	65,035
Total	61,844	29,993	13,206	77,129	182,172

<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	156	1,817	523	487	2,983
\$10,000-\$19,999	558	1,537	602	489	3,186
\$20,000-\$29,999	745	2,355	1,072	317	4,489
\$30,000-\$39,999	5,749	2,571	871	239	9,430
\$40,000-\$49,999	6,254	1,385	563	85	8,287
\$50,000+	1,867	1,349	662	75	3,953
Total	15,329	11,014	4,293	1,692	32,328



ACTIVE MEMBERS
Fiscal Years 2011-2017

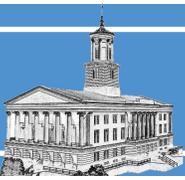
Year	Teacher Legacy Pension Plan	Teachers Retirement Plan	Public Employee Retirement Plan						Total
	Teachers	Teachers (Hybrid)	State Employees	State Employees (Hybrid)	Higher Education Employees	Higher Education Employees (Hybrid)	Political Subdivision Employees	Political Subdivision Employees (Hybrid)	
2011	79,583	0	42,142	0	16,409	0	81,780	0	219,914
2012	73,449	0	42,171	0	16,693	0	78,180	0	210,493
2013	73,306	0	41,856	0	16,590	0	77,815	0	209,567
2014	78,506	0	40,581	0	16,829	0	78,144	0	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
2017	61,844	15,329	30,036	11,014	13,206	4,293	77,086	1,692	214,500



SCHEDULE OF RETIRED MEMBERS
By Type of Benefit Plan

Benefit Plan	Teachers Legacy Pension Plan	Public Employee Retirement Plan - Legacy			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
Regular	31,033	19,977	9,855	29,600	90,465
Option I	4,097	5,747	3,150	6,484	19,478
Option II	1,463	1,568	913	1,515	5,459
Option III	5,134	5,197	1,988	5,203	17,522
Option IV	4,027	2,951	1,413	2,302	10,693
S.S. Leveling	4,549	2,687	711	2,138	10,085
Others	32	125	6	48	211
Total	50,335	38,252	18,036	47,290	153,913

Benefit Plan	Teacher Retirement Plan	Public Employee Retirement Plan - Hybrid			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
Regular	2	0	1	0	3
Option I	0	1	0	0	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	0	0	0	0
Total	2	1	1	1	5



SCHEDULES OF RETIRED MEMBERS
FOR THE YEAR ENDED JUNE 30, 2017



SCHEDULE OF RETIRED MEMBERS
By Type of Retirement

Type of Retirement	Teachers Legacy Pension Plan	Public Employee Retirement Plan - Legacy			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
Early Retirement	6,265	5,208	2,759	6,702	20,934
Service Retirement	42,465	30,259	14,239	37,354	124,317
Disability	1,287	2,015	743	2,614	6,659
Total Retirees	50,017	37,482	17,741	46,670	151,910
Survivors	318	770	295	620	2,003
Total	50,335	38,252	18,036	47,290	153,913

Type of Retirement	Teacher Retirement Plan	Public Employee Retirement Plan - Hybrid			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
Retirees:					
Early Retirement	0	0	0	0	0
Service Retirement	1	1	1	1	4
Disability	1	0	0	0	1
Total Retirees	2	1	1	1	5
Survivors	0	0	0	0	0
Total	2	1	1	1	5



SCHEDULE OF RETIRED MEMBERS

By Average Monthly Benefits

STATE EMPLOYEES LEGACY PENSION PLAN

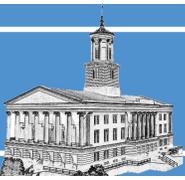
Average Monthly Benefit	Number of Retirees	Type of Retirement				Option Selected						
		Service	Early	Disability	Survivor	Regular	I	II	III	IV	SS	
											Leveling	Other
0-500	11,110	7,944	2,289	618	259	6,250	1,177	390	1,504	641	547	1
501-1,000	8,295	5,476	1,613	1,017	189	4,576	1,328	322	1,066	588	408	7
1,001-1,500	6,000	4,813	771	294	122	3,019	842	251	854	440	586	8
1,501-2,000	4,716	4,257	320	62	77	2,316	577	178	695	428	518	4
2,001-2,500	3,216	3,024	127	16	49	1,590	408	124	414	321	356	3
2,501-3,000	1,991	1,921	43	3	24	941	270	91	297	215	165	12
3,001-3,500	1,139	1,090	26	3	20	525	193	78	135	133	70	5
3,501-4,000	626	611	6	0	9	276	99	42	108	72	20	9
Over 4,000	1,159	1,125	11	2	21	488	252	92	120	111	20	76
	38,252	30,261	5,206	2,015	770	19,981	5,746	1,568	5,193	2,949	2,690	125

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	4,652	3,599	915	112	26	2,883	535	172	543	289	226	4
501-1,000	6,121	3,803	1,868	387	63	3,703	714	185	700	476	333	10
1,001-1,500	7,366	5,075	1,730	503	58	4,241	706	215	849	559	790	6
1,501-2,000	9,072	7,758	1,041	211	62	4,971	701	229	1,086	799	1,279	7
2,001-2,500	9,791	9,197	487	61	46	6,140	598	239	1,029	864	920	1
2,501-3,000	6,306	6,113	152	11	30	4,283	348	178	472	480	541	4
3,001-3,500	3,297	3,233	48	1	15	2,216	224	95	232	261	269	0
3,501-4,000	1,763	1,736	16	1	10	1,208	130	56	118	130	121	0
Over 4,000	1,967	1,951	8	0	8	1,398	140	95	98	156	80	0
	50,335	42,465	6,265	1,287	318	31,043	4,096	1,464	5,127	4,014	4,559	32

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	6,017	4,411	1,269	247	90	3,684	930	230	635	322	214	2
501-1,000	3,894	2,641	841	351	61	2,316	624	172	381	273	128	0
1,001-1,500	2,586	2,086	353	108	39	1,359	443	137	291	233	123	0
1,501-2,000	1,706	1,483	170	28	25	794	307	102	222	181	100	0
2,001-2,500	1,073	978	66	8	21	482	201	57	139	134	59	1
2,501-3,000	774	734	28	1	11	341	149	51	104	80	49	0
3,001-3,500	530	501	15	0	14	236	125	42	59	51	17	0
3,501-4,000	414	395	10	0	9	178	99	26	64	36	11	0
Over 4,000	1,042	1,010	7	0	25	468	272	97	91	101	10	3
	18,036	14,239	2,759	743	295	9,858	3,150	914	1,986	1,411	711	6



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	25,974	19,793	4,410	1,464	307	17,168	3,437	703	2,660	1,093	895	18
501-1,000	11,277	8,670	1,544	899	164	7,354	1,504	317	1,171	503	409	19
1,001-1,500	4,823	4,053	495	205	70	2,694	705	200	610	285	319	10
1,501-2,000	2,390	2,161	151	35	43	1,166	362	108	364	172	217	1
2,001-2,500	1,321	1,225	72	6	18	571	216	72	218	102	142	0
2,501-3,000	667	635	19	4	9	280	112	42	84	64	85	0
3,001-3,500	362	350	9	1	2	138	64	37	44	39	40	0
3,501-4,000	191	182	3	0	6	87	32	11	24	14	23	0
Over 4,000	285	282	2	0	1	145	54	22	21	30	13	0
	47,290	37,351	6,705	2,614	620	29,603	6,486	1,512	5,196	2,302	2,143	48

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	1	1	0	0	0	1	0	0	0	0	0	0

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	2	1	0	1	0	2	0	0	0	0	0	0

HIGHER EDUCATION 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	1	1	0	0	0	1	0	0	0	0	0	0

POLITICAL SUBDIVISION HYBRID RETIREMENT PLAN

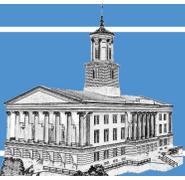
Average Monthly Benefit	Number of Retirees	Type of Retirement				Option Selected						
		Service	Early	Disability	Survivor	Regular	I	II	III	IV	SS Leveling	Other
0-500	1	1	0	0	0	0	0	0	1	0	0	0



SCHEDULE OF RETIRED MEMBERS

By Current Age

Current Age	Teachers Legacy Pension Plan	Public Employee Retirement Plan - Legacy			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
Under 40	81	150	48	126	405
40-44	49	96	20	115	280
45-49	118	217	71	223	629
50-54	475	592	191	668	1,926
55-59	2,597	2,870	990	3,011	9,468
60-64	8,418	6,673	2,625	7,941	25,657
65-69	13,898	9,224	3,953	11,429	38,504
70-74	10,434	7,538	3,668	9,486	31,126
75-79	6,088	4,830	2,743	6,683	20,344
80-84	2,661	3,206	1,938	4,292	13,445
85-89	1,109	1,856	1,147	2,225	7,889
90-94	1,109	793	509	813	3,224
95-99	320	190	122	236	868
Over 99	78	17	11	42	148
Total	50,335	38,252	18,036	47,290	153,913



SCHEDULE OF RETIRED MEMBERS

By Current Age (continued)

Current Age	Teacher Retirement Plan	Public Employee Retirement Plan - Hybrid			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
45-49	1	0	0	0	1
50-54	0	0	0	0	0
55-59	0	1	0	1	2
65-69	0	0	1	0	1
70-74	1	0	0	0	1
Total	2	1	1	1	5

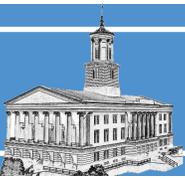


SCHEDULE OF RETIRED MEMBERS

By Date of Retirement

Date of Retirement	Teachers Legacy Pension Plan	Public Employee Retirement Plan - Legacy			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
1950's	2	0	0	0	2
1960's	17	7	0	0	24
1970's	335	184	54	120	693
1980's	2,562	1,493	774	1,357	6,186
1990's	8,745	6,316	3,496	6,407	24,964
2000's	18,744	13,185	6,648	16,214	54,791
2010's	19,930	17,067	7,064	23,192	67,253
Total	50,335	38,252	18,036	47,290	153,913

Date of Retirement	Teachers Retirement Plan	Public Employees Retirement Plan - Hybrid			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
2010's	2	1	1	1	5
Total	2	1	1	1	5



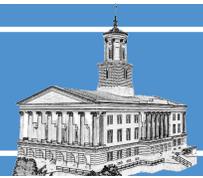
SCHEDULE OF RETIRED MEMBERS
Based on Service Credit at Retirement

Years Of Service	Teachers Legacy Pension Plan	Public Employee Retirement Plan - Legacy			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
Under 10	4,610	8,547	4,463	15,598	33,218
10-14	4,050	5,695	2,756	8,614	21,115
15-19	4,590	4,326	2,129	6,941	17,986
20-24	5,719	4,318	1,995	5,776	17,808
25-29	6,824	3,931	1,944	4,465	17,164
30-34	14,905	6,746	2,726	4,039	28,416
35-39	6,580	2,848	1,290	1,309	12,027
40-44	2,468	1,261	504	408	4,641
Over 44	589	580	229	140	1,538
Total	50,335	38,252	18,036	47,290	153,913

Years of Service	Teachers Retirement Plan	Public Employees Retirement Plan - Hybrid			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
Under 10	2	1	1	1	5
Total	2	1	1	1	5



RETIRED MEMBERS BY GEOGRAPHICAL DISTRIBUTION
FOR THE YEAR ENDED JUNE 30, 2017

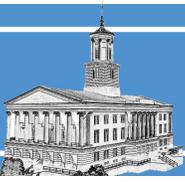


UNITED STATES

Alabama	975	Ohio	233
Alaska	22	Oklahoma	105
Arizona	191	Oregon	69
Arkansas	497	Pennsylvania	108
California	257	Rhode Island	5
Colorado	156	South Carolina	476
Connecticut	24	South Dakota	16
Delaware	8	Tennessee	140,934
District of Columbia	17	Texas	668
Florida	1,911	Utah	34
Georgia	1,485	Vermont	8
Hawaii	17	Virginia	700
Idaho	31	Washington	85
Illinois	200	West Virginia	49
Indiana	193	Wisconsin	53
Iowa	39	Wyoming	14
Kansas	63	Total U.S.	<u>153,873</u>
Kentucky	881		
Louisiana	119		
Maine	32		
Maryland	106		
Massachusetts	40		
Michigan	150		
Minnesota	31		
Mississippi	1,515		
Missouri	217		
Montana	20		
Nebraska	17		
Nevada	62		
New Hampshire	21		
New Jersey	34		
New Mexico	68		
New York	88		
North Carolina	829		
North Dakota	4		

INTERNATIONAL COUNTRIES

Australia	2
Belize	1
Brazil	2
Canada-Manitoba	1
Canada-New Brunswick	3
Canada-Newfoundland	1
Canada-Nova Scotia	1
Canada-Ontario	3
Canada-Prince Edward Island	1
Chile	2
Ecquador	1
Egypt	1
Germany	3
Ghana	1
Greece	3
Ireland	1
Kenya	1
Phillipines	1
Poland	1
Spain	1
Thailand	3
Total Foreign Countries	<u>34</u>
American Samoa	1
Puerto Rico	5
Virgin Islands, U.S.	1
Overseas Military Bases	4
Total U.S.	<u>153,873</u>
Total U.S. & Foreign	<u>153,918</u>

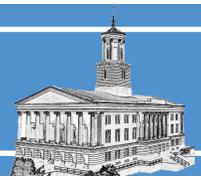


RETIRED MEMBERS BY GEOGRAPHICAL DISTRIBUTION
FOR THE YEAR ENDED JUNE 30, 2017



TENNESSEE COUNTIES

Anderson	2,041	Hamilton	6,708	Morgan	665
Bedford	963	Hancock	136	Obion	983
Benton	426	Hardeman	1,084	Overton	583
Bledsoe	615	Hardin	778	Perry	276
Blount	3,413	Hawkins	1,887	Pickett	143
Bradley	1,938	Haywood	719	Polk	303
Campbell	1,007	Henderson	503	Putnam	2,881
Cannon	450	Henry	1,025	Rhea	739
Carroll	951	Hickman	731	Roane	1,515
Carter	3,405	Houston	161	Robertson	1,552
Cheatham	1,099	Humphreys	505	Rutherford	4,672
Chester	430	Jackson	390	Scott	540
Claiborne	909	Jefferson	1,444	Sequatchie	349
Clay	186	Johnson	570	Sevier	1,635
Cocke	932	Knox	8,597	Shelby	15,488
Coffee	1,151	Lake	315	Smith	499
Crockett	426	Lauderdale	910	Stewart	317
Cumberland	1,284	Lawrence	1,069	Sullivan	3,431
Davidson	11,039	Lewis	355	Sumner	3,424
Decatur	309	Lincoln	833	Tipton	1,212
DeKalb	463	Loudon	1,037	Trousdale	200
Dickson	1,235	Macon	379	Unicoi	456
Dyer	735	Madison	3,050	Union	277
Fayette	1,128	Marion	577	Van Buren	229
Fentress	530	Marshall	708	Warren	997
Franklin	978	Maurry	1,564	Washington	2,214
Gibson	1,441	McMinn	1,112	Wayne	423
Giles	652	McNairy	663	Weakley	1,189
Grainger	495	Meigs	209	White	767
Greene	2,571	Monroe	812	Williamson	3,245
Grundy	389	Montgomery	3,320	Wilson	2,489
Hamblen	1,397	Moore	102	<u>Total</u>	<u>140,934</u>



AVERAGE BENEFIT PAYMENT SCHEDULE
Fiscal Year of Retirement

Teacher Retirement Plan

Years of Service Credit

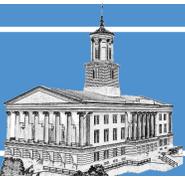
	Less than 15	15-19	20-24	25-29	30 or more
2017 Average Monthly Benefit	\$93	\$0	\$0	\$0	\$0
Number of Retirees	1	0	0	0	0
Average Final Salary	\$37,094	\$0	\$0	\$0	\$0
2016 Average Monthly Benefit	\$39	\$0	\$0	\$0	\$0
Number of Retirees	1	0	0	0	0
Average Final Salary	\$39,323	\$0	\$0	\$0	\$0

Teacher Legacy Pension Plan

Years of Service Credit

	Less than 15	15-19	20-24	25-29	30 or more
2017 Average Monthly Benefit	\$574	\$1,200	\$1,617	\$2,169	\$2,925
Number of Retirees	388	215	251	228	694
Average Final Salary	\$52,674	\$55,528	\$58,965	\$64,100	\$64,783
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

(continued)



AVERAGE BENEFIT PAYMENTS SCHEDULE
(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
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
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.

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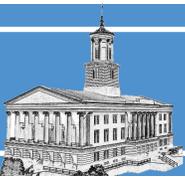


AVERAGE BENEFIT PAYMENT SCHEDULE
Fiscal Year of Retirement

Public Employee Retirement Plan-Hybrid
Years of Service Credit

	Less than 15	15-19	20-24	25-29	30 or more
2017 Average Monthly Benefit	\$0	\$0	\$0	\$0	\$0
Number of Retirees	0	0	0	0	0
Average Final Salary	\$0	\$0	\$0	\$0	\$0
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.



AVERAGE BENEFIT PAYMENTS SCHEDULE
(CONTINUED)



Public Employee Retirement Plan
Years of Service Credit

	Less than 15	15-19	20-24	25-29	30 or more
2017 Average Monthly Benefit	\$365	\$820	\$1,157	\$1,464	\$2,396
Number of Retirees	2,563	759	614	504	1,156
Average Final Salary	\$43,292	\$38,782	\$43,367	\$44,471	\$55,431
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

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 ESTABLISHED
July 1, 2016 through June 30, 2017

Teacher Legacy Pension Plan	Type of Service	No of Members	Years of Service	Amount
	Backpayment	28	43	\$ 223,888
	Military	0	0	0
	Redeposit	49	201	1,089,480
	Totals	77	244	\$ 1,313,368

Public Employee Retirement Plan - Legacy	Type of Service	No of Members	Years of Service	Amount
	Backpayment	236	815	\$ 3,379,530
	Military	1	1	2,498
	Redeposit	50	272	739,122
	Totals	287	1,088	\$ 4,121,150

Teacher Retirement Plan	Type of Service	No of Members	Years of Service	Amount
	Backpayment	3	14	\$ 83,668
	Military	0	0	0
	Redeposit	1	0	1,071
	Totals	4	14	\$ 84,739

Public Employee Retirement Plan - Hybrid	Type of Service	No of Members	Years of Service	Amount
	Backpayment	4	2	\$ 6,220
	Military	2	6	0
	Redeposit	0	0	0
	Totals	6	8	\$ 6,220

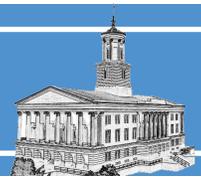
Grand Totals:	Type of Service	No of Members	Years of Service	Amount
	Backpayment	271	874	\$ 3,693,306
	Military	3	7	2,498
	Redeposit	100	473	1,829,673
	Totals	374	1,354	\$ 5,525,477



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 INSTALLMENT ACTIVITY
For the Year Ended June 30, 2017

	<u>Type of Service</u>	<u>Number of Members</u>	<u>Years of Service</u>	<u>Amount</u>
Teacher Legacy Pension Plan	Backpayment	9	5	\$ 4,152
	Military	0	0	0
	Redeposit	24	113	149,812
	Totals	33	118	\$ 153,964
Public Employee Retirement Plan - Legacy	Backpayment	14	37	\$ 2,275
	Military	0	0	0
	Redeposit	14	64	14,212
	Totals	28	101	\$ 16,487
Teacher Retirement Plan	Backpayment	1	0	\$ 3,346
	Military	0	0	0
	Redeposit	0	0	0
	Totals	1	0	\$ 3,346
Grand Totals:	Backpayment	24	42	\$ 9,773
	Military	0	0	0
	Redeposit	38	177	164,024
	Totals	62	219	\$ 173,797



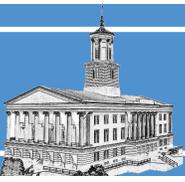
REFUND ACTIVITY

For the Year Ended June 30	Number of Refunds Processed	Amount Refunded
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
2017	4,583	39,943,710

POLITICAL SUBDIVISION PARTICIPATION

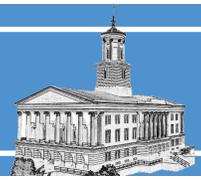
Schedule by Category

Year Ended June 30	Number of Cities	Number of Counties	Political Subdivisions	Total
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
2017	181	87	257	525

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

Year Ended June 30	State Employees		Teachers	
	Legacy	Hybrid	Legacy	Hybrid
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
2017	15.02%	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.



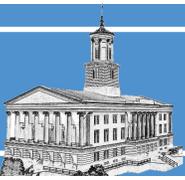
PRINCIPAL PARTICIPATING EMPLOYERS
Current Year and Nine Years Ago

Teacher Legacy Pension Plan

	2017				2008		
	Covered		Percentage of Total System		Covered		Percentage of Total System
	Employees	Rank			Employees	Rank	
Participating Government				Participating Government			
Shelby County Schools	5,619	1	8.45%	Memphis City Schools		1	0.00%
Davidson County Schools	4,688	2	7.05%	Davidson County Schools	5,446	2	8.03%
Knox County Schools	3,876	3	5.83%	Knox County Schools	3,934	3	5.80%
Rutherford County Schools	2,510	4	3.77%	Shelby County Schools	2,916	4	4.30%
Hamilton County Schools	2,500	5	3.76%	Hamilton County Schools	2,840	5	4.19%
Williamson County Schools	2,108	6	3.17%	Rutherford County Schools	2,128	6	3.14%
Sumner County Schools	1,789	7	2.69%	Sumner County Schools	1,774	7	2.62%
Montgomery County Schools	1,759	8	2.64%	Montgomery County Schools	1,753	8	2.59%
Sevier County Schools	1,015	9	1.53%	Williamson County Schools	1,674	9	2.47%
Wilson County Schools	914	10	1.37%	Jackson-Madison County Schools	1,124	10	1.66%
Others	35,066		52.71%	Others	44,202		65.20%
	<u>66,523</u>		100.00%		<u>67,791</u>		100.00%

Public Employee Retirement Plan - Legacy

	2017				2008		
	Covered		Percentage of Total System		Covered		Percentage of Total System
	Employees	Rank			Employees	Rank	
Participating Government				Participating Government			
State	42,479	1	35.24%	State	85,271	1	40.67%
Shelby County Unified School District	3,839	2	3.18%	Memphis City Schools	7,395	2	3.53%
Rutherford County	2,615	4	2.17%	Hamilton County	5,510	3	2.63%
Williamson County	2,466	4	2.05%	Rutherford County	3,070	4	1.46%
Montgomery County	2,406	5	2.00%	Montgomery County	2,949	5	1.41%
Others	66,752		53.37%	Others	105,465		50.30%
Total	<u>120,557</u>		100.00%	Total	<u>209,660</u>		100.00%



SCHEDULES OF PRINCIPAL PARTICIPATING EMPLOYERS
(CONTINUED)



Teacher Retirement Plan

	2017			<u>Participating Government</u>	2008		
	<u>Covered Employees</u>	<u>Rank</u>	<u>Percentage of Total System</u>		<u>Covered Employees</u>	<u>Rank</u>	<u>Percentage of Total System</u>
<u>Participating Government</u>				(1)			
Davidson County Schools	1,590	1	2.39%				
Shelby County Schools	1,533	2	2.30%				
Knox County Schools	1,007	3	1.51%				
Williamson County Schools	844	4	1.27%				
Hamilton County Schools	830	5	1.25%				
Montgomery County Schools	700	6	1.05%				
Rutherford County Schools	648	7	0.97%				
Sumner County Schools	392	8	0.59%				
Wilson County Schools	296	9	0.44%				
Jackson-Madison County Schools	213	10	0.32%				
Others	7,276		10.94%				
	<u>15,329</u>		<u>23.04%</u>				

Public Employee Retirement Plan - Hybrid

	2017			<u>Participating Government</u>	2008		
	<u>Covered Employees</u>	<u>Rank</u>	<u>Percentage of Total System</u>		<u>Covered Employees</u>	<u>Rank</u>	<u>Percentage of Total System</u>
<u>Participating Government</u>				(1)			
State Employee Hybrid	15,271	1	12.67%				
Hamilton County-Hybrid	425	2	0.35%				
Montgomery County-Hybrid	145	3	0.12%				
Roane County Government	113	4	0.09%				
Weakley County-Hybrid	107	5	0.09%				
Others	938		0.78%				
Total	<u>16,999</u>		<u>100.00%</u>				

(1) The Teacher Retirement Plan and Public Employee Retirement Plan - Hybrid became effective for teachers 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, 2017, there were 525 political subdivisions participating in TCRS.

Participation as of June 30, 2017:

Cities	181
Counties	87
Utility Districts	75
Special School Districts	19
Local Education Agencies	10
Joint Ventures	22
Housing Authorities	13
911 Emergency Communication Districts	55
Miscellaneous Authorities	<u>63</u>
Total	525

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.

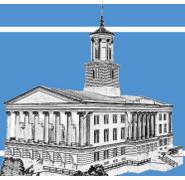
Coverage

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 525
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)

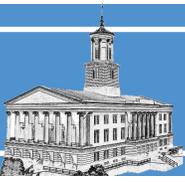
Local Government Hybrid Plan

- 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



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.



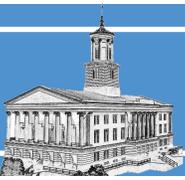
911 EMERGENCY COMMUNICATIONS DISTRICTS

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

CITIES

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

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



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	Mauy	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	Lenior City	Memphis	Rockwood
Clinton	Hartsville	Lawrenceburg	Maryville	Morristown	Rogersville**
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.
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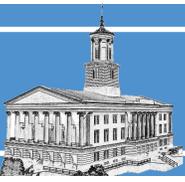
MISCELLANEOUS AGENCIES

- | | |
|--|--|
| Anderson County Economic Development Association | South Central Human Resource Agency** |
| Anderson County Water Authority | South Central Tennessee Community Services Agency |
| Beech River Watershed | South Central Tennessee Development District |
| Bi County Solid Waste Management | South Central Tennessee Workforce Board |
| Blount County Fire Protection District | Southeast Tennessee Community Service Agency |
| Blount County Library | Southeast Tennessee Development District |
| Books from Birth | Southeast Tennessee Human Resource Agency |
| Carter County Tomorrow | Southwest Tennessee Community Service Agency |
| Cocke County Partnership, Inc. | Southwest Tennessee Development District |
| County Officials Association of Tennessee | Southwest Tennessee Human Resource Agency |
| Delta Human Resource Agency | Tennessee Association of Assessing Officers |
| Douglas Cherokee Economic Authority | Tennessee Association of County Mayors |
| East Tennessee Community Service Agency | Tennessee Athletics Association** |
| Fayetteville-Lincoln County Industrial Development Board | Tennessee County Commissioners Association |
| First Tennessee Development District | Tennessee County Highway Officials Association |
| First Tennessee Human Resource Agency | Tennessee County Services Association |
| Four Lake Regional Industrial Development Authority | Tennessee Duck River Development Agency |
| Greater Nashville Regional Council | Tennessee Education Association |
| Hamilton County Community Service Agency | Tennessee Elk River Development Agency** |
| Joint Economic and Development Board of Wilson County | Tennessee Historical Society |
| Knox County Community Services Agency | Tennessee Municipal Bond Fund |
| Loudon County Economic Development Agency | Tennessee Municipal League |
| Maryville, Alcoa, Blount Co. Parks & Rec. | 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 |
| Millington Airport Authority | Tennessee Secondary School Athletic Association |
| Networks Sullivan Partnership | Tennessee Sheriffs Association |
| Northeast Community Service Agency | Tennessee State Employees Association |
| Northwest Tennessee Community Service Agency | Tennessee Veterans Home Board |
| Obion County Library | Upper Cumberland Community Services Agency |
| Putnam County Library | Upper Cumberland Human Resource Agency |
| Squatchie Valley Planning and Development District | Upper East Tennessee Human Development Agency |
| Sevier County Economic Development Council | Workforce Solutions |
| Shelby County Community Service Agency | |

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 | |

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**UTILITY DISTRICTS**

Alpha-Talbott	Lakeview
Arthur Shawnee	Lincoln County Board of Public Utilities
Big Creek	Loudon
Bloomingtondale	Madison Suburban Utility District
Bondcroft	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
Cookeville Boat Dock Road Utility District	Old Hickory
County Wide	Old Knoxville Highway Utility District
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	Walden's Ridge Utility District
Jackson County	Webb Creek
Johnson City Power Board	West Knox**
LaGuardo Utility District	West Overton
Lake County	

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