

TENNESSEE CONSOLIDATED RETIREMENT SYSTEM

A Program of the Tennessee Treasury Department | A Component Unit of the State of Tennessee

Annual Comprehensive Financial Report

*For the Fiscal Year Ended
June 30, 2021*



Prepared by:
State of Tennessee Department of Treasury
502 Deaderick Street
Nashville, TN 37243-0201
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treasury.tn.gov/tcrs

David H. Lillard, Jr., State Treasurer
Jamie Wayman, TCRS Director



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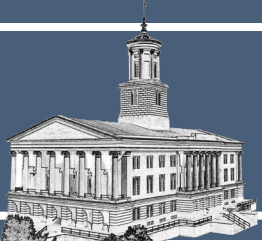
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Introduction

Chairman of the Board's Letter

Professional Awards

Letter of Transmittal

Administration and Mission

The Council on Pensions

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 10, 2021

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 thirty-fourth 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 manages the plan to secure the financial future of its more than 580,000 active, inactive and retired members. TCRS remains financially strong and well-funded. TCRS has been recognized as one of the top three best-funded pension plan in the country. TCRS paid a total of \$2.87 billion to our 149,260 members in fiscal year 2021, over 92% of whom remain in Tennessee. Members are provided comprehensive financial education and retirement counseling at no additional cost to the member. Information about the TCRS pension plans can be found at *treasury.tn.gov/tcrs*.

Investments: The 2021 fiscal year was a great period for all investors and TCRS portfolio experienced a gain of 25.60 percent with an annualized gain of 9.41 percent for the ten-year period. The 2021 results placed TCRS in the top 25% of peers for the period. The ten-year return 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. 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.

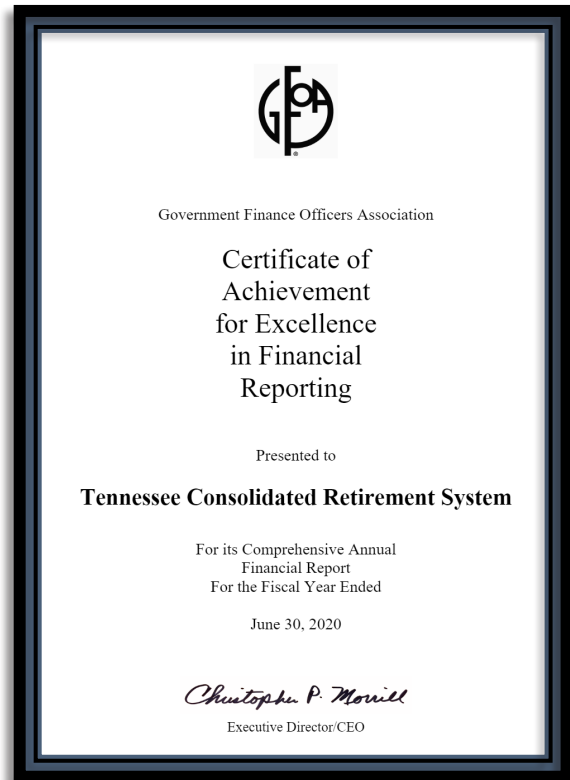
Sincerely,

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, 2020. This was the 33rd 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, 2020. 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 10, 2021

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) annual comprehensive financial report for the fiscal year ended June 30, 2021. 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 588 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)



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. As of June 30, 2020, the latest valuation date, the legacy plan had the following funded ratios on a market value basis: state employees, 90.58 percent; K-12 teachers, 103.09 percent; and political subdivisions in aggregate 102.15 percent. As of June 30, 2020, the hybrid retirement plan had the following funded ratios on a market value basis: state employees, 112.9 percent and K-12 teachers, 116.52 percent. Experience studies are performed on a quadrennial basis. The results of the June 30, 2016 experience study have been incorporated into the June 30, 2019 actuarial valuation which produced employer contribution rates for the period July 1, 2020-June 30, 2021.

The TCRS is invested in the Tennessee Retiree Group Trust (TRGT). 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.

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 7.25 percent investment return assumed by TCRS. A premium will continue to be placed on security selection.

The current TCRS Investment Policy can be found at treasury.tn.gov/Retirement/Boards-and-Governance/Reporting-and-Investment-Policies. TCRS pension funds represent 99.3 percent of the TRGT. For fiscal year 2021, the TRGT investments provided a 25.60 percent rate of return. The annualized rate of return was 12.34 percent, 11.30 percent, and 9.41 percent over the trailing three, five, and ten years, respectively. For further information on investments of TRGT, please refer to the TRGT Financial Statements at treasury.tn.gov.

(continued)



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, 2020. This was the 33rd 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 the Tennessee Consolidated Retirement System 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, Financial Strategies and Analysis, Human Resources, and Communications. 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 operational cost associated with state employees and higher education employees. Local education agencies are responsible for the operational cost related to K-12 teachers. Political subdivisions are responsible for the operational cost associated with their employees.

MISSION

The mission of the TCRS 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

Created as a legislative oversight committee, the Council on Pensions develops, recommends and establishes pension and retirement standards and maintains a progressive state policy on retirement.

The Council periodically reviews Tennessee's retirement 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 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.

(continued)



NON-VOTING MEMBERS



David H. Lillard, Jr.
State Treasurer



Jamie Wayman
TCRS Director



Jason Mumpower
Comptroller of the Treasury



Juan Williams
*Commissioner of
Human Resources*



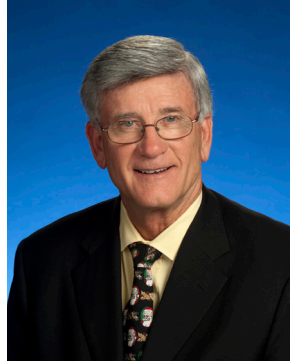
Butch Eley
*Commissioner of
Finance and Administration*



VOTING MEMBERS - SENATORS



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



**Senator
Todd Gardenhire**



**Senator
Brenda Gilmore**



**Senator
Jack Johnson**



**Senator
Joey Hensley**
*Finance, Ways and Means
Second Vice-Chair*



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



**Senator
Paul Bailey**
Speaker's Designee



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

(continued)



VOTING MEMBERS - REPRESENTATIVES



**Representative
Charlie Baum**
*Finance, Ways and Means
Vice-Chair*



**Representative
Karen D. Camper**



**Representative
David Hawk**



**Representative
Patsy Hazlewood**
*Council Chair
Finance, Ways and Means Chair*



**Representative
Gary Hicks**
*Finance, Ways and Means
Sub-Committee Chair*



**Representative
Sam Whitson**



**Representative
Ryan Williams**



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 (as nonvoting members), the Commissioner of Human Resources, the Commissioner of Finance and Administration, the Comptroller of the Treasury, the Secretary of State and the Administrative Director of the Courts. In addition, the State Treasurer sits as Chair of the Board and the Director of TCRS serves as Secretary.

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

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

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

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EX-OFFICIO MEMBERS



David H. Lillard, Jr.
State Treasurer



Jamie Wayman
TCRS Director



Tre Hargett
Secretary of State



Jason Mumpower
Comptroller of the Treasury



**Representative
Patsy Hazlewood**
Council Chair



**Senator
Bo Watson**
Council Vice-Chair



Juan Williams
*Commissioner of
Human Resources*



Butch Eley
*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, 2022



Johnny Bohanan
Public Safety
Term Expires:
June 30, 2022



Tim Ellis
Tennessee
Municipal League
Term Expires: June 30, 2023



Dr. Kim Lackey Fisher
East Tennessee Teacher
Term Expires:
June 30, 2022



Bill Kemp
Tennessee County
Officials Association
Term Expires:
June 30, 2023



Alfred Laney
Retired State Employee
Term Expires:
June 30, 2022



Patsy Moore
West Tennessee Teacher
Term Expires:
June 30, 2023



Paula Shaw Daniel
State Employee
Term Expires:
June 30, 2022



Cathlyn Smith
State Employee
Term Expires:
June 30, 2022



Robert Wormsley
Tennessee County
Services Association
Term Expires: June 30, 2023



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.

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
Aksia
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.

Chris Conklin
RREEF America LLC
Chicago, Illinois

Tony Ferrante
Heitman
Chicago, Illinois

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

Alec Burleigh
AEW Capital Management L.P.
Boston, Massachusetts

Preston Meyer
J.P. Morgan Investment Management, Inc.
New York, New York

(continued)

**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.

Jenny Chou
TimesSquare Capital Management
New York, New York

Thomas Clancy
Fiera Capital
Boston, Massachusetts

Chris Moore
WCM Asset Management
Laguna Beach, California

Jill Farrell
American Century Investments
Kansas City, Missouri

Justin Atkinson
Walter Scott & Partners, Ltd.
Edinburgh, Scotland, UK

Brett Peven
Pzena Investment Management
New York, New York

Vanessa DeMeo
PanAgora Asset Management, Inc.
Boston, Massachusetts

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

Ben Kottler
Marathon Asset Management
London, England

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.

JoAnne M. K. Jackson
State Street Corporation
Boston, Massachusetts

THE MEDICAL ADVISORS

The Tennessee Consolidated Retirement System contracts with the University of Massachusetts Medical School (UMass) to serve as the Medical Advisor. UMass Medical School evaluates applications for disability retirement to determine whether the applicants are totally and permanently disabled and unable to engage in gainful employment. Additionally, UMass Medical School reviews medical data submitted by disabled retirees who are subject to periodic evaluation.



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
Findley, Inc.
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

Jason Mumpower
Comptroller of the Treasury
Nashville, Tennessee



TREASURER’S OFFICE

State Treasurer David H. Lillard, Jr., JD, LLM
 Chief Operating Officer Mary Jo Price, JD
 Deputy Chief Operating Officer Kevin Bradley, CPA, CGFM, AAP, CGMA
 Communications Director Shelli King
 Director, Legislative and Agency Affairs Roy West
 Executive Assistant to the Treasurer Heather Sczpeczenski

TCRS INVESTMENTS

Chief Investment Officer Michael Brakebill, CFA, CAIA
 Deputy Chief Investment Officer Thomas Kim, CFA
 Assistant CIO and Director of Cash Management Tim McClure, CTP, CGFM, CFP
 Equity Director Carrie Green, CFA
 Real Estate Director J.P. Rachmaninoff, CPA
 Private Equity Director Daniel Crews, CFA
 Strategic Lending Director Jeff Dunn, CFA

RETIREMENT ADMINISTRATION

TCRS Director Jamie Wayman, CPA, CEBS
 TCRS Assistant Director Erica Nale, CEBS
 Administrator of Old Age and Survivors Insurance Mary Griffin, JD
 Senior Director of Financial Empowerment Mary Beth Franklyn, JD
 Director of Outreach Drew Freeman
 Assistant Director of Employer Reporting and Customer Service Altovisse Robertson

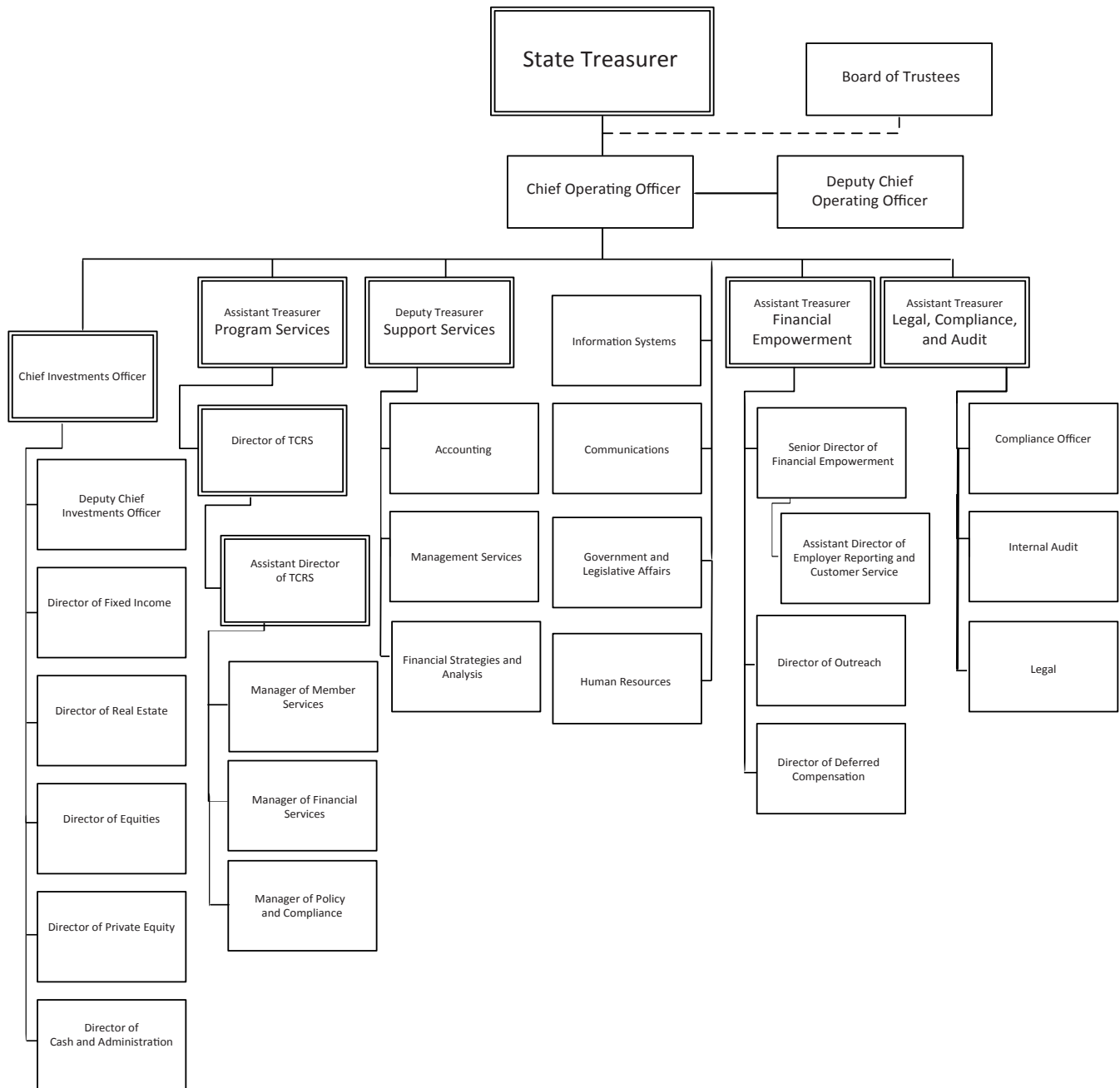
TREASURY DIVISIONS

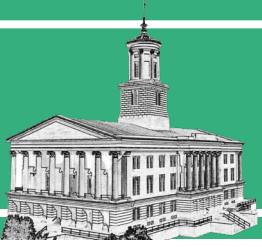
Deputy Treasurer, Support Services Rick DuBray, CPA
 Assistant Treasurer, Financial Empowerment Ashley Nabors
 Assistant Treasurer, Legal, Compliance and Audit Alison Cleaves, JD
 Assistant Treasurer, Program Services Steve Summerall, ARM, CEBS
 Director of Compliance Jennifer Selliers, CCEP
 Director of Deferred Compensation Hunter Bethea
 Director of Accounting Brian Derrick, CPA
 Deputy Director of Accounting Connie Gibson, CPA
 Director of Management Services Kerry Hartley, CPA

*The Treasurer is housed on the 1st floor of the State Capitol Building.
 Divisions are housed in 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





JASON E. MUMPOWER
Comptroller

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 June 30, 2021, 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

(continued)



no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Tennessee Consolidated Retirement System as of June 30, 2021, 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, 2021, and the changes in its financial position for the year then ended in accordance with accounting principles generally accepted in the United States of America. Our opinion is not modified with respect to this matter.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the 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.

Supplementary 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

(continued)



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 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 9, 2021, on our consideration of the Tennessee Consolidated Retirement System's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, and contracts, and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Tennessee Consolidated Retirement System's internal control over financial reporting and compliance.

A handwritten signature in cursive script that reads "Katherine J. Stickel".

Katherine J. Stickel, CPA, CGFM, Director
Division of State Audit
December 9, 2021



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, 2021. This section should be read in conjunction with the Independent Auditor's Report, the audited financial statements, and the accompanying notes. The financial statements, notes and this discussion are the responsibility of management.

FINANCIAL HIGHLIGHTS

- The net position for the TCRS plans (total assets minus total liabilities) at June 30, 2021 was \$65.5 billion, increasing \$12.1 billion (22.7 percent) from the plan net position at June 30, 2020. The net position is restricted for future benefit obligations. This increase in plan net position is primarily the result of an increase in net investment income.
- Net investment income for fiscal year 2021 was \$13.6 billion. During fiscal year 2021, the TCRS received a time-weighted rate of return on its portfolio of 25.60 percent, compared to 4.94 percent for fiscal year 2020.
- Contribution revenue for fiscal year 2021 totaled \$1.5 billion, representing a decrease of 0.4 percent compared to fiscal year 2020.
- Total benefits and refunds paid for fiscal year 2021 were \$2.9 billion, representing an increase of 4.1 percent over fiscal year 2020 total benefits and refunds paid of \$2.8 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 2.3 percent cost of living adjustment was given in July 2020.
- Total administrative expenses for fiscal year 2021 were \$19.8 million, representing an increase of 3.2 percent from fiscal year 2020 administrative expenses of \$19.2 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 accordance 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, 2021.

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



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, 2021, the TCRS had a net position (total assets in excess of total liabilities) of \$65.5 billion, an increase of \$12.1 billion (22.7 percent) from \$53.3 billion at June 30, 2020. 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, 2021	June 30, 2020	Increase (Decrease) Amount	Percentage Change
ASSETS				
Cash and cash equivalents	\$ 24,211,870	\$ 24,305,039	\$ (93,169)	(0.4) %
Cash collateral for securities on loan	3,130,122,292	1,761,910,539	1,368,211,753	77.7 %
Member and employer receivables	114,400,094	108,359,508	6,040,586	5.6 %
Investments	65,363,262,412	53,232,946,150	12,130,316,262	22.8 %
Capital assets	9,464,569	13,178,457	(3,713,888)	(28.2) %
TOTAL ASSETS	<u>68,641,461,237</u>	<u>55,140,699,693</u>	<u>13,500,761,544</u>	24.5 %
LIABILITIES				
Death benefits, refunds and other payables	30,549,380	29,235,566	1,313,814	4.5 %
Cash collateral for securities on loan	3,130,122,292	1,761,910,539	1,368,211,753	77.7 %
TOTAL LIABILITIES	<u>3,160,671,672</u>	<u>1,791,146,105</u>	<u>1,369,525,567</u>	76.5 %
NET POSITION RESTRICTED FOR PENSIONS	<u>\$ 65,480,789,565</u>	<u>\$ 53,349,553,588</u>	<u>\$ 12,131,235,977</u>	22.7 %

(continued)



ANALYSIS OF REVENUES AND EXPENSES

Contribution rates for fiscal year 2021 remained steady but a significant change in the investment markets resulted in growth of the fund for fiscal year 2021. Gross investment income for fiscal year 2021 increased \$11.0 billion (426.2 percent) from fiscal year 2020

Investment expenses for fiscal year 2021 totaled \$69 million for a 36 percent decrease over fiscal year 2020 investment expenses of \$107 million. These expenses were split between portfolio management investment expenses of \$66.1 million and \$2.5 million in expenses attributed to the securities lending program. The decrease in investment expense is attributable to lower interest rates which directly affect the expenses for the securities lending program. The TCRS investment portfolio earned a time-weighted rate of return of 25.60 percent and net investment income of \$13.6 billion.

Total benefits paid during the year ended June 30, 2021 were \$2.9 billion, an increase of 4.1 percent over fiscal year 2020 total benefits which can be attributed to an increase in the number of retirees and a 2.3 percent cost of living adjustment given in July 2020. Total refunds paid decreased \$0.6 million, a decrease of 1.3 percent, in fiscal year 2021 from fiscal year 2020.

Administrative expenses for the year ended June 30, 2021 were \$19.8 million, an increase of 3.2 percent from fiscal year 2020 administrative expenses. The increase in administrative costs can be primarily attributed to increased expenses for actuarial and legal services.

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, 2021		Year ended June 30, 2020	
	Amount	% of Total	Amount	% of Total
Employee Contributions	\$ 399,341	2.7%	\$ 380,167	9.4%
Employer Contributions	1,089,474	7.2%	1,114,994	27.6%
Other Contributions	1,076	0.0%	1,406	0.0%
Net Investment Income	13,576,686	90.1%	2,539,479	62.9%
Total	\$ 15,066,577	100.0%	\$ 4,036,046	100.0%

Expenses by Type

(expressed in thousands)

	Year ended June 30, 2021		Year ended June 30, 2020	
	Amount	% of Total	Amount	% of Total
Benefit Payments	\$ 2,871,323	97.8%	\$ 2,757,155	97.7%
Refunds	44,190	1.5%	44,753	1.6%
Administrative	19,828	0.7%	19,215	0.7%
Total	\$ 2,935,341	100.0%	\$ 2,821,123	100.0%

(continued)



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

	For the Year Ended June 30, 2021	For the Year Ended June 30, 2020	FY21 - FY20 Increase (Decrease) Amount	FY21 - FY20 Percentage Change
ADDITIONS				
Contributions	\$ 1,489,890,682	\$ 1,496,566,726	\$ (6,676,044)	(0.4)%
Investment income	13,631,076,224	2,590,371,009	11,040,705,215	426.2%
Less: Investment expense	(66,090,762)	(61,495,465)	4,595,297	7.5%
Net income from securities lending activities	11,700,714	10,603,871	1,096,843	10.3%
Net investment income	13,576,686,176	2,539,479,415	11,037,206,761	434.6%
TOTAL ADDITIONS	15,066,576,858	4,036,046,141	11,030,530,716	273.3%
DEDUCTIONS				
Annuity benefits	2,865,681,520	2,752,436,072	113,245,448	4.1%
Death benefits	5,641,247	4,719,352	921,895	19.5%
Refunds	44,189,614	44,753,651	(564,037)	(1.3)%
Administrative expenses	19,828,500	19,214,635	613,865	3.2%
TOTAL DEDUCTIONS	2,935,340,881	2,821,123,710	114,217,171	4.0%
NET INCREASE (DECREASE)	12,131,235,977	1,214,922,431	10,916,313,545	898.5%
NET POSITION RESTRICTED FOR PENSIONS				
BEGINNING OF YEAR	53,349,553,588	52,134,631,157	1,214,922,431	2.3%
END OF YEAR	\$ 65,480,789,565	\$ 53,349,553,588	\$ 12,131,235,977	22.7%

(continued)



ECONOMIC FACTORS, FUTURE FUNDING PROVISIONS, OVERALL OUTLOOK

For the year ended June 30, 2021 the portfolio delivered a return of 25.60 percent which was above the actuarial assumed return of 7.25 percent. The fund gained 12.34 percent for the trailing three- year period and 9.41 percent for the trailing ten-year period. According to the Verus performance benchmark, the fund beat 82 percent of its peers for the trailing three-year period and 80 percent for the trailing ten-year period.

Strong returns from equities drove the returns for the year. Private Equity led with a return of 64.53 percent, and this was followed by very strong returns in Emerging Markets (50.70 percent), Canadian Stocks (46.95 percent), U.S. Stocks (40.70 percent), and International Developed Markets Equities (38.48 percent). Interest rates rose during the year due to the improving economic outlook and this dampened returns for the Fixed Income portfolio (loss of 0.90 percent).

An actuarial valuation was performed as of June 30, 2019 that determined the employer contribution rates for the period July 1, 2020 through June 30, 2021. An actuarial experience study to establish demographic and economic assumptions was completed effective June 30, 2016, was adopted by the Board of Trustees during fiscal year 2017 and was utilized in the June 30, 2019 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, 2021



STATEMENT OF FIDUCIARY NET POSITION

JUNE 30, 2021

(Expressed in Thousands)

	Public Employee Retirement Plan	Teacher Retirement Plan	Teacher Legacy Pension Plan	Total
ASSETS				
Cash and cash equivalents	\$ 12,508	\$ 223	\$ 11,481	\$ 24,212
Cash collateral for securities on loan	1,617,076	28,784	1,484,262	3,130,122
Receivables				
Member receivable	10,296	7,393	17,980	35,669
Employer receivable	40,268	2,959	35,504	78,731
Total receivables	50,564	10,352	53,484	114,400
Investment in Tennessee Retiree Group Trust	33,767,815	601,069	30,994,378	65,363,262
Capital assets (net)	4,890	87	4,488	9,465
TOTAL ASSETS	35,452,853	640,515	32,548,093	68,641,461
LIABILITIES				
Accounts payable				
Death benefits and refunds payable	1,280	312	698	2,290
Federal withholding payable	9,715	173	8,918	18,806
Retiree insurance premium payable	4,884	87	4,482	9,453
Cash collateral for securities on loan	1,617,076	28,784	1,484,262	3,130,122
TOTAL LIABILITIES	1,632,955	29,356	1,498,360	3,160,671
NET POSITION RESTRICTED FOR PENSIONS	\$ 33,819,898	\$ 611,159	\$ 31,049,733	\$ 65,480,790

See accompanying Notes to the Financial Statements.



STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED JUNE 30, 2021



STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED JUNE 30, 2021

(Expressed in Thousands)

	Public Employee Retirement Plan	Teacher Retirement Plan	Teacher Legacy Pension Plan	Total
ADDITIONS				
Contributions				
Member contributions	\$ 162,281	\$ 72,213	\$ 164,847	\$ 399,341
Employer contributions	723,255	29,153	337,066	1,089,474
Other contributions	1,076	0	0	1,076
Total contributions	886,612	101,366	501,913	1,489,891
Investment income	7,033,366	116,123	6,481,587	13,631,076
Less: Investment expense	(34,102)	(563)	(31,426)	(66,091)
Net income from investing activities	6,999,264	115,560	6,450,161	13,564,985
Securities lending activities				
Securities lending income	7,338	121	6,762	14,221
Less: Securities lending expense	(1,301)	(21)	(1,198)	(2,520)
Net income from securities lending activities	6,037	100	5,564	11,701
Net investment income	7,005,301	115,660	6,455,725	13,576,686
TOTAL ADDITIONS	7,891,913	217,026	6,957,638	15,066,577
DEDUCTIONS				
Annuity benefits	1,524,681	104	1,340,897	2,865,682
Death benefits	2,790	80	2,771	5,641
Refunds	24,240	4,069	15,881	44,190
Administrative expense	12,679	2,560	4,589	19,828
TOTAL DEDUCTIONS	1,564,390	6,813	1,364,138	2,935,341
NET INCREASE	6,327,523	210,213	5,593,500	12,131,236
FIDUCIARY NET POSITION RESTRICTED FOR PENSIONS				
BEGINNING OF YEAR	27,492,375	400,946	25,456,233	53,349,554
END OF YEAR	\$ 33,819,898	\$ 611,159	\$ 31,049,733	\$ 65,480,790

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 as a discretely presented component unit. The state appoints the majority of the TCRS Board of Trustees, its governing body, and approves its operating budget. The TCRS is presented as such in the *Tennessee Annual Comprehensive Financial Report*. That report is available on the state's website at www.tn.gov/finance/rd-doa/fa-accfin-ar.html.

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, 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. That report is available on the state's website at treasury.tn.gov.

Method used to value investments: Assets of the TCRS are invested in the Tennessee Retiree Group Trust (TRGT). A report of TRGT is available on the state's website at treasury.tn.gov. As of June 30, 2021, the TCRS owns 99.27 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, 2021 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

(continued)



fair value measurement within the fair value hierarchy established by GAAP. The hierarchy is based on the valuation inputs used to measure the fair value of the asset and give the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements).

- 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, 2021 (CONTINUED)



INVESTMENTS MEASURED AT FAIR VALUE

As of June 30, 2021

Expressed in Thousands

Investments at Fair Value Level	GAAP Hierarchy Level 1	GAAP Hierarchy Level 2	GAAP Hierarchy Level 3	NAV	Total Investments
Government Agencies		\$ 112,322			\$ 112,322
Government Bonds	\$ 5,672,842	119,585			5,792,427
Government Inflation Indexed	90,897				90,897
Government Mortgage Backed		3,868,730	\$ 17,138		3,885,868
Government Asset Backed		74,233	20,188		94,421
Municipal Bonds		58,472	8,105		66,577
Commercial Mortgage Backed		328,395	194,655		523,050
Commercial Paper		94,962			94,962
Corporate Asset Backed Securities		393,853	713,760		1,107,613
Corporate Bonds		4,724,115	17,119		4,741,234
Corporate Equities	32,335,476		42,515		32,377,991
Preferred Stocks	53,122	32,841	13		85,976
Limited Partnership Units			1,076,213	\$ 9,646,997	10,723,210
Real Estate			3,152,911	1,958,896	5,111,807
Derivatives		394			394
TOTAL TRGT INVESTMENTS AT FAIR VALUE	\$ 38,152,337	\$ 9,807,902	\$ 5,242,617	\$ 11,605,893	64,808,749
Cash and Cash Equivalents					928,042
Cash Collateral on Loaned Securities					3,153,034
Investment Income Receivable					216,944
Derivatives Receivable					205,264
Investments Sold					72,742
TOTAL ASSETS OF THE TRGT					\$ 69,384,775

(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	169	\$9,646,997	Various	N/A	Various transfer and sale restrictions
Real Estate	Real Estate Commingled Investments	38	\$1,958,896	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.

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 \$9.5 million at year end and is being amortized using the straight-line method over the ten-year estimated life of the system. The amortization expense for the current year was \$3.7 million.

(continued)



B: PLAN DESCRIPTIONS

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

At June 30, 2021, 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.

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, 2021 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	116,559	53	53,785	170,397
Inactive Employees Entitled to But Not Yet Receiving Benefits	145,670	11,630	30,951	188,251
Active Plan Members	<u>142,448</u>	<u>29,203</u>	<u>50,944</u>	<u>222,595</u>
Total membership	<u>404,677</u>	<u>40,886</u>	<u>135,680</u>	<u>581,243</u>
Number of participating employers	637	144	144	781

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

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year. The COLA is based on the change in the CPI during the prior calendar year, capped at 3 percent, and applied to the current benefit. No COLA is granted if the change in the CPI is less than one-half percent. A one percent COLA is granted if the CPI change is between one-half percent and one percent. There are additional classes of employees that include state judges, elected members of the general assembly, and public safety officers which have different benefit structures and eligibility requirements. These classifications represent an immaterial percentage of the state employee membership.

For political subdivision employees, there are various tiers of benefits and eligibility requirements. Each political subdivision adopts the benefit structure that the entity provides to its employees. Unreduced service retirement benefits are determined using a multiplier of the member's highest 5 consecutive year average compensation multiplied by the member's years of service credit. Plan members are eligible for service-related disability benefits regardless of length of service. Five years of service is required for non-service-related disability eligibility. The service related and non-service-related disability benefits are determined in the same manner as a service retirement benefit but are reduced 10 percent and include projected service credits. A variety of death benefits are available under various eligibility criteria. If adopted as a benefit provision by the political subdivision, member and beneficiary annuitants are entitled to automatic COLAs after retirement. A COLA is granted each July for annuitants retired prior to the 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, 2021, the required ADC for LEAs was 10.27 percent of covered payroll.

For the Teacher Retirement Plan, LEAs are required by statute to contribute the greater of the ADC or 4 percent. The ADC is the estimated amount necessary to finance the costs of benefits earned by plan members during the year, the unfunded accrued liability, and the cost of administration. Teachers are required by statute to contribute 5 percent of salary. For the year ended June 30, 2021, the required ADC for LEAs was 2.02 percent of covered payroll while actual contributions were 4 percent of covered 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, 2021, the required ADC varied for each participating employer, with approximately ninety-six percent of all employer rates less than twenty (20) percent. 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.

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

From July 1, 2014, through June 30, 2018, the funds contributed to the stabilization reserves were held by TCRS in the pension trust fund. As of June 30, 2021, there was \$73,152,014 in the stabilization reserve on behalf of the Teachers Retirement Plan and \$67,245,155 in the various stabilization reserves on behalf of the Public Employee Retirement Plan held by TCRS. Effective July 1, 2018, all future stabilization reserve contributions are held in a separate trust outside of TCRS for the benefit of each employer that participates in the stabilization reserve trust. The amounts reflected in the Stabilization Reserve Trust can only be moved to the entity's pension trust at the direction of the entity (employer) with the approval of the Board of Trustees of the Pension Stabilization Reserve Trusts.

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

The TRGT is authorized to invest in securities in accordance with the investment policy of the TCRS. That policy allows the Trust to invest in bonds, debentures, preferred stock and common stock, real estate and in other good and solvent securities subject to the approval of the Board of Trustees, but further subject to the following statutory restrictions and provisions:

- a. The total sum invested in common and preferred stocks shall not exceed seventy-five percent (75 percent) of the total of the funds of the trust.
- b. The total sum invested in notes and bonds or other fixed income securities exceeding one year in maturity shall not exceed seventy-five percent (75 percent) of the total funds of the trust.
- c. Within the restrictions in (a) and (b) above, fifteen percent (15 percent) of the total of the funds of the retirement system may be invested in securities of the same kinds, classes, and investment grades as those otherwise eligible for investment in various approved foreign countries. However, upon action of the TCRS Board of Trustees with



subsequent approval by the Council on Pensions, limit has been authorized at an amount not to exceed twenty-five percent (25 percent).

- d. Within the restrictions in (a) and (b) above, funds may be invested in Canadian securities which are substantially of the same kinds, classes and investment grades as those otherwise eligible for investment.
- e. The total amount of securities loaned under a securities lending program cannot exceed thirty percent (30 percent) of total assets.
- f. The total sum invested in alternative assets shall not exceed forty percent (40 percent) of the market value of total assets.

State statute also authorizes the TRGT to invest in forward contracts to hedge its foreign currency exposure and to purchase or sell domestic equity index futures contracts for the purpose of asset allocation relating to the domestic equity portfolio. The total amount of the financial futures contract obligation shall not exceed ten percent (10 percent) 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, 2021:

Authorized Asset Class	Target Allocation
U.S. equity	31%
Canadian equity	2%
Developed market international equity	12%
Emerging market international equity	4%
Private equity	10%
U.S. fixed income	20%
Strategic lending	10%
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

(continued)



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.

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, 2021, the TRGT had the following securities on loan and received the collateral as shown below:

SECURITIES LENDING

As of June 30, 2021

Securities on Loan	Fair Value of Securities on Loan	Cash Collateral Received
Fixed	\$ 1,400,886,663	\$ 1,427,713,132
Equity	1,692,902,552	1,725,321,019
Total	\$ 3,093,789,215	\$ 3,153,034,151

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 *treasury.tn.gov*.



At June 30, 2021, the TRGT had the following investments:

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

As of June 30, 2021

Expressed in Thousands

Rating	Fair Value	Percentage of Total Investments
AAA	\$ 423,722	0.654%
AA	262,908	0.406%
A	1,073,516	1.656%
BBB	3,520,342	5.432%
BB	448,695	0.692%
B	154,965	0.239%
CCC	66,637	0.103%
CC	1,656	0.003%
NR	4,130,843	6.374%
	<u>10,083,284</u>	
U. S. Government Agencies and Obligations explicitly guaranteed by the U. S. Government	7,323,162	
Total Fixed Income Securities	<u>17,406,446</u>	
Equity	32,377,991	
Real Estate	5,111,807	
Private Equities	6,686,216	
Strategic Lending	4,036,994	
Preferred Stock not Classified as Fixed Income	85,976	
Derivative Instruments (not rated)	394	
Short term investment fund with custodian (NR)	(6,204)	
Short term investments classified as cash (NR)	(890,871)	
	<u>(890,871)</u>	
Total Investments of the TRGT	<u>\$ 64,808,749</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, 2021.

EFFECTIVE DURATION OF DEBT INVESTMENTS

As of June 30, 2021

Expressed in Thousands

Investment Type	Fair Value	Effective Duration (years)
Government Agencies	\$ 112,322	1.16
Government Bonds	5,792,427	15.93
Government Inflation Indexed	90,897	4.13
Government Mortgage Backed	3,885,868	4.45
Government Asset Backed	94,421	5.84
Municipal Bonds	66,577	14.43
Commercial Mortgage Backed	523,050	1.99
Commercial Paper	94,962	0.00
Corporate Asset Backed	1,107,613	1.07
Corporate Bonds	4,741,234	10.47
Short-Term Investments	897,075	0.00
Total TRGT Debt Investments	\$ 17,406,446	9.39

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 CMOs at June 30, 2021 was \$523,049,886 of which \$343,877,216 were CMOs that are generally more sensitive to interest rate of 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, 2021

Expressed in Thousands

Currency	Total Fair Value	Fixed Income	Equity	Cash
Australian Dollar	\$ 426,509	\$ 0	\$ 426,385	\$ 124
British Pound Sterling	1,586,369	0	1,583,016	3,353
Canadian Dollar	1,457,802	0	1,456,641	1,161
Danish Krone	356,774	0	356,773	1
Euro Currency	3,097,399	0	3,096,050	1,349
Hong Kong Dollar	235,445	0	235,441	4
Japanese Yen	1,713,501	0	1,711,715	1,786
New Israeli Shekel	9,157	0	9,157	0
New Zealand Dollar	8,540	0	8,538	2
Norwegian Krone	59,253	0	59,252	1
Singapore Dollar	105,222	0	105,127	95
Swedish Krona	255,629	0	255,596	33
Swiss Franc	795,949	585	795,360	4
Total	\$ 10,107,549	\$ 585	\$ 10,099,051	\$ 7,913

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 \$7,913,012 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 25.78 percent. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

Derivatives:

Futures - The TRGT may buy or sell fixed income and equity index futures contracts for the purposes of making asset allocation changes in an efficient and cost-effective manner and to improve liquidity. Gains (losses) on futures hedge losses (gains) produced by any deviation from the TRGT target allocation. The gains and losses resulting from daily fluctuations in the fair value of the outstanding futures contract are settled daily, on the following day, and a receivable or payable is established for any unsettled gain or loss as of the financial statement date. As of June 30, 2021, the TRGT was under contract for fixed income and equity index futures and the resulting receivable is reflected in the financial statements at fair value.

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Foreign Currency Forward Contracts - The international securities expose the TRGT to potential losses due to a possible rise in the value of the US dollar. The TRGT investment managers can reduce foreign currency exposure by selling foreign currency forward contracts, at agreed terms and for future settlement, usually within a year. The manager will reverse the contract by buying the foreign currency before the settlement date. A gain (loss) on this transaction pair will hedge a loss (gain) on the currency movement of the international security. 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. TRGT did not hold any foreign currency forward contracts at June 30, 2021.

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.

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, 2021

Expressed in thousands

	Changes in Fair Value		Fair Value at June 30, 2021		
	Financial Statement Classification	Amount	Financial Statement Classification	Amount	Notional Amount
Futures Contracts	Investment Income	\$ 24,617	Derivative Instruments Receivable	\$ 2,954	\$ 1,537,238
TBA Mortgage Backed Securities	Investment Income	\$ 394	Derivative Instruments Assets	\$ 394	\$ 190,388

Futures 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 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 \$15,835,016,351 at June 30, 2021. 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.

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NOTES TO THE FINANCIAL STATEMENTS
JUNE 30, 2021 (CONTINUED)



The mortality improvement assumption adopted with the 2016 experience study utilizes the most current projection scale published by the Society of Actuaries as of the actuarial valuation date. As of June 30, 2020, the projection scale was updated from Scale MP-2018 to Scale MP-2019. This change lowered the liability and was included with other differences between expected and actual experience.

The actuarial assumptions used in the June 30, 2020 actuarial valuation were based on the results of an actuarial experience study performed for the period July 1, 2012 through June 30, 2016.

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, 2016 actuarial experience study. This return was selected from a range of values developed using historical market returns and future capital market projections. The future capital market projections were produced using a building-block method in which a best-estimate of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) is developed for each major asset class. These best-estimates are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation of 2.5 percent. The best-estimates of geometric real rates of return and the TCRS investment policy target asset allocation 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	5.69%	31%
Developed market international equity	5.29%	14%
Emerging market international equity	6.36%	4%
Private equity and strategic lending	5.79%	20%
U.S. fixed income	2.01%	20%
Real estate	4.32%	10%
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 7.25 percent based on a comparison of historical market returns and future capital market projections.

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Discount rate: The discount rate used to measure the total pension liability was 7.25 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 7.25 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 (6.25%) or one percentage point higher (8.25%) than the current rate:

Plan	1 percent Decrease (6.25%)	Current Discount Rate (7.25%)	1 percent Increase (8.25%)
Teacher Legacy Pension Plan	\$ (2,444,167,882)	\$ (5,629,534,760)	\$ (8,275,360,950)
Teacher Retirement Plan	\$ (7,890,591)	\$ (144,192,616)	\$ (245,092,059)

E: OTHER ACCOUNTING DISCLOSURES

Subsequent event: The 112th General Assembly of the State of Tennessee appropriated a one-time additional contribution of \$250 million to the Public Employee Retirement Plan for state and higher education employees to be effective July 1, 2021 in accordance with Public Chapter 454, Section 64, Item 56.



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

Total pension liability	<u>2021</u>	<u>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Service Cost	\$ 320,188,346	\$ 324,597,317	\$ 345,065,162	\$ 345,257,426	\$ 351,528,106	\$ 359,568,654	\$ 393,173,920	\$ 404,576,942
Interest	1,764,235,143	1,716,256,039	1,695,569,610	1,636,816,010	1,618,619,959	1,582,470,751	1,578,251,721	1,483,656,307
Change of benefit terms	0	0	0	0	0	0	0	0
Difference between expected and actual experience	(37,149,799)	(442,566,506)	72,474,157	(119,208,468)	(296,555,977)	(764,354,573)	46,576,630	0
Change of assumptions	0	0	0	346,381,384	0	0	0	0
Benefit payments, including refunds of member contributions	(1,359,548,443)	(1,314,913,673)	(1,268,406,149)	(1,218,622,546)	(1,172,892,841)	(1,138,014,028)	(1,096,410,122)	(1,037,013,093)
Net change in total pension liability	687,725,247	283,373,177	844,702,780	990,623,806	500,699,247	39,670,804	921,592,149	851,220,156
Total pension liability - beginning	24,732,472,757	24,449,099,580	23,604,396,800	22,613,772,994	22,113,073,747	22,073,402,943	21,151,810,794	20,300,590,638
Total pension liability - ending (a)	25,420,198,004	24,732,472,757	24,449,099,580	23,604,396,800	22,613,772,994	22,113,073,747	22,073,402,943	21,151,810,794
Plan fiduciary net position								
Contributions-employer	337,066,627	353,767,319	350,734,176	318,336,627	319,576,407	327,521,593	338,301,211	348,474,887
Contributions-members	164,846,662	167,155,248	168,919,223	176,442,688	177,940,219	181,763,296	187,121,567	195,520,938
Net investment income	6,455,724,460	1,215,904,780	1,759,945,606	1,867,629,821	2,365,586,643	560,785,122	646,526,936	3,054,117,822
Benefit payments, including refunds of member contributions	(1,359,548,443)	(1,314,913,673)	(1,268,406,149)	(1,218,622,546)	(1,172,892,841)	(1,138,014,028)	(1,096,410,122)	(1,037,013,093)
Administrative expense	(4,589,318)	(4,571,564)	(5,201,742)	(5,789,356)	(5,347,136)	(6,893,993)	(5,635,689)	(2,663,319)
Net change in plan fiduciary net position	5,593,499,987	417,342,110	1,005,991,114	1,137,997,234	1,684,863,292	(74,838,010)	69,903,903	2,558,437,235
Plan fiduciary net position - beginning	25,456,232,777	25,038,890,667	24,032,899,553	22,894,902,319	21,210,039,027	21,284,877,037	21,214,973,134	18,656,535,899
Plan fiduciary net position - ending (b)	31,049,732,764	25,456,232,777	25,038,890,667	24,032,899,553	22,894,902,319	21,210,039,027	21,284,877,037	21,214,973,134
Net pension liability (asset) - ending (a) - (b)	<u>\$ (5,629,534,760)</u>	<u>\$ (723,760,020)</u>	<u>\$ (589,791,087)</u>	<u>\$ (428,502,753)</u>	<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 (ASSET)

Fiscal Year Ended June 30

Total pension liability	2021	2020	2019	2018	2017	2016	2015
Service Cost	\$ 98,704,242	\$ 85,848,628	\$ 74,297,210	\$ 60,633,198	\$ 43,440,149	\$ 28,980,449	\$ 15,581,497
Interest	28,379,472	20,721,440	14,804,562	9,275,807	5,159,135	2,175,079	583,011
Change of benefit terms	0	0	0	0	0	0	0
Difference between expected and actual experience	(3,478,690)	(10,298,460)	1,446,372	763,491	2,054,643	(1,477,409)	0
Change of assumptions	0	0	0	2,496,211	0	0	0
Benefit payments, including refunds of member contributions	(4,252,985)	(3,695,228)	(2,206,627)	(1,628,598)	(1,021,752)	(283,467)	(34,531)
Net change in total pension liability	119,352,039	92,576,380	88,341,517	71,540,109	49,632,175	29,394,652	16,129,977
Total pension liability - beginning	347,614,810	255,038,430	166,696,913	95,156,804	45,524,629	16,129,977	0
Total pension liability - ending (a)	466,966,849	347,614,810	255,038,430	166,696,913	95,156,804	45,524,629	16,129,977
Plan fiduciary net position							
Contributions-employer	29,152,958	25,616,933	20,529,121	34,957,065	26,262,053	17,538,589	8,310,132
Contributions-members	72,213,168	63,182,574	52,929,975	43,730,696	32,848,220	21,855,921	10,390,077
Net investment income	115,660,117	16,947,487	18,475,708	13,554,381	10,058,396	1,011,283	294,742
Benefit payments, including refunds of member contributions	(4,252,985)	(3,695,228)	(2,206,627)	(1,628,598)	(1,021,752)	(283,467)	(34,531)
Administrative expense	(2,559,673)	(2,295,363)	(2,018,230)	(1,846,534)	(1,417,125)	(819,972)	(280,047)
Net change in plan fiduciary net position	210,213,585	99,756,403	87,709,947	88,767,010	66,729,792	39,302,354	18,680,373
Plan fiduciary net position - beginning	400,945,879	301,189,476	213,479,529	124,712,519	57,982,727	18,680,373	0
Plan fiduciary net position - ending (b)	611,159,465	400,945,879	301,189,476	213,479,529	124,712,519	57,982,727	18,680,373
Net pension liability (asset) - ending (a) - (b)	<u>\$ (144,192,616)</u>	<u>\$ (53,331,069)</u>	<u>\$ (46,151,046)</u>	<u>\$ (46,782,616)</u>	<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 (ASSET)

Fiscal Year Ended June 30

	<u>2021</u>	<u>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Total pension liability	\$ 25,420,198,004	\$ 24,732,472,757	\$ 24,449,099,580	\$ 23,604,396,800	\$ 22,613,772,994	\$ 22,113,073,747	\$ 22,073,402,943	\$ 21,151,810,794
Plan fiduciary net position	31,049,732,764	25,456,232,777	25,038,890,667	24,032,899,553	22,894,902,319	21,210,039,027	21,284,877,037	21,214,973,134
Net pension liability (asset)	<u><u>\$ (5,629,534,760)</u></u>	<u><u>\$ (723,760,020)</u></u>	<u><u>\$ (589,791,087)</u></u>	<u><u>\$ (428,502,753)</u></u>	<u><u>\$ (281,129,325)</u></u>	<u><u>\$ 903,034,720</u></u>	<u><u>\$ 788,525,906</u></u>	<u><u>\$ (63,162,340)</u></u>
Plan fiduciary net position as a percentage of the total pension liability	122.15%	102.93%	102.41%	101.82%	101.24%	95.92%	96.43%	100.30%
Covered payroll	\$ 3,282,482,099	\$ 3,326,750,965	\$ 3,352,756,393	\$ 3,501,703,581	\$ 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	(171.50)%	(21.76)%	(17.59)%	(12.24)%	(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 (ASSET)

Fiscal Year Ended June 30

	<u>2021</u>	<u>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>
Total pension liability	\$ 466,966,849	\$ 347,614,810	\$ 255,038,430	\$ 166,696,913	\$ 95,156,804	\$ 45,524,629	\$ 16,129,977
Plan fiduciary net position	<u>611,159,465</u>	<u>400,945,879</u>	<u>301,189,476</u>	<u>213,479,529</u>	<u>124,712,519</u>	<u>57,982,727</u>	<u>18,680,373</u>
Net pension liability (asset)	<u><u>\$ (144,192,616)</u></u>	<u><u>\$ (53,331,069)</u></u>	<u><u>\$ (46,151,046)</u></u>	<u><u>\$ (46,782,616)</u></u>	<u><u>\$ (29,555,715)</u></u>	<u><u>\$ (12,458,098)</u></u>	<u><u>\$ (2,550,396)</u></u>
Plan fiduciary net position as a percentage of the total pension liability	130.88%	115.34%	118.10%	128.06%	131.06%	127.37%	115.81%
Covered payroll	\$1,442,090,457	\$1,261,909,185	\$ 1,056,859,310	\$ 873,677,206	\$ 655,205,868	\$ 441,775,131	\$ 207,753,299
Net pension liability (asset) as a percentage of covered payroll	(10.00)%	(4.23)%	(4.37)%	(5.35)%	(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

	Actuarially-Determined Contribution	Contributions in Relation to the Actuarially-Determined Contribution	Contribution Deficiency	Covered Payroll	Contributions as a Percentage of Covered Payroll
2021	\$ 337,066,627	\$ 337,066,627	\$ 0	\$ 3,282,482,099	10.27%
2020	353,767,319	353,767,319	0	3,326,750,965	10.63%
2019	350,734,176	350,734,176	0	3,352,756,393	10.46%
2018	318,336,627	318,336,627	0	3,501,703,581	9.08%
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	8.86%
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%

(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
2021	\$ 29,152,958	\$ 29,152,958	\$ 0	\$ 1,442,090,457	2.02%
2020	25,616,933	25,616,933	0	1,261,909,185	2.03%
2019	20,529,122	20,529,122	0	1,056,859,310	1.94%
2018	14,251,505	34,957,065	(20,705,560)	873,677,206	4.00%
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

	2021	2020	2019	2018	2017	2016	2015	2014
Annual money-weighted rate of return, net of investment expense	25.78%	5.05%	7.76%	8.40%	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, 2021 for Local Education Agencies for the Teacher Legacy Plan were calculated as a result of an actuarial valuation performed as of June 30, 2019. The actuarially determined contributions for the fiscal year ended June 30, 2021 for Local Education Agencies for the Teacher Retirement Plan were calculated as a result of an actuarial valuation performed as of June 30, 2019. 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	N/A	N/A
Inflation	2.5 percent	2.5 percent
Cost of Living Adjustments	2.25 percent	2.25 percent
Salary increases	Graded salary ranges from 8.72 percent to 3.46 percent, including inflation, averaging 4.00 percent	Graded salary ranges from 8.72 percent to 3.46 percent, including inflation, averaging 4.00 percent
Investment rate of returns	7.25 percent, net of pension plan investment expense, including inflation	7.25 percent, net of pension plan investment expense, including inflation



SCHEDULE OF ADMINISTRATIVE EXPENSES
FOR THE YEAR ENDED JUNE 30, 2021



SCHEDULE OF ADMINISTRATIVE EXPENSES
For the Year Ended June 30, 2021

	<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	\$ 2,038,266	\$ 411,474	\$ 737,745	\$ 3,187,485
Employee benefits	805,015	162,512	291,373	1,258,900
TOTAL PERSONNEL SERVICES	<u>2,843,281</u>	<u>573,986</u>	<u>1,029,118</u>	<u>4,446,385</u>
PROFESSIONAL SERVICES				
Accounting	387,520	78,231	140,262	606,013
Actuarial services	583,329	117,759	211,134	912,222
Information systems	2,843,660	574,064	1,029,257	4,446,981
Management services	131,523	26,551	47,605	205,679
Medical review	124,472	25,128	45,053	194,653
Administrative, Internal Audit, Legal, Personnel	2,789,949	563,220	1,009,815	4,362,984
TOTAL PROFESSIONAL SERVICES	<u>6,860,453</u>	<u>1,384,953</u>	<u>2,483,126</u>	<u>10,728,532</u>
COMMUNICATION				
Travel	12,130	2,449	4,391	18,970
Telephone	108,937	21,991	39,429	170,357
Printing	55,930	11,291	20,244	87,465
Postage	136,692	27,595	49,475	213,762
TOTAL COMMUNICATION	<u>313,689</u>	<u>63,326</u>	<u>113,539</u>	<u>490,554</u>
MISCELLANEOUS				
Office space	86,354	17,433	31,256	135,043
Supplies and maintenance	2,747	554	994	4,295
Amortization of intangible assets	2,374,878	479,428	859,582	3,713,888
Other services and charges	198,106	39,993	71,704	309,803
TOTAL MISCELLANEOUS	<u>2,662,085</u>	<u>537,408</u>	<u>963,536</u>	<u>4,163,029</u>
TOTAL ADMINISTRATIVE EXPENSES	<u>\$ 12,679,508</u>	<u>\$ 2,559,673</u>	<u>\$ 4,589,319</u>	<u>\$ 19,828,500</u>



SCHEDULE OF INVESTMENT EXPENSES
FOR THE YEAR ENDED JUNE 30, 2021



The Tennessee Consolidated Retirement System (TCRS) is a participant in the Tennessee Retiree Group Trust (TRGT) and owns 99.27% 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 investment expenses for TRGT.

Personnel Services

Salaries and Other Personnel Costs	\$	7,469,237
Travel		437
Communication		43,725
Office Space		83,526
Supplies and Maintenance		2,377
Other Services and Charges		44,930
Total Personnel Services		<u>7,644,232</u>

Professional Services

Accounting		466,221
Legal services		189,995
Data processing		19,159
Information systems		1,352,223
Management services		66,135
Administration, Internal Audit, Personnel		1,387,956
Total Professional Services		<u>3,481,689</u>

Investment Activity Expenses

Alternative Asset Fees		530,590
External Investment Manager Fees		38,790,488
Investment Consulting Fees		1,361,554
Investment Custodian Fees		1,711,916
Legal Fees		470,635
Real Estate Manager Fees		11,124,315
Other Investment Professional Fees		1,680,609
Total Investment Activity Expenses		<u>55,670,107</u>

Total Investment Expenses of TRGT 66,796,028

Less: Investment expense for other TRGT participants (705,266)

Total Investment Expenses of TCRS \$ 66,090,762



**SCHEDULES OF EXPENSES FOR CONSULTANTS
FOR THE YEAR ENDED JUNE 30, 2021**



**SCHEDULES OF EXPENSES FOR CONSULTANTS
For the Year Ended June 30, 2021**

	<u>Public Employee Retirement Plan</u>	<u>Teacher Retirement Plan</u>	<u>Teacher Legacy Pension Plan</u>	<u>TOTAL</u>
ACTUARIAL SERVICES				
Findley Inc	\$ 535,369	\$ 108,077	\$ 193,776	\$ 837,222
The Segal Company Southeast	47,959	9,682	17,359	75,000
TOTAL ACTUARIAL SERVICES	<u>583,328</u>	<u>117,759</u>	<u>211,135</u>	<u>912,222</u>
CALL CENTER SERVICES				
Empower	989,646	199,784	358,200	1,547,630
TOTAL CALL CENTER SERVICES	<u>989,646</u>	<u>199,784</u>	<u>358,200</u>	<u>1,547,630</u>
INFORMATION SYSTEMS SERVICES				
Deloitte Consulting LLP	206,551	41,697	74,760	323,008
TOTAL INFORMATION SYSTEMS SERVICES	<u>206,551</u>	<u>41,697</u>	<u>74,760</u>	<u>323,008</u>
MEDICAL REVIEW SERVICES				
University of Massachusetts Worcester	124,472	25,128	45,053	194,653
TOTAL MEDICAL REVIEW SERVICES	<u>124,472</u>	<u>25,128</u>	<u>45,053</u>	<u>194,653</u>
ATTORNEY FEES				
Ice Miller	9,520	1,922	3,446	14,888
Williams & Jensen PLLC	35,298	7,126	12,776	55,200
TOTAL ATTORNEY FEES	<u>44,818</u>	<u>9,048</u>	<u>16,222</u>	<u>70,088</u>
TOTAL EXPENSES FOR CONSULTANTS	<u>\$ 1,948,815</u>	<u>\$ 393,416</u>	<u>\$ 705,370</u>	<u>\$ 3,047,601</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 27, 2021

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

Re: 2021 Annual Comprehensive Financial Report Performance Letter

Dear Jamie:

For the fiscal year ended June 30, 2021, TCRS returned 25.60%, outperforming its policy index (23.67%) and its as-allocated index (23.85%). During the fiscal year ended June, the pandemic and unprecedented stimulus to combat its economic impacts have resulted in unusually strong performance in risk assets with the strongest returns coming from equities in the TCRS portfolio (U.S. Equity 40.70%; International Equity 41.16%) and private equity (64.53% one quarter lagged) for the period. The worst performing asset class for the fiscal year was U.S. Fixed Income with a -0.90% return driven by concerns over potentially rising interest rates.

TCRS ranked in the third quartile of its peer group (Investment Metric’s Public DB > \$1 billion) for the fiscal year ended June 30, 2021. The Plan’s adherence to its strategic asset allocation and structure, with low tracking error, benchmark relative U.S. equity and a long duration bias in fixed income, were primary drivers of the Plan’s peer ranking for the period. Longer term, the Plan ranked in the top quartile of its peer group for the three and ten-year periods ended June 30, 2021 and in the upper half of peers for the 5-year period ended June.

As of June 30, 2021, the System’s asset allocation and one-year respective returns were:

Asset Class	% of Assets	One Year Return
Domestic Equity	30.5%	40.70%
Canada Index Fund	2.1%	46.95%
International Developed Market	12.4%	38.48%
International Emerging Market	3.9%	50.70%
Domestic Fixed Income	23.2%	-0.90%
Real Estate	8.9%	8.07%
Private Equity	10.3%	64.53%
Strategic Lending	7.4%	18.24%
Cash and Cash Equivalents	1.3%	0.14%
Total	100.0%	25.60%

For the fiscal year, risk-on sentiment propelled markets forward and expectations for strong economic growth and inflation over the intermediate-term sparked a rotation from growth sectors that had performed well through the crisis toward more value-orientated sectors positioned to outperform in a period of rising interest rates. Small-cap equities (Russell 2000 Index +62.0%) made back lost ground relative to large-cap equities (Russell 1000 Index +43.1%), The 10-year Treasury yield rose from 0.66% to a peak of 1.74% before moderating to 1.47% by the end of the fiscal year. TCRS’ diversified portfolio posted strong results over the period and the Plan remains well funded and cost effective.

Best Regards,

 Margaret S. Jadallah



DAVID H. LILLARD, JR.
STATE TREASURER

STATE OF TENNESSEE

MARY JO PRICE
CHIEF OPERATING OFFICER

MICHAEL BRAKEBILL
CHIEF INVESTMENT OFFICER



JAMIE WAYMAN
DIRECTOR OF TCRS

TREASURY DEPARTMENT
STATE CAPITOL
NASHVILLE, TENNESSEE 37243-0225

November 1, 2021

Dear Members,

I am pleased to present the Investment Section of the TCRS Comprehensive Annual Financial Report for the fiscal year ended June 30, 2021.

The Tennessee Retiree Group Trust (TRGT) contained \$65.8 billion in assets as of June 30, 2021. Assets for the TCRS are comingled in the TRGT for investment purposes and TCRS represents \$65.4 billion, or 99.3%, of the TRGT.

TRGT 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 TRGT 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 TRGT.

The 2021 fiscal year was a strong year for investors and the TRGT gained 25.60% for the fiscal year with an annualized gain of 9.41% for the trailing ten-year period. The ten-year return exceeded the actuarial required return and the portfolio was 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 September 28, 2018.

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. Pursuant to *Tennessee Code Annotated*, Section 8-37-114, the Treasury Investment Division engages outside investment managers. 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 2020-2021, no assets were under the control of emerging investment managers.

To assist in the fiduciary responsibility for managing the TRGT portfolio during fiscal year 2021, Verus served as the general investment consultant for TRGT. The Townsend Group served as the real estate investment consultant and Aksia 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 2021.

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 delivered a return of 25.60% during the fiscal year. Strong equity returns produced these exceptional results. Private equity led with a return of 64.53%, followed by Emerging Markets with 50.70%, Canada at 46.95%, U.S Equity with 40.70% and International Developed at 38.48%. Strategic Lending and Real Estate had very good results with respect to their benchmarks. The long-duration Fixed Income portfolio lost 0.9% for the year and yet those results beat its benchmark considerably (-2.25%).



TRGT INVESTMENT PERFORMANCE REVIEW

Periods Ending June 30, 2021

	Annualized Returns		
	Current Year	3-Year	5-Year
Pension Plan Portfolio	25.60%	12.34%	11.30%
Policy Index (1)	23.67%	11.94%	10.98%
As-Allocated Index	23.85%	11.83%	10.79%
Domestic Equity	40.70%	16.81%	16.69%
S & P 1500 Index	42.12%	18.12%	17.38%
Canadian Equity	46.95%	13.64%	12.74%
S & P TSX 60 Index	46.90%	13.63%	12.65%
Domestic Fixed Income	-0.90%	7.44%	4.14%
Citigroup LPF Index	-2.25%	7.26%	3.81%
International Developed Equity	38.48%	10.58%	12.40%
International Developed Equity Index	33.57%	8.28%	10.53%
International Emerging Mkts Equity	50.70%	11.58%	11.13%
International Emerging Mkts Custom Index	52.44%	12.43%	12.02%
Real Estate	8.07%	6.39%	7.66%
NCREIF Index	2.63%	4.89%	5.81%
Private Equity	64.53%	28.75%	25.07%
Private Equity Custom Index	53.81%	17.01%	17.63%
Strategic Lending Portfolio	18.24%	7.86%	8.44%
SL Benchmark	13.51%	5.89%	6.26%

Verus

Ranking of TCRS Portfolio	Percentile Rankings	Risk Adjusted Basis
	Last three years	18
Last five years	36	20

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 1/1/2019, 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% Cambridge Associates, Custom Private Equity Benchmark/ 7% Strategic Lending/ 1% 91 Day T-Bill.



TRGT ASSET ALLOCATION

As of June 30, 2021

Asset Class	Fair Value	Percentage
Domestic Equity	\$ 21,448,480,442	33%
Domestic Fixed Income	17,227,501,739	26%
International Equity	7,508,378,171	11%
International Fixed Income	53,707,190	0%
Short-Term Securities	3,626,140,592	6%
Real Estate	5,111,807,123	8%
Private Equities & Strategic Lending	10,723,209,228	16%
Totals	<u>\$ 65,699,224,485</u>	<u>100%</u>

This table describes the asset allocation of the entire TRGT investment portfolio. TCRS is comingled with the TRGT portfolio and owns 99.3% 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, 2021**by Fair Value*

Shares	Security Name	Fair Value
6,957,085	APPLE INC	\$ 952,842,362
3,475,928	MICROSOFT CORP	941,628,895
218,427	AMAZON.COM INC	751,423,828
299,967	ALPHABET INC	744,808,560
1,234,423	FACEBOOK INC CLASS A	429,221,221
1,700,752	JPMORGAN CHASE + CO	264,534,966
321,445	TESLA INC	218,486,167
1,322,359	JOHNSON + JOHNSON	217,845,422
269,567	NVIDIA CORP	215,680,557
873,486	VISA INC CLASS A SHARES	204,238,497

TRGT LARGEST BOND HOLDINGS*As of June 30, 2021**by Fair Value*

Par Value	Security Name	Yield	Maturity	Moody's Rating	Fair Value
\$ 604,750,000	US TREASURY N/B	2.02	2/15/2041	Aaa	\$ 592,655,000
398,720,000	US TREASURY N/B	1.45	11/15/2030	Aaa	379,593,900
250,000,000	TREASURY BILL	0.01	7/1/2021	Aaa	250,000,000
288,500,000	US TREASURY N/B	2.12	5/15/2050	Aaa	235,758,594
202,336,000	US TREASURY N/B	2.08	2/15/2046	Aaa	219,250,025
255,500,000	US TREASURY N/B	2.12	8/15/2050	Aaa	215,498,281
218,770,000	US TREASURY N/B	2.10	2/15/2051	Aaa	208,925,350
187,975,000	US TREASURY N/B	2.09	5/15/2051	Aaa	200,839,539
211,750,000	US TREASURY N/B	1.44	8/15/2030	Aaa	197,523,047
215,500,000	US TREASURY N/B	2.11	11/15/2050	Aaa	193,613,281

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, 2021

	Domestic		International		Total	
	Fair Value	%	Fair Value	%	Fair Value	%
Fixed Income						
Government Bonds	\$ 6,533,653,491	9.94%	\$	0.00%	\$ 6,533,653,491	9.94%
Corporate Bonds	4,740,648,433	7.22%	585,285	0.00%	4,741,233,718	7.22%
Municipal/Provincial Bonds	66,577,492	0.10%		0.00%	66,577,492	0.10%
Total Bonds	<u>11,340,879,416</u>	<u>17.26%</u>	<u>585,285</u>	<u>0.00%</u>	<u>11,341,464,701</u>	<u>17.26%</u>
Corporate Asset Backed	1,107,613,752	1.69%		0.00%	1,107,613,752	1.69%
Commercial Mortgage Backed	523,049,886	0.80%		0.00%	523,049,886	0.80%
Government Agencies	242,816,954	0.37%		0.00%	242,816,954	0.37%
Government Mortgage Backed Securites	3,885,867,905	5.91%		0.00%	3,885,867,905	5.91%
Government Asset Backed	94,420,124	0.14%		0.00%	94,420,124	0.14%
Preferred Stock	32,853,702	0.05%	53,121,905	0.08%	85,975,607	0.13%
Total Fixed Income	<u>17,227,501,739</u>	<u>26.22%</u>	<u>53,707,190</u>	<u>0.08%</u>	<u>17,281,208,929</u>	<u>26.30%</u>
Common Stock						
Consumer Discretionary	2,553,686,817	3.89%	1,039,517,821	1.58%	3,593,204,638	5.47%
Consumer Staples	1,056,153,016	1.61%	710,482,223	1.08%	1,766,635,239	2.69%
Energy	756,537,119	1.15%	246,563,088	0.38%	1,003,100,207	1.53%
Financials	2,887,924,938	4.40%	1,067,459,234	1.62%	3,955,384,172	6.02%
Healthcare	2,546,512,067	3.88%	916,434,140	1.39%	3,462,946,207	5.27%
Industrials	2,260,408,803	3.44%	1,589,436,795	2.42%	3,849,845,598	5.86%
Information Technology	4,791,148,264	7.29%	741,433,780	1.13%	5,532,582,044	8.42%
Materials	731,461,236	1.11%	581,989,450	0.89%	1,313,450,686	2.00%
Private Placements	8,475,913	0.01%	72,234	0.00%	8,548,147	0.01%
Real Estate	44,711,819	0.07%	60,448,805	0.09%	105,160,624	0.16%
Telecommunication Services	2,038,806,071	3.10%	313,934,985	0.48%	2,352,741,056	3.58%
Utilities	458,919,123	0.70%	177,957,284	0.27%	636,876,407	0.97%
Corporate Equities	1,232,875,971	1.88%	51,107,781	0.08%	1,283,983,752	1.96%
Depository Receipts	80,844,865	0.12%	11,540,551	0.02%	92,385,416	0.14%
Rights/Warrants	14,420	0.00%	0	0.00%	14,420	0.00%
Total common stock	<u>21,448,480,442</u>	<u>32.65%</u>	<u>7,508,378,171</u>	<u>11.43%</u>	<u>28,956,858,613</u>	<u>44.08%</u>

(continued)



INVESTMENT SUMMARY (CONTINUED)



TRGT INVESTMENT SUMMARY (CONTINUED)

June 30, 2021

	Domestic		International		Total	
	Fair Value	%	Fair Value	%	Fair Value	%
Short-Term Investments						
Commercial Paper	205,008,503	0.31%		0.00%	205,008,503	0.31%
Pooled Funds and Mutual Funds	3,421,132,089	5.21%		0.00%	3,421,132,089	5.21%
Total Short Term Investments	<u>3,626,140,592</u>	<u>5.52%</u>		<u>0.00%</u>	<u>3,626,140,592</u>	<u>5.52%</u>
Real Estate	5,111,807,123	7.78%		0.00%	5,111,807,123	7.78%
Private Equities & Strategic Lending	<u>10,723,209,228</u>	<u>16.32%</u>		<u>0.00%</u>	<u>10,723,209,228</u>	<u>16.32%</u>
Total Investments	<u>58,137,139,124</u>	<u>88.49%</u>	<u>7,562,085,361</u>	<u>11.51%</u>	<u>65,699,224,485</u>	<u>100.00%</u>
Derivatives & Options	394,453				394,453	
Short Term Investments Classified as Cash Equivalents	<u>(890,870,682)</u>				<u>(890,870,682)</u>	
Total Investments of the Tennessee Retiree Group Trust	<u>\$ 57,246,662,895</u>		<u>\$ 7,562,085,361</u>		<u>\$ 64,808,748,256</u>	

Note: TCRS owns 99.3% 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	\$ 8.5 Billion	\$ 36,470,001
Real Estate Asset Management	5.1 Billion	12,622,829
Private Equities & Strategic Lending Asset Management	10.7 Billion	508,878
Total Asset Management		<u>\$ 49,601,708</u>
Other Investment Services Fees		
Custodian Bank	\$ 65.0 Billion	\$ 1,735,912
General Investment Consultant	65.0 Billion	378,720
Real Estate Investment Consultant	5.1 Billion	343,750
Private Equities & Strategic Lending Investment Consultant	10.7 Billion	950,004
Total Investment Services Fees		<u>\$ 3,408,386</u>

(continued)



SCHEDULES OF INVESTMENT FEES AND COMMISSIONS
FOR THE YEAR ENDED JUNE 30, 2021 (CONTINUED)



TRGT Schedules of Commissions

Domestic Exchange Traded Shares

Broker Name	DOMESTIC		
	Number of Shares Traded	Total Commissions	Commission per Share
Instinet, LLC	133,419,167	\$ 2,668,383	0.0200
JP Morgan	20,281,893	405,638	0.0200
Barclays Capital	13,673,555	244,275	0.0179
RBC Capital Markets Corporation	9,817,815	196,356	0.0200
UBS Securities LLC	8,842,872	176,857	0.0200
Truist Securities	8,444,996	168,900	0.0200
Raymond James & Associates Inc.	6,114,541	122,291	0.0200
Evercore ISI	6,107,280	122,146	0.0200
Sanford Bernstein & Co.	5,690,963	113,819	0.0200
OTHER BROKERS*	19,410,363	318,756	0.0164
Totals	231,803,445	\$ 4,537,421	

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
C S FBCO	21,018,930	\$ 420,379	0.0200
Morgan Stanley & Company, Inc.	46,556,700	349,178	0.0075
Bank of America Securities	35,966,332	269,749	0.0075
Goldman Sachs Group, Inc.	33,549,593	251,625	0.0075
OTHER BROKERS*	27,677,726	247,694	0.0089
Wells Fargo	31,949,796	239,630	0.0075
UBS Securities LLC	31,757,814	238,187	0.0075
Barclays Capital	13,471,561	206,949	0.0154
Totals	241,948,452	\$ 2,223,391	

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

(continued)



SCHEDULES OF INVESTMENT FEES AND COMMISSIONS
FOR THE YEAR ENDED JUNE 30, 2021 (CONTINUED)



International Exchange Traded Shares

Broker Name	INTERNATIONAL		
	Number of Shares Traded	Total Commissions	Commission per Share
UBS Securities LLC	83,121,108	\$ 474,813	0.0057
Goldman Sachs Group, Inc.	29,085,810	383,521	0.0132
Instinet	69,210,550	355,828	0.0051
Jefferies International	21,157,978	201,439	0.0095
Morgan Stanley & Company, Inc.	48,849,871	194,909	0.0040
JP Morgan Chase & Company	41,411,621	167,894	0.0041
Merrill Lynch	21,102,725	164,328	0.0078
Citigroup Global Markets, Inc.	40,874,802	151,300	0.0037
Credit Suisse	35,341,694	134,916	0.0038
HSBC Bank	40,447,050	126,564	0.0031
Carnegie	6,751,506	120,077	0.0178
Exane	10,829,267	109,463	0.0101
Barclays Capital	6,938,590	101,409	0.0146
OTHER BROKERS*	138,293,142	1,161,214	0.0084
TOTALS	593,415,714	\$ 3,847,674	

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

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ACTUARIAL VALUATIONS

Actuarial valuations of the TCRS are performed by an independent actuarial consulting firm to assess the funded status of the system and to determine employer contribution rates for its various components. The valuation performed as of June 30, 2019 set employer rates effective July 1, 2020 through June 30, 2021. The June 30, 2020 valuation established contribution rates beginning July 1, 2021. 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.

QUADRENNIAL EXPERIENCE STUDY

A quadrennial experience study was conducted as of June 30, 2016. The system made adjustments to the mortality assumptions to reflect TCRS experience, including an assumption for future mortality improvement. In addition, the system lowered the long-term inflation assumption, which also lowered other economic assumptions such as the discount rate, COLA and salary scale for all groups. Assumptions developed from the June 30, 2016 experience study were used in each actuarial valuation starting with the June 30, 2017 valuation. The June 30, 2020 quadrennial experience study was recently completed and presented to the TCRS Board of Trustees. The recommendations from the June 30, 2020 experience study will be used in each actuarial valuation starting with the June 30, 2021 valuation.

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 in the Reporting and Investment Policies section of the TCRS website at treasury.tn.gov/tcrs.



Justin C. Thacker, F.S.A.
Direct Line: (629) 895-7858
Email: Justin.Thacker@usi.com



November 12, 2021

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, 2021 for the Tennessee Consolidated Retirement System was performed as of June 30, 2020. In addition, a valuation for accounting purposes pursuant to GASB 67 and 68 was performed as of June 30, 2020 and was used to satisfy June 30, 2021 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, 2016. 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 2020 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.

(continued)



Mr. David H. Lillard, Jr.
Chairman, Board of Trustees
November 12, 2021
Page Two

Certain tables presented in the Annual Comprehensive Financial Report are derived from the 2020 actuarial valuation reports prepared by Findley. 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 2020 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 2020 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 Findley 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, 2017 valuation. The assumptions used are based on the consulting actuary's recommendations resulting from the June 30, 2016 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 value. The actuarial value of assets must be within 80-120 percent of the fair 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 2.25 percent annually, reflecting the 1997 adoption of compounded cost-of-living adjustments.

Economic Assumptions

- **Investment Return Rate** — 7.25 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 — 3.0 percent annual increase.

(continued)



Decrement Assumptions

Post-Retirement Mortality — Mortality assumptions utilize the RP-2014 industry standard base table for annuitants adjusted for TCRS experience, with mortality improvements projected six years beyond each actuarial valuation date for the Legacy Plan and projected generationally for the Hybrid Plan.

Pre-Retirement Mortality — Mortality assumptions utilize the RP-2014 industry standard base table for non-annuitants adjusted for TCRS experience, with mortality improvements projected fifteen years beyond each actuarial valuation date for the Legacy Plan and projected generationally for the Hybrid Plan.

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%



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

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

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%

**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
2011	SETHEEPP	135,588	\$ 6,058,348	\$ 44,682	0.24%
	PSPP	79,488	2,354,939	29,626	1.14%
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%
2017	TLPP	62,320	3,414,741	54,794	3.48%
	TRP	15,607	674,906	43,244	3.23%
	PERP	139,397	5,566,390	39,932	4.02%
2018	TLPP	59,487	3,460,664	58,175	6.17%
	TRP	19,634	905,280	46,108	6.62%
	PERP	140,238	5,816,152	41,473	3.86%
2019	TLPP	56,294	3,248,210	57,701	-0.81%
	TRP	23,345	1,068,265	45,760	-0.75%
	PERP	142,259	6,045,602	42,497	2.47%
2020	TLPP	53,582	3,219,651	60,088	4.14%
	TRP	26,418	1,251,899	47,388	3.56%
	PERP	143,024	6,287,911	43,964	3.45%

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
2011	SETHEEPP	83,041	\$ 1,457,974	\$ 17,557	2.92%
	PSPP	33,544	241,910	7,212	3.61%
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%

(continued)



ACTUARIAL DATA (CONTINUED)



2017	TLPP	50,230		1,187,624		23,644	2.09%
	TRP	2		2		797	N/A
	PERP	103,277		1,286,131		12,453	2.24%
2018	TLPP	50,922	\$	1,227,139	\$	24,098	1.92%
	TRP	3		2		801	0.50%
	PERP	106,448		1,353,198		12,712	2.08%
2019	TLPP	52,400		1,285,073		24,524	1.77%
	TRP	12		22		1,830	128.35%
	PERP	110,655		1,429,232		12,916	1.60%
2020	TLPP	52,913		1,324,475		25,031	2.07%
	TRP	25		53		2,109	15.26%
	PERP	113,475		1,494,962		13,174	2.00%

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		
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
2017	TLPP	2,137	69,114	1,243	24,042	50,230	1,187,624	3.94%	23,644
	TRP	1	1	0	0	2	2	237.95%	797
	PERP	6,538	102,361	3,272	34,345	103,277	1,286,131	5.58%	12,453
2018	TLPP	1,805	62,874	1,113	23,359	50,922	1,227,139	3.33%	24,098
	TRP	1	0	0	0	3	2	50.75%	801
	PERP	6,127	99,291	2,956	32,224	106,448	1,353,198	5.21%	12,712
2019	TLPP	2,671	83,451	1,193	25,517	52,400	1,285,073	4.72%	24,524
	TRP	9	20	0	0	12	22	813.41%	1,830
	PERP	7,458	112,062	3,251	36,028	110,655	1,429,232	5.62%	12,916
2020	TLPP	1,765	66,768	1,252	27,366	52,913	1,324,475	3.07%	25,031
	TRP	13	31	0	0	25	53	140.12%	2,109
	PERP	6,122	103,165	3,302	37,435	113,475	1,494,962	4.60%	13,174

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

Legislative changes modified the plans presented beginning July 1, 2014. The July 1, 2015 Actuarial Valuation was the first performed after this change.
 Note: Timing differences exist between the data utilized for statistical information and that used for actuarial valuation purposes.



ACTUARIAL BALANCE SHEET
as of July 1, 2020

	<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	\$ 21,894,277,719	\$ 111,444,882	\$ 25,753,696,700	\$ 47,759,419,301
Members' accumulation fund	3,717,402,690	235,438,855	1,855,966,571	5,808,808,116
Total present assets	<u>25,611,680,409</u>	<u>346,883,737</u>	<u>27,609,663,271</u>	<u>53,568,227,417</u>
Present value of prospective contributions payable to:				
Employer accumulation fund				
Normal	609,210,892	227,825,360	2,859,834,823	3,696,871,075
Accrued liability	<u>0</u>	<u>(2,732,885)</u>	<u>1,240,602,233</u>	<u>1,237,869,348</u>
Total employer accumulation	<u>609,210,892</u>	<u>225,092,475</u>	<u>4,100,437,056</u>	<u>4,934,740,423</u>
Member's accumulation fund	<u>1,518,636,087</u>	<u>859,518,713</u>	<u>1,463,200,629</u>	<u>3,841,355,429</u>
Total prospective contributions	<u>2,127,846,979</u>	<u>1,084,611,188</u>	<u>5,563,637,685</u>	<u>8,776,095,852</u>
TOTAL ASSETS	<u><u>\$ 27,739,527,388</u></u>	<u><u>\$ 1,431,494,925</u></u>	<u><u>\$ 33,173,300,956</u></u>	<u><u>\$ 62,344,323,269</u></u>
LIABILITIES				
Present value of prospective benefits payable on account of:				
Present retired members and beneficiaries	\$ 14,552,707,349	\$ 697,001	\$ 15,831,904,205	\$ 30,385,308,555
Present active members	12,533,798,274	1,392,890,165	15,183,903,719	29,110,592,158
Former members	653,021,765	37,907,759	2,157,493,032	2,848,422,556
TOTAL LIABILITIES	<u><u>\$ 27,739,527,388</u></u>	<u><u>\$ 1,431,494,925</u></u>	<u><u>\$ 33,173,300,956</u></u>	<u><u>\$ 62,344,323,269</u></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.

Dollar Amounts Expressed in Millions

		Actuarial Accrued Liabilities for:				Portion of Actuarial Accrued Liabilities Covered by Assets		
	Actuarial Valuation July 1	(1) Active Member Contributions	(2) Retirees and Beneficiaries	(3) Active Members (Employer Financed)	Valuation Assets	(1)	(2)	(3)
2011	SETHEEP	\$ 3,707.0	\$ 15,941.3	\$ 13,059.3	\$ 30,118.2	100%	100%	80%
	PSPP	1,100.8	2,560.6	3,700.3	6,562.6	100%	100%	78%
	Total	\$ 4,807.8	\$ 18,501.9	\$ 16,759.6	\$ 36,680.8	100%	100%	80%
2013	SETHEEP	\$ 3,759.9	\$ 18,747.4	\$ 11,616.3	\$ 31,851.0	100%	100%	80%
	PSPP	1,196.3	3,075.7	3,517.8	7,398.3	100%	100%	89%
	Total	\$ 4,956.2	\$ 21,823.1	\$ 15,134.1	\$ 39,249.3	100%	100%	82%
2015	TLPP	\$ 3,340.9	\$ 12,534.5	\$ 5,433.7	\$ 21,040.2	100%	100%	95%
	TRP	10.4	0.0	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	0.0	15.0	49.9	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%
2017	TLPP	\$ 3,351.8	\$ 13,485.7	\$ 6,003.4	\$ 22,330.7	100%	100%	92%
	TRP	66.0	0.0	32.4	96.1	100%	100%	93%
	PERP	1,640.8	13,940.9	10,231.2	23,379.2	100%	100%	76%
	Total	\$ 5,058.6	\$ 27,426.6	\$ 16,267.0	\$ 45,806.0	100%	100%	82%
2018	TLPP	\$ 3,509.6	\$ 13,754.8	\$ 6,412.1	\$ 23,172.7	100%	100%	92%
	TRP	111.5	0.0	56.7	159.9	100%	100%	85%
	PERP	1,706.8	14,539.1	10,618.9	24,520.1	100%	100%	78%
	Total	\$ 5,327.9	\$ 28,294.0	\$ 17,087.7	\$ 47,852.7	100%	100%	80%
2019	TLPP	\$ 3,565.1	\$ 14,317.1	\$ 6,123.4	\$ 24,426.8	100%	100%	100%
	TRP	167.6	0.3	76.8	243.6	100%	100%	99%
	PERP	1,793.1	15,281.4	10,740.5	26,092.5	100%	100%	84%
	Total	\$ 5,525.8	\$ 29,598.8	\$ 16,940.7	\$ 50,762.9	100%	100%	92%
2020	TLPP	\$ 3,717.4	\$ 14,552.7	\$ 6,423.8	\$ 25,611.7	100%	100%	100%
	TRP	235.4	0.7	108.0	346.9	100%	100%	100%
	PERP	1,856.0	15,831.9	11,162.4	27,609.7	100%	100%	89%
	Total	\$ 5,808.8	\$ 30,385.3	\$ 18,612.0	\$ 53,568.3	100%	100%	93%



SUMMARY OF ACCRUED AND UNFUNDED ACCRUED LIABILITIES



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 entry age normal method.

Under this method, the unfunded accrued liability is being funded by level-dollar contributions. The actuarially-determined contributions are intended to provide funding for both the normal cost and the unfunded actuarial liability cost.

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 Jun 30	Actuarial Accrued Liabilities (AAL)	Valuation Assets	Ratio Assets to AAL	Unfunded Actuarial Accrued Liabilities (UAAL)	Active Member Payroll	UAAL as a Percentage of Active Member Payroll
2011						
SETHEEP	\$ 32,707.6	\$ 30,118.2	92.08%	\$ 2,589.4	\$ 6,058.3	42.74%
PSPP	\$ 7,361.7	\$ 6,562.6	89.15%	\$ 799.1	\$ 2,354.9	33.93%
2013						
SETHEEP	\$ 34,123.6	\$ 31,851.0	93.34%	\$ 2,272.6	\$ 6,236.9	36.44%
PSPP	\$ 7,789.8	\$ 7,398.3	94.97%	\$ 391.5	\$ 2,375.0	16.49%
2015						
TLPP	\$ 21,309.1	\$ 21,040.2	98.74%	\$ 268.9	\$ 3,542.1	7.59%
TRP	\$ 14.7	\$ 15.7	106.80%	\$ (1.0)	\$ 239.5	-0.42%
PERP	\$ 23,248.6	\$ 21,682.8	93.26%	\$ 1,565.8	\$ 5,009.6	31.26%
2016						
TLPP	\$ 21,816.5	\$ 21,681.8	99.38%	\$ 134.7	\$ 3,465.9	3.89%
TRP	\$ 47.6	\$ 49.9	104.83%	\$ (2.3)	\$ 493.2	-0.47%
PERP	\$ 24,105.7	\$ 22,512.8	93.39%	\$ 1,592.9	\$ 5,262.4	30.27%
2017						
TLPP	\$ 22,840.9	\$ 22,330.7	102.28%	\$ 510.2	\$ 3,414.7	-14.94%
TRP	\$ 98.4	\$ 96.1	97.66%	\$ 2.3	\$ 715.0	0.32%
PERP	\$ 25,812.9	\$ 23,379.2	90.57%	\$ 2,433.7	\$ 5,598.0	43.47%
2018						
TLPP	\$ 23,676.5	\$ 23,172.7	97.87%	\$ 503.8	\$ 3,460.7	14.56%
TRP	\$ 168.2	\$ 159.9	95.09%	\$ 8.3	\$ 958.2	0.86%
PERP	\$ 26,864.8	\$ 24,520.1	91.27%	\$ 2,344.7	\$ 5,857.4	40.03%
2019						
TLPP	\$ 24,005.6	\$ 24,426.8	101.75%	\$ (421.2)	\$ 3,248.2	-12.97%
TRP	\$ 244.7	\$ 243.6	99.55%	\$ 1.1	\$ 1,130.0	0.10%
PERP	\$ 27,815.0	\$ 26,092.5	93.81%	\$ 1,722.5	\$ 6,095.1	28.26%
2020						
TLPP	\$ 24,693.9	\$ 25,611.7	103.72%	\$ (917.8)	\$ 3,219.7	-28.51%
TRP	\$ 344.1	\$ 346.9	100.79%	\$ (2.8)	\$ 1,323.4	-0.21%
PERP	\$ 28,850.3	\$ 27,609.7	95.70%	\$ 1,240.6	\$ 6,347.0	19.55%



SELECTED ACTUARIAL FUNDING INFORMATION

Actuarial Valuation Year	Earnings Assumptions	Salary Assumptions	Unfunded Liability (Asset)		State Amortization Period
			SETHEEP	PSPP	
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)
2017	7.25%	4.00% (2)	510,205,267	2,307,714	2,433,632,446	13.64 (1)
2018	7.25%	4.00% (2)	503,884,213	8,253,746	2,344,674,537	12.85 (1)
2019	7.25%	4.00% (2)	(421,138,310)	1,094,161	1,722,513,721	9.51 (1)
2020	7.25%	4.00% (2)	(917,817,386)	(2,732,885)	1,240,602,233	7.67 (1)

Notes:

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

(2) Graded scale

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

**GAIN AND LOSS ANALYSIS, JUNE 30, 2020 VALUATION**

	Consolidated State	Teacher
Contribution Rate	20.37%	10.27%
Effective Employer Contribution Rate Pursuant to 2018 Valuation		
Investment Results	-0.67%	-0.70%
Salary Increases	0.10%	-0.02%
New Entrants: Since the Legacy Plan closed in new entrants effective June 30, 2014 there is no impact on the contribution rate for new entrants	0.00%	0.00%
Cost of Living Escalation	0.02%	0.02%
Contribution Rate Change Delay	0.06%	-0.04%
Effect of turnover on total payroll	0.43%	0.05%
Update Mortality Projection	-0.11%	-0.09%
Other	-0.16%	-0.14%
Subtotal	<hr/> -0.33%	<hr/> -0.92%
End of amortization for 2013 tier	0.00%	-3.65%
Re-amortization of unfunded liability	0.61%	4.60%
Effective Employer Contribution Rate Pursuant to 2020 Valuation	20.65%	10.30%

ACTUARIAL VS. RECOMMENDED CONTRIBUTION RATES

The Board adopted the contribution rates as recommended by the actuary. See pages 50 and 51 for required supplementary information regarding actuarial vs. actual contributions.



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 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 contributes 9.0 percent of salary to the ORP. The employee contributes 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 normal retirement age (age 60 for legacy plan members or age 65 for hybrid plan members) 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. For members joining TCRS on or after July 1, 1997, accidental disability benefits are determined in the same manner as ordinary disability using the projection of service method. Disability benefits are increased by 5.0 percent for state employees, teachers and employees of participating political subdivisions which have authorized the 5.0 percent benefit improvement. The accidental benefit is adjusted if the member's combined benefits from Social Security and/or workers' compensation exceed 75 percent of his AFC.

(continued)



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

A member may designate one or more persons, his estate, an institution or any combination of such as his beneficiary. However, estates and institutions 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 for certain vested members, a 100 percent Joint and Survivor Annuity for any beneficiary under certain conditions 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 entered 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 of service. 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 the State and Teacher Hybrid Retirement 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 mytcrs.com. Detailed member information, salary and service history, and the ability to apply for retirement benefits 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 annually 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.
- Welcome packets are mailed to all new members.
- Membership guides are available to members on the TCRS website.
- Member self-service can be accessed at mytcrs.com in order to update contact and beneficiary information.

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 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 are available online at publicreports.treasury.tn.gov
- Actuarial Report
- Employer education regarding reporting and participation in TCRS.



TCRS Legacy Plan and Social Security Benefits for Calendar Year 2021

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
\$30,000	TCRS	\$ 7,088		\$ 9,450		\$ 11,813		\$ 14,175		\$ 16,538	
	Social Security	14,700		14,700		14,700		14,700		14,700	
	Total	\$ 21,788	72.6%	\$ 24,150	80.5%	\$ 26,513	88.4%	\$ 28,875	96.3%	\$ 31,238	104.1%
\$40,000	TCRS	\$ 9,450		\$ 12,600		\$ 15,750		\$ 18,900		\$ 22,050	
	Social Security	17,604		17,604		17,604		17,604		17,604	
	Total	\$ 27,054	67.6%	\$ 30,204	75.5%	\$ 33,354	83.4%	\$ 36,504	91.3%	\$ 39,654	99.1%
\$50,000	TCRS	\$ 11,813		\$ 15,750		\$ 19,688		\$ 23,625		\$ 27,563	
	Social Security	20,496		20,496		20,496		20,496		20,496	
	Total	\$ 32,309	64.6%	\$ 36,246	72.5%	\$ 40,184	80.4%	\$ 44,121	88.2%	\$ 48,059	96.1%
\$60,000	TCRS	\$ 14,175		\$ 18,900		\$ 23,625		\$ 28,350		\$ 33,075	
	Social Security	23,400		23,400		23,400		23,400		23,400	
	Total	\$ 37,575	62.6%	\$ 42,300	70.5%	\$ 47,025	78.4%	\$ 51,750	86.3%	\$ 56,475	94.1%
\$70,000	TCRS	\$ 16,538		\$ 22,050		\$ 27,563		\$ 33,075		\$ 38,588	
	Social Security	26,124		26,124		26,124		26,124		26,124	
	Total	\$ 42,662	60.9%	\$ 48,174	68.8%	\$ 53,687	76.7%	\$ 59,199	84.6%	\$ 64,712	92.4%

TCRS Hybrid Plan and Social Security Benefits for Calendar Year 2021

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
\$30,000	TCRS	\$ 4,500		\$ 6,000		\$ 7,500		\$ 9,000		\$ 10,500	
	Social Security	14,700		14,700		14,700		14,700		14,700	
	Total	\$ 19,200	64.0%	\$ 20,700	69.0%	\$ 22,200	74.0%	\$ 23,700	79.0%	\$ 25,200	84.0%
\$40,000	TCRS	\$ 6,000		\$ 8,000		\$ 10,000		\$ 12,000		\$ 14,000	
	Social Security	17,604		17,604		17,604		17,604		17,604	
	Total	\$ 23,604	59.0%	\$ 25,604	64.0%	\$ 27,604	69.0%	\$ 29,604	74.0%	\$ 31,604	79.0%
\$50,000	TCRS	\$ 7,500		\$ 10,000		\$ 12,500		\$ 15,000		\$ 17,500	
	Social Security	20,469		20,496		20,496		20,496		20,496	
	Total	\$ 27,969	55.9%	\$ 30,496	61.0%	\$ 32,996	66.0%	\$ 35,496	71.0%	\$ 37,996	76.0%
\$60,000	TCRS	\$ 9,000		\$ 12,000		\$ 15,000		\$ 18,000		\$ 21,000	
	Social Security	23,400		23,400		23,400		23,400		23,400	
	Total	\$ 32,400	54.0%	\$ 35,400	59.0%	\$ 38,400	64.0%	\$ 41,400	69.0%	\$ 44,400	74.0%
\$70,000	TCRS	\$ 10,500		\$ 14,000		\$ 17,500		\$ 21,000		\$ 24,500	
	Social Security	26,124		26,124		26,124		26,124		26,124	
	Total	\$ 36,624	52.3%	\$ 40,124	57.3%	\$ 43,624	62.3%	\$ 47,124	67.3%	\$ 50,624	72.3%

* Average Final Compensation

A key component of the Hybrid Plan is a 401(k) plan, which allows the member to invest pre-tax or after-tax (Roth) dollars in investment options of his or her choice that are offered by the plan. A member is immediately vested in the 401(k) and can decide how the contributions should be invested given individual goals, risk tolerance, and timeline. The amount a member receives in retirement from his or her 401(k) account is based on the amount saved, plus any accumulated earnings from investments. The employer contributes 5% of the employee's earnable compensation directly to the 401(k) for the member to invest.

This chart is based on a date of retirement in 2021. Social security benefits have been calculated by Findley, Inc., actuarial consultants for the TCRS, utilizing the following assumptions: (1) retirement is taking place at age 65 in 2020; (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.

1974

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

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.

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

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.

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.

(continued)



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 to qualify a public safety officer to retire on an unreduced retirement benefit at age 55 with 25 years of service.

2012

New pension plan design options offered to local governments.

2013

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

2016

Qualified Domestic Relations Orders (QDROs) recognized by the retirement system.

2017

Allow members to designate multiple beneficiaries at retirement.

2019

Added 25-year early retirement option for all public safety officers.

Changed service requirement for some death benefits from 10 years to vesting.

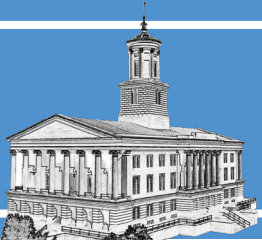
2020

Added 25-year early retirement option for all correctional officers and emergency medical service employees.

2021

Expanded Public Safety Officer Benefits to cover Local Government Correctional Officers on an optional basis.

Retired Law Enforcement Officers allowed to return to work with added benefits.



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 89-92 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 93-124 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 2012-2021
Expressed in Thousands

As of June 30	Fair Value
2012	34,912,773
2013	37,564,905
2014	42,905,157
2015	43,243,941
2016	43,306,209
2017	47,014,252
2018	49,722,596
2019	52,134,631
2020	53,349,554
2021	65,480,790



ANALYSIS OF RESERVES
FOR THE YEAR ENDED JUNE 30, 2021



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 Employee Retirement 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. Effective July 1, 2018, future contributions to the stabilization reserve are held in a separate trust outside of TCRS and therefore are not reflected on this schedule.

	Public Employee Retirement Plan	Teacher Retirement Plan	Teacher Legacy Pension Plan	Total
<i>June 30, 2020 Member Reserve Fund</i>	\$ 1,854,591,058	\$ 235,330,677	\$ 3,716,401,982	\$ 5,806,323,717
Member Contributions	162,281,115	72,213,168	164,846,662	399,340,945
Employer Provided Contributions	5,552,115	(261)	6,897	5,558,751
Interest	84,774,123	11,675,244	175,458,692	271,908,059
Refunded Account Balances	(24,231,832)	(4,069,467)	(15,849,685)	(44,150,984)
Transfers to Employer Fund of Retiring Members' Accounts	(141,264,829)	(316,033)	(236,589,159)	(378,170,021)
<i>June 30, 2021 Member Reserve Fund</i>	1,941,701,750	314,833,328	3,804,275,389	6,060,810,467
<i>June 30, 2020 Employer Reserve Fund</i>	25,584,328,533	107,464,310	21,739,830,795	47,431,623,638
Employer Contributions	723,253,754	29,152,958	337,066,627	1,089,473,339
Employer Refunds	(8,179)	0	(30,451)	(38,630)
Other Contributions	1,076,398	0	0	1,076,398
Investment Income	6,991,511,785	100,658,995	6,455,724,460	13,547,895,240
Transfers from Retiring Members' Account	141,264,829	316,033	236,589,159	378,170,021
Employer Provided Contributions	(5,552,115)	261	(6,897)	(5,558,751)
Interest Credited to Members' Account	(84,774,123)	(11,675,244)	(175,458,692)	(271,908,059)
Lump-Sum Death Benefits	(2,790,015)	(79,798)	(2,771,434)	(5,641,247)
Retirement and Survivors Annuities	(1,524,680,927)	(103,720)	(1,340,896,873)	(2,865,681,520)
Administrative Expenses	(12,679,508)	(2,559,673)	(4,589,319)	(19,828,500)
<i>June 30, 2021 Employer Reserve Fund</i>	31,810,950,432	223,174,122	27,245,457,375	59,279,581,929
<i>June 30, 2020 Stabilization Reserve Fund</i>	53,455,341	58,150,892	0	111,606,233
Investment Income	13,789,814	15,001,122	0	28,790,936
<i>June 30, 2021 Stabilization Reserve Fund</i>	67,245,155	73,152,014	0	140,397,169
<i>June 30, 2021 Assets held in Trust for Pension Benefits</i>	\$ 33,819,897,337	\$ 611,159,464	\$ 31,049,732,764	\$ 65,480,789,565



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	Benefit Payments	Administrative Expenses	Refunds		
Public Employee Retirement Plan									
6/30/2021	\$ 162,281	\$ 723,255	\$ 1,076	\$ 7,005,301	\$ 1,527,471	\$ 12,679	\$ 24,240	\$ 6,327,523	
6/30/2020	149,829	735,610	1,406	1,306,627	1,460,114	12,348	23,186	697,824	
6/30/2019	138,197	730,655	2,479	1,877,223	1,393,511	12,654	24,055	1,318,334	
6/30/2018	121,257	739,160	2,604	1,973,039	1,320,077	13,268	21,135	1,481,580	
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									
6/30/2021	\$ 72,213	\$ 29,153	\$ 0	\$ 115,660	\$ 184	\$ 2,560	\$ 4,069	\$ 210,213	
6/30/2020	63,183	25,617	0	16,947	100	2,295	3,595	99,757	
6/30/2019	52,930	20,529	0	18,476	23	2,018	2,184	87,710	
6/30/2018	43,731	34,957	0	13,554	31	1,847	1,598	88,766	
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									
6/30/2021	\$ 164,847	\$ 337,066	\$ 0	\$ 6,455,725	\$ 1,343,668	\$ 4,589	\$ 15,881	\$ 5,593,500	
6/30/2020	167,155	353,767	0	1,215,905	1,296,941	4,572	17,972	417,342	
6/30/2019	168,919	350,734	0	1,759,946	1,251,885	5,202	16,521	1,005,991	
6/30/2018	176,442	318,337	0	1,867,630	1,200,195	5,789	18,427	1,137,998	
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	195,521	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 eight 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							
6/30/2021	\$ 1,392,253	\$ 36,031	\$ 96,397	\$ 2,790	\$ 1,527,471	\$ 24,240	\$ 1,551,711
6/30/2020	1,330,665	34,437	92,133	2,879	1,460,114	23,186	1,483,300
6/30/2019	1,269,879	32,864	87,924	2,844	1,393,511	24,055	1,417,566
6/30/2018	1,203,055	31,135	83,297	2,590	1,320,077	21,135	1,341,212
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							
6/30/2021	\$ 95	\$ 2	\$ 7	\$ 80	\$ 184	\$ 4,069	\$ 4,253
6/30/2020	30	1	2	67	100	3,595	3,695
6/30/2019	6	0	1	16	23	2,184	2,207
6/30/2018	2	0	0	29	31	1,598	1,629
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							
6/30/2021	\$ 1,224,431	\$ 31,689	\$ 84,777	\$ 2,771	\$ 1,343,668	\$ 15,881	\$ 1,359,549
6/30/2020	1,182,674	30,608	81,886	1,773	1,296,941	17,972	1,314,913
6/30/2019	1,140,760	29,523	78,984	2,618	1,251,885	16,521	1,268,406
6/30/2018	1,093,439	28,299	75,708	2,749	1,200,195	18,427	1,218,622
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 eight 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 Legacy Retirement Plan			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
0 - 4	261	251	92	26,102	26,706
5 - 9	7,900	4,153	2,210	15,372	29,635
10 - 14	12,898	4,808	2,513	11,569	31,788
15 - 19	11,207	5,076	1,794	9,139	27,216
20 - 24	9,605	3,638	1,256	7,166	21,665
25 - 29	5,788	2,072	865	3,932	12,657
30 - 34	1,841	1,248	506	1,968	5,563
35 - 39	798	879	278	748	2,703
40 - 44	220	323	133	297	973
Over 44	84	141	74	88	387
Total	50,602	22,589	9,721	76,381	159,293

Years of Service	Teachers Hybrid Retirement Plan	Public Employee Hybrid Retirement Plan			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
0-4	18,929	13,161	6,305	5,412	43,807
5-9	8,798	3,954	1,896	710	15,358
10-14	749	290	114	168	1,321
15-19	321	154	46	103	624
20-24	106	51	18	61	236
25-29	39	25	11	22	97
30-34	7	6	6	6	25
35-39	2	1	0	3	6
40-44	1	3	0	0	4
Over 44	0	0	0	1	1
Total	28,952	17,645	8,396	6,486	61,479

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, 2021



SCHEDULES OF ACTIVE MEMBERS
By Enrollment Date

Date of Membership	Teachers Legacy Pension Plan		Public Employee Legacy Pension Plan			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees		
1940's	0	0	1	0	1	
1950's	0	0	1	1	2	
1960's	16	18	12	2	48	
1970's	221	304	161	219	905	
1980's	2,356	2,262	860	2,104	7,582	
1990's	13,600	5,375	1,979	9,661	30,615	
2000's	23,057	9,405	3,757	19,132	55,351	
2010's	11,272	5,162	2,929	34,984	54,347	
2020's	80	63	21	10,278	10,442	
Total	50,602	22,589	9,721	76,381	159,293	

Date of Membership	Teachers Hybrid Retirement Plan		Public Employee Hybrid 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	1	1	0	1	3	
1980's	6	8	3	10	27	
1990's	53	78	34	76	241	
2000's	386	294	101	205	986	
2010's	23,349	12,916	6,295	3,951	46,511	
2020's	5,157	4,348	1,963	2,243	13,711	
Total	28,952	17,645	8,396	6,486	61,479	



SCHEDULES OF ACTIVE MEMBERS
By Current Age

Current Age	Teacher Legacy Pension Plan	Public Employee Legacy Pension Plan			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
Less than 20	0	1	0	133	134
20-24	1	9	0	2,644	2,654
25-29	36	113	23	5,355	5,527
30-34	4,077	1,078	374	6,445	11,974
35-39	7,340	1,973	770	7,003	17,086
40-44	8,980	2,823	1,075	8,183	21,061
45-49	9,880	3,395	1,308	9,399	23,982
50-54	9,599	3,839	1,546	11,099	26,083
55-59	5,891	3,873	1,792	11,045	22,601
60-64	3,470	3,204	1,642	8,866	17,182
65-69	1,036	1,535	822	3,934	7,327
70 and above	292	746	369	2,275	3,682
Total	50,602	22,589	9,721	76,381	159,293

Current Age	Teachers Hybrid Pension Plan	Public Employee Hybrid Retirement Plan			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
Less than 20	0	32	2	37	71
20-24	1,871	1,094	275	598	3,838
25-29	8,634	3,451	1,204	995	14,284
30-34	6,292	3,355	1,332	865	11,844
35-39	3,479	2,398	1,250	811	7,938
40-44	2,871	1,912	1,061	807	6,651
45-49	2,318	1,578	930	655	5,481
50-54	1,811	1,423	890	664	4,788
55-59	1,003	1,234	728	512	3,477
60-64	489	820	516	361	2,186
65-69	145	261	151	119	676
70 and above	39	87	57	62	245
Total	28,952	17,645	8,396	6,486	61,479



SCHEDULES OF ACTIVE MEMBERS
By Age at Enrollment

Age at Enrollment	Teachers Legacy Pension Plan	Public Employee Legacy Pension Plan			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
Less than 20	93	516	137	1,298	2,044
20 - 24	18,391	4,706	1,630	11,728	36,455
25 - 29	14,899	5,802	1,961	12,581	35,243
30 - 34	7,027	3,546	1,552	11,108	23,233
35 - 39	4,954	2,883	1,363	10,864	20,064
40 - 44	2,980	2,133	1,156	9,308	15,577
45 - 49	1,323	1,440	879	7,262	10,904
50 - 54	583	857	617	5,323	7,380
55 - 59	210	460	285	3,757	4,712
60 - 64	95	167	110	1,928	2,300
65 - 69	38	64	25	832	959
70 and above	9	15	6	392	422
Total	50,602	22,589	9,721	76,381	159,293

Age at Enrollment	Teachers Hybrid Pension Plan	Public Employee Hybrid Retirement Plan			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
Less than 20	12	182	24	136	354
20 - 24	9,304	3,092	898	1,076	14,370
25 - 29	6,937	3,948	1,476	1,076	13,437
30 - 34	3,611	2,614	1,337	830	8,392
35 - 39	2,979	2,028	1,149	798	6,954
40 - 44	2,378	1,677	957	675	5,687
45 - 49	1,782	1,400	874	652	4,708
50 - 54	1,125	1,230	796	518	3,669
55 - 59	587	935	558	414	2,494
60 - 64	171	417	248	207	1,043
65 - 69	56	94	57	75	282
70 and above	10	28	22	29	89
Total	28,952	17,645	8,396	6,486	61,479



SCHEDULES OF ACTIVE MEMBERS
By Salary

<u>Annual Salary</u>	<u>Teachers Legacy Pension Plan</u>		<u>Public Employee Legacy Pension 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	62	130	40	4,233	4,465
\$10,000-\$19,999	95	159	70	13,586	13,910
\$20,000-\$29,999	275	668	635	15,035	16,613
\$30,000-\$39,999	486	3,447	1,843	14,805	20,581
\$40,000-\$49,999	7,268	4,716	1,968	12,599	26,551
\$50,000+	42,416	13,469	5,165	16,123	77,173
Total	50,602	22,589	9,721	76,381	159,293

<u>Annual Salary</u>	<u>Teachers Hybrid Pension Plan</u>		<u>Public Employee Hybrid 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	324	1,427	456	800	3,007
\$10,000-\$19,999	459	890	420	1,651	3,420
\$20,000-\$29,999	852	2,038	1,276	1,247	5,413
\$30,000-\$39,999	3,244	4,625	1,951	1,138	10,958
\$40,000-\$49,999	14,156	3,805	1,658	907	20,526
\$50,000+	9,917	4,860	2,635	743	18,155
Total	28,952	17,645	8,396	6,486	61,479



ACTIVE MEMBERS
Fiscal Years 2012-2021

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)	
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
2018	59,026	19,417	27,844	13,192	12,228	5,625	77,162	2,940	217,434
2019	55,884	23,032	25,812	15,139	11,356	6,781	77,239	4,320	219,563
2020	53,486	26,402	24,162	17,170	10,589	7,876	77,499	5,498	222,682
2021	50,602	28,952	22,589	17,645	9,721	8,396	76,381	6,486	220,772



SCHEDULE OF RETIRED MEMBERS
By Type of Benefit Plan

Benefit Plan	Teachers Legacy Pension Plan	Public Employee Legacy Pension Plan			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
Regular	33,191	21,528	10,885	34,290	99,894
Option I	4,802	6,568	3,571	8,263	23,204
Option II	1,569	1,643	981	1,809	6,002
Option III	5,859	5,720	2,271	6,412	20,262
Option IV	4,096	2,998	1,451	2,606	11,151
S.S. Leveling	4,258	2,570	716	2,126	9,670
Others	38	88	7	51	184
Total	53,813	41,115	19,882	55,557	170,367

Benefit Plan	Teacher Hybrid Retirement Plan	Public Employee Hybrid Retirement Plan			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
Regular	41	53	16	15	125
Option I	9	6	3	5	23
Option II	1	0	0	1	2
Option III	1	7	3	8	19
Option IV	1	0	1	1	3
S.S. Leveling	0	0	0	0	0
Others	0	0	0	0	0
Total	53	66	23	30	172

As a consolidated plan, members of TCRS can retire with service in more than one pension plan. In fiscal year 2021, TCRS paid 170,539 total benefit payments to 149,260 retired members.



SCHEDULE OF RETIRED MEMBERS
By Type of Retirement

Type of Retirement	Teachers Legacy Pension Plan	Public Employee Legacy Pension Plan			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
Early Retirement	6,687	5,688	2,970	7,771	23,116
Service Retirement	45,425	32,569	15,844	44,145	137,983
Disability	1,297	1,936	696	2,685	6,614
Total Retirees	53,409	40,193	19,510	54,601	167,713
Survivors	404	922	372	956	2,654
Total	53,813	41,115	19,882	55,557	170,367

Type of Retirement	Teachers Hybrid Retirement Plan	Public Employee Hybrid Retirement Plan			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
Early Retirement	25	28	10	16	79
Service Retirement	25	34	13	13	85
Disability	3	1	0	1	5
Total Retirees	53	63	23	30	169
Survivors	0	3	0	0	3
Total	53	66	23	30	172

As a consolidated plan, members of TCRS can retire with service in more than one pension plan. In fiscal year 2021, TCRS paid 170,539 total benefit payments to 149,260 retired members.



SCHEDULE OF RETIRED MEMBERS

By Average Monthly Benefits

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	4,545	3,582	821	96	46	2,818	569	159	544	262	191	2
501-1,000	6,070	3,875	1,815	285	95	3,611	767	183	732	441	326	10
1,001-1,500	7,093	4,644	1,836	539	74	4,152	786	228	862	557	495	14
1,501-2,000	8,522	6,942	1,255	265	60	4,607	722	204	1,088	651	1,245	5
2,001-2,500	9,667	8,932	607	81	47	5,745	737	234	1,171	823	956	0
2,501-3,000	7,934	7,645	235	26	28	5,269	473	212	763	641	575	1
3,001-3,500	4,483	4,385	68	3	27	3,131	310	136	336	309	257	4
3,501-4,000	2,342	2,302	28	2	10	1,630	180	78	171	159	123	1
Over 4,000	3,157	3,118	22	0	17	2,228	258	135	192	253	90	1
	53,813	45,425	6,687	1,297	404	33,191	4,802	1,569	5,859	4,096	4,258	38

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	11,326	8,163	2,339	512	312	6,366	1,878	396	1,533	631	522	0
501-1,000	8,595	5,618	1,824	933	220	4,713	1,474	333	1,116	572	383	4
1,001-1,500	6,017	4,618	892	364	143	3,052	931	232	819	418	563	2
1,501-2,000	5,037	4,483	370	92	92	2,437	681	182	804	401	530	2
2,001-2,500	3,718	3,481	151	26	60	1,881	513	144	528	336	314	2
2,501-3,000	2,343	2,244	56	5	38	1,172	327	103	360	238	139	4
3,001-3,500	1,459	1,420	25	3	11	727	224	74	208	153	65	8
3,501-4,000	891	858	13	0	20	404	173	59	128	97	26	4
Over 4,000	1,729	1,684	18	1	26	776	367	120	224	152	28	62
	41,115	32,569	5,688	1,936	922	21,528	6,568	1,643	5,720	2,998	2,570	88

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	6,295	4,685	1,279	201	130	3,815	1,014	217	719	305	223	2
501-1,000	4,140	2,806	924	334	76	2,453	697	181	413	275	120	1
1,001-1,500	2,848	2,267	419	112	50	1,559	489	151	323	207	119	0
1,501-2,000	1,898	1,649	190	35	24	954	317	112	250	167	98	0
2,001-2,500	1,307	1,191	82	12	22	581	238	84	172	160	71	1
2,501-3,000	914	858	40	2	14	408	176	52	125	111	42	0
3,001-3,500	647	618	15	0	14	306	141	41	75	60	24	0
3,501-4,000	470	448	11	0	11	217	107	27	54	55	10	0
Over 4,000	1,363	1,322	10	0	31	592	392	116	140	111	9	3
	19,882	15,844	2,970	696	372	10,885	3,571	981	2,271	1,451	716	7

As a consolidated plan, members of TCRS can retire with service in more than one pension plan. In fiscal year 2021, TCRS paid 170,539 total benefit payments to 149,260 retired members.

(continued)



SCHEDULE OF RETIRED MEMBERS
By Average Monthly Benefits (continued)

POLITICAL SUBDIVISION LEGACY PENSION PLAN

Average Monthly Benefit	Number of Retirees	Type of Retirement				Option Selected						
		Service	Early	Disability	Survivor	Regular	I	II	III	IV	SS Leveling	Other
0-500	28,464	21,710	4,880	1,348	526	18,408	4,117	793	3,050	1,143	932	21
501-1,000	13,442	10,345	1,913	958	226	8,722	1,888	403	1,439	580	393	17
1,001-1,500	6,120	5,101	634	298	87	3,518	942	229	790	326	306	9
1,501-2,000	3,258	2,935	215	57	51	1,727	498	125	500	216	190	2
2,001-2,500	1,883	1,761	73	15	34	874	330	106	305	144	123	1
2,501-3,000	1,044	995	31	5	13	441	204	60	165	74	100	0
3,001-3,500	555	532	10	4	9	238	120	39	65	51	42	0
3,501-4,000	323	306	10	0	7	130	68	23	50	29	22	1
Over 4,000	468	460	5	0	3	232	96	31	48	43	18	0
	55,557	44,145	7,771	2,685	956	34,290	8,263	1,809	6,412	2,606	2,126	51

TEACHER 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	52	25	25	2	0	41	8	1	1	1	0	0
501-1,000	1	0	0	1	0	0	1	0	0	0	0	0
Totals	53	25	25	3	0	41	9	1	1	1	0	0

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	63	33	27	1	2	50	6	0	7	0	0	0
501-1,000	1	0	1	0	0	1	0	0	0	0	0	0
1,001-1,500	1	1	0	0	0	1	0	0	0	0	0	0
1,501-2,000	1	0	0	0	1	1	0	0	0	0	0	0
Totals	66	34	28	1	3	53	6	0	7	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	23	13	10	0	0	16	3	0	3	1	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	27	10	16	1	0	14	4	1	7	1	0	0
1,001-1,500	1	1				1	0	0	0	0	0	0
1,501-2,000	1	1	0	0	0	0	0	0	1	0	0	0
2,001-2,500	1	1	0	0	0	0	1	0	0	0	0	0
Totals	30	13	16	1	0	15	5	1	8	1	0	0

As a consolidated plan, members of TCRS can retire with service in more than one pension plan. In fiscal year 2021, TCRS paid 170,539 total benefit payments to 149,260 retired members.



SCHEDULE OF RETIRED MEMBERS

By Current Age

Current Age	Teachers Legacy Pension Plan	Public Employee Legacy Pension Plan			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
Under 40	96	146	57	180	479
40-44	58	115	39	153	365
45-49	117	175	44	226	562
50-54	434	445	195	674	1,748
55-59	2,213	2,287	840	3,170	8,510
60-64	6,617	5,979	2,420	8,145	23,161
65-69	11,988	9,180	4,185	13,043	38,396
70-74	14,562	9,738	4,489	12,596	41,385
75-79	8,369	6,118	3,251	8,109	25,847
80-84	4,827	3,717	2,293	5,200	16,037
85-89	2,812	2,121	1,354	2,830	9,117
90-94	1,333	857	554	977	3,721
95-99	333	208	138	214	893
Over 99	54	29	23	40	146
Total	53,813	41,115	19,882	55,557	170,367

Current Age	Teachers Hybrid Retirement Plan	Public Employee Hybrid Retirement Plan			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
Under 40	0	2	0	0	2
40-44	1	1	0	0	2
45-49	0	0	0	0	0
50-54	3	2	0	2	7
55-59	0	1	1	3	5
60-64	25	22	10	13	70
65-69	22	29	8	10	69
70-74	2	8	3	2	15
75-79	0	1	0	0	1
80-84	0	0	1	0	1
Total	53	66	23	30	172

As a consolidated plan, members of TCRS can retire with service in more than one pension plan. In fiscal year 2021, TCRS paid 170,539 total benefit payments to 149,260 retired members.



SCHEDULE OF RETIRED MEMBERS

By Date of Retirement

Date of Retirement	Teachers Legacy Pension Plan	Public Employee Legacy Pension Plan			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
1950's	1	0	0	0	1
1960's	13	4	0	0	17
1970's	169	88	18	48	323
1980's	1,418	845	416	693	3,372
1990's	6,961	4,742	2,693	4,719	19,115
2000's	17,617	11,856	6,054	14,239	49,766
2010's	24,666	21,163	9,372	30,684	85,885
2020's	2,968	2,417	1,329	5,174	11,888
Total	53,813	41,115	19,882	55,557	170,367

Date of Retirement	Teachers Hybrid Retirement Plan	Public Employee Hybrid Retirement Plan			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
2010's	17	17	8	12	54
2020's	36	49	15	18	118
Total	53	66	23	30	172

As a consolidated plan, members of TCRS can retire with service in more than one pension plan. In fiscal year 2021, TCRS paid 170,539 total benefit payments to 149,260 retired members.



SCHEDULE OF RETIRED MEMBERS
Based on Service Credit at Retirement

Years Of Service	Teachers Legacy Pension Plan	Public Employee Legacy Pension Plan			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
Under 10	5,063	9,565	5,284	19,073	38,985
10-14	4,597	6,218	3,068	9,716	23,599
15-19	5,142	4,658	2,245	7,970	20,015
20-24	6,369	4,406	2,094	6,583	19,452
25-29	7,203	3,957	1,999	5,121	18,280
30-34	15,407	7,178	2,940	4,736	30,261
35-39	6,756	3,063	1,380	1,583	12,782
40-44	2,622	1,410	586	568	5,186
Over 44	654	660	286	207	1,807
Total	53,813	41,115	19,882	55,557	170,367

Years of Service	Teachers Hybrid Retirement Plan	Public Employee Hybrid Retirement Plan			Total
	Teachers	State Employees	Higher Education Employees	Political Subdivision Employees	
Under 10	53	66	23	27	169
25-29	0	0	0	1	1
30-34	0	0	0	2	2
Total	53	66	23	30	172

As a consolidated plan, members of TCRS can retire with service in more than one pension plan. In fiscal year 2021, TCRS paid 170,539 total benefit payments to 149,260 retired members.



RETIRED MEMBERS BY GEOGRAPHICAL DISTRIBUTION
FOR THE YEAR ENDED JUNE 30, 2021



UNITED STATES

Alabama	1,243
Alaska	22
Arizona	217
Arkansas	592
California	274
Colorado	202
Connecticut	28
Delaware	15
District of Columbia	17
Florida	2,323
Georgia	1,714
Hawaii	15
Idaho	30
Illinois	208
Indiana	237
Iowa	51
Kansas	77
Kentucky	1,078
Louisiana	136
Maine	45
Maryland	141
Massachusetts	50
Michigan	180
Minnesota	62
Mississippi	1,726
Missouri	259
Montana	30
Nebraska	20
Nevada	75
New Hampshire	23
New Jersey	46
New Mexico	96
New York	108
North Carolina	952
North Dakota	1

Ohio	284
Oklahoma	127
Oregon	87
Pennsylvania	144
Rhode Island	10
South Carolina	639
South Dakota	19
Tennessee	155,031
Texas	775
Utah	51
Vermont	6
Virginia	756
Washington	111
West Virginia	59
Wisconsin	78
Wyoming	14
Total U.S.	<u>170,484</u>

INTERNATIONAL COUNTRIES

Australia	3
Bermuda	1
Brazil	3
Canada-British Columbia	2
Canada-Manitoba	1
Canada-New Brunswick	3
Canada-Newfoundland	1
Canada-Ontario	5
Canada-Prince Edward Island	1
Canada-Quebec	1
Canada-Saskatchewan	1
Chile	3
Ecuador	1
Egypt	2
France	1
Germany	2
Ghana	1
Greece	3
Ireland	1
Kenya	1
Mexico	1
Netherlands	1
Poland	1
Portugal	1
Spain	3
Thailand	3
Total Foreign Countries	<u>47</u>
Puerto Rico	4
Virgin Islands, U.S.	1
U.S. Minor Outlying	1
Armed Forces in Europe	2
GRAND TOTAL	<u>170,539</u>



RETIRED MEMBERS BY GEOGRAPHICAL DISTRIBUTION
FOR THE YEAR ENDED JUNE 30, 2021



TENNESSEE COUNTIES

Anderson	2,210	Hamilton	7,250	Morgan	722
Bedford	921	Hancock	152	Obion	1,043
Benton	504	Hardeman	1,184	Overton	705
Bledsoe	555	Hardin	901	Perry	333
Blount	3,688	Hawkins	3,026	Pickett	181
Bradley	2,224	Haywood	736	Polk	346
Campbell	1,130	Henderson	606	Putnam	3,362
Cannon	432	Henry	1,165	Rhea	885
Carroll	947	Hickman	832	Roane	1,849
Carter	3,857	Houston	142	Robertson	1,673
Cheatham	949	Humphreys	526	Rutherford	5,272
Chester	550	Jackson	338	Scott	622
Claiborne	1,056	Jefferson	1,688	Sequatchie	402
Clay	185	Johnson	711	Sevier	2,073
Cocke	905	Knox	9,494	Shelby	16,508
Coffee	1,316	Lake	326	Smith	533
Crockett	426	Lauderdale	979	Stewart	455
Cumberland	1,437	Lawrence	1,243	Sullivan	2,737
Davidson	10,563	Lewis	395	Sumner	3,696
Decatur	359	Lincoln	942	Tipton	1,259
DeKalb	543	Loudon	1,203	Trousdale	228
Dickson	1,377	Macon	448	Unicoi	550
Dyer	744	Madison	3,547	Union	347
Fayette	1,143	Marion	707	Van Buren	263
Fentress	575	Marshall	752	Warren	1,142
Franklin	1,097	Maurry	1,860	Washington	2,756
Gibson	1,599	McMinn	1,170	Wayne	494
Giles	692	McNairy	755	Weakley	1,379
Grainger	579	Meigs	207	White	926
Greene	2,724	Monroe	906	Williamson	3,829
Grundy	422	Montgomery	4,011	Wilson	2,882
Hamblen	1,561	Moore	110	Total	155,031



AVERAGE BENEFIT PAYMENT SCHEDULE
Fiscal Year of Retirement

Teacher Legacy Pension Plan

	Years of Service Credit				
	Less than 15	15-19	20-24	25-29	30 or more
2021 Average Monthly Benefit	\$ 605	\$ 1,206	\$ 1,623	\$ 2,159	\$ 2,987
Number of Retirees	295	194	272	254	543
Average Final Salary	\$ 56,241	\$ 59,146	\$ 62,112	\$ 66,468	\$ 69,591
2020 Average Monthly Benefit	\$ 581	\$ 1,307	\$ 1,796	\$ 2,307	\$ 3,025
Number of Retirees	163	69	103	75	241
Average Final Salary	\$ 56,820	\$ 58,559	\$ 60,461	\$ 65,972	\$ 66,201
2019 Average Monthly Benefit	\$ 770	\$ 1,204	\$ 1,613	\$ 2,082	\$ 2,803
Number of Retirees	412	199	230	250	665
Average Final Salary	\$ 58,184	\$ 58,049	\$ 60,886	\$ 64,682	\$ 67,925
2018 Average Monthly Benefit	\$ 804	\$ 1,253	\$ 1,744	\$ 2,147	\$ 3,112
Number of Retirees	582	272	309	290	909
Average Final Salary	\$ 54,485	\$ 57,104	\$ 62,145	\$ 61,706	\$ 67,188
2017 Average Monthly Benefit	\$ 754	\$ 1,225	\$ 1,683	\$ 2,251	\$ 3,119
Number of Retirees	584	283	289	280	825
Average Final Salary	\$ 53,410	\$ 54,956	\$ 58,639	\$ 63,731	\$ 65,230
2016 Average Monthly Benefit	\$ 804	\$ 1,294	\$ 1,730	\$ 2,214	\$ 3,075
Number of Retirees	600	326	336	281	884
Average Final Salary	\$ 51,385	\$ 56,287	\$ 59,140	\$ 61,520	\$ 63,283
2015 Average Monthly Benefit	\$ 736	\$ 1,248	\$ 1,728	\$ 2,271	\$ 3,114
Number of Retirees	684	321	307	283	945
Average Final Salary	\$ 49,697	\$ 55,525	\$ 58,747	\$ 62,084	\$ 63,234
2014 Average Monthly Benefit	\$ 671	\$ 1,240	\$ 1,704	\$ 2,117	\$ 2,987
Number of Retirees	638	357	385	358	1,246
Average Final Salary	\$ 50,982	\$ 54,328	\$ 57,409	\$ 57,910	\$ 60,325
2013 Average Monthly Benefit	\$ 619	\$ 1,260	\$ 1,702	\$ 2,137	\$ 3,098
Number of Retirees	642	360	370	384	1,269
Average Final Salary	\$ 49,756	\$ 54,509	\$ 57,178	\$ 58,731	\$ 61,505
2012 Average Monthly Benefit	\$ 674	\$ 1,257	\$ 1,689	\$ 2,136	\$ 3,119
Number of Retirees	628	306	358	387	1,471
Average Final Salary	\$ 48,816	\$ 53,169	\$ 55,664	\$ 57,753	\$ 60,687

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

(continued)



AVERAGE BENEFIT PAYMENT SCHEDULE
Fiscal Year of Retirement (continued)

Public Employee Retirement Plan

		Years of Service Credit				
		Less than 15	15-19	20-24	25-29	30 or more
2021	Average Monthly Benefit	\$ 381	\$ 898	\$ 1,242	\$ 1,509	\$ 2,575
	Number of Retirees	2,454	789	692	494	1,083
	Average Final Salary	\$ 45,575	\$ 44,121	\$ 47,389	\$ 48,283	\$ 60,380
2020	Average Monthly Benefit	\$ 400	\$ 905	\$ 1,262	\$ 1,649	\$ 2,455
	Number of Retirees	1,057	315	266	163	430
	Average Final Salary	\$ 42,430	\$ 40,801	\$ 42,707	\$ 48,037	\$ 52,747
2019	Average Monthly Benefit	\$ 756	\$ 856	\$ 1,178	\$ 1,445	\$ 2,378
	Number of Retirees	2,129	595	480	389	1,015
	Average Final Salary	\$ 45,695	\$ 40,016	\$ 43,580	\$ 44,277	\$ 56,156
2018	Average Monthly Benefit	\$ 705	\$ 817	\$ 1,090	\$ 1,590	\$ 2,499
	Number of Retirees	2,640	698	508	442	1,140
	Average Final Salary	\$ 42,188	\$ 36,865	\$ 33,836	\$ 46,125	\$ 53,537
2017	Average Monthly Benefit	\$ 676	\$ 844	\$ 1,115	\$ 1,415	\$ 2,463
	Number of Retirees	2,636	676	562	436	1,048
	Average Final Salary	\$ 40,424	\$ 36,554	\$ 39,353	\$ 39,924	\$ 52,417
2016	Average Monthly Benefit	\$ 619	\$ 829	\$ 1,092	\$ 1,443	\$ 2,506
	Number of Retirees	2,894	730	621	531	1,500
	Average Final Salary	\$ 38,187	\$ 35,969	\$ 37,853	\$ 40,131	\$ 52,675
2015	Average Monthly Benefit	\$ 626	\$ 822	\$ 1,175	\$ 1,503	\$ 2,451
	Number of Retirees	3,307	771	570	533	1,186
	Average Final Salary	\$ 37,107	\$ 38,008	\$ 40,286	\$ 42,099	\$ 51,559
2014	Average Monthly Benefit	\$ 577	\$ 766	\$ 1,085	\$ 1,418	\$ 2,415
	Number of Retirees	2,514	673	539	514	1,085
	Average Final Salary	\$ 36,323	\$ 34,283	\$ 37,646	\$ 39,676	\$ 50,969
2013	Average Monthly Benefit	\$ 548	\$ 785	\$ 1,038	\$ 1,504	\$ 2,451
	Number of Retirees	2,516	663	580	573	1,242
	Average Final Salary	\$ 35,783	\$ 33,840	\$ 35,208	\$ 41,695	\$ 51,269
2012	Average Monthly Benefit	\$ 546	\$ 790	\$ 1,026	\$ 1,506	\$ 2,447
	Number of Retirees	2,520	615	544	504	1,118
	Average Final Salary	\$ 35,204	\$ 33,923	\$ 35,260	\$ 41,765	\$ 51,155

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

(continued)



AVERAGE BENEFIT PAYMENT SCHEDULE
Fiscal Year of Retirement (continued)

Teacher Hybrid Retirement Plan*

	<u>Years of Service Credit</u>	
	<u>Less than 15</u>	
2021 Average Monthly Benefit	\$	161
Number of Retirees		19
Average Final Salary	\$	47,846
2020 Average Monthly Benefit	\$	244
Number of Retirees		5
Average Final Salary	\$	63,113
2019 Average Monthly Benefit	\$	202
Number of Retirees		7
Average Final Salary	\$	52,115
2018 Average Monthly Benefit	\$	92
Number of Retirees		3
Average Final Salary	\$	56,185
2017 Average Monthly Benefit	\$	95
Number of Retirees		1
Average Final Salary	\$	37,094
2016 Average Monthly Benefit	\$	41
Number of Retirees		1
Average Final Salary	\$	39,323

Public Employee Hybrid Retirement Plan*

	<u>Years of Service Credit</u>	
	<u>Less than 15</u>	
2021 Average Monthly Benefit	\$	203
Number of Retirees		58
Average Final Salary	\$	54,042
2020 Average Monthly Benefit	\$	188
Number of Retirees		8
Average Final Salary	\$	49,419
2019 Average Monthly Benefit	\$	212
Number of Retirees		6
Average Final Salary	\$	57,776
2018 Average Monthly Benefit	\$	52
Number of Retirees		11
Average Final Salary	\$	36,684
2016 Average Monthly Benefit	\$	52
Number of Retirees		2
Average Final Salary	\$	72,747
2015 Average Monthly Benefit	\$	13
Number of Retirees		1
Average Final Salary	\$	43,305

*Because the Hybrid Retirement Plan was effective July 1, 2014, there are no retirees with greater than 15 years of service.

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, 2020 through June 30, 2021

	<u>Type of Service</u>	<u>No. of Members</u>	<u>Years of Service</u>	<u>Amount</u>
Teacher Legacy Pension Plan	Backpayment	15	23	\$ 91,631
	Military	0	0	0
	Redeposit	24	76	458,864
	Totals	39	99	\$ 550,495
Public Employee Legacy Pension Plan	Backpayment	188	269	\$ 1,726,753
	Military	0	0	0
	Redeposit	48	262	701,577
	Totals	236	531	\$ 2,428,330
Teacher Hybrid Retirement Plan	Backpayment	6	8	\$ 22,465
	Military	0	0	0
	Redeposit	6	11	41,716
	Totals	12	19	\$ 64,181
Public Employee Hybrid Retirement Plan	Backpayment	32	98	\$ 837,645
	Military	5	9	0
	Redeposit	3	14	82,597
	Totals	40	121	\$ 920,242
Grand Totals	Backpayment	241	398	\$ 2,678,494
	Military	5	9	0
	Redeposit	81	362	1,284,754
	Totals	327	770	\$ 3,963,248



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, 2021

	<u>Type of Service</u>	<u>No. of Members</u>	<u>Years of Service</u>	<u>Amount</u>
Teacher Legacy Pension Plan	Backpayment	6	207	\$ 8,634
	Military	0	0	0
	Redeposit	16	521	18,841
	Totals	22	728	\$ 27,475
Public Employee Legacy Pension Plan	Backpayment	15	591	\$ 73,581
	Military	0	0	0
	Redeposit	11	625	23,212
	Totals	26	1,216	\$ 96,793
Teacher Hybrid Retirement Plan	Backpayment	2	5	\$ 15,264
	Military	0	0	0
	Redeposit	4	10	13,985
	Totals	6	15	\$ 29,249
Public Employee Hybrid Retirement Plan	Backpayment	2	7	\$ 3,998
	Military	0	0	0
	Redeposit	0	0	0
	Totals	2	7	\$ 3,998
Grand Totals:	Backpayment	25	810	\$ 101,477
	Military	0	0	0
	Redeposit	31	1,156	56,038
	Totals	56	1,966	\$ 157,515


REFUND ACTIVITY

For the Year Ended June 30	Number of Refunds Processed	Amount Refunded
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	4,621	54,392,689
2017	4,583	39,943,710
2018	4,426	41,159,513
2019	4,872	42,759,556
2020	4,844	44,753,651
2021	5,334	44,189,614

POLITICAL SUBDIVISION PARTICIPATION
Schedule by Category

Year Ended June 30	Number of Cities	Number of Counties	Political Subdivisions	Total
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
2018	206	97	285	588
2019	209	90	273	572
2020	199	89	287	575
2021	203	89	296	588



HISTORICAL EMPLOYER CONTRIBUTION RATES
Expressed as a Percentage of Salary

Year Ended	State Employees		Teachers	
	Legacy	Hybrid	Legacy	Hybrid
June 30				
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%
2018	18.87%	4.00%	9.08%	4.00%
2019*	19.23%	1.66%	10.46%	1.94%
2020*	19.66%	1.73%	10.63%	2.03%
2021*	20.23%	1.80%	10.27%	2.02%

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

*The contribution rates shown for 2019, 2020, and 2021 for the State Employee and Teacher Hybrid Retirement Plans are the actuarially determined contribution rates (ADC). Employers participating in the Hybrid Retirement Plans are required to contribute the greater of 4.00% or the ADC. Contributions in excess of the ADC are held in a separate Stabilization Reserve Trust on behalf of the employer.



PRINCIPAL PARTICIPATING EMPLOYERS

Current Year and Nine Years Ago

Teacher Legacy Pension Plan

	2021				2012		
	Covered Employees	Rank	Percentage of Total System		Covered Employees	Rank	Percentage of Total System
Participating Government				Participating Government			
Shelby County Schools	4,149	1	8.20%	Teachers*	73,449	N/A	100.00%
Davidson County Schools	3,481	2	6.88%		-	2	0.00%
Knox County Schools	3,067	3	6.06%		-	3	0.00%
Rutherford County Schools	2,216	4	4.38%		-	4	0.00%
Hamilton County Schools	1,992	5	3.94%		-	5	0.00%
Williamson County Schools	1,738	6	3.43%		-	6	0.00%
Montgomery County Schools	1,429	7	2.82%		-	7	0.00%
Sumner County Schools	1,351	8	2.67%		-	8	0.00%
Sevier County Schools	856	9	1.69%		-	9	0.00%
Wilson County Schools	737	10	1.46%		-	10	0.00%
Others	29,586		58.47%	Others	-		0.00%
Total	50,602		100.00%	Total	73,449		100.00%

*TCRS changed pension administration systems in 2014. Access to detailed data for Teachers from fiscal years 2011-2014 is no longer available.

Public Employee Legacy Pension Plan

	2021				2012		
	Covered Employees	Rank	Percentage of Total System		Covered Employees	Rank	Percentage of Total System
Participating Government				Participating Government			
State	31,627	1	29.10%	State	58,864	1	38.42%
Shelby County Unified School District	4,432	2	4.08%	Memphis City Schools	8,736	2	5.70%
Rutherford County	2,831	3	2.60%	Hamilton County	6,211	3	4.05%
Williamson County	2,680	4	2.47%	Rutherford County	3,723	4	2.43%
Sumner County	2,172	5	2.00%	Williamson County	3,704	5	2.42%
Hamilton County	1,695	6	1.56%	Shelby County Board of Ed	3,658	6	2.39%
Montgomery County	1,529	7	1.41%	Montgomery County	3,495	7	2.28%
Wilson County	1,453	8	1.34%	Sumner County	3,236	8	2.11%
Sevier County	1,344	9	1.24%	Sullivan County	2,463	9	1.61%
Clarksville	1,230	10	1.12%	Johnson City	2,064	10	1.34%
Others	57,698		53.08%	Others	57,072		37.25%
Total	108,691		100.00%	Total	153,226		100.00%

(continued)



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

	Teacher Hybrid Retirement Plan¹		
	2021		
	Covered Employees	Rank	Percentage of Total System
<u>Participating Government</u>			
Shelby County Schools	2,829	1	9.77%
Davidson County Schools	1,750	2	6.04%
Knox County Schools	1,693	3	5.85%
Hamilton County Schools	1,506	4	5.20%
Williamson County Schools	1,505	5	5.20%
Rutherford County Schools	1,410	6	4.87%
Montgomery County Schools	1,036	7	3.58%
Davidson County Federal	976	8	3.37%
Sumner County Schools	722	9	2.49%
Wilson County Schools	582	10	2.02%
Others	14,943		51.61%
Total	28,952		100.00%

	Public Employee Hybrid Retirement Plan¹		
	2021		
	Covered Employees	Rank	Percentage of Total System
<u>Participating Government</u>			
State Employee Hybrid	25,984	1	79.88%
Hamilton County-Hybrid	1,359	2	4.18%
Montgomery County - Hybrid	1,268	3	3.90%
Bradley County - Hybrid	335	4	1.03%
Jefferson County - Hybrid	300	5	0.92%
Others	3,281		10.09%
Total	32,527		100.00%

¹The Teacher Retirement Plan and Public Employee Retirement Plan - Hybrid became effective for teachers July 1, 2014, therefore, therefore applicable information for nine years ago is not available.



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, 2021, there were 588 political subdivisions participating in TCRS.

Participation as of June 30, 2021:

Cities	203
Counties	89
Utility Districts	85
Special School Districts/Boards of Education*	36
Joint Ventures	17
Housing Authorities	15
911 Districts/ECDs	63
Miscellaneous agencies	80
Total	588

*Local Education Agencies participate through Local Governing bodies. Only Boards of Education participating separately from Counties or Cities are indicated in participation of political subdivisions.

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.

**TCRS PROVIDES
THE ADMINISTRATION
OF A RETIREMENT
PROGRAM FOR 588
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 (only applicable if in Legacy plan)

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

- 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. May be reduced from 10 years to vested status.
- 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. Only applicable for the legacy plan design and does not apply for those becoming members of the legacy plan after July 1, 2011.
- 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: An unreduced 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: An unreduced 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: An unreduced 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: An unreduced 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.



CITIES

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

COUNTIES

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

*All departments not covered by TCRS.

**Plan closed to new hires.

***Employer has more than one plan design

(continued)



911 EMERGENCY COMMUNICATIONS DISTRICTS

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

HOUSING AUTHORITIES

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

JOINT VENTURES

Bi County Solid Waste Management	Fayetteville/Lincoln County Public Library	Tazewell - New Tazewell Fire Department
Bolivar-Hardeman County Library	Jackson/Madison County Library**	TriCities Airport Authority***
Brownsville-Haywood County Library	Maryville, Alcoa, Blount Co. Parks & Rec.	Washington County/Johnson City Animal Control Center
Clarksville/Montgomery County Public Library	Morristown/Hamblen County Landfill	Washington County/Johnson City EMS
Clarksville/Montgomery County Regional Planning	Shelbyville-Bedford County Library	Wilson County Emergency Management Agency
Fayetteville-Lincoln County Industrial Development Board	Smyrna/Rutherford County Airport Authority	

MISCELLANEOUS AGENCIES

Anderson County Economic Development Association	County Officials Association of TN	Hardin County General Hospital
Association of County Mayors	Davidson County Officials	Henderson County Judges Officials Executives
Blount County Fire Protection District	Delta Human Resource Agency	Humphreys County Nursing Home
Blount County Library	Douglas Cherokee Economic Authority	Joint Economic and Development Board of Wilson County
Bradley Cleveland Community Services Agency	Dyer County Judges Executives Officials	Kinser Park
Carroll County Commissioners	Edward Gauche Fisher Public Library	Knox County Executive and Officials
Carter County Tomorrow	First Tennessee Development District	Knoxville City Judges and Attorneys
Clarksville Memorial Hospital**	First Tennessee Human Resource Agency	Lawrence County Public Library
Cocke County Partnership, Inc.	Governors Books From Birth Foundation	Lewis County Highway Department
Community Health Agencies	Greater Nashville Regional Council	Lewis County Officials
Cookeville Regional Medical Center	Hancock County Officials	Loudon County Economic Development Agency

*All departments not covered by TCRS.

**Plan closed to new hires.

***Employer has more than one plan design

(continued)



MISCELLANEOUS AGENCIES *(continued)*

Marion County Library	Southeast Tennessee Development District***	Tennessee Municipal Bond Fund
McMinn County Economic Development District	Southeast Tennessee Human Resource Agency	Tennessee Municipal League
Mid-Cumberland Human Resource Agency	Southwest Tennessee Development District	Tennessee Organization of School Superintendents**
Millington Airport Authority	Southwest Tennessee Human Resource Agency	Tennessee School Board Association
Networks Sullivan Partnership	Stokes Brown Public Library	Tennessee Secondary School Athletic Association
Obion County Library	Tellico Area Services System	Tennessee Sheriffs Association
Public Entity Partners	Tellico Reservoir Development Agency	Tennessee State Employees Association
Putnam County Library	Tennessee Association of Assessing Officers	Tennessee Veterans Home Board
Rutherford County Library System	Tennessee Central Economic Authority	Unicoi County Emergency Medical Services
Sequatchie Valley Planning and Development District	Tennessee County Commissioners Association	Upper Cumberland Human Resource Agency
Sevier County Economic Development Council	Tennessee County Highway Officials Association	Upper Cumberland Regional Airport
Sevier Solid Waste	Tennessee County Services Association	Upper Cumberland Workforce Development Board
Shelby County Officials	Tennessee Community Services Agency	Upper East Tennessee Human Development Agency
South Central Human Resource Agency**	Tennessee Duck River Development Agency	W.G. Public Library
South Central Tennessee Development District	Tennessee Education Association	Workforce Solutions**
South Central Tennessee Workforce Board	Tennessee Historical Society	

SPECIAL SCHOOL DISTRICTS/BOARDS OF EDUCATION

Arlington Community Schools***	Gibson County	Murfreesboro
Athens City Schools	Hawkins County	Oak Ridge***
Bartlett City***	Hollow Rock-Bruceton	Oneida
Bradford	Huntingdon	Paris
Clinch Powell Education Coop.	Lebanon	Rogersville City Schools
Coffee County	Lenoir City Schools	Shelby County
Collierville Schools***	Lewis County	South Carroll
Elizabethton	Little Tennessee Valley Education Coop.	Trenton
Fentress County	McKenzie	Tullahoma
Franklin	Milan	Union City
Germantown***	Millington City Schools	Union County
Gibson County	Moore County	West Carroll County

UTILITY DISTRICTS

Alpha-Talbott	County Wide	Glen Hills
Anderson County Water Authority	Crab Orchard	Greater Dickson Gas Authority
Arthur Shawnee	Cross Anchor	Greeneville Light and Power
Beech River Watershed***	Cumberland	Hampton South
Big Creek	DeWhite	Hardeman-Fayette County
Bloomingdale	Double Springs	Hendersonville
Blountville	Dyersburg Suburban	Hixson***
Bondcroft	East Fork	Jackson County
Bristol Electric System	East Montgomery	Johnson City Energy Authority***
Cagle Fredonia	East Side	LaGuardo
Castalian Springs/Bethpage	Fall Creek Falls	Lake County
Chuckey	First Carter County	Lakeview
Citizen's Gas	First Hawkins County	Lincoln County Board of Public Utilities
Consolidated Utility District/Rutherford County	First Tipton County	Loudon
Cookeville Boat Dock Road	Gladeville	Madison Suburban

*All departments not covered by TCRS.
 **Plan closed to new hires.
 ***Employer has more than one plan design

(continued)



UTILITY DISTRICTS *(continued)*

Middle Tennessee	Quebec-Walling	South Giles
New Market	Reelfoot Lake Regional	Surgoinsville
North Utility District of Decatur and Benton Counties	Riceville	Sylvia-Tennessee City Pond Water
North West	River Road	Walden's Ridge
Northeast Henry County	Roane Mountain	Watauga River Regional Water Authority
Oak Ridge	Russellville Whitesburg	Water Authority of Dickson County
O'Connor	Savannah Valley	Weakley County Municipal Electric***
Old Gainesboro Road	Second South Cheatham	Webb Creek
Old Hickory	Sevier County	West Knox**
Old Knoxville Highway	Shady Grove	West Overton
Paris-Henry	Siam	
Persia	Smith	
Plateau	Sneedville	
Pleasant View	South Cumberland	
Poplar Grove	South Elizabethton	

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**Plan closed to new hires

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