

TENNESSEE CONSOLIDATED RETIREMENT SYSTEM
BOARD OF TRUSTEES MEETING
DECEMBER 6, 2019

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**TENNESSEE CONSOLIDATED RETIREMENT SYSTEM
BOARD OF TRUSTEES MEETING
DECEMBER 6, 2019**

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**MINUTES OF THE
BOARD OF TRUSTEES MEETING
SEPTEMBER 26, 2019**

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Minutes of the TCRS Board of Trustees Meeting on September 26, 2019

The Board of Trustees of the Tennessee Consolidated Retirement System met on Thursday, September 26, 2019 at 10:00 a.m. The meeting was held in House Hearing Room III of the Cordell Hull Building with Chairman David Lillard presiding.

Chairman Lillard asked Mr. Wayman to conduct an attendance roll call. The following members were present: Chairman David Lillard, State Treasurer; Mr. Jamie Wayman, Director of TCRS; Ms. Deborah Taylor-Tate, Administrative Director of the Courts; Commissioner Stuart McWhorter, Department of Finance and Administration; Commissioner Juan Williams, Department of Human Resources; Mr. Justin Wilson, Comptroller of the Treasury; Mr. Michael Barker, Mr. Timothy Ellis, Mr. Bill Kemp, Ms. Kelly Littleton-Brewster and Ms. Paula Shaw.

TCRS Board of Trustees Appointments

Chairman Lillard welcomed Ms. Kelly Littleton-Brewster and Ms. Paula Shaw to the TCRS Board of Trustees.

Approval of the June 28, 2019 Minutes of the Board of Trustees

On a motion by Mr. Kemp and seconded by Mr. Barker, the minutes of the June 28, 2019 TCRS Board of Trustees meeting were unanimously approved.

Board of Trustees Committee Reports

Chairman Lillard recognized Mr. Wayman to review the administrative committee report. Mr. Wayman mentioned a quorum was not present and therefore no action items were taken. The administrative committee reviewed an employer seeking participation in TCRS. The committee discussed retirement operations and financial empowerment, employer education and customer service. The committee also discussed projects such as security for the member and retiree self-service portal and online retirement.

Chairman Lillard recognized Mr. Barker to review the audit committee report. Mr. Barker mentioned the audit committee approved minutes from the June meeting. Mr. Barker mentioned Mr. Earle Pierce reviewed reports regarding various audit activities. No items were reported to the Comptroller hotline number.

Chairman Lillard provided the investment committee report. Chairman Lillard mentioned the committee reviewed and approved several transactions and Mr. Brakebill and his staff provided a status report on the investment portfolio.

Investment Report

Chairman Lillard called on Mr. Michael Brakebill to give an overview of the Investment Report. Mr. Brakebill reviewed the Verus quarterly report for the period ending June 30, 2019. Mr.

Brakebill introduced the report beginning with an overview of the economic and investment climates.

Mr. Brakebill highlighted the performance results of the investment industry benchmarks for the periods of the most recent quarter through ten years. The 10-year market returns in global public equities were strong, particularly in US equities which outperformed international equities. Fixed income returns were significantly lower than equity returns due to the extended low interest rate environment over the same period. Mr. Brakebill continued, highlighting strong performance in REITs (real estate investment trusts), low single digit returns in hedge funds and minimal inflation at 1.7%. As of June 30, 2019, the \$52.3 billion portfolio produced a 9.4% 10-year return, a 6.6% 5-year return, a 9.0% 3-year return, and a 7.5% 1-year return. The TCRS 1-year performance outperformed 93% of Public Defined Benefit plans with more than \$1 billion in assets, which achieved a gross median return of 5.4%. TCRS returns were above peer median returns for the 1, 3, 5 and 10-year periods.

Mr. Brakebill reviewed the 1-year performance by major asset class, noting strong absolute and relative returns. The US fixed income portfolio delivered a strong 11.0% return and outperformed the benchmark while the US equity portfolio delivered a solid 7.2% return but underperformed the benchmark. Within equities, the large-cap equity overlay program and small cap portfolio outperformed their benchmarks. Both international developed and international emerging markets equity portfolios achieved above benchmark returns, but the absolute returns of these portfolios were less than that of US equities. Mr. Brakebill reiterated that the inflation hedged portfolio continues to wind down and that funds are redeployed in the strategic lending portfolio which generates higher returns. Unlike traditional fixed income investments, strategic lending returns are driven by credit risk, not duration. Mr. Brakebill then highlighted real estate performance, which continued to outperform its benchmark in the 1, 3 and 5-year periods. He noted that real estate valuations are high and fundamentals are acceptable. He then discussed the strong returns in private equity, up 17.5% over the trailing 1-year. The strong private equity returns in the 1, 3, and 5-year periods are the result of an eleven-year effort to develop staff, process and solid investments.

Mr. Brakebill finalized his review with the risk and return of TCRS relative to its peers. TCRS took less risk and added more value than the standard portfolio over the 5-year period.

Chairman Lillard asked if there were any questions about portfolio performance. Ms. Deborah Taylor-Tate raised a question about plans to increase the asset allocation to private equity given the strong returns achieved recently and historically. Mr. Brakebill replied that the alternative investment class, which includes private equity, real estate and strategic lending, has an interim allocation target of 7% and long-term target of 10%. Mr. Brakebill clarified that long-term refers to a three to five year period of time. Ms. Taylor-Tate also raised a question about the public REIT investments performance relative to private real estate investments. Mr. Brakebill noted that public investments react more quickly than private investments and that REITs have some leverage which amplifies their performance. He shared that TCRS views public REITs as undervalued compared to private real estate at this time.

Political Subdivision Petitioning for Membership in TCRS

Chairman Lillard introduced Mr. Wayman to review a political subdivision seeking participation into TCRS. Mr. Wayman reviewed the request for participation into TCRS for the Tazewell-New Tazewell Fire Department. Mr. Wayman mentioned this is a joint venture with the City of Tazewell and the City of New Tazewell. Mr. Wayman mentioned there are three resolutions, one being the joint venture of the fire department and each participant in the joint venture must authorize the participation. The fire department has one full time employee and they are selecting the legacy defined benefit plan, they are not offering prior service and they will offer cost of living benefits and not covering part-time employees. The employer rate will be 6.5% and the employees will contribute 5%.

On a motion by Mr. Wayman and seconded by Ms. Taylor-Tate, the Board unanimously approved the request for participation into TCRS for the Tazewell-New Tazewell Fire Department.

Other Business

Chairman Lillard announced future meeting dates. He reminded Board members that a Board educational session will take place after the meeting.

Adjournment

Chairman Lillard announced the completion of the business at hand and asked if there was any other business to come before the Board.

On a motion by Mr. Barker and seconded by Commissioner Williams, the Board unanimously approved the TCRS Board of Trustees meeting be adjourned.

With no other business, the Board of Trustees adjourned at 10:30 a.m. on September 26, 2019.

Respectfully Submitted,

/s/Jamie Wayman
Jamie Wayman
Director, TCRS

Approved:

David H. Lillard, Jr.
Chairman of the Board

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COMMITTEE MINUTES

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Minutes of the Administrative Committee

June 28, 2019

The Administrative Committee of the Board of Trustees of the Tennessee Consolidated Retirement System met on Friday, June 28, 2019 at 9:00 a.m. The meeting was held in Conference Room D, Eighth Floor Cordell Hull Building, with Director Jamie Wayman presiding.

The following members were present: Mr. Paul Varble, Mr. Alfred Laney, Mr. Kevin Fielden, Ms. Patsy Moore, and Ms. Deborah Taylor Tate.

Approval of the March 29, 2019 Minutes of the TCRS Administrative Committee

On a motion by Mr. Varble and seconded by Ms. Tate, the minutes of the March 29, 2019, TCRS Administrative Committee meeting were unanimously approved.

New Board Members

Mr. Wayman shared with the Committee that there would be new Board members introduced at the next Board meeting and that this was the last meeting for several members of the board. He discussed with the Committee that this would be the last meeting for Mr. Varble, Mr. Fielden, Ms. Vickie Burton and Mr. Ed Taylor. Ms. Burton and Mr. Taylor elected not to seek re-election and Mr. Wendell Cheek and Ms. Paula Shaw were elected as the state employee representative from the May 2019 election. Mr. Fielden chose not to pursue reappointment as the East Tennessee teacher representative. Mr. Varable is required to step down as the public officer position is required to switch between a firefighter and police officer every three years. Mr. Wayman discussed the appointment process for all positions on the Board.

Political Subdivision Update

Mr. Wayman introduced Mr. Joe Walker, Manager of Employer Participation, to discuss five employers seeking participation in TCRS.

The City of Celina seeks participation effective July 1, 2019 in the Local Government Hybrid Plan without Cost Controls. Employees will contribute 5% of salary to the TCRS defined benefit portion of the plan, and the initial employer rate to the TCRS defined benefit portion will be 1.1%. City of Celina will not offer the plan to part-time employees, and it will provide cost of living adjustments. City of Celina will not allow employees to establish prior service.

The City of Eagleville seeks participation effective July 1, 2019 in the Local Government Hybrid Plan without Cost Controls. Employees will contribute 0% of salary to the TCRS defined benefit portion of the plan, and the initial employer rate to the TCRS defined benefit portion will be 5.9%. City of Eagleville will not offer the plan to part-time employees, and it will provide cost of living adjustments. City of Eagleville will not allow employees to establish prior service.

The City of South Fulton seeks participation effective July 1, 2019 in the Local Government Hybrid Plan without Cost Controls. Employees will contribute 5% of salary to the TCRS defined benefit portion of the plan, and the initial employer rate to the TCRS defined benefit portion will be 1.1%. City of South Fulton will not offer the plan to part-time employees, and it will provide cost of living adjustments. City of South Fulton will not allow employees to establish prior service. South Fulton previously withdrew from TCRS July 1, 2000 and are re-entering the plan, the law states an employer who has withdrawn and later returns

to TCRS cannot withdraw again at a future date. Mr. Wayman explained that the law allows them to transfer plans within TCRS, but cannot withdraw in the future.

South Giles Utility District seeks participation effective July 1, 2019 in the Regular Defined Benefit Plan. Employees will contribute 5% of salary to the TCRS defined benefit portion of the plan, and the initial employer rate to the TCRS defined benefit portion will be 6.5%. South Giles Utility District will not offer the plan to part-time employees, and it will provide cost of living adjustments. South Giles Utility District will not allow employees to establish prior service.

Upper Cumberland Local Workforce Development Board seeks participation effective July 1, 2019 in the Regular Defined Benefit Plan. Employees will contribute 5% of salary to the TCRS defined benefit portion of the plan, and the initial employer rate to the TCRS defined benefit portion will be 6.5%. Upper Cumberland Local Workforce Development Board will not offer the plan to part-time employees, and it will provide cost of living adjustments. South Giles Utility District will not allow employees to establish prior service.

Mr. Drew Freeman, Director of Outreach, explained that their team talks to each entity about their cost and participation options. Mr. Wayman explained that there is not initial liability when the employer does not offer prior service and additional conversation was had about the law which requires to pay their contributions and ability for TCRS to withhold state-shared taxes in the event an employer didn't pay their contributions.

On a motion by Mr. Varble and seconded by Ms. Tate, the Administrative Committee unanimously recommended to the Board of Trustees that all five entities be allowed entry to TCRS.

Operations Update

Ms. Ashley Nabors, Assistant Treasurer of Financial Empowerment, introduced Mr. Freeman to discuss the plans which have transferred membership within TCRS in 2019. The plans transferring in 2009 are Brentwood, Johnson City Energy Authority and Cookeville. Mr. Fielden asked about the ability for an entity to transfer from a hybrid plan back to the legacy plan and Mr. Wayman explained that would be an option. Ms. Nabors then discussed the number of phone calls and meetings with participants and employers during the period January 1 to March 31, 2019. Over 50,000 member phone calls were answered and 376 group meetings for members were held during the time period, and there were approximately 7,500 attendees at the meetings. Ms. Nabors also provided a summary for the seven employer summits held to present contribution rates and a summary of participation in the deferred compensation program.

Next Ms. Erica Nale, Assistant Director of TCRS, shared an update on TCRS operations. Ms. Nale discussed TCRS is receiving approximately 50% of retirement application online and is further refining the process based on feedback from both staff and members. Additional online services are set to be rolled out later this year as TCRS continues to provide more services to members. Next, Ms. Nale mentioned during this quarter TCRS received approximately 2,500 retirement applications, which is slightly above average, 6,700 requests to change address or tax information, and processed more than 6,000 notifications of deceased members. Ms. Nale discussed the new contracts and Requests for Proposals being prepared in relation to the actuary and the death match process. Finally, Ms. Nale discussed the cost of living adjustment (COLA) of 1.9% that would be effective July 1, 2019. Mr. Varble asked about the difference in TCRS compared to

federal COLA adjustments. Mr. Wayman explained that the calculations are separate and based on different time frames.

Mr. Wayman added that goals of online retirement is to move to 100% online processing of retirement application by the end of 2019. Mr. Wayman also mentioned that TCRS is also exploring enhancements to the security of the self-service functionality based on conversation with other state pension plans.

Other Business

Adjournment

With no other business, the Administrative Committee of the Board of Trustees adjourned at 9:49 a.m. on June 28, 2019.

Respectfully Submitted,

/S/Erica Nale

Erica Nale

Assistant Director, TCRS

Approved:

James E. Wayman

Administrative Committee Chair

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**AUDIT COMMITTEE MEETING MINUTES
OF TENNESSEE CONSOLIDATED RETIREMENT SYSTEM (TCRS)
September 26, 2019**

The Tennessee Consolidated Retirement System (TCRS) Audit Committee for the Board of Trustees met on Thursday, September 26, 2019. The meeting began at 8:00 a.m. in the Cordell Hull Building, Conference Room C.

The following members were present:

- Chairman Michael Barker
- Juan Williams, DOHR Commissioner
- Tim Ellis, Goodlettsville City Manager

Others present were:

- David H. Lillard, Jr., TN State Treasurer
- Earle Pierce, Director of Internal Audit, TN Dept. of Treasury
- Jennifer Selliers, Director of Internal Compliance, TN Dept. of Treasury
- Alison Cleaves, Assistant Treasurer, Legal, Compliance & Audit, TN Dept. of Treasury
- Jamie Wayman, Director of TCRS
- Heather Iverson, Director of Treasury Legal Services
- Lauren L. Topping, Asst. General Counsel, Secretary of State's Office

Call Meeting to Order

Chairman Barker called the meeting to order and welcomed DOHR Commissioner Juan Williams as a new member of the audit committee. Commissioner Williams provided the Committee with a short summary of his background per Chairman Barker's request. Chairman Barker presented the minutes from the June 28, 2019 Audit Committee meeting for approval. Tim Ellis motioned to accept the minutes as presented and Chairman Barker seconded the motion. The minutes were unanimously approved from the June 2019 Audit Committee meeting.

Internal Audit Results

Earle Pierce presented the final results for the 2018 GASB Census Data Project. Discussion included an explanation of audit objectives for the joint project between Internal Audit and Employer Reporting as well as issues in salary data for various employers. Mr. Pierce explained the purpose of the project was to independently verify census data submitted to the actuary by TCRS as required by GASB 68 standards. Chairman Barker asked if the salary reporting issues had to do with employer staff turnover and Mr. Pierce stated payroll staff turnover at the employers may have contributed to some of the reporting errors. Follow up audit results for the 2018 Investment Incentives Compensation Review and 2016 Private Equity were discussed by Mr.

Pierce with the Committee. Mr. Pierce explained the reason for follow up audits is to ensure management action plans to address audit recommendations have been implemented and for Internal Audit to report the outcomes providing the Audit Committee assurance management's action plans were implemented and associated risks mitigated.

Mr. Pierce also reviewed data analytic audits for duplicate payments, duplicate persons and death overpayments. The review included discussion of the project charts illustrating the results and efforts by TCRS to collect overpayments. TCRS Director, Jamie Wayman informed the Committee of an RFP they have initiated to find a new vendor to provide death notifications services. Chairman Barker asked what process TCRS follows to prevent overpayments for members dying during the month. Mr. Wayman explained members are allowed to keep their benefit payment in the month of their death per State law and the focus of TCRS's efforts are to prevent any payments in the month after death.

Current Projects for TCRS

Mr. Pierce reviewed a list of current TCRS audit projects as well as those in the planning phase.

FY2019 Internal Audit Risk & Controls Assessment

Mr. Pierce reviewed the results of Internal Audit's project to address areas of improvement in Internal Audit's operations as a result of its most recent risk assessment. He covered a report of areas where improvements were implemented as well as a report on Internal Audit's controls and assessment of the effectiveness of those controls. He noted the assessments covered the areas of audit management, project management, staff management and vendor management.

Comptroller's Hotline

Mr. Pierce informed the Committee there was no hotline submissions related to TCRS received by the Comptroller's office since the previous Audit Committee meeting in June 2019.

Current Internal Audit Article

Mr. Pierce discussed the article entitled "Good Governance Key to Managing Speed of Change". Mr. Pierce summarized the article for the Committee discussing areas regarding organizational culture, the speed of disruptive innovations and existing operations ability to meet performance expectations. Mr. Pierce also highlighted areas of audit focus including audits of internal reporting systems, audits of regulatory change management systems as well as discussions with the Audit Committee and external auditors.

Other Business

Chairman Barker commented on the amount of information provided in the reports on a continual basis and the hard work of the audit team. Mr. Pierce stated his appreciation of Jamie and his staff as well as the efforts of Internal Audit staff with oversight from Assistant Director Kevin Gentry to produce the results in the reports provided to the Audit Committee.

Treasurer Lillard noted his appreciation of the efforts of everyone including those on the audit team. He stated Treasury continues to put more resources into internal controls. Treasurer Lillard also suggested members of Financial Empower and Deferred Compensation come to a future meeting to provide more detail on the census data issues noted in the report from Internal Audit today as well as other areas they are working to resolve regarding employer reporting.

Adjournment

Tim Ellis motioned to adjourn and Juan Williams seconded the motion. The motion to adjourn was unanimously approved. The meeting adjourned at approximately 8:37 a.m.

Meeting minutes documented by

Earle Pierce, CPA, CIA, CRMA
Director of Internal Audit
Tennessee Department of Treasury

Approved by:

Michael Barker
Chairman of the Audit Committee

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Minutes of the Meeting of the Investment Committee September 26, 2019

The Investment Committee of the Tennessee Consolidated Retirement System (TCRS) met on September 26, 2019 in the Cordell Hull Building. The Honorable David H. Lillard, Jr., State Treasurer, called the meeting to order at 9:00 AM. Investment Committee members in attendance included: Honorable David H. Lillard, Jr., State Treasurer; Honorable Stuart McWhorter, Commissioner of the Department of Finance and Administration; Mr. Bill Kemp, Sumner County Clerk. The Honorable Tre Hargett, Secretary of State, participated electronically. Additional attendees included: Michael Brakebill, Chief Investment Officer; Derrick Dagnan, Deputy Chief Investment Officer; Carrie Green, Director of Equities; JP Rachmaninoff, Director of Real Estate; Thomas Kim, Director of Fixed Income; Jeff Dunn, Senior Portfolio Manager; Suzan Ilic, Senior Portfolio Manager; Desiree Jablonski, Portfolio Manager; Jennifer Selliers, Director of Compliance; Earle Pierce, Director of Internal Audit; Tim McClure, Assistant Chief Investment Officer and Director of Cash Management;

Due to the electronic participation of one member, Treasurer Lillard began the meeting by asking the Committee to approve a Statement of Necessity to ensure a quorum in case there was not a physical quorum of the members present at the meeting.

Statement of Necessity: It is necessary for this committee to meet by teleconference so that it can consider proposed investments for the Tennessee Consolidated Retirement System in a timely manner. In order to meet the established time frames to complete these investments, the Committee determined that there was not enough time to convene a physical quorum of the Committee for the expeditious consideration of these investments, necessitating that a quorum of this Committee meet by using electronic participation.

Treasurer Lillard then motioned to approve the Statement, it was seconded by Mr. Bill Kemp. The Statement was approved unanimously by voice vote.

Treasurer Lillard requested a motion to approve the Minutes of the June 28, 2019 Investment Committee Meeting. Mr. Bill Kemp motioned to approve the Minutes, it was seconded by Treasurer Lillard. The Minutes were approved unanimously by voice vote.

Treasurer Lillard called on Mr. JP Rachmaninoff to present two real estate transactions for approval. Mr. Rachmaninoff presented a recommendation for a \$100 million commitment to Exeter Industrial Value Fund V, LP, a \$1.6 billion closed-end commingled fund. Exeter is an existing relationship for TCRS. This fund will continue to pursue a successful value added strategy for industrial acquisitions in target markets in the US. Mr. Rachmaninoff highlighted the strengths and risks of the investment and noted that this investment would allow the real estate portfolio to maintain an overweight exposure to the industrial property segment and offset a number of properties sales in 2019.

Secretary Hargett then motioned to approve the transaction which was seconded by Mr. Kemp. The motion was unanimously approved by voice vote.

Mr. Rachmaninoff presented the second transaction, a recommendation for a \$250 million commitment with an initial investment of \$100 million in the open-ended, perpetual life Prologis Targeted U.S. Logistics Fund L.P. The initial investment of \$100 million can be increased up to \$250 million upon Treasurer Lillard's approval of a staff recommendation memo. This is an existing relationship and TCRS invested \$50 million in Prologis Targeted US Logistics Fund in

July 2006. In December 2015, TCRS elected to participate in the fund's dividend reinvestment plan. Mr. Rachmaninoff stated that this fund is focused on investing in core, stabilized, high-quality industrial properties in key US markets and he reviewed further merits of the proposed investment.

Treasurer Lillard motioned to approve the transaction which was seconded by Mr. Kemp. The motion was unanimously approved by voice vote.

Treasurer Lillard continued the meeting by asking Mr. Jeff Dunn to present a strategic lending transaction for approval. Mr. Dunn presented a recommendation for a \$1 billion maximum commitment with an initial commitment of \$750 million to Ares Management via a Direct Lending Separately Managed Account. This is a new relationship for TCRS and replaces a middle market direct lending investment that has reached its harvest period. Ares Management is one of the most respected global credit managers with over twenty years of experience and a long track record of solid returns and low loss ratios. This investment focuses on direct lending to financial sponsor-backed middle market companies, primarily in the US. Mr. Dunn further discussed the strategy and merits of the investment which represents a core component of the strategic lending portfolio.

Prior to the vote, Secretary Hargett left the meeting; however, a physical quorum was still present. Commissioner McWhorter motioned to approve the transaction which was seconded by Mr. Kemp. The motion was unanimously approved by voice vote.

Treasurer Lillard called on Ms. Desiree Jablonski to present a private equity transaction for approval. Ms. Jablonski presented a recommendation for up to a \$100 million commitment to Denham Oil and Gas Fund II, L.P. This is an existing relationship for TCRS with three previous commitments to Denham Capital. This investment will utilize a top-down investment approach and primarily invest in North America-based oil and gas companies in the upstream exploration and production industry and in the midstream transportation and storage industries. Ms. Jablonski noted that natural resource and energy exposure in the private equity portfolio is below that of peers. Ms. Jablonski reviewed the merits of the investment and discussed risks to the investments, including a change to the Limited Partner Agreement, which satisfactorily mitigated a key investment risk concern.

Mr. Kemp motioned to approve the transaction which was seconded by Commissioner McWhorter. The motion was unanimously approved by voice vote.

The Treasurer then called on Mr. Michael Brakebill to review the TCRS portfolio and key initiatives. Mr. Brakebill deferred the TCRS full year and quarterly portfolio performance review to the Board of Trustees meeting which immediately followed the Investment Committee. Mr. Brakebill provided operational process updates and reviewed organizational personnel changes, including the addition of Suzan Ilic who joined the strategic lending investment team.

Mr. Brakebill then asked Mr. Derrick Dagnan to provide the notification of investment activity approvals that have been approved by the Treasurer since the June 28, 2019 TCRS Board of Trustees Investment Committee meeting. For Private Equity, Treasurer Lillard approved a \$50 million commitment to TA Select Opportunities Fund, L.P. on September 19, 2019. For Real Estate, on July 22, 2019, Treasurer Lillard approved \$72 million for the acquisition of a multi-family community in Orange County, California, \$53 million for an office building acquisition in Seattle, Washington and a debt financing transaction of approximately \$60.9 million related to a multi-family community near Denver, CO. Treasurer Lillard also approved \$23.2 million for a preferred equity investment in a multi-family community in Salt Lake City, Utah on July 1, 2019; the disposition of a multi-family community in Dallas, TX on August 5, 2019; \$45.3 million for

the acquisition of a multi-family community in Fairfax, Virginia on August 27, 2019; and the disposition of two industrial properties in Dallas, TX on August 27, 2019.

Seeing no further comments, Treasurer Lillard adjourned the meeting at 9:50 AM.

Respectfully submitted,

/s/Michael Brakebill
Michael Brakebill
Chief Investment Officer

APPROVED:

David H. Lillard, Jr. Chairman
TCRS Board of Trustees

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**TCRS BOARD OF TRUSTEES
APPOINTMENTS**

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BILL LEE
GOVERNOR
STATE OF TENNESSEE

November 6, 2019

Johnny Bohanan
PO Box 1894
Pigeon Forge, Tennessee 37868-1894

Dear Johnny:

Today, it is my distinct pleasure to confirm your appointment to the Tennessee Consolidated Retirement System Board of Trustees as a Representative of Public Safety. In the thorough, aggressive search for candidates, your individual characteristics and professional qualifications were exceptional among the number of nominees who expressed interest. This appointment is effective immediately and runs through June 30, 2022.

I consider it very important to ensure that Tennessee's boards and commissions are filled with the most dedicated and qualified citizens. I believe that your participation is certain to leave a positive impact on this board and the work it does.

Thank you for your interest in state government and for your willingness to serve your fellow citizens of Tennessee in this way. Please accept my very best wishes. I look forward to working with you and all Tennesseans to make our great state an even better place to live, work, and raise a family.

Warmest regards,



Bill Lee

BL:jc

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**POLITICAL SUBDIVISION
SEEKING MEMBERSHIP**

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**Political Subdivisions Beginning Participation
in the Tennessee Consolidated Retirement System
January 1, 2020**

Political Subdivision	Amount of Service Employer	Employee	ER Rate	EE Rate	Accrued Liability	Part Time Coverage	Cost of Living	Number of Employees
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Water Authority of Dickson County	ALL	0	9.62%	0%	\$0	Exclude	Include	77
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Regular Defined Benefit Plan

Meetings:

April 2018	Initial eligibility review, explained initial employer costs and participating procedures to the governing body.
August 2018	Actuarial study #1 completed, employer took no action.
May 2019	Employer requested another actuarial study
October 2019	Actuarial study #2 completed and employer moved forward
November 2019	Employer passed final adoption resolution
January 2020	Will explain reporting procedures to payroll officer.

Additional Notes:

- Water Authority of Dickson County will purchase all years of prior service credit for employees
- Water Authority of Dickson County will pay TCRS a lump sum of \$6,000,527 covering all years of prior service credit

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Tennessee Consolidated Retirement System

A RESOLUTION to authorize a political subdivision's participation in the Tennessee Consolidated Retirement System in accordance with Tennessee Code Annotated, Title 8, Chapters 34 – 37.

WHEREAS, Tennessee Code Annotated, Title 8, Chapter 35, Part 2 allows a political subdivision to participate in the Tennessee Consolidated Retirement System ("TCRS") subject to the approval of the TCRS Board of Trustees; and

WHEREAS, the Water Authority of Dickson County desires to participate in TCRS under the
(Name of Political Subdivision)

provisions of Tennessee Code Annotated, Title 8, Chapters 34 – 37 and in accordance with the following terms and conditions:

- A. TYPE PLAN. (CHECK BOX 1 OR BOX 2 OR BOX 3 OR BOX 4). The Political Subdivision adopts the following type plan:
 - (1) Regular Defined Benefit Plan.
 - (2) Alternate Defined Benefit Plan.
 - (3) Local Government Hybrid Plan (If this Plan is chosen, the Political Subdivision MUST also maintain a defined contribution plan on behalf of its employees and pass the attached resolution that describes the type of defined contribution plan the Political Subdivision will adopt. The defined contribution plan could provide for employer contributions of 0% to up to 7% of its employees' salaries).
 - (4) State Employee and Teacher Hybrid Plan (If this Plan is chosen, the Political Subdivision MUST also maintain a defined contribution plan on behalf of its employees whereby the Political Subdivision makes a mandatory employer contribution on behalf of each of its employees participating in the Hybrid Plan equal to 5% of the respective employee's salary subject to the cost controls and unfunded liability controls of the Hybrid Plan. The Political Subdivision must also pass the attached resolution that describes the type of defined contribution plan the Political Subdivision will adopt).

- B. EMPLOYEE CONTRIBUTIONS. (CHECK BOX 1 OR BOX 2 OR BOX 3 - IF THE STATE EMPLOYEE AND TEACHER HYBRID PLAN IS SELECTED ABOVE, THE EMPLOYEES MUST CONTRIBUTE 5% OF THEIR EARNABLE COMPENSATION UNDER THAT PLAN AND BOX 1 MUST BE CHECKED). The Employees shall contribute: (Water Authority of Dickson County hereby reserves to itself the right hereafter to discontinue the noncontributory provisions of § 8-34-206 for all its current and future employees)
 - (1) 5% of the employees' earnable compensation.
 - (2) 2.5% of the employees' earnable compensation.
 - (3) 0% of the employees' earnable compensation.

- C. COST-OF-LIVING INCREASES FOR RETIREES. (CHECK BOX 1 OR BOX 2 – IF EITHER THE LOCAL GOVERNMENT, OR THE STATE EMPLOYEE AND TEACHER HYBRID PLAN IS SELECTED ABOVE, COST-OF-LIVING INCREASES FOR RETIREES MUST BE GIVEN, SUBJECT TO ANY APPLICABLE COST CONTROLS AND UNFUNDED LIABILITY CONTROLS AND BOX 2 MUST BE CHECKED). The Political Subdivision shall:
 - (1) NOT provide cost-of-living increases for its retirees.
 - (2) PROVIDE cost-of-living increases for its retirees.

- D. ELIGIBILITY OF PART-TIME EMPLOYEES. (CHECK BOX 1 OR BOX 2). The Political Subdivision shall:
 - (1) NOT allow its part-time employees to participate in TCRS.
 - (2) ALLOW its part-time employees to participate in TCRS.

E. PRIOR SERVICE. (CHECK AND COMPLETE BOX 1 OR BOX 2 OR BOX 3 OR BOX 4 OR BOX 5 – CAUTION: IF THE STATE EMPLOYEE AND TEACHER HYBRID PLAN IS SELECTED ABOVE AND IF BOX 3 BELOW IS NOT CHOSEN, THE EMPLOYER CONTRIBUTION COULD EXCEED 4% THEREBY CAUSING THE COST CONTROLS AND UNFUNDED LIABILITY CONTROLS TO AUTOMATICALLY APPLY. ACCORDINGLY, PRIOR SERVICE IS NOT RECOMMENDED). For each employee employed with the Political Subdivision on the effective date of the Political Subdivision's participation in TCRS, the Political Subdivision shall:

- (1) Purchase ALL years of prior service credit on behalf of its employees.
- (2) Purchase NO years of prior service credit on behalf of its employees, but shall accept the unfunded liability should its employees establish ALL years of prior service.
- (3) NOT allow its employees to establish any prior service credit with the Political Subdivision.
- (4) Purchase _____ years of prior service credit on behalf of its employees and accept the unfunded liability should its employees establish an additional _____ years of prior service credit.
- (5) Purchase _____ years of prior service credit on behalf of its employees and no additional prior service credit may be established; and

F. MAXIMUM UNFUNDED LIABILITY. (COMPLETE THIS ITEM F ONLY IF THE STATE EMPLOYEE AND TEACHER HYBRID PLAN IS SELECTED ABOVE). For purposes of the cost control provisions of Tennessee Code Annotated, Section 8-36-922(d), the Political Subdivision defines "maximum unfunded liability" to mean an unfunded liability of no greater than: N/A; and

WHEREAS, the liability for participation and costs of administration shall be the sole responsibility of the Political Subdivision and not the State of Tennessee; and

WHEREAS, the Political Subdivision has passed a budget amendment appropriating the funds necessary to meet such liability and the same is attached hereto; and

WHEREAS, the effective date of participation shall be on January 1, 2020, or on such later date as determined by the TCRS Board of Trustees, and the initial employer contribution rate shall be 9.62%, which is based on the estimated lump sum accrued liability of \$0.00.

NOW, THEREFORE, BE IT RESOLVED That the Board of Commissioners of the
(Name of Governing Body)

Water Authority of Dickson County hereby authorizes all its employees in all its departments or
(Name of Political Subdivision)

instrumentalities to become eligible to participate in TCRS in accordance with the above terms and conditions subject to the approval of the TCRS Board of Trustees. It is acknowledged and understood that pursuant to Tennessee Code Annotated, Section 8-35-111 the Political Subdivision shall not make employer contributions to any other retirement or deferred compensation plans on behalf of any employee who participates in TCRS pursuant to this Resolution wherein the total combined employer contributions to such plans exceed 3% of the employee's salary, unless the Local Government Hybrid Plan or the State Employee and Teacher Hybrid Plan is adopted by the Political Subdivision for such employee. If either the Local Government Hybrid Plan or the State Employee and Teacher Hybrid Plan is adopted by the Political Subdivision, the Political Subdivision may make employer contributions to the defined contribution plan component of that Plan and to any one or more additional tax deferred compensation or retirement plans on behalf of such employee provided that the total combined employer contributions to such plans on behalf of the employee does not exceed 7% of the employee's salary.

STATE OF TENNESSEE
COUNTY OF DICKSON

I, R. Darrell James, clerk of the
Board of Commissioners of the Water Authority of Dickson County,
(Name of Governing Body) (Name of Political Subdivision)

do hereby certify that this is a true and exact copy of the foregoing Resolution that was approved and adopted in accordance with applicable law at a meeting held on the 17th day of November, 2019, the original of which is on file in this office.

IN WITNESS WHEREOF, I have hereunto set my hand, and the seal of the Water Authority of Dickson County
(Name of Political Subdivision)

R. Darrell James
As Clerk of the Board, as aforesaid

Seal



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STATISTICAL REPORTS

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ANALYSIS OF MEMBERS ACTIVELY CONTRIBUTING

	9/30/2017	12/31/2017	3/31/2018	6/30/2018	9/30/2018	12/31/2018	3/31/2019	6/30/2019	9/30/2019
Group I Members:									
(State & Higher Ed.)	40,996	40,674	38,617	37,974	37,057	36,509	35,779	35,084	34,404
Highway Patrol	692	685	679	668	634	627	621	608	610
Wildlife Officers	183	187	183	180	179	176	171	170	169
Teachers	58,202	58,306	56,800	55,712	54,935	53,833	53,513	52,397	51,824
General Employees of Polisubs	74,966	76,301	73,732	73,484	73,239	73,053	73,139	72,735	72,713
Firemen & Policemen	7,476	7,617	7,480	7,659	7,712	7,940	8,012	8,208	8,269
General Assembly	94	92	87	89	93	80	81	79	79
County Officials	2	2	2	2	1	1	1	1	1
Board Members	378	382	370	373	368	419	410	411	410
County Judges	11	10	8	7	6	6	6	6	6
Attorneys: ...	489	488	468	468	461	457	455	608	442
Total Group I	183,489	184,744	178,426	176,616	174,685	173,101	172,188	170,307	168,927
Group II & Prior Class:									
Wildlife Officers									
Highway Patrol									
Firemen & Policemen- Political Subdivisions	10	9	8	8	8	8	8	8	8
Total Group II & Prior Class	10	9	8						
Group III and Prior Class:									
State Judges	1	1	1	1	1	-			
County Judges	0	0							
Attorneys General	0	1	1	1	1	1	1	1	1
County Officials	2	2	2	2	2	1	1	1	1
Total Group III & Prior Class	3	4	4	4	4	2	2	2	2
Group IV									
State Judges	111	109	111	112	111	114	112	112	110
State & Teacher Hybrid Plan									
State	15,929	17,543	17,407	17,797	18,991	19,742	20,551	20,794	22,013
General Assembly	28	28	29	30	30	48	48	50	50
Teacher	19,099	20,751	19,931	19,601	22,936	23,049	23,420	23,091	25,855
Attorneys General, Judges	36	37	42	41	41	47	48	48	49
Political Subdivisions	1,620	1,996	2,052	2,243	2,572	2,917	3,132	3,252	3,609
Public Safety	222	296	306	309	374	350	352	351	442
Alcoa	43	42	40	40	39	0	0	0	0
Local Government Plans									
Alternate DB	40	45	48	49	51	54	58	59	58
Hybrid Plan w/o Cost Controls	292	320	371	413	472	492	614	629	700
Total Membership									
Contributing to TCRS	220,922	225,924	218,763	217,251	220,191	219,800	220,411	218,581	221,703
Teachers Contributing to ORP	8,387	8,213	8,028	8,219	8,054	7,860	7,743	7,649	7,614
Grand Totals	229,309	234,137	226,791	225,470	228,245	227,660	228,154	226,230	229,317

**RETIRED PAYROLL
STATISTICS
September 30, 2019**

	<u>AMOUNT</u>	<u># OF RETIREES</u>
STATE EMPLOYEES	\$69,836,231.20	48,396
STATE PAID JUDGES	\$1,088,342.16	216
COUNTY PAID JUDGES	\$231,124.23	60
ATTORNEY GENERALS	\$983,961.61	238
COUNTY OFFICIALS	\$305,590.86	133
PUBLIC SERVICE COMMISSIONERS	\$7,777.69	4
POLITICAL SUBDIVISIONS	\$38,450,684.59	41,846
TEACHERS	\$114,887,802.67	52,259
LOCAL TEACHERS	\$3,022,974.88	1,505
GOVERNORS AND WIDOWS	\$28,988.75	4
AGED TEACHERS	\$229.09	2
OTHERS	<u>\$338,641.96</u>	<u>129</u>
TOTAL	\$229,182,349.69	144,792

**RETIRED PAYROLL
STATISTICS
July 1, 2019
through
September 30, 2019**

	<u>AMOUNT</u>	<u># OF RETIREES</u>
STATE EMPLOYEES	\$209,531,372.45	48,396
STATE PAID JUDGES	\$3,279,346.38	216
COUNTY PAID JUDGES	\$746,223.81	60
ATTORNEY GENERALS	\$2,962,630.31	238
COUNTY OFFICIALS	\$922,542.19	133
PUBLIC SERVICE COMMISSIONERS	\$23,333.07	4
POLITICAL SUBDIVISIONS	\$115,321,041.12	41,846
TEACHERS	\$344,585,921.85	52,259
LOCAL TEACHERS	\$9,116,367.23	1,505
GOVERNORS AND WIDOWS	\$86,966.25	4
AGED TEACHERS	\$687.27	2
OTHERS	<u>\$993,366.54</u>	<u>129</u>
TOTAL	\$687,569,798.47	144,792

NOTE: NINETY-NINE PERCENT (99%) OF THE RETIREEES ARE ON DIRECT DEPOSIT

NUMBER OF MEMBERS REFUNDED

<u>Month</u>	<u>2013-14</u>	<u>2014-15</u>	<u>2015-16</u>	<u>2016-17</u>	<u>2017-18</u>	<u>2018-19</u>	<u>2019-20</u>
July	516	613	512	417	451	479	409
August	782	820	403	425	458	581	438
September	457	586	522	458	343	426	682
October	378	483	364	379	468	433	
November	314	244	359	321	313	389	
December	276	338	326	344	373	283	
January	402	322	386	308	324	481	
February	310	238	351	380	404	263	
March	284	331	355	354	332	301	
April	424	338	347	405	284	317	
May	866	247	332	347	305	387	
June	674	383	336	352	328	345	
TOTAL	<u>5,683</u>	<u>4,943</u>	<u>4,593</u>	<u>4,490</u>	<u>4,383</u>	<u>4,685</u>	<u>1,529</u>

**REFUND EXPENDITURES
2019-2020 FISCAL YEAR**

MONTH	MEMBER'S CONTRIBUTIONS	414(H) CONTRIBUTIONS	MEMBER'S INTEREST	EMPLOYER CONTRIBUTIONS	DEATH PAYMENTS	TOTAL
July	\$ 31,410.22	\$ 2,740,203.25	\$ 1,097,960.58	\$ 100,914.80	\$ 338,199.19	\$4,308,688.04
August	95,961.12	3,259,378.23	1,240,259.83	4,749.22	685,965.02	\$5,286,313.42
September	48,255.23	4,840,914.22	1,506,792.82	93,477.28	195,992.92	\$6,685,432.47
October						\$0.00
November						\$0.00
December						\$0.00
January						\$0.00
February						\$0.00
March						\$0.00
April						\$0.00
May						\$0.00
June						\$0.00
TOTAL	\$ 175,626.57	\$ 10,840,495.70	\$ 3,845,013.23	\$ 199,141.30	\$ 1,220,157.13	\$ 16,280,433.93

PRIOR SERVICE ACTIVITY
July 1, 2019 through September 30, 2019

Legacy State:	Type of Service	No of Members	Years of Service	Amount
	Backpayment	-	-	\$ -
	Military	-	-	-
	Redeposit	<u>2</u>	<u>22</u>	<u>\$ 4,338</u>
	Totals	<u>2</u>	<u>22</u>	<u>\$ 4,338</u>

Legacy Teachers:	Type of Service	No of Members	Years of Service	Amount
	Backpayment	5	7	\$ 19,964
	Military	-	-	\$ -
	Redeposit	<u>11</u>	<u>38</u>	<u>\$ 215,745</u>
	Totals	<u>16</u>	<u>45</u>	<u>\$ 235,709</u>

Legacy Higher Education:	Type of Service	No of Members	Years of Service	Amount
	Backpayment	9	40	\$ 367,946
	Military	-	-	\$ -
	Redeposit	<u>1</u>	<u>3</u>	<u>\$ 385</u>
	Totals	<u>10</u>	<u>43</u>	<u>\$ 368,331</u>

Legacy Political Subdivisions:	Type of Service	No of Members	Years of Service	Amount
	Backpayment	34	24	\$ 24,328
	Military	-	-	\$ -
	Redeposit	<u>3</u>	<u>8</u>	<u>\$ 32,922</u>
	Totals	<u>37</u>	<u>31</u>	<u>\$ 57,250</u>

Hybrid Higher Education:	Type of Service	No of Members	Years of Service	Amount
	Backpayment	1	2	\$ 2,405
	Military	-	-	\$ -
	Redeposit	-	-	\$ -
	Totals	<u>1</u>	<u>2</u>	<u>\$ 2,405</u>

Hybrid State:	Type of Service	No of Members	Years of Service	Amount
	Backpayment	-	-	\$ -
	Military	1	0	\$ -
	Redeposit	-	-	\$ -
	Totals	<u>1</u>	<u>0</u>	<u>\$ -</u>

Hybrid Teacher:	Type of Service	No of Members	Years of Service	Amount
	Backpayment	1	2	\$ 680
	Military	-	-	\$ -
	Redeposit	-	-	\$ -
	Totals	<u>1</u>	<u>2</u>	<u>\$ 680</u>

Hybrid Political Subdivisi	Type of Service	No of Members	Years of Service	Amount
	Backpayment	4	73	\$ 309,381
	Military	-	-	\$ -
	Redeposit	<u>1</u>	<u>1</u>	<u>\$ 3,221</u>
	Totals	<u>5</u>	<u>74</u>	<u>\$ 312,602</u>

Grand Totals:	Type of Service	No of Members	Years of Service	Amount
	Backpayment	54	147	\$ 724,704
	Military	1	0	\$ -
	Redeposit	<u>18</u>	<u>72</u>	<u>\$ 256,611</u>
	Totals	<u>73</u>	<u>219</u>	<u>\$ 981,315</u>

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DISABILITY RETIREMENT REPORT

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TCRS BOARD REPORT: 1ST QUARTER 2019

Reconsiderations and Re-Evaluations

Initial Claim	42
Re-Evaluation	30
Reconsideration	<u>6</u>
Total Cases Reviewed	78

Disability Claim Summary

<u>Disability Application Type</u>	
Ordinary	68
Inactive	5
Accidental	<u>1</u>
Total	74

<u>Health Type</u>	
Physical Health	54
Mental Health	<u>24</u>
Total	78

<u>Approvals and Denials</u>	
Approval	74
Denial	<u>4</u>
Total	78

<u>Denial Reasons</u>	
Capable of Light Work	3
Capable of Sedentary Work	1
No work limitations	<u>0</u>
Disability Claim Summary	4

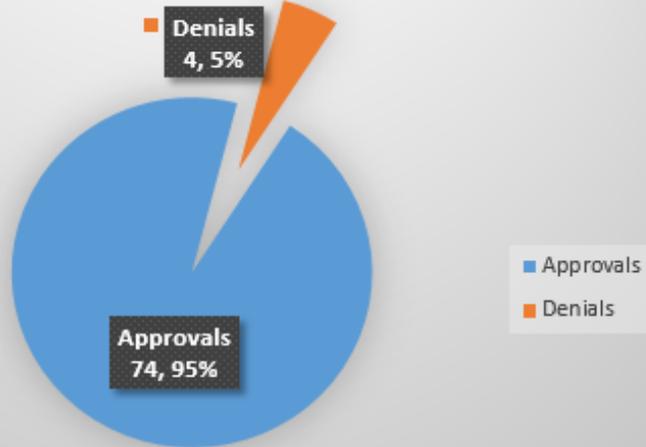
Average Age of Applicants

Lowest Age	38
Highest Age	59
Average Age	49

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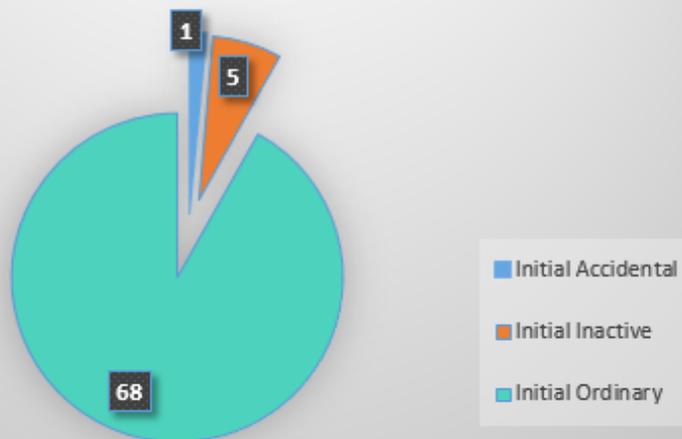
**1st Quarter
July - September 2019
Disability Applications Processed**

Total 78



**1st Quarter
July - September 2019
Disability Approvals by Type**

Total 74



TCRS BOARD REPORT: 1ST QUARTER 2019

Health Type Approval Reasons

Approval Reason	
Major Depressive Disorder/ MD/PTSD/ Anxiety/Bipolar Disorder/Depression/Paranoid schizophrenia	21
Back/ spinal/Lumbar radiculopathy/Spinal Stenosis/DDD/DJD	18
Wrist & Elbow pain/Neck pain/Shoulder/arm/knee pain	7
Neurological Disorders/ALS/MS/Auto Immune	7
Osteoarthritis/Rheumatoid Arthritis	6
Cancers	5
Heart/Stroke/CHF/CVA	4
Fibromyalgia	4
Polymyositis	1
Skin ulcerations	1
Total	74

FINANCIAL STATEMENTS

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TENNESSEE RETIREE GROUP TRUST
STATEMENT OF FIDUCIARY NET POSITION
September 30, 2019

ASSETS

Cash and cash equivalents	\$	1,884,758,223.43
Cash collateral for securities on loan		3,367,926,562.00
Receivables		
Investment income receivable		101,521,447.13
Derivative instruments receivable		255,829,583.39
Investments sold		88,264,101.74
Total receivables		445,615,132.26
Investments at fair value		
Government securities		6,842,133,441.06
Corporate securities		6,825,243,462.08
Corporate stocks		26,093,458,212.76
Strategic lending		2,714,165,736.15
Private equities		3,734,874,788.81
Real estate		4,906,796,038.67
Total investments		51,116,671,679.53
TOTAL ASSETS		56,814,971,597.22

LIABILITIES AND NET POSITION

LIABILITIES

Investments purchased		258,800,387.49
Other investments payables		29,075,706.38
Derivative instrument payable		252,253,669.30
Cash collateral for securities on loan		3,367,926,562.00
TOTAL LIABILITIES		3,908,056,325.17

**NET POSITION HELD IN TRUST FOR
POOL PARTICIPANTS**

\$ 52,906,915,272.05

See Accompanying Notes to the Financial Statements

UNAUDITED

**TENNESSEE RETIREE GROUP TRUST
STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE PERIOD ENDED SEPTEMBER 30, 2019**

OPERATIONS

INVESTMENT INCOME

Net appreciation in fair value of investments	\$ 736,487,104.23
Income on securities	323,849,082.52
Total investment income	<u>1,060,336,186.75</u>
Less: investment expense	11,640,723.05
Net income (loss) from investing activities	<u>1,048,695,463.70</u>

Securities lending activities

Securities lending income	25,821,288.65
Less: securities lending expense	22,352,267.65
Net income from securities lending activities	<u>3,469,021.00</u>

NET INVESTMENT INCOME	<u>1,052,164,484.70</u>
------------------------------	-------------------------

CAPITAL SHARE TRANSACTIONS

Net shares sold	320,757,500.54
Net shares redeemed	690,106,467.73
TOTAL INCREASE FROM CAPITAL SHARE TRANSACTIONS	<u>(369,348,967.19)</u>

NET INCREASE IN FIDUCIARY NET POSITION	682,815,517.51
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NET POSITION RESTRICTED FOR PARTICIPANTS

NET POSITION, BEGINNING OF PERIOD	<u>\$ 52,224,099,754.54</u>
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NET POSITION, END OF PERIOD	<u><u>\$ 52,906,915,272.05</u></u>
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See Accompanying Notes to the Financial Statements

UNAUDITED

Tennessee Retiree Group Trust
Notes to Financial Statements
September 30, 2019

A: Summary of Significant Accounting Policies

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

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

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

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

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

The fair value of assets of the TRGT held at September 30, 2019 represents the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants

B: Deposits and Investments

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

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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 and Insurance, 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.

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

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.

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The TRGT securities lending program is managed by a third party lending agent, Deutsche Bank AG. The TRGT may loan any debt or equity securities which is owned by TRGT. At September 30, 2019, the TRGT had market value of securities on loan totaling \$3,299,577,777 and received \$3,367,926,562 in collateral.

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 Pooled Investment Fund Report. That report is available on the state's website at <http://www.tn.gov/treasury/>.

Interest Rate Risk: Interest rate risk is the risk that future changes in prevailing market rates of interest will have an adverse effect on the fair value of debt investments. The fair values of securities with long terms to maturity may be highly sensitive to interest rate changes. The 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.

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.

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.

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 September 30, 2019 the TRGT had uninsured and uncollateralized cash deposits of foreign currency held by our master custodian, State Street Bank, in State Street's name. These deposits were used for investments pending settlement.

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.

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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.

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

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

Swaps - The TRGT is authorized to enter into Swap contracts and any income earned on option contracts has been included in investment income in the financial statements. A swap is a derivative contract through which two parties exchange the cash flows or liabilities from two different financial instruments.

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

Alternative Investments: The TRGT has investments in strategic lending, private equity funds and real estate. Because these investments are not readily marketable, the estimated value is subject to uncertainty and, therefore, may differ from the value that would have been used had a ready market for the investments existed, and such differences could be material. Title to real property invested in by TRGT is held by real estate investment holding companies.

Commitments:

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

Alternative Investments: The TRGT had unfunded commitments in private equity, strategic lending, and real estate commitments at the end of the period.

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**TENNESSEE CONSOLIDATED RETIREMENT SYSTEM
STATEMENT OF FIDUCIARY NET POSITION
AS OF SEPTEMBER 30, 2019**

ASSETS

Cash and Cash Equivalents	\$64,408,513.28
Cash collateral for securities on loan	3,353,385,032.73
Receivables	
Member receivable	1,721,117.64
Employer receivable	700,496.78
	2,421,614.42
Total receivables	
	2,421,614.42
Investments, at fair value	
Tennessee Retiree Group Trust	52,257,533,945.58
Capital Assets (net)	16,892,344.45
	16,892,344.45
TOTAL ASSETS	55,694,641,450.46

LIABILITIES

Accounts payable	
Federal withholding payable	17,887,552.41
Retiree insurance premium payable	9,458,032.48
Other	313,069.25
Cash collateral for securities on loan	3,353,385,032.73
	3,381,043,686.87
TOTAL LIABILITIES	3,381,043,686.87
NET POSITION RESTRICTED FOR PENSIONS	\$52,313,597,763.59

See Accompanying Notes to the Financial Statements

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**TENNESSEE CONSOLIDATED RETIREMENT SYSTEM
STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE PERIOD ENDED SEPTEMBER 30, 2019**

ADDITIONS

Contributions	
Member contributions	\$55,423,918.46
Employer contributions	196,932,662.45
Other contributions	423,167.48
Total contributions	<u>252,779,748.39</u>
Investment income	
Total investment income	635,823,625.23
Less: Investment expense	(11,478,099.64)
Net income (loss) from investing activities	<u>624,345,525.59</u>
Securities lending activities	
Securities lending income	18,521,044.23
Less: securities lending expense	(16,083,585.94)
Net income from securities lending activities	<u>2,437,458.29</u>
Net investment income	<u>626,782,983.88</u>
TOTAL ADDITIONS	<u>879,562,732.27</u>

DEDUCTIONS

Annuity benefits	687,393,321.60
Death benefits	867,000.00
Refunds	12,335,803.94
TOTAL DEDUCTIONS	<u>700,596,125.54</u>

NET INCREASE 178,966,606.73

NET POSITION RESTRICTED FOR PENSIONS

BEGINNING OF YEAR 52,134,631,156.86

END OF YEA \$52,313,597,763.59

See Accompanying Notes to the Financial Statements

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Tennessee Consolidated Retirement System
Notes to Financial Statements
September 30, 2019

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

A: Summary of Significant Accounting Policies

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

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

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

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

Method used to value investments: Assets of the TCRS are invested in the Tennessee Retiree Group Trust (TRGT). As of September 30, 2019, the TCRS owns 95.28 percent of the investments 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 September 30, 2019 represents the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants.

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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 \$16.9 million at June 30, 2019 and is being amortized using the straight line method over the ten year estimated life of the system.

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 September 30, 2019, there were three defined benefit pension plans within the TCRS. The Public Employee Retirement Plan is an agent, multiple-employer defined benefit pension plan for state government employees and for political subdivisions electing to participate in the TCRS. The Teacher Legacy Pension Plan is a cost-sharing, multiple-employer defined benefit pension plan for teachers of local education agencies (LEAs). The Teacher Legacy Pension Plan closed to new membership on June 30, 2014, but will continue providing benefits to existing members and retirees. Beginning July 1, 2014, the Teacher Retirement Plan became effective for teachers employed by LEAs after June 30, 2014. The Teacher Retirement Plan is a separate cost sharing, multiple employer defined benefit pension plan.

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

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

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.

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Teacher Retirement Plan

Members of the Teacher Retirement Plan are eligible to retire at age 65 with 5 years of service credit or pursuant to the rule of 90 where age and years of service total 90. Plan members are entitled to receive unreduced service retirement benefits, which are determined by a formula using the member's highest five consecutive year average compensation and the member's years of service credit. Service related disability benefits are provided regardless of length of service. Five years of service is required for non-service related disability eligibility. The service related and non-service related disability benefits are determined in the same manner as a service retirement benefit but are reduced 10 percent and include projected service credits. A variety of death benefits are available under various eligibility criteria. Member and beneficiary annuitants are entitled to automatic cost of living adjustments (COLAs) after retirement. A COLA is granted each July for annuitants retired prior to the 2nd of July of the previous year. The COLA is based on the change in the consumer price index (CPI) during the prior calendar year, capped at 3 percent, and applied to the current benefit. No COLA is granted if the change in the CPI is less than one-half percent. A one percent COLA is granted if the CPI change is between one-half percent and one percent. The Teacher Retirement Plan includes provisions to control employer contributions and unfunded liabilities. As such, plan provisions are automatically changed when employer contributions and unfunded liabilities exceed statutory limits.

Public Employee Retirement Plan

For state employees, there are two major tiers of benefits and eligibility requirements. State employees becoming members before July 1, 2014 are eligible to retire at age 60 with 5 years of service credit or after 30 years of service credit regardless of age. State employees becoming members after June 30, 2014 are eligible to retire at age 65 with five years of service or pursuant to the rule of 90 where age and years of service total 90. Plan members are entitled to receive unreduced service retirement benefits, which are determined by a formula using the member's highest five consecutive year average compensation and the member's years of service credit. Service related disability benefits are provided regardless of length of service. Five years of service is required for non-service related disability eligibility. The service related and non-service related disability benefits are determined in the same manner as a service retirement benefit but are reduced 10 percent and include projected service credits. A variety of death benefits are available under various eligibility criteria. Member and beneficiary annuitants are entitled to automatic COLAs after retirement. A COLA is granted each July for annuitants retired prior to the 2nd of July of the previous year. The COLA is based on the change in the CPI during the prior calendar year, capped at 3 percent, and applied 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.

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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 period ending September 30, 2019, the required ADC for LEAs was 10.63 percent of covered-employee payroll.

For the Teacher Retirement Plan, LEAs are required by statute to contribute greater of the ADC or 4 percent. The ADC is the estimated amount necessary to finance the costs of benefits earned by plan members during the year, the unfunded accrued liability, and the cost of administration. Teachers are required by statute to contribute 5 percent of salary. For the period ending September 30, 2019, the required ADC for LEAs was 2.03 percent of covered-employee payroll while actual contributions were 4 percent of covered-employee payroll.

For the Public Employee Retirement Plan, each governmental entity is required by statute to contribute the ADC except that the contribution rate for state employees hired after June 30, 2014 is the greater of the ADC or 4 percent. The ADC is the estimated amount necessary to finance the costs of benefits earned by plan members during the plan year, the unfunded accrued liability, and the cost of administration. For the year ended June 30, 2019, the required ADC varied for each participating employer, with approximately ninety-six percent of all employer rates less than twenty (20) percent and contributions from these same employers accounting for over ninety percent of the contributions for this plan. By statute, state employees hired before July 1, 2014 are noncontributory while employees hired after June 30, 2014 contribute 5 percent of salary. As adopted by the governmental entity, political subdivision employees may be noncontributory, contribute 2.5 percent of salary, or contribute 5 percent of salary.

Reserves: The statute governing the Teacher Retirement Plan and certain employers in the Public Employee Retirement Plan provide for a minimum employer contribution rate of 4 percent. The statute further provides that 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 – June 30, 2018, the funds contributed to the stabilization reserves were held by TCRS in the pension trust fund. As of June 30, 2019, there was \$55,402,861 in the stabilization reserve on behalf of the Teachers Retirement Plan and \$50,929,207 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 (TCA)* Title 8, Chapters 34-37. Pursuant to this statute the Tennessee Consolidated Retirement System (TCRS) and its board of directors with the State Treasurer (Treasurer) as custodian, authorized by TCA 8-37-104 adopted this group trust for the purpose of pooling funds of TRGT with other assets in the custody of the Treasurer, solely for investment purposes. The assets invested consist exclusively of assets of exempt pension and profit sharing trusts and individual retirement accounts, custodial accounts, retirement income accounts, governmental plans and tax-exempt trusts under the Internal Revenue Code of 1986 and Rev. Rul. 81-100, as modified by Rev. Ruls. 2004-67, 2008-40 and 2011-1 (referred to herein as “Retirement Assets”). The Custodian shall be responsible for the managing and directing the investment of the Group Trust Funds in the same manner as it invests funds of the TCRS. As of September 30, 2019, the TCRS owns 95.28 percent of the investments in the TRGT.

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

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

State statute also authorizes the 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. Gross exposure to approved fixed income financial instruments will be limited to ten percent (10 percent) of the market value of the Trust's total assets for risk mitigating positions and 10 percent (10 percent) for risk positions. Position sizes will be measured by notional amounts. Options will be measured in their notional equivalents.

Investment policy: The TRGT investment authority is established pursuant to Tennessee Code Annotated Title 8, Chapter 37. The statute provides the Board of Trustees with the responsibility to establish the investment policy of the TRGT. The investment policy may be amended by the Board. The TRGT assets are managed on a total return basis with a long-term objective of achieving and maintaining a fully funded status for the benefits provided by the TCRS.

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

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The TRGT securities lending program is managed by a third party lending agent, Deutsche Bank AG. The TRGT may loan any debt or equity securities which is owned by TRGT. At September 30, 2019, the TRGT had market value of securities on loan totaling \$3,299,517,777 and received \$3,367,926,562 in collateral.

The TCRS 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 Pooled Investment Fund Report. That report is available on the state's website at <http://www.in.gov/treasury/>.

Interest Rate Risk: Interest rate risk is the risk that future changes in prevailing market rates of interest will have an adverse effect on the fair value of debt investments. The fair values of securities with long terms to maturity may be highly sensitive to interest rate changes. The 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.

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.

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.

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 September 30, 2019, the TRGT had uninsured and uncollateralized cash deposits of foreign currency held by our master custodian, State Street Bank, in State Street's name. These deposits were used for investments pending settlement.

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.

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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. The TRGT can sell up to 80% of its foreign currency exposure into US dollars. Foreign currency forward contracts expose the TCRS to foreign currency risk as they are denominated in foreign currency.

Any unrealized gain on foreign currency forward contracts has been reflected in the financial statements as an investment. The notional amount of the foreign currency forward contracts has been reflected in the financial statements as a receivable and a payable. Any unrealized loss on foreign currency forward contracts has been included in the payable established for the contracts.

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

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

Swaps - The TRGT is authorized to enter into Swap contracts and any income earned on option contracts has been included in investment income in the financial statements. A swap is a derivative contract through which two parties exchange the cash flows or liabilities from two different financial instruments.

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

Alternative Investments: The TRGT has investments in strategic lending, private equity funds and real estate. Because these investments are not readily marketable, the estimated value is subject to uncertainty and, therefore, may differ from the value that would have been used had a ready market for the investments existed, and such differences could be material. Title to real property invested in by TRGT is held by real estate investment holding companies.

Commitments:

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

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Alternative Investments: The TRGT had unfunded commitments in private equity, strategic lending, and real estate commitments at the end of the period.

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