

# Tennessee Retiree Group Trust



STATE OF TENNESSEE  
COMPTROLLER OF THE TREASURY  
DEPARTMENT OF AUDIT  
DIVISION OF STATE AUDIT  
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## Independent Auditor's Report

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

### Report on the Financial Statements

We have audited the accompanying statement of fiduciary net position of the Tennessee Retiree Group Trust as of June 30, 2017, the related statement of changes in fiduciary net position for the year then ended, and the related notes to the financial statements, which collectively comprise the Tennessee Retiree Group Trust's basic financial statements.

#### *Management's Responsibility for the Financial Statements*

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

#### *Auditor's Responsibility*

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting principles used and reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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

## *Opinion*

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Tennessee Retiree Group Trust of the State of Tennessee as of June 30, 2017, and the changes in fiduciary net position thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

## *Emphasis of Matters*

As discussed in Note A.1., the financial statements present only the Tennessee Retiree Group Trust, and do not purport to, and do not, present fairly the financial position of the State of Tennessee, as of June 30, 2017 and the changes in financial position thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America. Our opinion is not modified with respect to this matter.

As discussed in Note B, the financial statements of the Tennessee Retiree Group Trust include investments valued at \$7,772,110,343 (17 percent of net position) whose fair values have been estimated by management in the absence of readily determinable fair values. Management's estimates are based on information provided by the fund managers or the general partners. Our opinion is not modified with respect to this matter.

## **Other Reporting Required by *Government Auditing Standards***

In accordance with *Government Auditing Standards*, we have also issued our report dated December 14, 2017, on our consideration of the Tennessee Retiree Group Trust's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, and contracts, and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Tennessee Retiree Group Trust's internal control over financial reporting and compliance.



Deborah V. Loveless, CPA  
Director  
December 14, 2017

# Tennessee Retiree Group Trust

## Tennessee Retiree Group Trust Statement of Fiduciary Net Position June 30, 2017

(Expressed in Thousands)

### ASSETS

Cash and cash equivalents	\$	625,725
Cash collateral for securities on loan		5,003,218
Receivables		
Investment income receivable		149,815
Derivative instruments receivable		104,917
Investments sold		79,317
Total Receivables		<u>334,049</u>
Investments at fair value		
Government securities		8,583,838
Corporate securities		5,076,734
Corporate stocks		24,805,713
Derivative instruments		393
Strategic lending		1,860,382
Private equities		1,862,282
Real estate		4,049,446
Total Investments		<u>46,238,788</u>
TOTAL ASSETS		<u>52,201,780</u>

### LIABILITIES AND NET POSITION

#### LIABILITIES

Investments purchased		68,184
Other investments payables		14,927
Derivative instrument payable		109,478
Cash collateral for securities on loan		<u>5,003,218</u>
TOTAL LIABILITIES		<u>5,195,807</u>
NET POSITION HELD IN TRUST FOR POOL PARTICIPANTS	\$	<u>47,005,973</u>

See Accompanying Notes to the Financial Statements

# Tennessee Retiree Group Trust

## Tennessee Retiree Group Trust Statement of Changes in Fiduciary Net Position For Fiscal Year Ended June 30, 2017

*(Expressed in Thousands)*

### OPERATIONS

#### INVESTMENT INCOME

Net appreciation in fair value of investments	\$	3,829,446
Income on securities		1,055,089
Total investment income		<u>4,884,535</u>
Less: investment expense		54,076
Net income (loss) from investing activities		<u>4,830,459</u>

#### Securities lending activities

Securities lending income		57,856
Less: securities lending expense		32,428
Net income from securities lending activities		<u>25,428</u>

NET INVESTMENT INCOME 4,855,887

#### CAPITAL SHARE TRANSACTIONS

Net shares sold		1,565,532
Net shares redeemed		2,624,786
TOTAL DECREASE FROM CAPITAL SHARE TRANSACTIONS		<u>(1,059,254)</u>

NET INCREASE IN FIDUCIARY NET POSITION 3,796,633

#### NET POSITION RESTRICTED FOR PARTICIPANTS

NET POSITION, BEGINNING OF PERIOD		43,209,340
NET POSITION, END OF PERIOD	\$	<u><u>47,005,973</u></u>

*See Accompanying Notes to the Financial Statements*

# Tennessee Retiree Group Trust

## Tennessee Retiree Group Trust Notes to the Financial Statements June 30, 2017

### A: Summary of Significant Accounting Policies

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

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

**Cash and cash equivalents:** Cash and cash equivalents includes cash and short term investments with a maturity date within three months of the acquisition date. Cash management pools are included as cash. Cash received that cannot be immediately invested in securities, or that is needed for operations, is invested in either the State Pooled Investment Fund sponsored by the State of Tennessee and administered by the State Treasurer or in the State Street Government Money Market Fund, a short-term, open-end mutual fund under the contractual arrangement for master custody services. The balance in this investment at June 30, 2017 was \$3,004,724.

**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 June 30, 2017 represents the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. Assets held are categorized for fair value measurement within the fair value hierarchy established by GAAP. The hierarchy is based on the valuation inputs used to measure the fair value of the asset and give the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements).

- Level 1 - Unadjusted quoted prices for identical assets or liabilities in active markets that can be accessed at

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the measurement date.

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

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

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

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

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

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

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

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

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## Investments Measured at Fair Value

As of June 30, 2017

Expressed in Thousands

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

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

Asset Classification	Strategy	Number of Funds	NAV	Remaining Life	Redemption Terms	Redemption Restrictions
Limited Partnerships	Traditional Private Equity and Strategic Lending	74	3,473,687	Various	N/A	Various transfer and sale restrictions
Mutual Funds	International Public Equities	23	260,318	N/A	May Redeem all or part of the shares with at least fifteen (15) days written notice	Redemptions may be distributed in cash, in-kind or a combination and are subject to further restrictions by the fund's trustees
Real Estate	Real Estate Commingled Investments	19	709,315	N/A	N/A	Various transfer and sale restrictions

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

**International Public Equities using Mutual Funds:** TRGT will invest in mutual funds as an efficient and cost-effective means to gain passive exposure to a specific sector, industry or country. As of June 30, 2017, TRGT has retained Baring International Investment Limited to facilitate an international equity investment strategy utilizing, in part, sector and country index mutual funds.

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

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## **B: Deposits and Investments**

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

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

- a. The total sum invested in common and preferred stocks shall not exceed seventy-five percent (75 percent) of the total of the funds of the trust.
- b. The total sum invested in notes and bonds or other fixed income securities exceeding one year in maturity shall not exceed seventy-five percent (75 percent) of the total funds of the trust.
- c. Within the restrictions in (a) and (b) above, 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.

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**Investment policy:** The TRGT investment authority is established pursuant to *Tennessee Code Annotated* Title 8, Chapter 37. The statute provides the Board of Trustees with the responsibility to establish the investment policy of the TRGT. The investment policy may be amended by the Board. The TRGT assets are managed on a total return basis with a long-term objective of achieving and maintaining a fully funded status for the benefits provided by the TCRS. The following was the Board's adopted asset allocation policy as of June 30, 2017:

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

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

The TRGT securities lending program is managed by a third party lending agent, Deutsche Bank AG. The TRGT may loan any debt or equity securities which is owned by TRGT. Our securities lending agent manages the average maturities of securities on loan against the average maturities of securities on collateral invested. The maturity gap has a limit of 33 days. This is monitored by investment staff on a periodic basis to ensure compliance.

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

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## Securities Lending

As of June 30, 2017

### Fair Value of Securities on Loan

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

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

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

TRGT's investment policy specifies that bond issues subject for purchase are investment grade bonds rated by one of the Nationally Recognized Statistical Rating Organizations (NRSROs). There is no requirement to divest an asset if it is downgraded after purchase. For short-term investments, the investment policy provides for the purchase of only the highest quality debt issues. Commercial paper should be rated in the highest tier by all rating agencies which rate the paper, with a minimum of two ratings required. Commercial paper cannot be purchased if a rating agency has the commercial paper on a negative credit watch. The investment policy also requires preparation of a credit analysis report on the corporation prior to purchasing commercial paper.

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

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

## Credit Quality Distribution for Securities with Credit Exposure as a percentage of Total Investments

As of June 30, 2017

*Expressed in Thousands*

Rating	Fair Value (in thousands)	Percentage of Total Investments
P-1	\$ 3,059	0.007%
AAA	489,032	1.058%
AA	389,599	0.843%
A	881,900	1.907%
BBB	2,338,128	5.057%
BB	274,236	0.593%
B	63,729	0.138%
CCC	55,459	0.120%
CC	871	0.002%
D	25,659	0.055%
NR	3,529,507	7.633%
	<u>8,051,179</u>	
U. S. Government Agencies and Obligations explicitly guaranteed by the U. S. Government	6,116,004	
Total Fixed Income Securities	<u>14,167,183</u>	
Equity	24,805,713	
Real Estate	4,049,446	
Private Equities	1,862,282	
Strategic Lending	1,860,382	
Preferred Stock not Classified as Fixed Income	64,219	
Derivative Instruments (not rated)	393	
Add Back Short term investment fund with custodian (NR)	(3,005)	
Add Back Short term investments classified as cash (NR)	(567,825)	
	<u>(567,825)</u>	
<b>Total Investments as shown on Fiduciary Net Position</b>	<b><u>\$ 46,238,788</u></b>	

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**Interest Rate Risk:** Interest rate risk is the risk that future changes in prevailing market rates of interest will have an adverse effect on the fair value of debt investments. The fair values of securities with long terms to maturity may be highly sensitive to interest rate changes. The investment policy for the TRGT states that the maturity of its debt securities may range from short-term instruments, including investments in the State Pooled Investment Fund, to long-term bonds, with consideration of liquidity needs. However, the policy does not specifically address limits on investment maturities. Duration is a measure of a debt investment's exposure to fair value changes arising from changing interest rates. It uses the present value of cash flows weighted for those cash flows as a percentage of the investment's full price. The TRGT had the following investments and effective duration at June 30, 2017.

## Effective Duration of Debt Investments

As of June 30, 2017

Expressed in Thousands

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

**Asset-Backed Securities:** The TRGT invests in various collateralized mortgage obligations (CMOs) which are mortgage-backed securities. These securities are based on cash flows from interest and principal payments on underlying mortgages and could therefore be more sensitive to prepayments by mortgagees as a result of a decline in interest rates. The fair value of CMOs at June 30, 2017 was \$297,444,710 of which \$158,220,655 were CMOs that are generally more sensitive to interest rate changes.

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

# Tennessee Retiree Group Trust

## Foreign Currency-Denominated Investments

As of June 30, 2017

Expressed in Thousands

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

**Custodial Credit Risk:** Custodial Credit Risk for deposits is the risk that in the event of a bank failure, the TRGT deposits may not be returned to TRGT. The TRGT does not have an explicit policy with regards to Custodial Credit Risk for deposits. At year end, the TRGT had uninsured and uncollateralized cash deposits of \$31,571,026 in foreign currency held by our master custodian, State Street Bank, in State Street's name. These deposits were used for investments pending settlement.

**Rate of Return:** For the year, the money-weighted rate of return on investments in the TRGT, net of investment expense, was 11.295 percent. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

### Derivatives:

**Futures** - The TRGT may buy or sell fixed income and equity index futures contracts for the purposes of making asset allocation changes in an efficient and cost effective manner and to improve liquidity. Gains (losses) on futures hedge losses (gains) produced by any deviation from the TRGT target allocation. The gains and losses resulting from daily fluctuations in the fair value of the outstanding futures contract are settled daily, on the following day, and a receivable or payable is established for any unsettled gain or loss as of the financial statement date. As of June 30, 2017, the TRGT was under contract for fixed income and equity index futures and the resulting payable is reflected in the financial statements at fair value.

**Foreign Currency Forward Contracts** - The international securities expose the TRGT to potential losses due to a possible rise in the value of the US dollar. The TRGT investment managers can reduce foreign currency exposure by 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

# Tennessee Retiree Group Trust

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

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

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

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

## Derivative Summary

As of June 30, 2017

Expressed in thousands

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

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

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the custodian bank and high quality money center banks or brokerage firms. The credit risk of foreign currency forward contracts is managed by limiting the term of the forward contracts and restricting the trading to high quality banks. The credit risk of futures contracts is managed by maintaining a daily variation margin.

**Alternative Investments:** The TRGT has investments in strategic lending, private equity funds and real estate with an estimated fair value of \$7,772,110,343 at June 30, 2017. Because these investments are not readily marketable, the estimated value is subject to uncertainty and, therefore, may differ from the value that would have been used had a ready market for the investments existed, and such differences could be material. Title to real property invested in by TRGT is held by real estate investment holding companies.

**Commitments:**

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

**Alternative Investments:** The TRGT had unfunded commitments of \$3,477,792,988 in private equity, strategic lending, and real estate commitments at year end.