



October 30, 2023

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

Re: 2023 Annual Comprehensive Financial Report Performance Letter

Dear Mr. Wayman:

TCRS generated a return of 6.66% for the fiscal year ended June 30, 2023, underperforming its policy index return of 8.57%. Risk assets delivered strong returns in the first half of 2023, building off the positive momentum seen towards the end of 2022. Fiscal year performance was positive across all public equity markets, while fixed income, real estate and private equity posted negative returns. Economic growth proved to be resilient, despite the discontinuation of the large amount of pandemic-related stimulus and a sharp rise in interest rates. Earlier in the year many economists had forecast a U.S. recession in mid-to-late summer (especially after a series of regional bank failures, notably Silicon Valley Bank and First Republic); however, sentiment eased considerably as the prospect of a “soft-landing” gained traction. Falling headline inflation, resilient labor market data, and the first rate pause from the Federal Reserve all contributed to a more positive macroeconomic outlook.

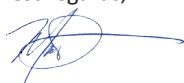
TCRS ranked in the 75th percentile of its peer group (Investment Metric’s Public DB >\$1 billion) for the fiscal year. The System’s higher allocation to illiquid asset classes such as Private Equity, Real Estate, and Strategic Lending versus traditional asset classes (Domestic Equity and International Equity) contributed to the third quartile peer group ranking. This was a reversal from the previous fiscal year, where illiquid asset classes contributed positively to relative performance.

As of June 30, 2023, the Plan’s asset allocation and one-year respective returns were:

Asset Class	% of Assets	One Year Returns
Domestic Equity	28.6%	18.79%
Canada	1.6%	6.63%
International Developed	11.6%	19.47%
International Emerging Markets	3.4%	11.52%
Domestic Fixed Income	17.8%	-2.75%
Real Estate	11.7%	-4.07%
Private Equity	13.4%	-3.42%
Strategic Lending	11.1%	8.14%
Cash and Cash Equivalents	0.8%	2.74%
Total	100%	6.66%

During this fiscal year, public equities contributed strongly to absolute performance with significant alpha contributions from International Equity managers.

Best regards,



Mark Brubaker, CFA
 Managing Director



DAVID H. LILLARD, JR.
STATE TREASURER

STATE OF TENNESSEE

MARY JO PRICE
CHIEF OPERATING OFFICER

MICHAEL BRAKEBILL
CHIEF INVESTMENT OFFICER



JAMIE WAYMAN
DIRECTOR OF TCRS

TREASURY DEPARTMENT
STATE CAPITOL
NASHVILLE, TENNESSEE 37243-0225

December 13, 2023

Dear Members,

I am pleased to present the Investment Section of the TCRS Comprehensive Annual Financial Report for the fiscal year ending June 30, 2023.

The Tennessee Retiree Group Trust (TRGT) contained \$65.1 billion in assets as of June 30, 2023. Assets for the TCRS are comingled in the TRGT for investment purposes and TCRS represents \$64.5 billion, or 99%, of the TRGT.

TRGT assets are invested to preserve principal value, to achieve a superior rate of return within acceptable risk levels and to provide the liquidity necessary to pay beneficiaries in a timely manner. The portfolio is diversified among domestic and international stocks and bonds, real estate, private equity and short-term securities. A diversified portfolio is used to manage risk and to minimize significant exposure to unpredictable events. Staff consults with the TRGT general investment consultant periodically to determine the optimal, long-term mix of assets to best meet the plan's investment objectives. The investment performance for TCRS was computed using a fair value based, time-weighted rate of return and is based on it being a sub-component of the TRGT.

The TRGT posted a return of 6.66% for the fiscal year with an annualized gain of 8.08% for the trailing ten-year period. Performance for the year was satisfying given the shock of rapid rises in short-term interest rates as the Federal Reserve maneuvered to dampen inflation. The ten-year return exceeded the actuarial required return and the portfolio was managed in a manner to protect capital in an adverse environment.

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

Sincerely,

Michael Brakebill
Chief Investment Officer



Statutory Investment Authority

The investment authority for the Board of Trustees of TCRS is set out in Tennessee Code Annotated, Section 8-37-104. Pursuant to this authority and the investment terms, conditions and limitations outlined therein, the Board of Trustees approves the TCRS’ investment policy. The Board approved TCRS’ revised and restated investment policy on March 26, 2021. The policy became effective July 1, 2021.

The Tennessee Retiree Group Trust (TRGT) was established in 2015 by a statutory enactment of the Tennessee General Assembly. The provisions of the TRGT are codified in *Tennessee Code Annotated* (TCA) Title 8, Chapters 34-37. Pursuant to this statute the Tennessee Consolidated Retirement System (TCRS) and its Board of Trustees with the State Treasurer (Treasurer) as custodian, authorized by TCA 8-37-104 adopted this group trust for the purpose of pooling funds of TCRS with other assets in the custody of the Treasurer, solely for investment purposes. The Custodian shall be responsible for the managing and directing the investment of the Group Trust Funds in accordance with the investment policies of the TCRS.

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

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

Funds in the retirement system are actively managed, primarily by the Treasury Investment Division, through a diversified portfolio of high-quality domestic and international bonds, domestic and international stocks, real estate, private equity, and short-term instruments. Pursuant to *Tennessee Code Annotated*, Section 8-37-114, the Treasury Investment Division engages outside investment managers. In those instances, the Investment Division endeavors to use emerging investment managers to the greatest extent feasible within the bounds of financial and

fiduciary prudence, as prescribed under *Tennessee Code Annotated*, Section 8-37-113. During fiscal year 2022-2023, no assets were under the control of emerging investment managers.

To assist in the fiduciary responsibility for managing the TRGT portfolio during fiscal year 2023, Verus served as the general investment consultant for TRGT. The Townsend Group served as the real estate investment consultant and Aksia served as the private equity consultant.

State Street Bank and Trust Company was the master bank custodian for TRGT, providing safekeeping and accounting services for the investment portfolio during fiscal year 2023.

Cost of Investment Operation

The cost to operate the investment program for TRGT is about thirteen basis points (0.13%). This cost includes the cost of personnel, operational cost, master bank custodian cost, record keeping, and external manager fees. Commission costs for publicly listed securities and management fees for private equity investments are capitalized, meaning commission costs and management fees are not included in the expenses, but are recorded in the value of the assets. Recent peer comparisons of investment management fees and expenses indicate the investment program is managed very cost effectively.

Performance Measurement

Verus provided performance measurement for the TRGT, which delivered a return of 6.66% during the fiscal year. Public equity markets rebounded strongly in the second half of the fiscal year, driven by a prevailing “soft-landing” narrative that bolstered the positive market sentiment. At the same time, valuations in private equity and real estate began to adjust to lingering concerns in the public markets. TRGT’s International Developed Markets Portfolio realized a 19.47% return, followed by Equity U.S. Equity portfolio delivering 18.79%, and Emerging Markets posting a positive 11.52%. Strategic Lending was a bright spot in the alternative asset space, gaining 8.14%. Real Estate and Private Equity posted returns of -4.07% and -3.42%, respectively. The Fixed Income portfolio also remained under pressure throughout the year, losing -2.75% in fair value.



TRGT INVESTMENT PERFORMANCE REVIEW

Updated from Verus Report for Period Ending June 30, 2023

	Annualized Returns		
	Current Year	3-Year	5-Year
Pension Plan Portfolio	6.66%	8.89%	7.82%
Policy Index (1)	8.57%	8.21%	7.53%
As-Allocated Index	7.79%	8.19%	7.42%
Domestic Equity	18.79%	14.07%	10.95%
S&P 1500 Index	19.24%	14.67%	11.83%
Canadian Equity	6.63%	13.78%	8.02%
S&P TSX 60 Index	6.91%	13.73%	8.00%
Domestic Fixed Income	-2.75%	-6.28%	0.60%
FTSE LPF Index	-2.46%	-6.77%	0.46%
International Developed Equity	19.47%	9.88%	5.32%
International Developed Equity Index	17.51%	8.44%	3.93%
International Emerging Mkts Equity	11.52%	10.59%	4.51%
International Emerging Mkts Custom Index	12.62%	10.71%	4.82%
Real Estate	-4.07%	12.56%	9.72%
NCREIF ODCE Index	-3.09%	8.40%	7.45%
Private Equity	-3.42%	26.01%	20.59%
Private Equity Custom Index	-3.97%	24.96%	14.41%
Strategic Lending Portfolio	8.14%	9.75%	7.01%
SL Benchmark	9.65%	4.65%	3.72%

Verus

Ranking of TCRS Portfolio	Percentile Rankings	Risk Adjusted Basis
Last three years	39	41
Last five years	11	19

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

(1) Effective 10/1/21, Policy Index is 31% S&P 1500/ 2% S&P TSX 60/ 12% MSCI EAFE IMI net/ 4% MSCI Emerging Markets net -0.50%/ 20% FTSE LPF/ 10% NCREIF 1Q Lag/ 10% Cambridge custom/ 10% Strategic Lending/ 1% FTSE T-Bill 1 Month.



TRGT ASSET ALLOCATION

As of June 30, 2023

Asset Class	Fair Value	Percentage
Domestic Equity	\$ 18,104,525,375	28%
Domestic Fixed Income	13,742,163,300	21%
International Equity	8,044,212,666	13%
International Private Equities & Strategic Lending	1,360,054,067	2%
International Fixed Income	34,383,286	0%
Short-Term Securities	2,693,443,730	4%
Real Estate	7,175,971,591	11%
Private Equities & Strategic Lending	13,783,376,380	21%
Totals	\$ 64,938,130,395	100%

This table describes the asset allocation of the entire TRGT investment portfolio. TCRS is commingled with the TRGT portfolio and owns 99% of the net asset value in TRGT.

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

**TRGT LARGEST STOCK HOLDINGS***As of June 30, 2023**by Fair Value*

Shares	Security Name	Fair Value
6,316,499	APPLE INC	\$ 1,225,211,311
3,117,329	MICROSOFT CORP	1,061,575,218
4,856,569	ALPHABET INC CL C	585,073,278
3,920,490	AMAZON.COM INC	511,075,076
982,528	NVIDIA CORP	415,628,995
1,120,008	TESLA INC	293,184,494
982,703	META PLATFORMS INC CLASS A	282,016,107
1,531,296	JPMORGAN CHASE + CO	222,711,690
606,742	BERKSHIRE HATHAWAY INC CL B	206,899,022
851,561	VISA INC CLASS A SHARES	202,228,706

TRGT LARGEST BOND HOLDINGS*As of June 30, 2023**by Fair Value*

Par Value	Security Name	Yield	Maturity	Moody's Rating	Fair Value
\$ 584,750,000	US TREASURY N/B	4.08%	2/15/2041	Aaa	\$ 424,674,688
317,650,000	FED HOME LN DISCOUNT NT	4.84%	7/3/2023	Aaa	317,606,800
291,500,000	US TREASURY N/B	3.90%	5/15/2050	Aaa	163,877,656
190,336,000	US TREASURY N/B	4.08%	2/15/2046	Aaa	146,439,760
222,500,000	US TREASURY N/B	3.90%	8/15/2050	Aaa	129,258,594
178,300,000	US TREASURY N/B	4.10%	8/15/2041	Aaa	125,255,750
188,194,000	US TREASURY N/B	4.04%	8/15/2040	Aaa	121,032,266
117,766,000	US TREASURY N/B	3.87%	2/15/2053	Aaa	113,036,959
170,500,000	US TREASURY N/B	3.90%	11/15/2050	Aaa	105,869,844
124,000,000	US TREASURY N/B	4.04%	8/15/2047	Aaa	99,703,750

A complete portfolio listing is available upon request.

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

Moody's rates securities as follows:

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



TRGT INVESTMENT SUMMARY

June 30, 2023

	Domestic		International		Total	
	Fair Value	%	Fair Value	%	Fair Value	%
Fixed Income						
Government Bonds	\$ 4,038,677,383	6.22%	\$	0.00%	\$ 4,038,677,383	6.22%
Corporate Bonds	4,206,685,471	6.48%		0.00%	4,206,685,471	6.48%
Municipal/Provincial Bonds	23,258,838	0.03%		0.00%	23,258,838	0.03%
Total Bonds	8,268,621,692	12.73%	0	0.00%	8,268,621,692	12.73%
Corporate Asset Backed	930,574,890	1.43%		0.00%	930,574,890	1.43%
Commercial Mortgage Backed	262,983,713	0.40%		0.00%	262,983,713	0.40%
Government Agencies	406,303,082	0.63%		0.00%	406,303,082	0.63%
Government Mortgage Backed Securites	3,714,522,238	5.72%		0.00%	3,714,522,238	5.72%
Government Asset Backed	71,085,720	0.11%		0.00%	71,085,720	0.11%
Preferred Stock	88,071,965	0.14%	34,383,286	0.05%	122,455,251	0.19%
Total Fixed Income	13,742,163,300	21.16%	34,383,286	0.05%	13,776,546,586	21.21%
Common Stock						
Consumer Discretionary	1,880,877,763	2.90%	989,642,780	1.52%	2,870,520,543	4.42%
Consumer Staples	1,102,056,035	1.70%	681,344,624	1.05%	1,783,400,659	2.75%
Energy	761,319,003	1.17%	395,751,573	0.61%	1,157,070,576	1.78%
Financials	2,231,954,532	3.44%	1,380,945,997	2.13%	3,612,900,529	5.56%
Healthcare	2,386,030,790	3.67%	1,050,906,512	1.62%	3,436,937,302	5.29%
Industrials	1,852,582,391	2.85%	1,596,875,455	2.46%	3,449,457,846	5.31%
Information Technology	4,588,524,245	7.07%	826,962,787	1.27%	5,415,487,032	8.34%
Materials	553,011,110	0.85%	587,058,300	0.91%	1,140,069,410	1.76%
Private Placements	62,336	0.00%	14,041,873	0.02%	14,104,209	0.02%
Real Estate	17,385,985	0.03%	38,889,498	0.06%	56,275,483	0.09%
Telecommunication Services	1,324,572,062	2.04%	243,795,967	0.38%	1,568,368,029	2.42%
Utilities	411,643,213	0.63%	189,489,025	0.29%	601,132,238	0.93%
Corporate Equities	951,679,566	1.47%	45,600,958	0.07%	997,280,524	1.54%
Depository Receipts	42,826,344	0.06%	2,852,651	0.00%	45,678,995	0.06%
Rights/Warrants	0	0.00%	54,666	0.00%	54,666	0.00%
Total Common Stock	18,104,525,375	27.88%	8,044,212,666	12.39%	26,148,738,041	40.27%

(continued)



TRGT INVESTMENT SUMMARY (CONTINUED)

June 30, 2023

	Domestic		International		Total	
	Fair Value	%	Fair Value	%	Fair Value	%
Short Term Investments						
Pooled Funds and Mutual Funds	2,693,443,730	4.15%		0.00%	2,693,443,730	4.15%
Total Short Term Investments	2,693,443,730	4.15%		0.00%	2,693,443,730	4.15%
Real Estate	7,175,971,591	11.05%		0.00%	7,175,971,591	11.05%
Private Equities & Strategic Lending	13,783,376,380	21.23%	1,360,054,067	2.09%	15,143,430,447	23.32%
Total Investments	55,499,480,376	85.47%	9,438,650,019	14.53%	64,938,130,395	100.00%
Derivatives & Options					777,392	
Short Term Investments Classified as Cash Equivalents	(725,692,637)				(725,692,637)	
Total Investments of the Tennessee Retiree Group Trust	<u>\$ 54,774,565,131</u>		<u>\$ 9,438,650,019</u>		<u>\$ 64,213,215,150</u>	

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



TRGT SCHEDULE OF FEES

	Average Assets Under Management	Fees
Asset Management		
External Investment Manager Fees	\$ 7.9 Billion	\$ 33,330,150
Real Estate Asset Management	7.2 Billion	10,773,845
Private Equities & Strategic Lending Asset Management	15.1 Billion	77,780
Total Asset Management		<u>\$ 44,181,775</u>
Other Investment Services Fees		
Custodian Bank	\$ 64.2 Billion	\$ 1,886,167
General Investment Consultant	64.2 Billion	431,064
Real Estate Investment Consultant	7.2 Billion	343,750
Private Equities & Strategic Lending Investment Consultant	15.1 Billion	914,580
Total Investment Services Fees		<u>\$ 3,575,561</u>

(continued)



SCHEDULES OF INVESTMENT FEES AND COMMISSIONS
FOR THE YEAR ENDED JUNE 30, 2023 (CONTINUED)



TRGT SCHEDULES OF COMMISSIONS

Domestic Exchange Traded Shares

Broker Name	DOMESTIC		
	Number of Shares Traded	Total Commissions	Commission per Share
Instinet	38,215,236	\$ 764,294	0.0200
Jane Street Equities	40,921,044	306,908	0.0075
JP Morgan Chase & Company	3,129,946	62,599	0.0200
OTHER BROKERS*	57,316,765	970,729	0.0169
TOTALS	139,582,991	\$ 2,104,530	

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

Broker Name	DOMESTIC		
	Number of Shares Traded	Total Commissions	Commission per Share
Merrill Lynch/Bank of America	17,171,763	\$ 368,083	0.0214
Goldman Sachs Group	19,642,010	147,316	0.0075
UBS Securities, LLC	17,807,487	133,559	0.0075
Credit Suisse	5,135,892	102,718	0.0200
Morgan Stanley & Company	6,735,479	50,517	0.0075
OTHER BROKERS*	67,364,039	644,269	0.0089
TOTALS	133,856,670	\$ 1,446,462	

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

(continued)



SCHEDULES OF INVESTMENT FEES AND COMMISSIONS
FOR THE YEAR ENDED JUNE 30, 2023 (CONTINUED)



International Exchange Traded Shares

Broker Name	INTERNATIONAL		
	Number of Shares Traded	Total Commissions	Commission per Share
Instinet	60,694,621	\$ 823,531	0.0136
Goldman Sachs Group	127,821,762	813,695	0.0064
Morgan Stanley & Company, Inc	79,155,237	318,226	0.0040
JP Morgan Chase & Company	49,377,030	296,619	0.0060
UBS Securities, LLC	54,674,347	282,460	0.0052
Barclays Capital	14,803,346	246,013	0.0166
Merrill Lynch	38,333,210	229,098	0.0060
Credit Suisse	6,338,207	114,307	0.0180
Sanford C Bernstein, LLC	7,062,058	101,063	0.0143
Citigroup Global	11,846,664	35,085	0.0030
HSBC Bank	10,536,018	7,810	0.0007
OTHER BROKERS*	366,447,403	2,696,233	0.0074
TOTALS	827,089,903	\$ 5,964,140	

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

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