

THE TENNESSEE CONSOLIDATED RETIREMENT SYSTEM

INVESTMENT POLICY

REVISED AND RESTATED

Table of Contents

I. Definitions	4
II. Overview and Authority	9
A. Introduction.....	9
B. Investment Authority.....	9
C. Fiduciary Standard	9
D. Scope.....	9
III. Objective	10
IV. Roles and Responsibilities	10
A. Board of Trustees	10
B. Investment Committee	11
C. State Treasurer	11
D. Chief Investment Officer	12
E. Investment Staff	12
F. General Consultant	13
V. Governing Principles	13
A. Primary Investment Objective	13
B. Authorized Asset Classes and Investment Activities	13
C. Asset Allocation Ranges	14
D. Asset Allocation Targets.....	14
E. Benchmarks	15
VI. Additional Investment Criteria	15
A. Equity	15
B. Fixed Income Securities and Cash Equivalents.....	16
C. Private Equity	16
D. Real Estate	17
E. Secondary Market and Co-Investments	18
F. Private Equity and Real Estate Approval Limits	18
G. Canadian Securities	19
H. International Securities.....	19
I. Currency.....	19
J. Derivative Instruments	20
K. Securities Lending	20
L. Standby Note Purchaser	21
M. Investment Companies	21
N. Margin and Collateral.....	21

VII. Risk Management	21
A. Rebalancing and Transitioning	21
B. Liquidity Management	22
C. Percentage Limitations	22
D. Designated Nationally Recognized Statistical Rating Organizations (“NRSROs”)	22
E. Trading, Brokerage and Research	22
F. Service Providers	23
G. Legal, Compliance and Audit	23
H. Investment Procedures	23
I. Conflicts of Interest	24
VIII. Monitoring and Reporting	24
A. Quarterly	24
B. Periodically	24
C. Annually	24
IX. Non-comporting Assets of a Participating Political Subdivision	25
X. Policy Interpretation	25
XI. Approval and Adoption	26

I. Definitions

The following definitions are used hereafter with respect to this Investment Policy:

Board – The Board of Trustees of the TCRS.

Buyout – Generally a type of traditional private equity investment that invests in the purchase of all or part of the stock or assets of a privately or publicly owned company through the use of debt and equity.

Cash Equivalents – Investment Grade debt investments representing liquid, marketable securities with a remaining term to maturity (at the time of purchase) of ninety days or less (≤ 90 days), including, but not limited to, commercial paper and discount notes. Debt securities issued by the United States, any agency of the United States federal government or any entity with the express or implied backing of the United States with a remaining term to maturity of three hundred ninety-seven days or less (≤ 397 days) may also be considered Cash Equivalents for purposes of this Investment Policy.

Chief Investment Officer (“CIO”) – The Department of Treasury employee responsible for the investment and oversight of the TCRS assets in accordance with statutory guidelines and the investment policies and strategies established by the Board.

Co-Investment – An indirect investment whereby limited partners or participants of a private equity or Commingled Real Estate Investment (and other parties) make a minority investment in a portfolio company or other underlying asset alongside the associated External Investment Manager.

Co-Investment Strategy – A categorical set of Co-Investments linked by a specified common factor, including, but not limited to, all Co-investments originating from a given underlying private equity or Commingled Real Estate Investment that is proposed for approval, managed, and reported as a single investment.

Commingled Real Estate Investment – A pooled investment vehicle that invests primarily in real estate assets and real estate related assets and is overseen by an External Investment Manager. Commingled Real Estate Investments may include, but are not limited to: open and closed end funds; private limited partnerships; private limited liability companies; private and public Real Estate Investment Trusts (“REITs”); and group trusts.

Core Investments – An industry term that generally means a Traditional Property Type that is well-located, of institutional quality and leased, at the time of acquisition, at a rate of eighty percent or greater ($\geq 80\%$). “Core plus,” as defined by the general real estate industry, may also be considered a Core Investment for purposes of this Investment Policy.

Derivative Instruments – Any agreement, option or instrument, or any series or combinations of an agreement, option or instrument: (i) to make or take delivery of, or assume or relinquish,

a specified amount of one (1) or more underlying interests, or to make a cash settlement in lieu thereof; or (ii) that has a price, performance, value or cash flow based primarily upon the actual or expected price, yield, level, performance, value or cash flow of one (1) or more underlying interests. Derivative Instruments include, but are not limited to, options, warrants (not attached to another investment), caps, floors, collars, swaps, security-based swaps, security-based swap agreements, mixed swaps, swaptions, forwards, futures and any other agreements, options or instruments substantially similar thereto, or any series or combinations thereof. Derivative Instruments do not include Collateralized Mortgage Obligations (“CMOs”), Treasury Inflation-Protected Securities (“TIPS”), other asset-backed securities, principal-protected structured securities or floating rate securities.

Direct Lending – The transfer of funds from the ultimate lender to the ultimate borrower, most often through a third (administrative) party.

Direct Real Estate Investment – A direct ownership or co-ownership in Core Investments or Non-Core Investments.

Distressed – Generally a type of traditional private equity investment that invests in the debt obligations of under-performing companies in need of operating or financial restructuring and that are typically involved in a turnaround, restructuring, deleveraging or bankruptcy situation.

Distressed Debt – A debt instrument issued by a company that is typically involved in a turnaround, restructuring, deleveraging or bankruptcy situation.

Emerging Market Debt – A debt instrument issued by nations or companies that are in the process of rapid growth and industrialization. Emerging Market Debt is subject to the same screening methodology discussed within this Investment Policy (Section VI.H).

Equity(ies) – Investments representing an equity, ownership interest to include, but not limited to, publicly traded common and preferred stock, Initial Public Offerings (“IPOs”), bonds or any security convertible to stock, equity-focused Investment Companies, publicly traded Real Estate Investment Trusts (“REITs”) and equity Restricted Securities.

External Investment Adviser – An individual or entity duly selected and contractually bound, who/that typically provides asset management services on a non-discretionary basis to the TCRS. Such External Investment Adviser will be appropriately registered, or exempt from registration, under the applicable state and federal securities laws, rules and regulations.

External Investment Manager – An individual or entity, duly selected and contractually bound, who/that typically assumes discretion over a specified portion of the TCRS’s assets. Such External Investment Manager will be appropriately registered, or exempt from registration, under the applicable state and federal securities laws, rules and regulations.

Fixed Income Security(ies) – Investments representing an instrument under which the issuer owes the holder (debt) to include, but not limited to, notes, bonds or other fixed income securities.

General Consultant – An entity or individual, duly selected and contractually bound, with substantial experience in providing advice on and/or consulting services related to the Total Assets based upon its/his/her expertise and analysis of the issues and/or assets under consideration.

Growth Equity – Generally a type of traditional private equity investment that invests in an established company for the purpose of growing its business.

Hedging Transaction – A derivative transaction that is entered into and maintained to manage: (i) the risk of a change in the value, yield, price, cash flow or quantity of assets or liabilities, or a portfolio of assets and/or liabilities; or (ii) the currency exchange rate risk related to assets or liabilities, or a portfolio of assets and/or liabilities.

High Yield Bonds – A debt instrument with a credit rating below Investment Grade.

Income Generation Transaction – A derivative transaction, excluding Hedging Transactions and Replication Transactions, which is entered into to generate income.

Internal Legal Counsel – The Assistant Treasurer for Legal, Compliance and Audit or his/her authorized designee(s) who represent the Department of Treasury.

Investment Committee – A committee of the Board comprised of Board members that will assist the Board in fulfilling its responsibilities with respect to the investments of the TCRS.

Investment Companies – An entity, primarily engaged in the business of investing, that issues publicly listed securities. Investment Companies include, but are not limited to publicly listed unit investment trusts (“UITs”), exchange-traded funds (“ETFs”), open-ended mutual funds and close-ended mutual funds.

Investment Grade – Rating description given to debt securities. For purposes of this Investment Policy, Investment Grade for long-term debt securities must be within the four (4) highest tiers (e.g., AAA, AA, A, or BBB) and short-term debt securities must be within the three (3) highest tiers (e.g., A-1, A-2 or A-3); rating modifiers (+, -) should not be considered when determining the tiers. Debt securities issued by the United States, any agency of the United States federal government or any entity with the express or implied backing of the United States shall be considered as holding the highest possible rating.

Investment Staff – Each Department of Treasury, Investment Division employee involved in the investment management of the Total Assets.

Legal Advisor – The Attorney General and Reporter or his/her authorized designee(s) who represent the Board in all matters.

Levered Loans – A debt instrument from companies with below Investment Grade credit ratings. Leveraged loans are typically secured with a lien on the company's assets and are generally senior to the company's other debt.

Market Value – Sometimes referred to as aggregate book value or book value, Market Value are determined in accordance with applicable financial reporting requirements. For additional guidance, refer to the TCRS's Comprehensive Annual Financial Report.

Master Custodian – A bank, savings and loan association or trust company, duly selected and contractually bound, that, at a minimum, holds the assets of and processes securities transactions for the State of Tennessee, Department of Treasury on behalf of the TCRS.

Mezzanine Debt – Placed between debt and equity in a company's capital structure, mezzanine debt is typically a subordinated debt instrument for late-stage venture and mature companies and offers income through a current coupon and equity participation through a warrant.

Non-Core Investments – Broadly defined as all other real estate assets that are not Core Investments. Non-Core Investments include “value-added,” “opportunistic,” “build to core” or “lease to core” investments, as defined by the general real estate industry.

Outside Legal Counsel – Attorney(s) or law firm(s), duly selected and contractually bound, who/that provide legal advice to the TCRS or the Department of Treasury for or on behalf of the TCRS.

Other Opportunities – Generally a type of private equity investment that is designed to capture innovative investment opportunities created by the marketplace that do not fit an existing category.

Real Estate Debt – A debt instrument that is secured by the collateral of specified real estate property.

Replication Transaction – A derivative transaction or combination of derivative transactions, excluding Hedging Transactions, affected either separately or in conjunction with cash market investments included in a portfolio in order to replicate the risks and returns of another authorized transaction, investment or instrument and/or operate as a substitute for cash market transactions.

Resource – Generally a type of traditional private equity investment that invests in commodities or natural resources.

Restricted Securities – Has the same meaning as set forth in Rule 144(a)(3) promulgated under the Securities Act of 1933.

Service Providers – Any external party who/that performs investment-related services for or on behalf of the TCRS, including, but not limited to, the General Consultant, External Investment

Advisers, External Investment Managers, Outside Legal Counsel, investment consultants, data providers, data aggregators, securities litigation monitors, etc.

Structured Credit – Products comprised of tranches of portfolios of credit instruments or exposures, including credit derivatives, usually securitized by various financial assets.

T.C.A. – Tennessee Code Annotated.

TCRS – Tennessee Consolidated Retirement System, which may also be referred to under state law as “retirement system.”

Total Assets – The total plan assets or overall investment portfolio of the TCRS.

Traditional Property Type – Real estate assets that consists of only office, multifamily (apartment), retail and/or industrial assets.

Venture Capital – Generally a type of traditional private equity investment that invests in the financing of rapidly-growing companies that do not have access to public equity or debt financing.

II. Overview and Authority

A. Introduction

The Tennessee Consolidated Retirement System was established by the General Assembly as of July 1, 1972 for the purpose of providing retirement and other benefits for state employees, teachers, higher education employees, local government employees and employees of other entities authorized to participate.

B. Investment Authority

General administration and responsibility for the proper operation of the TCRS are vested with the TCRS Board of Trustees (“Board”), including the authority for investing and reinvesting the assets of the TCRS. The State Treasurer, a constitutional officer, is the custodian of the funds of the TCRS. The day-to-day administration and operation of the TCRS are primarily delegated to the State Treasurer.

Implementation of the TCRS Investment Policy established by the Board is hereby delegated to the State Treasurer, who shall put such policy into effect. In implementing this Investment Policy, the State Treasurer hereby delegates certain responsibilities to the Chief Investment Officer and Investment Staff, including the power to invest and reinvest the TCRS’s assets in accordance with the criteria established by this Investment Policy.

The Chief Investment Officer with the approval of the State Treasurer may, through written procedures, provide additional investment criteria or guidance.

C. Fiduciary Standard

All assets of the TCRS shall be invested and managed solely in the interest of the TCRS’s beneficiaries and in a manner consistent with T.C.A. §35-14-107, the prudent investor rule pursuant to T.C.A. §35-14-103 and the standard of care pursuant to T.C.A. §35-14-104. Furthermore, the delegation of investment and management functions shall be carried out in accordance with T.C.A. §35-14-111. Notwithstanding the foregoing, and in accordance with T.C.A. §8-37-104, the assets of the TCRS shall be invested subject to the criteria further established by the Board through this Investment Policy, as may be amended from time to time.

D. Scope

The Investment Policy is binding on all persons and entities with authority over the TCRS’s assets, including, but not limited to, the Board, Investment Staff, External Investment Managers, External Investment Advisers, General Consultant, Service Providers, Master Custodian and any other person who or entity that may have a fiduciary relationship with the TCRS.

III. Objective

The purpose of this Investment Policy is to support the TCRS's primary investment objective by:

- Outlining the distinct roles and responsibilities of the Board, Investment Staff and Service Providers;
- Establishing formalized benchmarks to measure and evaluate the performance results of the Total Assets;
- Setting forth the additional investment criteria, which the Board determines to be prudent in consideration of the purposes, terms, distribution requirements and other circumstances of the TCRS and in the best interest of the beneficiaries;
- Communicating the Investment Policy, as approved by the Board, to the Investment Staff, External Investment Managers, External Investment Advisers, General Consultant, Service Providers, Master Custodian and any other person who or entity that may have a fiduciary relationship with the TCRS; and
- Functioning as a supervisory tool, guiding the ongoing oversight of the Total Assets.

IV. Roles and Responsibilities

In addition to the responsibilities described below and throughout this Investment Policy, Service Providers, as well as any other person who or entity that may have a fiduciary relationship with the TCRS, may have additional duties and responsibilities outlined within federal and state laws, rules and regulations; executed contracts or agreements; or as dictated by standard business or industry practices.

A. Board of Trustees

- 1) Adopt an Investment Policy that establishes the additional investment criteria, which the Board determines to be prudent in consideration of the purposes, terms, distribution requirements and other circumstances of the TCRS;
- 2) Delegate investment and management functions that a prudent trustee of comparable skills would properly delegate under the circumstances;
- 3) Review and, if applicable, authorize the use of Service Providers or the processes employed by Investment Staff;
- 4) Evaluate the investment performance of the Total Assets through reports supplied by the State Treasurer, Chief Investment Officer, Investment Staff and Service Providers; and
- 5) Periodically review the actions taken by delegates in order to monitor performance and compliance with the terms of the delegation.

B. Investment Committee

- 1) Evaluate the investment performance of the private equity and real estate investment portfolios, through reports supplied by the State Treasurer, Chief Investment Officer, Investment Staff and Service Providers;
- 2) Approve private equity and real estate commitments or transactions as described in Section VI.F. of this Investment Policy;
- 3) Approve a political subdivision's coinvestment plan as described in Section IX of this Investment Policy and
- 4) Review other information that may be furnished to the Investment Committee and, as applicable, provide assistance to the Board, State Treasurer and Chief Investment Officer.

C. State Treasurer

- 1) Implement the Investment Policy, as approved by the Board;
- 2) Operate with a duty of undivided loyalty, investing and managing the TCRS's assets solely in the interest of the beneficiaries;
- 3) Delegate investment and management functions that a prudent trustee of comparable skills would properly delegate under the circumstances;
- 4) Review and, as applicable, authorize the use of Service Providers and the employment of Investment Staff;
- 5) Evaluate and, as applicable, approve the processes employed and procedures established by Investment Staff;
- 6) Evaluate the investment performance of the Total Assets through reports supplied by the Chief Investment Officer, Investment Staff and Service Providers;
- 7) Negotiate and execute, with the advice and counsel of the Legal Advisor, Internal Legal Counsel and/or Outside Legal Counsel, as applicable, all contracts, agreements, forms and memoranda of understanding deemed necessary or desirable for the efficient administration of the TCRS's assets;
- 8) Monitor the Total Assets' compliance with this Investment Policy and applicable federal and state laws, rules and regulations; and
- 9) Take actions that are deemed essential to protect the assets of the TCRS with any emergency actions being promptly reported to the Board.

D. Chief Investment Officer

- 1) Assume executive responsibility and authority, as delegated by the State Treasurer, for the ongoing evaluation and management of the Total Assets, ensuring compliance with the Investment Policy and such policies, procedures, laws, rules and regulations that may apply;
- 2) Operate with a duty of undivided loyalty, investing and managing the TCRS's assets solely in the interest of the beneficiaries;
- 3) Undertake the necessary authority to effectively manage and supervise the Investment Staff;
- 4) Delegate investment and management functions to Investment Staff that a prudent trustee of comparable skills would properly delegate under the circumstances;
- 5) Review and, as applicable, recommend the use of Service Providers, General Consultant, External Investment Managers and External Investment Advisers and the employment of Investment Staff;
- 6) Report to and consult with the State Treasurer and/or his designee on administrative, organizational and investment activities;
- 7) Collaborate, as applicable, with the Investment Committee Investment Staff and Service Providers on development and implementation of appropriate investment strategies, policies, and procedures;
- 8) Prepare and submit reports, as required, to document investment activities; and
- 9) Notify the State Treasurer of situations that merit the Board's attention.

E. Investment Staff

- 1) Assume fiduciary responsibility and authority, as delegated by the State Treasurer and Chief Investment Officer, for the Investment Staff member's role in the ongoing evaluation and management of the Total Assets;
- 2) Utilize special skills and expertise in an effort to accomplish the primary objective of the Total Assets, as stated in the Investment Policy;
- 3) Operate with a duty of undivided loyalty, investing and managing the TCRS's assets solely in the interest of the beneficiaries;
- 4) Source and evaluate prospective investments on an as-needed basis;
- 5) Ensure compliance with the Investment Policy and such other policies, procedures, laws, rules and regulations that may apply;
- 6) Assist the State Treasurer, or his designee, and Chief Investment Officer with respect to any matters related to the TCRS's assets;
- 7) Prepare and submit reports, as required, to document investment activities; and
- 8) Notify the State Treasurer of situations that merit his attention.

F. General Consultant

- 1) Provide a third-party perspective and oversight to applicable portfolios;
- 2) Assess the TCRS's Investment Policy and applicable procedures;
- 3) Assist with developing and implementing policies, procedures and strategies;
- 4) Prepare and submit relevant, reliable and timely research, performance reports and objective advice as required or as needed by the Board, State Treasurer, Chief Investment Officer or Investment Staff;
- 5) Source and evaluate prospective investments on an as-needed basis; and
- 6) Support the Investment Staff with respect to any matters related to applicable portfolios.

V. Governing Principles

The Board has adopted a set of governing principles for the oversight of the Total Assets. Those principles are as follows:

A. Primary Investment Objective

The primary investment objective of the Total Assets 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.

B. Authorized Asset Classes and Investment Activities

The Board, in accordance with T.C.A. §8-37-101 et. seq., hereby empowers the State Treasurer and Investment Staff to invest and reinvest the TCRS's assets in the following asset-classes and investment activities, subject to all the terms, conditions, limitations and restrictions imposed, as applicable, by this Investment Policy and other policies, procedures, laws, rules and regulations that may apply:

- Equities;
- Fixed Income Securities
- Private equity;
- Real estate;
- Cash and Cash Equivalents;
- Canadian securities;
- International securities;
- Canadian and international currency;
- Derivative Instruments;
- Securities lending;
- Investment Companies; and
- Standby note purchaser.

C. Asset Allocation Ranges

Based on input from the Chief Investment Officer, Investment Staff and General Consultant, the Board hereby establishes the following strategic asset allocation ranges:

<u>Asset Classes</u>	<u>Minimum</u>	<u>Maximum</u>	<u>Statutory Limit</u>
Domestic Equity	25%	50%	75%
International Equity	5%	25%	
Emerging Markets Equity	0%	10%	
Domestic Fixed Income Securities	20%	60%	75%
Inflation Indexed Bonds	0%	15%	
International Fixed Income Securities	0%	10%	
Private Equity	0%	25%	40%
Real Estate	0%	20%	
Cash and Cash Equivalents	0%	10%	

For purposes of the above table: domestic includes United States and Canada; emerging market is a subset of international; and private equity includes traditional private equity and strategic lending. Additional statutory and Investment Policy limitations may apply.

D. Asset Allocation Targets

Based on input from the Chief Investment Officer, Investment Staff and General Consultant, the Board hereby establishes the following interim and strategic asset allocation targets:

<u>Portfolio</u>	<u>Interim Target</u> <i>Effective January 1, 2017</i>	<u>Strategic Target</u>
Equity – United States	31%	31%
Equity – Canadian	2%	2%
Equity – International Developed Markets	13%	12%
Equity – Emerging Markets	4%	4%
Domestic Fixed Income Securities	25%	20%
Inflation Indexed Bonds	0%	0%
Private Equity – Traditional	7%	10%
Private Equity – Strategic Lending	7%	10%
Real Estate	10%	10%
Cash and Cash Equivalents	1%	1%

E. Benchmarks

Based on input from the Chief Investment Officer, Investment Staff and General Consultant, the Board has determined that the investment performance for the Total Assets and each component portfolio will be compared with the following respective benchmark indices:

<u>Portfolio</u>	<u>Benchmark Index</u>
Equity – United States	S&P 1500
Equity – Canadian	S&P / TSX 60 Index
Equity – International Developed Markets	MSCI EAFE Investable Market Index (IMI)
Equity – Emerging Markets	MSCI Emerging Markets Index*
Domestic Fixed Income Securities	FTSE US Large Pension Fund Baseline Bond Index
Inflation Indexed Bonds	Citigroup TIPS Index
Private Equity – Traditional	Cambridge Associates Custom Private Equity Benchmark
Private Equity – Strategic Lending	Custom Index: 50% Barclay’s High Yield 2% Issuer Capped Index + 50% Credit Suisse Leveraged Loan Index
Real Estate	NCREIF Property Index
Cash and Cash Equivalents	91-Day United States Treasury Bills

*The equity emerging markets benchmark index will be adjusted to exclude countries based on the screening methodology, as further discussed below in Section VI.G.

The Total Assets’ and each component portfolio’s (investment) performance will be calculated in accordance with the performance reporting procedures established by the Investment Staff and approved by the State Treasurer.

VI. Additional Investment Criteria

The Board, in accordance with T.C.A. §8-37-104, hereby imposes the following investment terms, conditions, limitations and restrictions. The disqualification of an investment under one (1) section of this Investment Policy does not prevent its qualification in whole or in part under another section.

A. Equity

No Equity will be purchased with the purpose or with the effect of changing or influencing the control of the issuer. Additionally, no more than four and ninety-nine one hundredths percent ($\leq 4.99\%$) of a voting class of a company’s equity securities registered under Section 12 of the Securities Exchange Act of 1934 (i.e., outstanding shares) shall be, directly or indirectly, acquired.

B. Fixed Income Securities and Cash Equivalents

Only Fixed Income Securities rated Investment Grade by one of the designated Nationally Recognized Statistical Rating Organizations (“NRSROs”) shall be purchased. This rating restriction does not apply to bond-focused Investment Companies or debt Restricted Securities. Additionally, there is no requirement to divest of an asset if it is downgraded below Investment Grade.

Only Cash Equivalents rated Investment Grade by one of the designated Nationally Recognized Statistical Rating Organizations (“NRSROs”) shall be purchased. The TCRS shall invest no more than two hundred million dollars ($\leq \$200,000,000$) in Cash Equivalents issued by any one issuer, excluding Cash Equivalents

- Issued by the United States, any agency of the United States federal government or any entity with the express or implied backing of the United States; or
- That matures on the next business day.

For purposes of this section, “business day” shall mean any day on which (i) the United States securities exchanges, (ii) the Master Custodian and (iii) the State of Tennessee, Department of Treasury are open for regular business activity.

C. Private Equity

Unless specifically stated otherwise within this Investment Policy, reference to private equity transactions, commitments or investments shall include all traditional private equity and strategic lending investment types.

1. Component Portfolios

Private equity is comprised of two component portfolios: traditional private equity and strategic lending. Traditional private equity investments may include, but shall not be limited to, the following types of investments: Venture Capital; Buyout; Distressed; Growth Equity; Resource; and Other Opportunities. Strategic lending investments may include, but shall not be limited to, the following types of investments: High Yield Bonds; Levered Loans; Emerging Market Debt; Distressed Debt; Mezzanine Debt; Direct Lending; Structured Credit; Real Estate Debt; and Other Opportunities.

2. Legal Structures and Holding Entities

The Board authorizes the State Treasurer and Investment Staff to create holding entities, to the extent permitted by law, on behalf of the TCRS for the purpose of acquiring, holding title to and collecting income from private equity investments. The Board also authorizes the transfer of a private equity investment from direct ownership to a title holding entity on behalf of the TCRS (or the converse) during the course of a holding period of the private equity investment, if deemed prudent.

Private equity investments may be held in various investment structures or holding entities, including, but not limited to: limited partnerships, limited liability corporations, private fund trusts or corporations, and special purpose vehicles or entities. Additionally, the investment structure or holding entity into which the TCRS would invest shall be established in a commonly accepted jurisdiction, which includes, but is not limited to Delaware, the Cayman Islands, Guernsey, Jersey, Luxembourg, or Bermuda. The structure of each holding entity shall be reviewed by Outside Legal Counsel.

3. Geographical Diversification

Investment Staff will seek appropriate geographical diversification for private equity investments and focus primarily on investments in the United States and other developed countries.

Prior to a recommendation, Investment Staff shall assess a proposed private equity investment's geographic classification. A private equity investment's geographic classification shall be determined, at the time of recommendation, according to the TCRS Investment Policy criteria related to international securities' country classification, using the following elements that are specific to private equity and strategic lending investments:

- The security "issuer" will be defined as the associated External Investment Manager; and
- The investment's expected geographical focus shall be majority comprised, greater than fifty percent ($\geq 50\%$), of United States, Canada or permissible international countries as further described in Section VI, H. of this Investment Policy.

D. Real Estate

Unless specifically stated otherwise within this Investment Policy, reference to real estate transactions, commitments or investments shall include all Direct Real Estate Investments and Commingled Real Estate Investments.

No Direct Real Estate Investment may be located in the State of Tennessee and no Direct Real Estate Investment shall exceed one percent ($\leq 1\%$) of the Market Value of the Total Assets.

The same geographical diversification policy requirements that apply to private equity shall also apply to Commingled Real Estate Investments.

In addition, no real estate investment shall be made which would cause, at the time of acquisition or commitment to a Commingled Real Estate Investment, the total Market Value of the TCRS holdings in any single Traditional Property Type to exceed forty-five percent ($\leq 45\%$) of the real estate portfolio target allocation or Market Value, whichever is greater.

The Board authorizes the State Treasurer and Investment Staff to use leverage within the real estate investment portfolio where prudent. Target leverage on a new or existing Direct Real Estate Investments is limited to no more than seventy-five percent ($\leq 75\%$) Loan to Value ("LTV") (at the time of acquisition or refinancing). The LTV ratio within the Direct Real Estate Investment portfolio shall not exceed fifty percent ($\leq 50\%$) at the time of acquisition or refinancing.

The Board authorizes the State Treasurer and Investment Staff to create entities, to the extent permitted by law, on behalf of the TCRS for the purpose of acquiring, holding title to, and collecting income from real property. The Board also authorizes the transfer of real estate property from direct ownership to a title holding entity on behalf of the TCRS (or the converse) during the course of a holding period of the real estate investment.

E. Secondary Market and Co-Investments

The Board authorizes the State Treasurer and Investment Staff to participate in secondary offerings, purchase and sell interests from other investors in the secondary market, and Co-Investments or Co-Investment Strategies related to private equity and real estate investments.

No Co-Investment can exceed the External Investment Manager's own investment in the underlying asset (commonly referred to as a portfolio company or other co-investment opportunity), and at no time can a Co-Investment result in the TCRS owning more than fifty percent ($\leq 50\%$) of the underlying asset.

In the event a Co-Investment structure includes the right to opt into or out of discrete proposed underlying assets the State Treasurer may delegate the authority to accept or decline such a proposed underlying asset to the Chief Investment Officer or member(s) of the Investment Staff.

F. Private Equity and Real Estate Approval Limits

Recommendations for the acquisition or disposition of any private equity and real estate commitments, transactions or investments, including Co-Investments or Co-Investment Strategies, exceeding seventy-five million dollars ($> \$75,000,000$) shall be presented by the Investment Staff to the Investment Committee for consideration. Recommendations for the acquisition and disposition of any private equity and real estate commitments, transactions or investments less than or equal to seventy-five million dollars ($\leq \$75,000,000$) shall be presented by the Investment Staff to the State Treasurer for consideration and, if approved, reported to the Investment Committee at its next meeting. For acquisitions of private equity investments and Commingled Real Estate Investments the dollar threshold is based upon the commitment amount. For dispositions and acquisitions of private equity investments and Commingled Real Estate Investments the dollar threshold is based upon the fair market value, as last reported by the External Investment Manager, plus any unfunded commitment. For acquisitions or dispositions of Direct Real Estate Investments the dollar threshold is based upon the equity investment net of any leverage (debt) used or acquired by the TCRS.

A private equity and real estate commitment, transaction or investment will be deemed approved upon written recommendation by the Investment Staff, written approval by the CIO, written approval by the State Treasurer and, if applicable as outlined above, an approval vote from the Investment Committee. The Investment Committee's approval shall include a maximum commitment, transaction or investment amount for each recommendation. Subject to terms of governing contracts, if any, and the prior written approval of the State Treasurer in each instance, Investment Staff has the discretion within that approved maximum amount to raise, lower or terminate commitments or transactions with an External Investment Manager. Such increase, decreases or terminations will be reported to the Investment Committee at its next scheduled meeting.

G. Canadian Securities

The TCRS may invest in publicly traded, Canadian securities that are otherwise of the same kinds, classes and investment grades otherwise eligible for investment.

H. International Securities

The Board hereby determines that the following international countries are permissible for all otherwise eligible investments by the TCRS:

- International countries included in the Morgan Stanley Capital International ("MSCI") EAFE Investable Market Index ("IMI"), as amended from time to time (i.e., international developed markets); and
- International countries included in the MSCI Emerging Markets ("EM") Index, as amended from time to time (i.e., emerging markets).

Suitability of investing in such emerging markets countries shall be further subject to a screening methodology reviewed by the TCRS's General Consultant, recommended by the Chief Investment Officer and approved by the State Treasurer.

For purposes of the TCRS's international securities investments, a publicly traded, international security's country classification will be determined, at the time of acquisition, using a combination of the following criteria:

- Market in which the issuer conducts its primary business ("Country Classification");
- Issuer's management location, country of primary listing, country of revenue and reporting currency ("Country of Risk");
- Country in which the issuer is legally established ("Country of Incorporation"); and
- Investment's geographical focus ("Geo Focus").

The issuer's parent and ultimate parent entity(ies) may also be evaluated in order to determine a security's country classification.

I. Currency

Currency transactions are permitted as necessary to facilitate the settlement of Canadian and international securities transactions and to mitigate currency risk. The TCRS may engage in

“bona fide spot foreign exchange transactions,” as defined by the United States Commodities Futures Trading Commission (“CFTC”), Hedging Transactions, Income Generation Transactions or Replication Transactions involving currencies of Canada and those international countries authorized pursuant to this Investment Policy.

J. Derivative Instruments

The TCRS may purchase or sell stock index futures. Stock index futures contracts shall

- Not be utilized for purposes of “speculative leveraging” as defined in T.C.A. §8-37-104(a)(7);
- Be classified by and included in the asset allocation ranges of the domestic and international equity portfolios;
- Be measured in their notional principal or notional equivalent amount; and
- Not exceed ten percent ($\leq 10\%$) of the Market Value of the Total Assets.

Additionally, the TCRS may engage in Hedging Transactions, Income Generation Transactions or Replication Transactions involving Derivative Instruments under the following conditions:

- Derivative Instruments will be measured in their notional principal or notional equivalent amount; and
- Derivative Instruments, excluding currency Derivative Instruments, shall not exceed twenty percent ($\leq 20\%$) of the Market Value of the Total Assets.

Hedging Transactions, Income Generation Transactions and Replication Transactions shall be executed only with registered swap dealers.

K. Securities Lending

The TCRS may loan its securities for a fee, provided that:

- The total market value of securities on loan does not exceed thirty percent ($\leq 30\%$) of the Market Value of the Total Assets; and
- Each loan is collateralized in accordance with this Investment Policy.

Only the following types of financial instruments will be acceptable collateral for purposes of securities lending:

- Bonds, notes and treasury bills of the United States or other obligations guaranteed as to principal and interest by the United States government or any of its agencies;
- Obligations guaranteed as to principal and interest by the United States government or United States sponsored corporations or enterprises; and
- Cash.

Collateral will be marked-to-market, each business day, to ensure that on any business day the market value, plus accrued but unpaid rebates and, in the case of debt securities, accrued but unpaid interest, of the collateral held in respect to a securities lending transaction is not less than:

- 102% ($\geq 102\%$) of the aggregate market value of the loaned securities for domestic securities and international securities that are denominated in the same currency as the collateral provided by the borrower;
- 105% ($\geq 105\%$) of the aggregate market value of the loaned securities for international securities that are not denominated in the same currency as the collateral provided by the borrower; or
- 100% ($\geq 100\%$) for cash collateral.

Cash received as collateral may be invested by or on behalf of the TCRS in any investment instrument in which the TCRS's assets may be directly invested. Such cash may also be invested in short-term investment funds, provided the portfolio of such funds contains only those investment instruments in which the TCRS's assets may be directly invested.

L. Standby Note Purchaser

The TCRS may enter into contracts to serve as a standby note purchaser for the Tennessee State School Bond Authority, the Tennessee State Funding Board and the Tennessee Local Development Authority, provided said contracts contain the following provisions:

- The TCRS receives an annual commission, representing a fair market value fee for serving as the standby note purchaser; such fee shall be reviewed annually and, as appropriate, adjusted; and
- If called upon to purchase such notes, the TCRS shall receive a market rate of return exceeding the market rate for short-term investments.

M. Investment Companies

The TCRS may invest in shares of publicly listed Investment Companies. Investment Companies shall be classified by and subject to the asset allocation range of the underlying asset class type (e.g. equity-focused ETF included in the equity allocation calculation, etc.).

N. Margin and Collateral

Cash and obligations of the United States government or any of its agencies may be used, posted or received by the TCRS in order to meet margin or collateral requirements related to investment activities.

VII. Risk Management

A. Rebalancing and Transitioning

The Total Assets should be actively managed in an effort to attain, within acceptable risk limitations, the TCRS's primary investment objective. As such, the Chief Investment Officer and Investment Staff shall have the ability to make tactical shifts in asset allocations as deemed appropriate to increase risk-adjusted returns, so long as such changes are within the approved asset allocation ranges as stated within this Investment Policy.

Additionally, the Board recognizes that one or more component portfolio may experience a period of transition due to, for example, an initial funding phase, rebalancing or strategy shift. The Board acknowledges that during a transition period it may be necessary to analyze assets based upon terminal value and not relative to a benchmark.

B. Liquidity Management

In order to ensure sufficient operational liquidity, the Total Fund shall maintain a minimum of twenty-five one-hundredths of a percent ($\geq 0.25\%$) in Cash Equivalents rated within the highest tier (e.g., A-1) by at least two (≥ 2) of the designated NRSROs; rating modifiers (+, -) should not be considered when determining the tiers.

Cash that cannot be immediately invested in another asset may be invested in short-term, open-end mutual funds under the contractual arrangement with the Master Custodian or in the State Pooled Investment Fund.

C. Percentage Limitations

In determining compliance with the percentage limitations stated within this Investment Policy, the Total Assets will be valued at Market Value. Accordingly, an investment may be made on any given day provided that such investment does not cause any applicable limitation prescribed in this Investment Policy to be exceeded on such day.

D. Designated Nationally Recognized Statistical Rating Organizations (“NRSROs”)

The credit ratings of any credit rating agency that is registered with the Securities and Exchange Commission (“SEC”) as a NRSRO will be deemed sufficiently reliable for use to determine a security’s investment grade and eligibility under this Investment Policy.

E. Trading, Brokerage and Research

Best execution, cost and benefits that serve the exclusive interest of the beneficiaries are the overriding principles in determining the trading and brokerage counterparty to be used in any transaction.

The State Treasurer and Investment Staff are hereby authorized to transact with duly selected trading and brokerage counterparties. Selection of trading and brokerage counterparties shall be subject to the qualifications and processes established by the Investment Staff and approved by the State Treasurer.

The State Treasurer and Investment Staff are hereby authorized to enter into client commission agreements or commission sharing or rebate arrangements in order to obtain research services permitted under the safe harbor protections of Section 28(e) of the Securities and Exchange Act of 1934 or other similar regulations.

F. Service Providers

The State Treasurer, in consultation with the Chief Investment Officer and Internal Legal Counsel, is authorized to contract for investment management services, personal services, professional services and consultant services as necessary and in the best interest of the TCRS. Such services include, but are not limited to, those provided by a General Consultant, External Investment Advisers, External Investment Managers, Outside Legal Counsel, investment consultants, data providers, data aggregators, securities litigation monitors, proxy advisors, investment and performance analytics, trading and execution platforms, and research providers. The Board delegates to the State Treasurer, in consultation with the Chief Investment Officer and Internal Legal Counsel, the responsibility to determine the procurement method for and duties and responsibilities of such Service Providers.

Pursuant to, and as defined in, T.C.A. §8-37-113 the State Treasurer shall endeavor to use “emerging investment managers” to the greatest extent feasible within the bounds of financial and fiduciary prudence. Use of “emerging investment managers” shall be subject to the qualifications established by the Investment Staff and approved by the State Treasurer.

G. Legal, Compliance and Audit

The State Treasurer, in consultation with Internal Legal Counsel and with the approval of the Legal Advisor, has primary responsibility for the retention of Outside Legal Counsel. The State Treasurer and Internal Legal Counsel shall consult, as needed and applicable, with the Legal Advisor and/or Outside Legal Counsel. The State Treasurer, or his designee(s), has the authority to negotiate and execute, with the advice and counsel of the Legal Advisor, Internal Legal Counsel and/or Outside Legal Counsel, as applicable, all contracts, agreements, forms and memoranda of understanding deemed necessary or desirable for the efficient administration of the TCRS’s assets.

The Chief Investment Officer and Investment Staff will collaborate with the Department of Treasury compliance staff to ensure efficient and effective development and administration of a compliance program that is reasonably designed to prevent, detect and, if necessary, remedy violations of the laws, rules, regulations and policies applicable to the Department of Treasury Investment Division’s investment and securities activities.

To aid in the safeguarding of the TCRS’s assets, the Department of Treasury internal audit staff will periodically evaluate risk control areas as to their adequacy, efficiency and effectiveness. Additionally, the State Treasurer shall ensure that critical investment, accounting and legal, compliance and audit functions are segregated within the Department of Treasury.

H. Investment Procedures

The Board and State Treasurer deem procedures integral components to the implementation of the TCRS’s Investment Policy and effective oversight of the Total Assets. At a minimum, the Chief Investment Officer shall implement procedures related to proxy voting, trade management and supervision, evaluation of research services, the use of placement agents,

conflicts of interest, performance reporting, stress testing, and selecting, approving and monitoring private equity and real estate investments.

I. Conflicts of Interest

The Board members and the Investment Staff are required, under separate policies, to notify the Department of Treasury's compliance officer of a conflict of interest or the appearance of a conflict of interest. In the event a disclosed conflict of interest or apparent conflict of interest is related to a specific investment recommendation or transaction, the Department of Treasury's compliance officer will ensure that such disclosure, if material, is made in writing to the investment and audit committees of the Board at the next scheduled committee meeting.

VIII. Monitoring and Reporting

A. Quarterly

The State Treasurer shall report quarterly to the Council on Pensions and Insurance any holdings in securities issued by companies that have substantial current operations in nations determined by the United States Department of State to be state-sponsors of terrorism.

The State Treasurer shall also report quarterly to the Council on Pensions and Insurance the investments in emerging market countries.

The Chief Investment Officer shall provide a detailed, written review of the investment activity at the quarterly Board meetings. Pursuant to the private equity disclosure process (Section VI.**Error! Reference source not found.**), the Investment Staff will report the required information to the audit committee of the Board on a quarterly basis.

B. Periodically

The State Treasurer, Chief Investment Officer, Investment Staff and Service Providers, shall provide other reports as requested or as needed by the Board or State Treasurer.

C. Annually

The Board shall publish an annual report. The Chief Investment Officer, Investment Staff and, as needed, Service Providers shall assist in preparing the investment-related portions of the annual report.

The State Treasurer shall prepare an annual report of investment activity to the Council on Pensions and Insurance. Such report will consist of the General Consultant's report and a summary of the closing balances of investments in emerging market countries.

The State Treasurer, in accordance with T.C.A. §8-37-113(b) shall submit an annual statement to the general assembly regarding the use of emerging investment managers.

At least annually, the General Consultant shall review the TCRS's Investment Policy and applicable investment procedures and provide its recommendations to the State Treasurer and Chief Investment Officer for consideration.

IX. Non-comporting Assets of a Participating Political Subdivision

Pursuant to T.C.A. § 9-3-507(c), a political subdivision may request that its pension plan assets be coinvested with TCRS assets. To the extent that some or all of a political subdivision's pension plan assets do not comport with this Investment Policy, such political subdivision's pension plan assets may be coinvested with the TCRS's assets in accordance with T.C.A. §9-3-507(e) upon the written recommendation by the Chief Investment Officer and State Treasurer and subsequent written approval by the Investment Committee. Such written recommendation and approval shall contain the limitations, conditions, or restrictions on the coinvestment of a political subdivision's pension plan assets, including, but not limited to, the management strategy and timeframe for the conversion or liquidation of the political subdivision's pension plan assets to an investment authorized by this Investment Policy within a reasonable period of time, considering the market for such investments. The written recommendation and approval shall be reported in writing to the Board at its next meeting.

X. Policy Interpretation

The Board, State Treasurer, Investment Staff and Service Providers are required to comply with all applicable federal and state laws, rules and regulations. The Investment Policy may reference or restate applicable laws, rules and regulations, or portions thereof, for convenience; however, in the event of any conflict between the law and this Investment Policy, the law prevails. Each fiduciary to the TCRS is ultimately responsible for compliance with applicable laws, rules and regulations.

The Board hereby authorizes the State Treasurer to take, for and on behalf of the TCRS, all actions necessary to comply with applicable federal and state securities laws, rules and regulations. In implementing such, the State Treasurer may delegate certain responsibilities to the Investment Staff, Department of Treasury staff or Service Providers.

The State Treasurer is authorized to provide written interpretive guidance and approve in writing, from time to time, exceptions from the requirements contained within the Investment Policy in furtherance of compliance or as deemed in the best interest of the TCRS's beneficiaries, consistent with both fiduciary standards and the scope of the Investment Policy. Such interpretive guidance or exceptions shall be reported in writing to the Board at its next meeting and to the Council of Pensions and Insurance within a reasonable time.

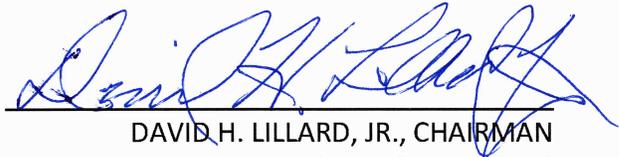
XI. Approval and Adoption

The Council on Pensions and Insurance hereby approved, as required, the applicable provisions within this revised and restated Investment Policy of the Tennessee Consolidated Retirement System at its meeting held on the 16th day of October, 2018.



CHARLES SARGENT, COMMITTEE CHAIR
Council on Pensions and Insurance

The Board of Trustees of the Tennessee Consolidated Retirement System hereby approved and adopted this revised and restated Investment Policy of the Tennessee Consolidated Retirement System at its meeting on the 28th day of September, 2018.



DAVID H. LILLARD, JR., CHAIRMAN
BOARD OF TRUSTEES
Tennessee Consolidated Retirement System

Approved for signature by ac 11/6/18