

THE TENNESSEE CONSOLIDATED RETIREMENT SYSTEM INVESTMENT POLICY

ORGANIZATIONAL STRUCTURE AND GENERAL OVERVIEW

The Tennessee Consolidated Retirement System (TCRS) represents the pension plan for state employees, teachers, higher education employees, local government employees, and employees of other entities authorized to participate in TCRS. TCRS was established by state statute in 1972. The governing statute is found in Tennessee Code Annotated Section 8-34-101, et seq.

Final authority for investing and reinvesting the assets of the Tennessee Consolidated Retirement System (System) is subject to approval of the System's Board of Trustees (Board). T.C.A. Section 8-37-104(a). Implementation of investment policy established by the Board is hereby delegated to the State Treasurer (Treasurer) who shall put such policy into effect. T.C.A., Section 8-37-110. Assets shall be invested subject to all the terms, conditions, limitations, and restrictions imposed by the laws of the State of Tennessee upon domestic life insurance companies in the making and disposing of their investments or as otherwise provided by state law. T.C.A. Section 8-37-104(a). If the Board has issued other directions further limiting such investments, the assets shall be invested according to the criteria established by the Board.

Treasurer

The Treasurer shall implement this Investment Policy established by the Board and shall have the full power to invest and reinvest TCRS funds on behalf of the Board. T.C.A. Section 8-37-110(b). In implementing this Investment Policy, the Treasurer may delegate certain responsibilities to the Chief Investment Officer and Investment Staff.

Legal Counsel

The State Attorney General or an assistant designated by him shall represent the Board in all matters. In all cases where the interests of the System require additional counsel to the Attorney General, the Chairman of the Board, with approval of the Attorney General, is authorized to employ such additional counsel. T.C.A. Section 8-34-308. With respect to investment matters requiring legal counsel, the Treasurer may approve the assignment of legal counsel upon the recommendation of the Assistant Treasurer for Legal, Compliance and Internal Audit.

Investment Committee

The Board of Trustees shall create an Investment Committee consisting of five members. Three of the members shall be the Treasurer, the Secretary of State and the Commissioner of Finance and Administration. The two remaining members shall be members of the Board of Trustees, who have demonstrable investment experience, business experience, educational background, or investment oversight experience, and will be elected by the Board of Trustees.

Investment Advisory Council

The Treasurer shall nominate, with the advice and consent of the Board, an Investment Advisory Council (IAC), consisting of up to seven persons who have experience as investment portfolio managers, economists, or investment advisors to work with the Treasurer's investment staff, T.C.A. Section 8-37-108, to advise the Board on investment policy, T.C.A. Section 8-37-109.

In so advising the Board, the Council will assist the Treasurer, Chief Investment Officer and Investment Staff by providing advice and recommendations on the most appropriate short, intermediate and long-term investment strategy. At each meeting of the Council, the previous meetings' recommendations will be reviewed and reinforced or changed as agreed upon by the Council Members.

Chief Investment Officer (CIO)

The Chief Investment Officer for the System's assets will assume the necessary authority to effectively manage the Investment Staff. The CIO shall report to and consult with the Council on investment matters in formal, scheduled meetings and informally as needed.

The Chief Investment Officer shall:

1. Have executive responsibility and authority, as delegated by the Treasurer, for the management of the assets of the System in keeping with such guidelines and policies as approved by the Board and such applicable laws of the State of Tennessee.
2. Prepare and submit reports, as required, to the Treasurer, the Council, and the Board to document investment activities.
3. Report to and consult with the Treasurer on administrative, organizational and investment activities.
4. Work with the Council on development and implementation of an appropriate investment strategy.
5. Work jointly with the Council to develop long-term economic and investment projections.
6. File with the Treasurer a disclosure statement as prescribed by the Treasurer each year in December.

Investment Staff

The CIO, subject to approval of the Treasurer, shall maintain an Investment Staff to effectively manage all assets of the System. The Treasurer may delegate to the Chief Investment Officer and staff the power to invest and reinvest the System's assets within criteria established by the Board. T.C.A. Section 8-37-105. Investment Staff will perform their duties in compliance with the Chartered Financial Analyst Institute's, Code of Ethics and Standards of Professional Conduct. Each member of the Investment Staff shall file with the Treasurer a disclosure statement as prescribed by the Treasurer each year in December.

Each member of the investment staff shall act with the same care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a similar capacity and familiar with those matters would use in the conduct of a similar enterprise with similar aims.

Reporting

Investment Staff shall provide a detailed written review of investment activity at Board and Council meetings. This shall include a review of the purchases and sales over the period under review, a portfolio summary, a review of current investment policy, and other reports as requested.

The Treasurer shall prepare an annual report of investment activity to the Council on Pensions and Insurance, with such reports to commence no later than as of the calendar year ending December 31, 2012. The Treasurer shall report to the members of the Council on Pensions and Insurance the investments in emerging market countries, with such report to commence no later than as of the quarter ending December 31, 2012, and continue quarterly thereafter. Such annual report to the Council will consist of the general investment consultant's report as of December 31. Such report on investments in emerging market countries shall consist of a summary of closing balances as provided by the general investment consultant.

Pursuant to T.C.A. Section 8-37-104(d)(1), the Treasurer shall submit a quarterly report to the members of the Council on Pensions and Insurance about any System holdings in public 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.

Internal Controls

The CIO shall maintain a system of internal controls to safeguard the assets of the System. Such controls shall include, but not limited to, assisting the Treasury Department's Internal Audit Department in its performance of periodic audits and other projects to ensure compliance with applicable laws, rules, policies and appropriate practices; assisting the Audit Committee of the Board in its review of the Audit Division's findings and recommendations; ensuring that financial assets are held in trust at a third party custodial financial institution; and ensuring that an independent consultant or master custodial financial institution calculate investment performance independent from the internal records of TCRS.

The Treasury department's accounting, internal audit, and legal and compliance divisions shall report to an executive management employee other than the CIO.

Brokerage Firms

All brokerage firms (for stock and all other securities) shall be selected for use according to their financial standing, execution capabilities, underwriting capabilities, research capabilities, price and other services provided to the System.

Consultants

The Treasurer, in consultation with the CIO may engage the services of investment consultants as necessary to assist the Staff in managing TCRS assets and overseeing the External Managers

and Advisors. The Board delegates to the Treasurer the responsibility to determine the duties and responsibilities of the consultant with such enumerated in a contractual agreement.

External Managers and Advisors

The Treasurer, in conjunction with the CIO, may engage the services of investment advisors to manage the portfolio after consultation with and authorization by the TCRS Board of Trustees. The Board delegates to the Treasurer the responsibility to determine the duties and responsibilities of investment advisors with such enumerated in a contractual agreement. The TCRS Board, Treasurer, and Staff will have specific responsibilities as stated below:

Roles of the Board

Reviews and, if appropriate, authorizes requests by the Treasurer to engage investment services. Delegates to the Treasurer the authority to retain qualified external investment managers, advisors, and consultants.

Reviews and approves the processes employed by Staff in the selection and engagement of investment managers, advisors, and consultants.

Reviews and monitors the investment performance of the investment advisors selected by Staff.

Roles of the Treasurer, CIO and Staff

Evaluates the needs of the Division to achieve its risk-adjusted return objectives and, if appropriate, presents recommendations to obtain authorization to the TCRS Board of Trustees to engage investment management services in order to achieve these objectives.

Develops the processes for engaging investment management services. Upon approval by the Treasurer of consultants and managers, manages investment consulting and advisory relationships.

Master Custodian Financial Institution

The Treasurer may engage the services of a master custodian financial institution to hold in trust the financial assets of TCRS and to process trade transactions. The Board delegates to the Treasurer the responsibility to determine the duties and responsibilities of the master custodian financial institution with such enumerated in contractual agreement. Engagement of the Custodian shall be subject to the Tennessee State procurement process which includes competitive and non-competitive procurement processes.

Proxy Voting

It is the general policy to vote proxies in a manner which will provide the best ultimate value to the shareholders of that entity. The Chief Investment Officer will develop and maintain a proxy voting policy, and review such policy annually with the Council. In voting all proxies, the investment staff will:

1. Analyze the economic consequences of the options presented to them as shareholders, and select the option most likely to protect and enhance the value of the System's assets.
2. Document the votes (and other actions and decisions) along with the reasons for taking the action chosen. This includes maintaining a record of all attempts to solicit proxies, from outside or inside the organization.
3. The Chief Investment Officer should consult with the Treasurer on any particularly difficult proxy questions.

Commission Dollar Arrangements

The CIO is hereby given approval and is authorized to obtain investment research services permitted by Section 28(e) which amends the Securities and Exchange Laws of 1934 through use of commission dollars; provided, however, that best execution of all trades shall continue to be the overriding principle in determining the broker to be used in executing any transaction. The CIO shall annually disclose to the Board significant provisions of each commission dollar arrangement existing on June 30 of each year. The CIO shall, within a reasonable period of time, disclose to the Board any new commission dollar arrangement entered into as well as other information requested. Only those research goods and services which directly enhance the investment decision-making process or investment returns, and which do not have a non-investment capability shall be eligible for procurement through commission dollar arrangements. Goods and services specifically permitted include performance evaluation services, securities pricing services, quotation and trading information services and analytical databases as well as technical publications which directly enhance the investment decision-making process.

No good or service may be procured through commission dollar arrangements if such good or service benefits an employee in an individual capacity. Goods and services specifically prohibited from procurement through use of commission dollar arrangements include direct telephone lines to brokerage firms, personal computers or other office equipment, payment of travel related expenses and payment of cost of attending seminars, classes or other investment training activities. The CIO shall develop and implement a structured review and approval process to ensure that commission dollar arrangements entered into pursuant to this policy comply with the provisions stated herein. Any commission dollar arrangement in which commission commitment is made by the System shall be evidenced by a written agreement which specifies the nature and extent of the commission commitment as well as other significant provisions of the arrangement.

INVESTMENT POLICY AND OBJECTIVES

Key Objective

Achieving superior risk adjusted returns is the primary objective for the Fund. Achieving the primary goal will provide the liquidity needed by the System to pay beneficiaries, preserve principal value over a long-term basis, and insure the actuarial soundness of the plan.

- Control risk by proper diversification of asset classes
- Exceed the actuarial assumption on a long-term basis
- Exceed the return of the composite benchmark of the target weighting of the asset classes

Investment Return

The System's assets should be managed actively to attain, within acceptable risk limitations, a return on assets that will meet beneficiary payments as required. Return shall include both current income and capital appreciation. The investments of the System shall be diversified so as to minimize the risk of large losses, unless under particular circumstances it is clearly prudent not to do so. The total return objective of the system shall be to exceed the returns as set out under the "Performance Measurement" section of this policy.

Liquidity for System Beneficiary Payment

Contributions and Investment income appear sufficient to meet beneficiary payments for the foreseeable future. Continual review of the System should be conducted to assure that investments providing income for liquidity needs are purchased as the System matures.

Asset Allocation

Allocation Range

The chief investment officer is permitted to make investments within the following ranges:

<u>Asset Class</u>	<u>Minimum</u>	<u>Maximum</u>
Domestic Stocks	25%	50%
Domestic Bonds	20%	60%
Inflation Indexed Bonds	0%	15%
Short-term Securities	0%	10%
International Bonds	0%	10%
International Stocks	5%	25%
Emerging Markets Stocks*	0%	10%
Private Equity & Strategic Lending	0%	10%
Real Estate	0%	10%

*Emerging Market Stocks are a subset of International Stocks; Maximum International Stocks and Emerging Market Stocks may not exceed 25%.

Performance Measurement

To provide the Investment Staff and the Board with guidance as to investment performance expectations, the following performance measurement standards are established. These standards are to act as guides in determining whether the Fund and individual asset classes are achieving their long term goals, both in relationship to the System's peer group of other public funds and the marketplace in general. In recognition of the System's long-term perspective, these standards are to be measured through use of a five-year rolling average. This serves to reinforce the System's bias against investment decisions designed to show short-term gain at the expense of long term performance.

Total Fund Performance Measurement Standards

This set of standards is designed to measure the performance of the Fund in total, including the impact that state law, investment policy restrictions and asset allocation decisions may have on the performance of the Fund. Given the current state law, investment policy and asset allocation parameters, the following standards are considered reasonable expectations for the total Fund:

The Fund's overall annualized total return should exceed the return available from a policy of investing in an index fund of the following:

<u>Asset Class</u>	<u>Index</u>	<u>Weight ***</u>
Domestic Stocks	S&P 1500	33%
Canadian Stocks	S&P/TSX 60 Index	4%
International Stocks	MSCI EAFE Investable Market Index (IMI)	13%
Emerging Market Stocks	MSCI EM Adjusted*	5%
Domestic Bonds	Citigroup Large Pension Fund Index	25%
Inflation Indexed Bonds	Citigroup TIPS Index	4%
International Bonds	Citigroup Non-U.S. G-5 Govt. Bond Index	0%
Traditional Private Equity	S&P 500 + 3%	3%
Strategic Lending	Strategic Lending Benchmark**	5%
Real Estate	NCREIF Property Index	7%
Short-term Securities	91-Day U.S. Treasury Bills	1%
TOTAL		100%

* To facilitate proper evaluation of the Emerging Market Stocks portfolio, the MSCI Emerging Markets Index returns will be adjusted to exclude countries based on the country screening methodology developed.

**Benchmark will be 50% Barclay's High Yield 2% Constrained Index and 50% Credit Suisse Leveraged Loan Index.

*** Effective as of December 31, 2012

To accurately compare portfolio performance when significant changes in allocations occur in illiquid asset classes, the total fund performance will be calculated on an "as-allocated" basis. The "as-allocated" calculation will use the actual percentages invested in the illiquid asset classes of real estate and private equity instead of the long-term target weights.

Rebalancing

Should an asset class fall below the minimum percentage or exceed the maximum percentage, the CIO is expected to rebalance the portfolio to bring the asset class within the minimum / maximum range within 90 days.

The CIO will review market movements and the investment strategy employed and make specific portfolio re-balance recommendations to the Treasurer if an asset class moves more than 5% from its target weight within a 90 day period. During transition periods, this variation will be evaluated versus the "as-allocated" target percentages. To facilitate temporary strategic actions not to exceed 12 months, the TCRS Investment Committee may authorize bundling of all equity portfolios and permit a total additional underweight or overweight position not to exceed 5% of total system assets in aggregate of the combined equity portfolios. During these temporary actions, the equity portfolios will be evaluated on a combined basis and individual minimum and maximum ranges will apply to the bundling of all equity portfolios and the individual portfolio restrictions will not apply.

Asset Class Performance Measurement Standards

Each asset class is currently actively managed by the System. Since an alternative to active management exists in the form of index funds, it is proper to measure the System's performance against the most appropriate index for each asset class to determine the "value added" over time by active management. As asset classes change, indices should be reviewed to ensure that proper comparisons are being made. The above indices provide for appropriate comparison to the System's current asset classes.

INVESTMENT CRITERIA

Both the Board and the Investment Staff are aware of the desirability of investing within the State of Tennessee whenever quality, risk, diversification and potential return are equal to or greater than that available on like investments outside the state. The Investment Staff should encourage and be receptive to Tennessee financial proposals. However, both the Board and the Investment Staff are aware of the fiduciary responsibility of investing pension assets and should not make any investment based solely on its location in Tennessee when quality, risk, diversification, or potential return are sacrificed. See T.C.A. Section 35-3-117(b). Further, the Board will not approve, and staff is not authorized to engage in, investment proposals designed to benefit special political, social, or economic subgroups within or external to the System's beneficiaries unless they clearly meet all fiduciary standards of investing.

In determining compliance with the percentage limitations of this policy, the assets of the System shall be valued at their market value. Accordingly, an investment may be made on any given day provided such investment does not cause any applicable limitation prescribed in this policy to be exceeded on such day. T.C.A. Section 8-37-104(b).

Common, Preferred Stock and Convertible Bonds

Growth is important to the System to attain a return that will allow for greater participant benefits and/or lower employer funding requirements. Equity investments will be used to seek this growth through potential dividend and capital appreciation. The System will limit its investment in common and preferred stock to 75% of the System's total assets. T.C.A. Section 8-37-104(a)(1). Convertible bonds, equity exchange traded funds, stock options, and stock index futures will also be counted as an equity investment and included in this limitation. The System's stock portfolio shall be managed by the Investment Staff to obtain a superior return. The stock of smaller, emerging companies, including new issues, should be an integral part of the total portfolio. Not more than 4.99% of the outstanding shares of any one issuer shall be purchased. Any stock purchase which does not meet the statutory definition for domestic life insurance companies shall be considered purchased under the basket clause as permitted by statute.

Notes, Bonds, and Mortgages

Public issues of notes and bonds shall make up the majority of fixed income investments. It will be necessary to actively manage this sector of the portfolio in times of volatile interest rate swings to either shorten the average maturity to protect principal value or lengthen maturities to lock up a long-term stream of income. The only issues subject for purchase are investment grade bonds (four highest ratings) as rated by one of the recognized rating agencies. Issues of any agency of the federal government or any entity with the express or implied backing of the U. S. Treasury shall be considered as holding the highest possible rating. The total sum invested in notes and bonds and other fixed income securities exceeding one (1) year shall not exceed 75% of the total funds of the System. Government Bond futures, Federal Funds futures, Eurodollar futures, interest rate swaps, credit default and credit default index swaps will also be counted as a Fixed Income investment and included in this limitation. T.C.A. Section 8-37-104(a)(2).

Private Placements

Any debt issues purchased which do not have an active secondary market shall be thoroughly researched from a credit standpoint and shall be determined by the Investment Staff as having credit quality that conforms to the limits placed on public issues. Not more than 15% of the total fixed income portfolio shall be placed in private placements. Private placements may be considered for purchase when they yield a return over equivalent quality public issues that are sufficient to compensate for their lack of marketability. Except in the case of notes purchased by the System pursuant to standby note purchase agreements wherein the System receives a market rate of return, tax exempt securities of any state are not considered a prudent investment for the System.

Exchange Traded Funds (ETFs)

Equity ETFs may be included in the equity portfolio and bond ETFs in the bond portfolio and shall be subject to the limitations of those portfolios.

Stock Options

Call options may be written on stock positions owned by the System. Options should not be written on more than 10% of the total stock portfolio. Options may not be purchased but positions can be closed out. Rules and Regulations of the State of Tennessee, Chapter 0780-1-32.

Fixed Income Financial Instruments

Investment Staff may purchase or sell Government Bond futures, Federal Funds futures, Eurodollar futures, interest rate swaps, credit default and credit default index swaps for the purpose of making asset allocation changes, modifying credit risk, adjusting interest rate risk, and improving liquidity. In addition, options on those instruments may be employed. Activity in interest rates futures, swaps, and their respective options will be subject to the following terms and conditions:

1. Gross exposure to approved fixed income financial instruments will be limited to 10% of the market value of the System's total assets for risk mitigating positions and 10% for risk positions. Position sizes will be measured by notional amounts. Options will be measured in their notional equivalents.
2. The sum total of the fixed income portfolios, together with the value of any fixed income index futures contract obligations should be within the asset allocation range for the fixed income portfolio. While fixed income index futures contracts are outstanding, the Investment Staff shall maintain a comparison of the System's fixed income asset allocation against its invested position including futures contracts.
3. The System may use cash and obligations of the U.S. government or any of its agencies to meet the variation margin requirement.
4. Investment Staff may purchase or sell Government Bond futures, Federal Funds Futures, Eurodollar futures, interest rate swaps, credit default and credit default index swaps.

5. Transactions will be conducted through only a few of the highest quality domestic money center banks and domestic brokerage firms. The criteria to be used in selecting such banks and brokerage firms should include, but should not be limited to, their experience and expertise in the financial futures market.
6. A transaction record shall be maintained which contains the following:
 - a) The amount of contracts purchased and the reason therefor.
 - b) The amount of contracts sold and the reason therefor.
7. Investment Staff shall submit a quarterly report to the Board specifying the transactions during the previous quarter. The report shall summarize the strategies employed, the investment performance of those strategies, and potential strategies for the present quarter. Each report shall list the banks and brokerage firms authorized to conduct financial futures transactions with the System. T.C.A. Section 8-37-104(a)(7).

Equity Futures

Investment Staff may purchase or sell stock index futures contracts for the purpose of making asset allocation changes in a more efficient and cost effective manner, and to improve liquidity. In addition, options on those instruments may be employed to achieve risk management objectives.

Such futures contracts shall be subject to the following terms and conditions:

1. The Investment Staff will not enter into equity futures transactions for the purpose of speculative leveraging as defined in T.C.A. Section 8-37-104(a)(7)
2. The total notional amount of the System's equity financial futures contract obligations should not exceed 10% of the market value of the System's total assets. Position sizes will be measured by notional amounts. Options will be measured in their notional equivalents.
3. The sum total of the domestic and international equity portfolios, together with the value of any stock index futures contract obligations should be within the asset allocation range for each of domestic and international equity securities, respectively. While stock index futures contracts are outstanding, the Investment Staff shall maintain a comparison of the System's equity asset allocation against its invested position including futures contracts.
4. The System may use cash and obligations of the U.S. government or any of its agencies to meet the variation margin requirement.
5. Financial futures contracts may be utilized given the contracts are appropriate for the required portfolio management result. Indications of appropriateness include correlation with the underlying market, similar market coverage and similar sector coverage.
6. Transactions will be conducted through only a few of the highest quality domestic money center banks and domestic brokerage firms. The criteria to be used in selecting such banks and brokerage firms should include, but should not be limited to, their experience and expertise in the financial futures market.

7. A transaction record shall be maintained which contains the following:
 - a) The amount of stock index futures contracts purchased and the reason therefor.
 - b) The amount of stock index futures contracts sold and the reason therefor.
8. Investment Staff shall submit a quarterly report to the Board specifying the transactions during the previous quarter. The report shall summarize the strategies employed, the investment performance of those strategies, and potential strategies for the present quarter. Each report shall list the banks and brokerage firms authorized to conduct financial futures transactions with the System. T.C.A. Section 8-37-104(a)(7).

Short-term Investments

All monies waiting to be placed in a more permanent investment should be actively managed to obtain the best return available. These investments can include both publicly and privately negotiated short-term borrowing agreements. Commercial paper should be rated in the highest tier by all rating agencies which rate the paper. Rating modifiers (+, -) should not be considered when determining the highest rated tier. A minimum of two ratings is required. Commercial paper cannot be purchased if a rating agency has the commercial paper on a negative credit watch. Commercial paper cannot have a remaining maturity of more than 180 days from the date of purchase. The maximum amount of a specific corporation's commercial paper that can be purchased is \$100 million, but commercial paper maturing on the next business day shall not apply to this limit. A credit analysis report shall be prepared on a corporation before the corporation's commercial paper can be acquired. A credit analysis report should include a company profile, business description, financial profile, rating information, strengths and opportunities, weaknesses and threats, and an outlook and recommendation.

Securities Lending

Both debt and equity securities may be loaned for a fee to a select few of the highest quality securities firms and banks as recommended by the CIO and approved by the Treasurer. Loans shall be limited so that the total amount of the securities lent does not exceed 30% of the market value of the total assets in the System's portfolio. Eligible collateral shall be required for each loan. For purposes of this provision, eligible collateral means:

1. Bonds, notes, and treasury bills of the United States or other obligations guaranteed as to principal and interest by the United States or any of its agencies;
2. Obligations guaranteed as to principal and interest by the Federal Home Loan Mortgage Corporation, Federal National Mortgage Association, Student Loan Marketing Association and other United States government sponsored corporations or enterprises; and
3. Cash.

Securities received as collateral shall have a market value of at least 102% of the market value of the security loaned. Cash received as collateral shall have a value of at least 100% of the market value of the security loaned. Collateral should be closely monitored. Securities collateral should be marked to market each business day so that the aggregate market value of the

collateral allocated to all then outstanding loans to a single security firm or bank equals 102% of the market value of such loans and the interest accrued thereon. If at any time the aggregate market value of the securities collateral allocated to all then outstanding loans to a single security firm or bank is less than 100% of the market value of such loans, more collateral should be requested. Cash received as collateral may be invested by or on behalf of the System in any investment instrument in which the System'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 System's assets may be directly invested. The Treasurer, through securities lending agreements, may further restrict the collateral requirement outlined in this policy. T.C.A. Section 8-37-104(a)(6).

Securities lending agreements entered into shall be reviewed, commented upon, and approved as to form and legality by the Attorney General and Reporter.

Standby Note Purchase Agreement

The System 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:

1. The System receives an annual commission, representing a fair market value fee, for serving as the standby note purchaser.
2. Fees established for providing the standby note purchasing service will be reviewed annually and adjusted as appropriate.
3. If called upon to purchase such notes, the System receives a market rate of return exceeding the prime rate.

T.C.A. Section 8-37-104(a)(8).

International Investments

An amount not to exceed 25% of the System's total assets may be invested in the international markets, of those countries included in the Morgan Stanley Capital International (MSCI) EAFE IMI index for developed markets excluding any emerging market countries, except that of such 25%, an amount not to exceed 10% of the system's assets may be invested in those emerging market countries in the MSCI Emerging Markets Index determined to be suitable for investment pursuant to a methodology reviewed by the system's investment consultant, recommended by the Chief Investment Officer and approved by the Treasurer. The target allocation for such Emerging Markets investments shall be 5% of the system's assets. This International Investments policy may be amended only with the approval of the Council on Pensions and Insurance. Such securities must be actively traded in a public market and be of the same kinds, classes and investment grades otherwise eligible for investment. T.C.A. Section 8-37-104(a)(3).

Foreign Currency Hedging

The System may engage in forward contracts to hedge the foreign currency exposure of the fund under the following guidelines:

1. The overall strategy will be a tactical defense designed to reduce risk and protect the System's international portfolio from an appreciating dollar relative to other currency exposures.
2. The foreign currency exposure will be hedged by selling and purchasing currency using only forward contracts.
3. The allowable currencies for hedging purposes are limited to the currencies of those countries authorized pursuant to this policy.
4. Portfolio currencies may be hedged no more than 80% of international portfolio exposure for any given currency based on market value.
5. Portfolio currencies may be sold for U.S. dollars only and not for another portfolio currency.
6. Hedging will be conducted through the System's custodial bank and a few of the highest quality money center banks and brokerage firms. T.C.A. Section 8-37-104(a)(5).

Canadian Investments

The System may purchase Canadian securities which are actively traded in a public market provided they are substantially of the same kinds, classes and investment grades as those otherwise eligible for investment. Such investments shall not be subject to the restriction imposed on international investments.

Real Estate

An amount not to exceed 10% of the market value of the total TCRS portfolio may be invested in real estate. The real estate investment portfolio of TCRS may include investments in direct real estate investments, commingled funds, group trusts, real estate operating companies ("REOCs"), partnerships, corporations, limited liability companies ("LLCs") or other collective investment vehicles or pooled investments as well as REITs (private or public). At the time of acquisition, the minimum investment size for an individual property is \$5.0 million, unless the investment is part of an accumulation strategy of multiple properties in a given market or sub-market. The maximum investment size in any one property shall be limited to one-half of one percent (0.5%) of the market value of TCRS's total assets.

TCRS shall invest primarily in substantially leased (i.e., 80% or greater leased at time of acquisition) institutional quality, well-located assets in the traditional property types: office, apartment, retail, and industrial. To avoid concentrations within certain property types and to ensure prudent diversification over the longer time periods, no investment may be made which would cause, at the time of acquisition, the market value of TCRS holdings in any single traditional property type to exceed 40% of the market value of the greater of TCRS's real estate target allocation or the total value of real estate invested.

TCRS shall limit real estate investments such that at the time of acquisition, no more than 2% of the market value of TCRS's total assets shall be invested in any single Standard Metropolitan Statistical Area ("SMSA"). All investments shall be limited to properties located in the United States excluding de minimis positions held within comingled funds. In any event, TCRS cannot acquire real estate located in the State of Tennessee unless such acquisition is in the shares or interests of a regulated investment company, mutual fund, common trust fund, real estate investment trust, or similar organizations or vehicles which are comingled and investment determinations as to which real estate assets to purchase or acquire are made by the investment sponsor or investment manager, or persons other than TCRS.

Real estate investment advisors are to be utilized by TCRS to locate, evaluate, acquire, manage and dispose of separate account direct real estate investments. TCRS shall limit its exposure to any single Advisor to mitigate potential advisor or firm specific risk. No Advisor, at the time of an acquisition, shall be permitted to manage more than 40% of the market value of the greater of TCRS's real estate target allocation or the total value of real estate invested.

TCRS may own such investments in its own name or, to the extent permitted by law, through title holding entities, and may transfer real estate properties from direct ownership to a title holding entity or from a title holding entity to direct ownership, during the course of the holding period of the investment.

The Director of Real Estate shall develop comprehensive real estate investment guidelines (Real Estate Guidelines) that shall be reviewed by the Chief Investment Officer and approved by the Treasurer.

Transactions to acquire and dispose of direct real estate properties are subject to approval of the Investment Committee of the Board of Trustees. Transactions involving a market value of less than \$30 million may be recommended by the CIO and approved by the Treasurer after notification of the Investment Committee. T.C.A Section 8-37-104(a)(9).

Private Equity

No investment may be acquired that would, at the time of the acquisition, cause the aggregate book value of all of the retirement system's holdings and investments in private equity to exceed more than ten percent (10%) of the market value of the total assets of the retirement system. This limitation is intended to limit the actual value of assets invested and is not intended to limit commitments which will typically be larger than the actual invested value, particularly during the initial development stages of the private equity investment program.

The Private Equity portfolio shall consist of two segments, Traditional Private Equity and Strategic Lending.

I. Policies Common to Traditional Private Equity and Strategic Lending

1. Roles and Responsibilities

a. Roles of the Board and Investment Committee

Approve Private Equity investment policy.

Monitor private equity asset allocation and portfolio construction by reviewing the investment performance.

b. Roles of the Treasurer, CIO and Staff

(i) Treasurer

Approves private equity policy and guidelines as recommended by the CIO.

Engages investment managers as recommended by the CIO.

(ii) Chief Investment Officer and Staff

Develop Private Equity investment policy and guidelines, with approval of the policy by the Council on Pensions and Insurance, Board, and Investment Committee Treasurer, with the approval of the guidelines by the Treasurer upon the recommendation of the CIO.

Recommends for approval by the Treasurer, and monitors, investment management and advisory relationships so approved in the manner approved by the Board.

Evaluate prospective investments and their prepared offering materials on an as-needed basis.

Coordinate the investment approval process.

Conduct due diligence on individual investment opportunities and negotiates terms and conditions.

Report the status of all investment activities to the Investment Advisory Council and the Investment Committee.

c. Roles of the Consultant(s)

The Consultant(s) provides a key oversight and monitoring role.

In conjunction with Staff, reviews the process for the selection and engagement of Managers for approval by the Board.

Assist Staff with developing the investment strategy, policies, and procedures to implement the private equity investment program.

Prepare investment performance reports.

Provide the Board and Staff with relevant, reliable, and timely research and information.

Provide objective advice to Staff, the Investment Committee, and the Board.

Provide non-exclusive investment sourcing and servicing role for individual investments.

Source and evaluate prospective investments and their prepared offering materials on an as-needed basis.

Assist the Staff in conducting due diligence on prospective investments and in negotiating terms and conditions.

d. Roles of the Investment Advisory Committee

Advises the Board on investment policy as it relates to private equity.

2. Disclosure process: A disclosure process will document and disclose to the audit committee of the Board on a quarterly basis the names of any persons or entities who bring specific private equity investment proposals to any Retirement System employee or Board member who has a role in determining whether Retirement System assets should be invested in the private equity investment. For the purposes of this investment policy, "...bringing a specific private equity investment proposal..." does not include casual meetings or telephone calls of a general nature. "Bringing a specific private equity proposal..." for the purposes of this disclosure process means direct personal contact by someone intending to solicit funding for a specific private equity investment fund or transaction. This direct contact will typically include a discussion about a particular investment, the merits of that investment, and will include specific documentation supporting the investment case of the particular investment.

3. Records: Records of the Retirement System relating to the identity of the name of the private equity investment vehicle used, such as the name of any limited partnership, the name of the funds-of-funds manager and title of the fund, the amount invested in the vehicle, or the present

value of such investment shall be open to public inspection pursuant to T.C.A Section 8-37-104(a)(10)(C), provided, however, that records relating to the retirement system's review of any private equity investment shall not be public to the extent that:(i) The records contain confidential information provided to the retirement system or analysis or evaluation by the retirement system; or(ii) Disclosure of the records would have a potentially adverse effect on the retirement system's private equity program, the value of an investment, or the provider of the information.

II. Policies Specific to Traditional Private Equity

1. Risk Control: The private equity investment program will be structured to avoid concentration risk. The portfolio will tend to be less diversified during the growth phase than would be the case for a seasoned portfolio and the risk control measures noted below apply to a fully seasoned portfolio.

- a. Vintage Year Risk: Limited partnership returns in a given year tend to be more highly correlated than across a full economic cycle. Vintage year risks will be mitigated by controlling the annual deployment of funds. Another method that may be employed is the use of private equity secondary issues that would give the fund access to multiple vintage years. Vintage year concentration will be avoided by seeking to have less than 25% of the fund's private equity program fair market value in a given vintage year.
- c. General Partner/Manager Concentration Risk: General Partner/Manager concentration risk is the risk of being over-exposed to a single General Partner/Manager which might incur operational, business, or investment issues. General Partner/Manager concentration risk will be controlled by having less than 20% of the private equity program allocation invested with a given General Partner/Manager.
- d. Stage, Style, and Strategy Concentration Risk: Strategy concentration risk is the risk of being over-exposed to a particular private equity stage, style, or strategy such as buy-out funds or venture capital funds. Stage, style, and strategy concentration risk will be controlled by closely monitoring the range of investment strategies available in the private equity universe. The distribution of the stages, styles, and strategies employed by the fund will be monitored and reported.
- e. Industry Concentration Risk: The risk of having investments concentrated in a given industry. For example, this could mean having a large exposure to personal computer software companies across multiple partnerships. This risk will be mitigated by monitoring the underlying portfolio investments by industry.
- f. Geographic Concentration Risk: The risk of having investments concentrated in a given geography (individual states, countries or regions). For example, this could mean having a large exposure to funds seeking investment opportunities in the eastern United States. This risk will be mitigated by monitoring the underlying portfolio investments by geography. It is anticipated that TCRS will employ a global approach to private equity investing, with a substantial portion of investments domiciled or operating outside the US.

2. Process for Selecting, Managing and Disposing of Investments:

- a. Staff will utilize the Consultants(s) to develop strategy, calculate investment performance, assist with legal review, determine that a proposed investment complies with TCRS standards, and prepare quarterly investment reports.
- b. The Consultants(s) will also assist in the sourcing and selection of funds and negotiation of terms and conditions. Investments will only be made after recommendations of Consultant(s) and Staff, and will be consistent with the policies of the Board.
- c. Types of private equity investments: Private Equity investments may include domestic and international venture capital, corporate buyouts, mezzanine and distressed debt, special situations and secondary funds. Private equity investment vehicles may include limited partnerships, private placements, co-investments, funds-of-funds and commingled funds. The foregoing investments and investment vehicles are listed as examples only and not for the purpose of limitation.
- d. Length of contractual obligations: traditional private equity investments may involve periods of time of up to ten years or more from initial commitment to final liquidation. The investment horizon of the underlying investments and market trends are among the factors to be considered when considering the length of the contract.
- e. The Director of Private Equity shall develop comprehensive Private Equity investment policies, procedures, and guidelines that shall be recommended by the Chief Investment Officer and approved by the Treasurer.
- f. Commitments and transactions to acquire and dispose of private equity are subject to approval of the Investment Committee of the Board. Commitments and transactions involving a market value of less than \$30 million may be recommended by the CIO and approved by the Treasurer after notification of the Investment Committee. Manager terminations, mandate reductions, or sales of fund interests may be completed after a review and recommendation by the CIO and approval by the Treasurer. Any such terminations, mandate reductions or sales of fund interests will subsequently be reported to the Investment Committee during the next scheduled meeting.

III. Policies Specific to Strategic Lending

The objective of the portfolio is to be opportunistic and to focus on non-investment grade fixed income strategies. The size, strategies and implementation vehicles utilized will change in response to market opportunities. The fund will primarily utilize the skills and experience of external parties, however, staff may also implement internal strategies.

1. Risk control: Risk control for the strategic lending portfolio will be accomplished by the utilization of various strategies and implementation vehicles. The portfolio may be somewhat under-diversified on a stand-alone basis due to the opportunistic nature of the portfolio since diversification for TCRS is obtained at the overall TCRS fund level. Risk controls for less liquid products may utilize diversification by style, industry, geography, manager and vintage year. Risk control for more liquid products may involve periodic review of expected risk and return and manager effectiveness. Operational risk will be controlled by the utilization of multiple managers and/or strategies depending upon investment opportunities.

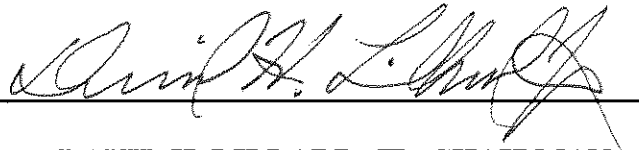
2. Process for Selecting, Managing and Disposing of Investments:

- a. Staff will utilize the Consultants(s) to develop strategy, calculate investment performance, assist with legal review, determine that a proposed investment complies with TCRS standards, and prepare quarterly investment reports.
- b. The Consultants(s) will also assist in the sourcing and selection of funds and/or managers and negotiation of terms and conditions. Investments will only be made after recommendations of Consultant(s) and Staff, and approval by the Treasurer, and will be consistent with the policies of the Board.
- c. Types of investments may include domestic and international senior loans; high yield bonds; direct lending; whole loans; real estate lending; mezzanine; distressed debt; special situations; and secondary opportunities. Investment vehicles may include limited partnerships, private placements, co-investments, funds-of-funds, separate accounts and commingled funds. The foregoing investments and investment vehicles are listed as examples only and not for the purpose of limitation.
- e. Length of contractual obligations: Strategic lending investments may involve contracts of various time periods, ranging from, for example, the contract period similar to that of traditional private equity, to contracts with a manager to invest funds in for a specific time period, to investments in more liquid assets for even shorter periods. The investment horizon of the underlying investments and market trends are among the factors to be considered when considering the lengths of contracts.
- e. Staff shall develop comprehensive Strategic Lending investment guidelines that shall be recommended by the Chief Investment Officer and approved by the Treasurer.
- f. Commitments and transactions are subject to approval of the Investment Committee of the Board except that:
 - (i) Commitments and transactions involving a value of less than \$30 million may be recommended by the CIO and approved by the Treasurer after notification to the Investment Committee;
 - (ii) Staff may utilize internal strategies and tactics to obtain exposures and to provide liquidity and flexibility. Internally managed strategies may be implemented upon written recommendation of the CIO and approval of the Treasurer. An example of such as strategies would be the purchase of ETFs with an appropriate objective to obtain tactical exposure. Any such transactions will subsequently be reported to the Investment Committee during the next scheduled meeting; and
 - (iii) Subject to the written approval of the Treasurer in each instance, Staff has the discretion to raise, lower, or terminate investments or commitments with existing relationships, subject to the terms of the investment contract. Any such transactions described in (i) or (ii) above will subsequently be reported to the Investment Committee during the next scheduled meeting.

3. Limitation of Authority. The authority to enter into commitments to make strategic lending investments shall expire on December 31, 2017; however, such expiration shall not affect commitments to invest in strategic lending entered into prior to December 31, 2017, nor shall it affect investments made subsequent to December 31, 2017, pursuant to those commitments.

THE BOARD OF TRUSTEES OF THE TENNESSEE CONSOLIDATED RETIREMENT SYSTEM ADOPTED THIS REVISED POLICY AT ITS BOARD MEETING ON September 28, 2012.

THE COUNCIL ON PENSIONS AND INSURANCE APPROVED THIS REVISED POLICY ON October 31, 2012.

A handwritten signature in black ink, appearing to read "David H. Lillard, Jr.", is written over a horizontal line.

**DAVID H. LILLARD, JR, CHAIRMAN
BOARD OF TRUSTEES
TENNESSEE CONSOLIDATED RETIREMENT SYSTEM**

A handwritten date in black ink, "November 1, 2012", is written below the signature.