



## **TCDRS Investment Policy**

**Revised, April 11, 2019**

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**STATEMENT OF POLICIES FOR INVESTMENT OF THE ASSETS OF  
THE TEXAS COUNTY & DISTRICT RETIREMENT SYSTEM**

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## **1. Introduction and Purpose**

The Texas County & District Retirement System (“TCDRS” or the “System”) was created to help Texas counties and districts provide reliable, reasonable retirement benefits for their employees. Investments are an important part of how those retirement benefits are funded. Our benefits are advance-funded, which means employers and employees save in advance, over the course of the employee’s career, for the benefit at retirement. Because benefits are funded in advance, almost 80% of each benefit dollar comes from investment earnings.

This Investment Policy (the “Policy”) is established by the TCERS Board of Trustees (the “Board”). The Policy provides a foundation from which to oversee the management of the investment of System assets. The Policy is intended to allow for sufficient flexibility to capture investment opportunities yet provide parameters to ensure prudence and care in the management of the investment program.

The Policy documents TCERS’ investment objectives, policies, guidelines and certain procedures. It also outlines the duties and responsibilities and provides guidance to the fiduciaries of the System including The Board of Trustees, individual members of the Board (“Trustees”), the Investment Officer, staff professionals, investment consultants, performance measurement analysts, external investment managers, custodians, securities lending agents and others who exercise discretionary authority or control over the management or disposition of System assets.

In addition, the Policy states the standards and disciplines adopted so that Trustees can effectively evaluate the performance of the System staff, investment managers, investment consultants and others. This Policy also serves as compliance with Section 845.301(f) of the TCERS Act which requires that the Board establish written investment objectives concerning the investment of assets of the System.

## **2. System Investment Objective**

The overall investment objective of the System (the “System Investment Objective”) is to attain an 8% annualized return net of fees over a long-term period (30 years or more), while diversifying the portfolio in such a manner in order to (1) achieve an acceptable level of risk in light of the investment return objective and (2) reduce the volatility of short-term investment returns in order to provide stability in benefit costs.

The Board will periodically review and evaluate the System Investment Objective, considering, among other factors, TCERS benefit design, expected future returns and risk on invested assets, employer cost volatility and future expected cash flows as the System matures.

## **3. Asset Allocation Plan**

### **A. In General**

The primary means through which the Board ensures that the System achieves the System Investment Objective is through an asset allocation plan. The asset allocation plan will be developed based on a set of capital market assumptions adopted by the Board as set forth in Table

3 of Exhibit A. These assumptions provide the primary basis from which the Board can determine whether the selected asset allocation plan is designed to attain the System Investment Objective.

The asset allocation plan identifies the asset classes in which the System may invest and the corresponding allocation percentages for each such class. The Board's asset allocation plan is set forth in Table 1 of Exhibit A. These allocation percentages are market-value based and specify the minimum, maximum, and target percentages authorized by the Board for each asset class.

These minimum, maximum, and target percentages provide the framework for allocating assets of the System. Within these funding restrictions, and in light of ever-changing market conditions, the Investment Officer allocates funds to approved investment managers or authorized investment vehicles in a manner that, in the Investment Officer's judgment, enhances the System's ability to achieve the System Investment Objective over the long term. In the event an asset class exceeds the maximum allocation percentage or is below the minimum allocation percentage established for such class, the Board authorizes the Investment Officer to rebalance assets in a manner consistent with this Policy in order to bring the allocation percentage within the allowable range for the asset class.

## **B. Reporting and Review of Asset Allocation Plan**

On a quarterly basis, the Investment Officer will provide the Board with a report on the status of the System's asset allocation plan, and the Board will formally review the System's asset allocation plan not less than annually. In the course of its review, the Board will consider current capital market assumptions, the existing allocation percentages and priorities, and possible modification to the asset allocation plan and the list of asset classes. Tables 1, 2 and 3 in Exhibit A are updated by Board action to reflect changes of asset classes, allocation parameters, and capital market assumptions.

## **4. Investment Monitoring**

### **A. In General**

For each asset class within the asset allocation plan, performance measurement benchmarks, investment objectives and guidelines will be established. These benchmarks, objectives and guidelines will form the basis for monitoring the investments of the System.

**(1) Performance Measurement Benchmarks.** The Investment Officer and investment consultants will recommend the performance measurement benchmarks for each asset class for review and approval by the Board. The performance measurement benchmarks for each asset class are set forth in Table 1 of Exhibit A. The Investment Officer and investment consultants will monitor the continued appropriateness of the performance measurement benchmarks and will recommend modifications to the benchmarks as necessary. Table 1 of Exhibit A will reflect any modifications to the benchmarks approved by the Board.

Based on the benchmarks approved for each asset class and the target asset allocation of the System, a composite benchmark for the overall portfolio of the System will be established and

referred to as the “TCDRS Policy Index.”<sup>1</sup> This composite benchmark will be utilized in monitoring the overall investment performance of the System’s investments.

**(2) Investment Objectives and Guidelines.** TCDRS uses investment objectives and guidelines for asset classes to achieve the desired return and control risk on a portfolio-wide basis. Investment objectives and guidelines will be established for each asset class and set forth the performance expectations and the role of the asset class in the portfolio.

With respect to publicly-traded securities, investment guidelines and objectives will be established for each investment manager and will be incorporated into each respective investment manager agreement and will (1) establish relative and/or absolute performance expectations, which are a function of the efficiency of the asset class and the type of investment strategy employed, (2) delineate which investments and strategies the manager is permitted to use to achieve its performance objectives, and which investments and strategies the manager is prohibited from using, and (3) specify the characteristics a manager’s portfolio is expected to display. If TCDRS is invested in a commingled investment vehicle, the manager is expected to adhere to the guidelines governing the respective vehicle.

The investment objectives and guidelines for the respective asset classes of alternative investments are set forth in Section 11, 12, and 13 of this Policy.

## **B. Performance Monitoring**

The Board retains a performance measurement analyst to report quarterly performance of the System’s investments based upon a total return using time-weighted rate of return calculations. These reports will (a) set forth the overall investment performance of the System’s investments and the performance of individual investment managers within asset classes and (b) compare the overall performance of the System’s investments with the System’s Investment Objective set forth in Section 2 and the TCDRS Policy Index.

## **C. Qualitative Due Diligence**

In addition to performance measurement, the Investment Officer and investment consultants will perform qualitative due diligence of the external investment managers in accordance with Section 9. In the broadest sense, the monitoring process is intended to confirm that the reasons TCDRS initially hired the manager still exist. This monitoring and review process should determine whether there has been any material deviation from the investment philosophy and process, the personnel responsible for management of the product are still in place, the organization continues to be stable, performance meets expectations, and the manager strictly adheres to investment guidelines or performance objectives set forth in the manager agreement with the System, or with respect to alternative investments, the guidelines and objectives set forth in this Policy.

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<sup>1</sup>The benchmarks for the Hedge Funds, Strategic Credit, Direct Lending, Private Equity, and Private Real Estate asset classes will be incorporated into the TCDRS Policy Index at their actual weights, as opposed to their target allocations, until they approach their target allocations due to the extended period required to transact in these asset classes. Unfunded target allocations of the Strategic Credit, Direct Lending, Private Equity and Private Real Estate asset classes will be netted against overallocations to Cash Equivalents and Hedge Funds. Any remaining unfunded target allocations will then be invested equally between U.S. Equity and Investment-Grade Bonds and the TCDRS Policy Index weights for each increased accordingly.

**D. Internal Review**

To the extent available for review, the investment staff of the System monitors individual transactions to determine compliance with the TCDRS Act, this Policy, industry standards, and contractual provisions. Material exceptions are promptly reported to the Board.

**E. External Audit**

Annually the external auditor (1) reviews the system of internal controls of the investment process and (2) performs additional tests as are necessary to develop an opinion as to the accuracy, in terms of the financial statements as a whole, of the investment data presented within the System's annual report.

**5. Standards of Care; Ethics; Prohibited Investments****A. Standards of Care**

Section 67, Article XVI, Texas Constitution, is incorporated into the TCDRS Act and provides the Board's overriding standard of care as to the investment of System assets. This Section of the Texas Constitution provides, in relevant part, that the Board "shall exercise the judgment and care under the circumstances then prevailing that persons of ordinary prudence, discretion, and intelligence exercise in the management of their own affairs, not in regard to speculation, but in regard to the permanent disposition of their funds, considering the probable income therefrom as well as the probable safety of their capital."

The investment operations of the Board are also guided by the standard of review specified in the Property Code, Texas Trust Code, Section 117.004(b). This standard provides that the Board's "investment and management decisions respecting individual assets must be evaluated not in isolation but in the context of the trust portfolio as a whole and as a part of an overall investment strategy having risk and return objectives reasonably suited to the trust."

Fiduciary standards of conduct also apply to the System staff, external investment managers, investment consultants, performance measurement analyst, custodian, securities lending agent and others who exercise discretionary authority or control over the management or disposition of System assets.

**B. Ethics; Placement Fees; Political Contributions**

The assets of the System will be invested in accordance with all applicable laws, regulations and applicable Texas constitutional provisions including, but not limited to, Chapter 572 of the Texas Government Code and the Texas Trust Code. The Trustees, Investment Officer, and System employees in performing the investment operations of the System shall also comply with all applicable laws relating to ethics and the TCDRS Code of Ethics. In addition, all investments of the System will comply with the TCDRS Policy for Placement Agents and Political Contributions, attached to this policy as Exhibit B.

### **C. Prohibited Investments under Chapter 808 of the Texas Government Code**

The assets of the System will be invested in accordance with Chapter 808 of the Texas Government Code (Prohibition on Investment in Companies that Boycott Israel). The Investment Officer and staff shall perform all actions necessary to ensure compliance with Chapter 808, including possible divestment of certain investments, to the extent such divestment is not otherwise excepted under Chapter 808 and such divestment is otherwise consistent with the fiduciary duties of the Trustees and the Investment Officer as contemplated by Texas Government Code Section 808.005.

### **6. Duties and Responsibilities of the Board of Trustees**

Pursuant to the TCDRS Act, the Board is responsible for all investing activities, including:

- adopting an asset allocation plan and allocating assets of the System to various asset classes in accordance with such plan;
- selecting an Investment Officer to supervise investment operations for the Board;
- selecting private professional investment consultants and investment managers to assist in investing the assets of the System;
- selecting performance measurement analysts;
- selecting the System's custodians; and
- selecting the System's securities lending agents.

In fulfilling its duties, the Board will:

- develop an Investment Policy, periodically review such Policy, and modify such Policy in the Board's discretion or as recommended by the Investment Officer as circumstances warrant;
- establish an asset allocation plan based on capital market assumptions adopted by the Board and review such asset allocation plan no less frequently than on an annual basis;
- approve performance measurement benchmarks for all assets classes and monitor investment performance utilizing such benchmarks;
- monitor the investments of the System through quarterly reports from the Investment Officer and staff, performance measurement analyst, investment consultants, and others regarding various aspects of the investments of the System, including investment performance, adherence to manager investment objectives and guidelines, cash flow concerns, and transactions; and
- obtain such information, reports, expert advice and assistance with respect to Board actions as is necessary to exercise Board responsibilities prudently.

### **7. Duties and Responsibilities of the Investment Officer**

#### **A. In General**

The Board will appoint an Investment Officer to supervise the investment operations on behalf of the Board (the "Investment Officer"). The Investment Officer manages the TCDRS investment funds pursuant to this Investment Policy and subject to the TCDRS Act, the TCDRS Code of Ethics, and all other applicable law and policies of the Board.



## **B. Duties and Responsibilities**

The duties and responsibilities of the Investment Officer will include:

- allocating those assets of the System that are held for investment purposes in accordance with the asset allocation plan adopted by the Board and among such investment managers as the Board has selected;
- monitoring each investment manager and reporting to the Board regarding their performance and compliance with the provisions of the TCDRS Act, manager investment guidelines, and the policies and procedures adopted by the Board regarding investments;
- managing the investment of the portion of System assets that the Board allocates for internal investment, including selecting which securities to purchase, hold, and sell among those assets, in accordance with the policies and procedures adopted by the Board;
- reporting quarterly to the Board on the investment operations of the System as described below;
- conducting evaluations of investment service providers and investment managers for recommendations to the Board and monitoring the performance of selected providers and managers pursuant to Sections 8 and 9; and
- managing the administrative investment operations of the System, including, but not limited to, executing or terminating investment or service contracts.

## **C. Investment Officer's Report**

The Investment Officer will report quarterly to the Board on (a) the overall performance of the System's investments, (b) the investment performance of the investment managers of each asset class within the TCDRS portfolio, (c) pursuant to Section 3B, the status of the asset allocation plan, (d) all transactions managed internally, including performance of such transactions, as applicable, (e) any material infractions (of which the Investment Officer is aware) of third party providers and managers retained by the Board to invest, settle, or safekeep the System's investment assets, and (f) any other matters requested by the Board from time to time.

## **D. Powers and Authority**

The Investment Officer and employees selected by the Investment Officer and who work under his or her supervision may take all actions necessary to carry out the investment directions of the Board provided such actions are consistent with the terms of the TCDRS Act and other applicable law, this Policy, and the TCDRS Code of Ethics. Such actions include, but are not limited to:

- committing System funds for purchasing of securities and making other authorized investments;
- transferring funds from the accounts at the System's custodian to (1) TCDRS sub-accounts of said custodian managed on behalf of TCDRS by investment managers, (2) various investment vehicles selected by the Board, such as collective or pooled trusts or alternative investment funds, and (3) the depository account of TCDRS;

- selling securities and other interests in investment vehicles owned by the System;
- executing documents needed to carry out the investment activities of the System, including, without limitation, documents necessary for (1) the transfer of bonds, stocks and other securities, (2) the pledge, substitution and release of securities pledged to secure funds at the custodian, and (3) the subscription documentation of acquisition of interests in private market investment funds; and
- authorizing drafts against funds of the System on deposit in the operating accounts with the custodian for the purchase of securities or the transfer of funds authorized above.

#### **E. Authority of Investment Officer to Protect the System's Interests**

TCDRS understands that it is important to have the ability to quickly respond to unexpected changes in market conditions, particularly in times of volatility or financial crisis.

For the purpose of better protecting or enhancing the System's interests and achieving the System Investment Objective over the long term, in addition to and without limiting the duties, responsibilities, powers and authority already provided in this Section 7, the Investment Officer has the authority to take action with respect to any investment matter (including, without limitation, the authority to invest additional funds) involving a situation or condition for which the time to act is limited and for which it is reasonable to believe that the failure to take prompt action may adversely affect the System's interests and objectives. By way of example, and not limitation, the Investment Officer has the authority to invest additional funds in response to a capital call when the time to act is limited and it is reasonable to believe that the failure to promptly respond may adversely affect the System's interests and objectives.

If and to the extent the Investment Officer takes action pursuant to the authority provided by this Section 7E, the Investment Officer shall promptly notify the Board and provide an account of the action taken and the relevant facts and circumstances that led to the decision to take such action.

#### **F. Evaluation of Performance**

Consistent with the terms of the Board of Trustees' Policy Manual, the Board will (1) monitor the performance of the Investment Officer to ensure his or her actions are consistent with the System Investment Objectives, the terms of this Policy, the investment directions provided by the Board, and the System's Code of Ethics and (2) conduct a formal annual evaluation of the performance of the Investment Officer.

### **8. External Investment Service Providers**

#### **A. Investment Consultant**

(1) **In General.** The Board will retain one or more investment consultants to provide investment data, analysis, and recommendations to assist the Board and investment staff in making optimum investment decisions. The Investment Officer will assist the Board in selecting investment consultants and monitoring their performance.

**(2) Duties and Responsibilities.** An investment consultant will provide services as requested by the Board and staff, which may include:

- developing appropriate investment policies;
- evaluating and recommending asset allocation alternatives;
- conducting due diligence on and searches for investment managers, custodians, or securities lending agents;
- assisting the Board in the development of investment manager guidelines and objectives;
- analyzing on-going investment performance of the System and individual managers and reporting such analysis to the Board on a quarterly basis;
- presenting to the Board formal evaluations of individual external managers;
- analyzing the financial condition of the plan;
- participating in benefit design issues; and
- providing any other investment-related services or advice that the Board or staff may request from time to time.

#### **B. Performance Measurement Analyst**

The Board will retain a performance measurement analyst to evaluate and analyze the investment results of the System's investment assets for which reliable and appropriate measurement methodology and procedures exist. The measurement analyst will provide written reports to the Board on a quarterly basis as described in Section 4B.

#### **C. Custodian and Securities Lending Agents**

**(1) Custodian.** The Board will retain a custodian to hold and account for the System's securities and cash available for investment. The custodian will maintain and make available information concerning the holdings and transactions of the System to the Board, the Investment Officer and staff, the investment consultants, the performance measurement analyst, and external investment managers. With respect to cash available for investment purposes, the custodian has the authority to invest such cash in accordance with Section 10. If the Board retains investment managers to manage the System's portfolios through collective investment funds, the investment managers so selected may also be appointed as custodians of the System's cash and securities for the purpose and with the authority described herein.

**(2) Securities Lender.** The Board may authorize an appointed custodian or other qualifying entity to lend the securities of the System. The terms by which the securities lending program is conducted shall be reflected in the applicable contractual agreements and Board actions regarding these appointments.

#### **D. Investment Legal Counsel**

The Board will retain one or more attorneys or law firms to serve as outside investment counsel for the purpose of assisting the Investment Officer and investment staff with legal matters related

to the investment operations of the System. Such matters may include the review and negotiation of contracts and other investment documentation related to external investment service providers or investment managers and handling any litigation related to investment operations.

## **E. Selection, Monitoring, and Review of Investment Providers**

(1) **Selection.** Unless otherwise provided above, the initial search for candidates for appointments made under this Section 8 will be conducted by the Investment Officer. The Investment Officer (or the Board) may seek the assistance of investment consultants or other external consultants in performing the search and related due diligence. Following a thorough and diligent search, the Investment Officer will recommend qualifying candidates to the Board for evaluation and final selection. All appointments made pursuant to this Section 8 require the final approval of the Board. Appropriate legal counsel for the System will review the agreement or agreements governing the relationship between the System and all appointments made pursuant to this Section 8 prior to execution of the agreement or agreements by the authorized officer of the System. Evidence of such review will be included with the agreement or agreements that are retained as part of the records of the System. The external investment providers selected by the Board are set forth on Exhibit C.

(2) **Monitoring and Review.** Unless otherwise provided in this Section 8, the operations and performance of the service providers in this Section 8 will be monitored by the Investment Officer. Any misconduct or violations of the terms of the applicable service agreement, this Policy, the TCDRS Act, or TCDRS Code of Ethics committed by a provider will be reported to the Board by the Investment Officer during his or her quarterly report. Consistent with the TCDRS Board of Trustees' Policy Manual, the Board will periodically review and evaluate the performance of appointees in this Section 8. In such evaluation, the Board may solicit the comments and recommendations of the Investment Officer, other investment staff, and other external consultants.

## **9. Investment Managers**

### **A. Selection**

In accordance with the asset allocation plan, assets in the TCDRS investment portfolio are subdivided into the asset classes shown in Table 1 of Exhibit A. The Board is ultimately responsible for the selection of investment managers to manage the portfolios within the asset classes. However, the Investment Officer and appropriate investment consultants will assist the Board in the selection process.<sup>2</sup> Specific selection procedures for publicly-traded investment managers and alternative investment managers are set forth in Section 9C and 9D below. The current investment managers of the various asset class portfolios are listed in Table 2 of Exhibit A.

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<sup>2</sup> As provided under the TCDRS Code of Ethics, potential investment managers may not contact or solicit trustees directly regarding investment management services, funds or products. All solicitations and inquiries with respect to investment management opportunities should be directed to the Investment Officer or appropriate investment consultant of TCDRS. Direct contact or communication with trustees for the purpose of soliciting business opportunities may disqualify an investment manager from consideration.

## **B. Monitoring and Remedial Action**

The operations of an investment manager will be monitored by the Investment Officer and appropriate investment consultants to ensure compliance with (a) the manager's investment objectives and guidelines or with the applicable investment guidelines and performance objectives for alternative investments, as applicable, (b) the terms of this Policy, and (c) the TCDRS Act and other applicable law. The general monitoring of System investment is discussed in Section 4, and specific monitoring procedures for publicly-traded investment managers and alternative investment managers are set forth in Section 9C(2) and 9D(4) below.

If an investment manager (1) fails to conform to the applicable investment objectives and guidelines and performance objectives, (2) fails to operate in a safe and sound manner, (3) experiences a material change in ownership or personnel that impacts the reasons TCDRS initially hired the investment manager, or (4) violates the terms of the investment manager agreement or other governing agreement, this Policy, the TCDRS Act, or other applicable law, the Investment Officer is authorized to take appropriate remedial action. Remedial action may include immediate termination. The Investment Officer shall promptly report to the Board any remedial action taken pursuant to this Section 9B.

## **C. Publicly-Traded Securities Investment Managers**

(1) **Selection and Board Approval Process.** The Investment Officer and appropriate investment consultant will conduct the initial search for investment managers for publicly-traded securities portfolios and perform the due diligence required in connection with the search. The process for this search will include developing the criteria for the investment mandate, determining the appropriate managers for the investment mandate, and interviewing the most qualified candidates. The appropriate investment consultant and Investment Officer will consult following the search process and jointly recommend a candidate or candidates to the Board. The Board will evaluate such candidate(s) and make the final selection of an investment manager.

(2) **Monitoring.** As described in Section 4, the Investment Officer, in conjunction with an investment consultant, will monitor the operations of the investment managers selected by the Board to determine compliance with the investment guidelines and objectives established for the investment manager. With the assistance of the reports of the Investment Officer, an investment consultant, and/or performance measurement analyst, the Board will also review and monitor the investment performance of each investment manager on a quarterly basis.

(3) **Periodic Review.** In addition to the monitoring described above, an investment consultant will periodically, but no less frequent than once every three years, perform a formal evaluation of the performance of the publicly-traded securities investment managers. After considering the evaluations and recommendations of the appropriate investment consultant, the Board will determine what action, if any, should be taken with respect to the investment managers. The Investment Officer will maintain a schedule for these periodic reviews.

## **D. Alternative Investment Managers**

(1) **Alternative Investments—defined.** For purposes of this Policy, “alternative investments” are investments within one of the following classes:

- Private equity – investments in business made through means other than through publicly-traded securities such as buyout investments and venture capital.
- Distressed debt – investments in the debt of financially distressed companies.
- Direct lending – investments in privately originated debt to companies or to real estate investors, including through business development companies, as well as other yield oriented non-correlated funds including, but not limited to, royalty streams and aviation leases.
- Strategic credit – investments primarily in debt instruments that provide return opportunities driven by dislocations in the capital markets or by credit risk.
- Hedge funds – investment strategies with the goal of achieving positive returns with a degree of independence from movements in financial markets and independent of traditional performance benchmarks.
- Real assets – investments in assets that have a return linked to inflation, such as energy related investments and other commodity based investments.
- Real estate – investments that have an ownership interest in either timber or direct real estate properties, either income or non-income producing.

Alternative investments are typically made through an interest in a limited partnership but also may be made through another vehicle (e.g., separate account, commingled fund, offshore entity, etc.), as appropriate for the individual investment.

**(2) Selection.** TCDRS has developed a process to source, evaluate, and select these investment opportunities as they arise. In selecting investment vehicles for recommendation, the Investment Officer and the investment consultant providing services with respect to one or more alternative asset classes (an “alternative investment consultant”) shall comply with this Policy and shall endeavor to select the highest quality managers available that will enable the various alternative asset programs to meet their long-term return objectives within the parameters established by these guidelines. In connection with this process, the alternative investment consultant shall conduct extensive due diligence on potential alternative investments for the purpose of making recommendations to the Board. Selection of alternative asset vehicles will take into consideration the following criteria:

- Quality and stability of the firm and investment team;
- Previous investment track record of the investment vehicle manager;
- Proposed investment strategy;
- Ability of investment vehicle manager to demonstrate capability to generate superior returns;
- Operational capabilities;
- Legal and economic terms governing the partnership or other vehicle;
- Alignment of interests; and
- TCDRS portfolio fit.

Recognizing the importance of vintage year diversification and the importance of striving to achieve adequate portfolio diversification by investing in different types of alternative asset investments, in different partnerships or other vehicles, with managers representing various investment styles, industries and geographic concentrations, the Investment Officer and alternative

investment consultant will develop an annual plan for alternative investments in private equity, private real estate, and distressed debt and present each such plan to the Board. This annual plan will reflect a pace of commitments that, considering forecasted cash flows, is expected to achieve the System's targeted allocation to the alternative asset class over a reasonable time period. This annual plan will be integrated with the existing portfolio and the prevailing economic environment and market conditions.

**(3) Board Approval Process.** Because of the level of diligence and operational flexibility required to make certain alternative investments in a timely and prudent manner, the Board has established a process for the approval of alternative investments.

The alternative investment consultant and the Investment Officer will periodically present to the Board for approval a list of recommended investments in each alternative investment asset class. These alternative investments will be recommended based on the alternative investment consultant's analysis and due diligence performed on such alternative investments.

Once the Board has approved the list of recommended investments, the Investment Officer and the alternative investment consultant will select investments from such list to carry out the annual plan for each of the alternative investment asset classes. The investments will be selected in a manner intended to enable TCDRS to meet its long-term return objectives set forth for the respective asset class. The investment objectives and guidelines for the respective asset classes of alternative investments are set forth in Section 11, 12, and 13 of this Policy. Once an investment is selected, the alternative investment consultant's analysis for each selected investment will be set forth in a report and made available to the Board.

Not all recommended alternative investments on the list approved by the Board will be completed for reasons including, but not limited to, unavailability of capacity on the part of the approved alternative investment, selection(s) by the Investment Officer and alternative investment consultant among approved alternative investments with similar strategies, and an inability to successfully negotiate legal and/or economic terms. Counsel employed by TCDRS will review and assist in the negotiation of each approved alternative investment's governing legal documents.

In addition to approving the list of recommended investments, the Board may authorize the Investment Officer to invest in alternative investments that have not previously been presented to the Board if an investment opportunity arises on which action must be taken prior to the next meeting of the Board. An authorization of this type will identify the asset classes in which the Investment Officer has such approval and place both aggregate and individual dollar limits for such investment. The Investment Officer shall promptly notify the Board of any investments made pursuant to this provision, and the Board will ratify such investments at its next regularly scheduled meeting.

**(4) Monitoring.** As described in Section 4, the Investment Officer, in conjunction with the alternative investment consultant, will monitor the operations of the alternative investments selected by the Board to determine compliance with the applicable investment guidelines and objectives. In the monitoring process for alternative investments, the Investment Officer and staff and/or alternative investment consultant will extend the initial due diligence into a formal process which regularly seeks to determine whether the manager is meeting the applicable alternative asset program's investment objectives and guidelines, as well as other requirements. In the broadest

sense, the monitoring process is intended to determine whether the initial reasons for selecting the investment vehicle remain valid and focuses on the following:

- Compliance with reporting and valuation requirements;
- Continuity of investment philosophy and process;
- Stability of personnel and organization; and
- Performance and risk management.

Additionally, in connection with monitoring alternative investments, the Investment Officer and staff and/or alternative investment consultant shall conduct portfolio reviews and on-site due diligence as necessary. Site visits will also be performed to confirm that appropriate infrastructure is in place to support the investment process.

With respect to the monitoring of alternative investments, the System will also take appropriate advantage of the rights offered TCDRS through limited partnership agreements or other governing agreements. In addition to regular performance and portfolio reviews, meetings with alternative investment managers and site visits, the Investment Officer will monitor adherence to partnership agreements and other governing agreements by reviewing allocations, distributions, expenses, restrictions, valuations, amendments, potential conflicts of interest, reporting requirements, and timely expiration of investment periods.

#### **E. Legal Review and Terms and Conditions**

Investment legal counsel for the System will review the agreement or agreements governing the relationship between the System and all selections made pursuant to this Section 9 prior to execution of the agreement or agreements by the authorized officer of the System. Evidence of such review will be included with the agreement or agreements that are retained as part of the records of the System.

In addition, the Board may establish policies relating to the terms and conditions for investment agreements as set forth in Exhibit D. The Investment Officer may waive any requirements or directives for terms and conditions of investment agreements set forth in the Board's policy if the Investment Officer believes proceeding with such investment without such terms and conditions is in the best interests of the System.



## **10. Investment Guidelines and Performance Measurement Standards for Internally Managed Assets**

### **A. Cash Equivalents**

Cash equivalents may be invested in investment grade instruments and funds that are safe, sound, liquid and provide competitive returns. Additionally, the Board may select entities to serve as custodians of the System's cash available for investment and may authorize the custodians to invest the cash so held in short-term securities.

## **11. Investment Guidelines and Performance Measurement Standards for Private Equity Portfolios**

### **A. Introduction**

The following investment guidelines and objectives govern the implementation of the Private Equity Program. The Private Equity Program includes venture capital, buyout and real asset investments, which comprise the Private Equity asset allocation of the System, as well as Distressed Debt, Strategic Credit, and Direct Lending asset allocations of the System.

### **B. Investment Objective**

The investment objective of the Private Equity Program is to enhance the total fund performance through the investment in non-publicly-traded securities by generating a long-term rate of return that exceeds that of publicly-traded equities. Private equity investments are expected to be illiquid and long-term in nature.

Given the above investment objective, the overall expectations of the Private Equity Program and its various components are as follows:

- *Overall Expectation for Private Equity Program:* Over the long-term, performance of the Private Equity Program is expected to exceed the TCDRS U.S. Equity asset class benchmark by 3%, net of fees and expenses.
- *Overall Expectation for Distressed Debt Component:* Over the long term, performance of the Distressed Debt component of the Private Equity Program is expected to exceed that of the TCDRS Strategic Credit asset class benchmark by 3%, net of fees and expenses.
- *Overall Expectation for Direct Lending Component:* Over the long term, performance of the Direct Lending component is expected to exceed that of the TCDRS Strategic Credit asset class benchmark by 2%, net of fees and expenses.
- *Overall Expectation for Strategic Credit Component:* Over the long term, the Strategic Credit component is expected to exceed that of the TCDRS Strategic Credit asset class benchmark, net of fees and expenses.

The long-term investment performance objectives of the Private Equity Program and its various components are set forth in Table 2 of Exhibit A.

The Distressed Debt, Direct Lending, and Strategic Credit components of the Private Equity Program will have performance benchmarks appropriate for credit asset classes, and such performance benchmarks will be utilized when incorporating the allocation of these components of the Private Equity Program into the TCDRS Policy Index.

### C. Investment Guidelines

**(1) Private Equity Investments.** Investment is authorized in vehicles that invest in a broad array of various non-publicly-traded securities, including but not limited to:

- *Buyout Investments* include investments in acquisitions, growth equity, recovery investments, subordinated debt, and special situations (a class which represents a diversified strategy across many sub-classes). Investments are made across the market capitalization spectrum and typically involve the purchase of a control position (primarily majority positions, with some minority positions) in an established company and may include the use of leverage. Investments are typically made in years one through six and returns typically occur in years three through ten. Investments may be made in companies that are either U.S. or non-U.S. domiciled.
- *Venture Capital Investments* include investments in companies in a range of stages of development from start-up/seed-stage, early stage, and later/expansion stage. Investments are typically made in years one through six and returns typically occur in years four through ten. Investments may be made in companies that are either U.S. or non-U.S. domiciled.
- *Distressed Debt Investments* include investments in the debt instruments of companies which may be publicly traded or privately held that are financially distressed and are either in bankruptcy or likely candidates for bankruptcy. Typical holdings are senior and subordinated debt instruments and bank loans. Equity exposure is acceptable as debt positions are often converted to equity during the bankruptcy reorganization process. Investments are typically made in years one through five and returns typically occur in years three through ten. Investments may be made in companies that are either U.S. or non-U.S. domiciled.
- *Direct Lending Investments* include investments primarily in privately originated debt and preferred equity instruments to companies (including through business development companies) and privately originated senior and mezzanine debt for real estate investors that provide return opportunities resulting from dislocations in the capital markets. Direct lending investments may also include other types of yield oriented non-correlated funds including, but not limited to, royalty streams and aviation leases. Investments may be made that are either U.S. or non-U.S. domiciled.
- *Strategic Credit Investments* include investments primarily in debt instruments that provide return opportunities resulting from dislocations in the capital markets or from credit risk. Investments may be made in companies that are either U.S. or non-U.S. domiciled.
- *Real Asset Investments* include investments in assets that have a return linked to inflation, such as energy related investments and other commodity based investments.

Real estate and timber investments are excluded from this category. Investments may be made in companies that are either U.S. or non-U.S. domiciled.

- *Co-Investments* include direct investments in companies made alongside the System's existing general partners and may include both control positions or non-control positions where there are significant governance rights and control provisions. They may include buyout, growth equity and real asset investments and may be in companies that are U.S. or non-U.S. domiciled. Co-investments are subject to the specific guidelines set forth in Section 11C(10) below.

**(2) Private Equity Investment Targets.** For the Private Equity Program, the targeted and range of investment exposures, measured at fair value, to the various private equity investment classes are shown in the following table:

<b>Style</b>	<b>Target</b>	<b>Minimum</b>	<b>Maximum</b>
Buyout	50%	30%	70%
Venture Capital	20%	10%	35%
Non-U.S.	20%	5%	30%
Real Assets	10%	0%	25%
Co-investments	0%	0%	10%
Total	100%		

Note: The Non-U.S. exposure refers to where the partnership or other vehicle is domiciled. The real asset exposure refers to the targeted strategy of the partnership or other vehicle.

The targets for the Distressed Debt, Direct Lending and Strategic Credit components of the Private Equity Program are listed in Table 1 of Exhibit A as separate investment allocations.

It is recognized that it may take an extended period for the Private Equity Program to be fully invested and that there may be deviations from the previously mentioned targets during the initial funding period.

**(3) Investment Vehicles.** The vehicles for private equity investments are typically limited partnerships, but may also include other entities such as limited liability companies or offshore corporations. These investment vehicles may invest in any type of security throughout the capital structure.

**(4) Industry/Geographic Concentration.** TCDRS shall endeavor to limit the potential for any one investment to negatively impact the long-term results of the Private Equity Program by investing across a variety of industries and geographic locations. For investments in venture capital, it is recognized that opportunities may be most readily available in a relatively limited number of industries.

**(5) Investment Vehicle Concentration.** Other than Strategic Credit or Direct Lending funds, TCDRS shall not comprise more than 30% of any one investment vehicle, inclusive of assets in a master fund and/or offshore fund. Any one investment vehicle may not comprise more than 10% of the Private Equity Program once it is fully invested, calculated on a committed capital basis. The optimum number of investment vehicles in the portfolio and the maximum exposure to any one investment vehicle varies with time and will be evaluated as part of the annual plan for the Private Equity Program.

**(6) Investment Timing.** TCDRS shall strive to limit the potential for any one investment to negatively impact the long-term results of the Private Equity Program by investing across business cycles and vintage years. Investments shall be selected with the goal of gaining exposure to the array of financing stages by opportunistically exploiting the best investments at different stages of the business cycle.

**(7) Liquidity.** Private equity investments are illiquid and typically have expected holding periods of 10-12 years. Investments are typically held until maturity and selling prior to maturity may result in realizing a sales price that reflects a discount to fair market value. Liquidity risk is managed by minimizing the possibility of forced sales that may arise from exceeding maximum exposure limits or lowering asset allocation targets to private equity investments.

**(8) Distributed Securities.** TCDRS shall ordinarily direct the sale of securities distributed by its investment vehicles as soon as practically possible and strive to not impair the value of the security.

**(9) Performance Evaluation.** The individual investment vehicle performance, as measured by the internal rate of return, will be evaluated compared to the performance of respective peer universes and vintage years, as reflected by the Private Equity Program benchmark; provided, however, the Strategic Credit, Distressed Debt and Direct Lending components within the Private Equity Program will instead be evaluated compared to the asset class benchmarks set forth on Table 1 of Exhibit A. **It is recognized that immature private equity investments will ordinarily have a “J-curve effect” whereby there are low to negative returns in the initial years due to the payment of investment management fees during a period when investments are typically carried at cost and returns have not been realized.**

#### **(10) Co-Investment Guidelines**

<b>Category</b>	<b>Guideline</b>
Annual capital deployment	Not to exceed 10% of targeted private equity annual commitments
GP relationship	May only co-invest with the System’s existing general partners
Max equity size	Not more than \$25 million co-investment in any transaction determined at the time of initial co-investment
Max equity ownership per deal	Not more than 40% of the direct investment (combined ownership through the fund and co-investment) determined at the time of initial co-investment
Max number of deals per year	10
Investment style	No co-investments in venture capital
Investment strategy	Co-investments must be consistent with the general partner’s strategy, focus and skill set
Control	May only invest in companies where the Investment Group (consisting of general partner, co-investment partners and affiliated funds) has control or is in a non-control position but has significant governance rights and control provisions
Board representation	General Partner must have at least one Board seat
Investment vehicle	Prefer partnership structure to limit liability, but investment can be made directly as well
Terms	On substantially similar or better terms and conditions as provided to the primary partnership or the partnership in which the System is invested

## 12. Investment Guidelines and Performance Measurement Standards for Private Real Estate Portfolios

### A. Introduction

The following investment guidelines govern the implementation of the Private Real Estate Program.

### B. Investment Objective

The investment objective of the Private Real Estate Program is to enhance the total fund performance through the investment in non-publicly-traded vehicles that invest in a broad array of real estate properties and ventures by generating a long-term rate of return that exceeds that of publicly-traded real estate securities. Private real estate investments are expected to be illiquid and long-term in nature.

Given the above investment objective, the overall performance expectation of the Private Real Estate Program is to, over the long-term, exceed the Private Real Estate Program benchmark as set forth in Table 1 of Exhibit A. Performance of the Private Real Estate Program will also be compared against such benchmark.

### C. Investment Guidelines

**(1) Private Real Estate Investments.** Investment is authorized in vehicles that invest in a broad array of real estate properties and ventures, including but not limited to:

- *Real Estate Partnerships* include investments in private vehicles (e.g. limited partnerships or limited liability companies) that have an ownership interest in direct real estate properties, either income-producing or non-income producing. The investment strategies may include those defined as “value-added” or “opportunistic.” “Value added” strategies derive their return from both income and appreciation. “Opportunistic” strategies derive their return primarily through appreciation. Investments may be made in companies that are either U.S. or non-U.S. domiciled.
- *Timber Partnerships* include investments in private vehicles (e.g., limited partnerships or limited liability companies) that have an ownership interest in properties where the majority value of the property is derived from income producing timber. Investments may be made in companies that are either U.S. or non-U.S. domiciled.

**(2) Private Real Estate Investment Targets.** For the Private Real Estate Program, the targeted and range of investment exposures to the various private real estate investment classes are shown in the following table:

Style	Target	Minimum	Maximum
Value Added	20%	0%	30%
Opportunistic	80%	60%	100%
Timber	0%	0%	20%
Total	100%		

It is recognized that it may take an extended period of time for the Private Real Estate Program to be fully invested and that there may be deviations from the previously mentioned targets during the initial funding period.

**(3) Investment Vehicles.** The vehicles for private real estate investments are typically partnerships but may also include other entities such as limited liability companies or offshore corporations. These investment vehicles may invest in a broad array of real estate properties and ventures.

**(4) Property Type/Geographic Concentration.** TCDRS shall endeavor to limit the potential for any one investment to negatively impact the long-term results of the Private Real Estate Program by investing across a variety of property types and geographic locations.

**(5) Investment Vehicle Concentration.** TCDRS shall not comprise more than 30% of any one investment vehicle, and any one investment vehicle may not comprise more than 10% of the Private Real Estate Program once it is fully invested, calculated on a committed capital basis. The optimum number of investment vehicles in the portfolio and the maximum exposure to any one investment vehicle varies with time and will be evaluated as part of the annual plan for the Private Real Estate Program.

**(6) Investment Timing.** TCDRS shall strive to limit the potential for any one investment to negatively impact the long-term results of the Private Real Estate Program by investing across business cycles and vintage years.

**(7) Liquidity.** Private real estate investments are illiquid and typically have expected holding periods of 8-10 years. Investments are typically held until maturity and selling prior to maturity may result in realizing a sales price that reflects a discount to fair market value. Liquidity risk is managed by minimizing the possibility of forced sales that may arise from exceeding maximum exposure limits or lowering asset allocation targets to private real estate investments.

**(8) Distributed Securities.** TCDRS shall ordinarily direct the sale of securities distributed by its investment vehicles as soon as practically possible and strive to not impair the value of the security.

**(9) Performance Evaluation.** The individual investment vehicle performance, as measured by the internal rate of return, will be evaluated compared to the performance of respective peer universes and vintage years, as reflected by the Private Real Estate Program benchmark set forth on Table 1 of Exhibit A. **It is recognized that immature private real estate investments will ordinarily have a “J-curve effect” whereby there are low to negative returns in the initial years due to the payment of investment management fees during a period when investments are typically carried at cost and returns have not been realized.**

### 13. Investment Guidelines and Performance Measurement Standards for Hedge Fund Portfolios

#### A. Introduction

The following investment guidelines govern the implementation of the Hedge Fund Program.

#### B. Investment Objective

The investment objective of the Hedge Fund Program is to utilize a portfolio of hedge funds to achieve positive returns with a degree of independence from movements in equity and fixed income markets and independent of traditional performance benchmarks. Hedge funds represent a distinctive investment style that is different from traditional, long-only funds. A fundamental difference is that hedge fund managers may use a wider range of investment techniques, such as leverage, short selling and derivatives to achieve their objectives. A portfolio of hedge funds is expected to deliver an absolute return with a risk level between that of stocks and bonds. The portfolio should also have a low correlation with other asset classes and therefore help diversify TCDRS. As such, the objective of the Hedge Fund Program is to reduce the volatility of the TCDRS total fund while continuing to maximize returns in a variety of market environments.

Given the above investment objective, the overall expectation and performance of the Hedge Fund Program will be compared against the benchmark for the Hedge Fund Program as set forth on Table 1 of [Exhibit A](#).

#### C. Investment Guidelines

(1) **Hedge Fund Styles.** Investment is authorized in hedge funds that use a broad array of various hedge fund styles, including but not limited to:

- *Market Neutral strategies* such as equity market neutral, fixed income arbitrage, and convertible bond arbitrage.
- *Event Driven strategies* such as risk arbitrage, merger arbitrage, activist and other event-driven strategies.
- *Credit/Distressed strategies* such as capital-structure arbitrage, fixed-income arbitrage, and distressed debt/equity.
- *Equity long/short strategies* where there is combination of long and short positions primarily in publicly-traded equities, with a net market exposure less than that of the overall equity market. Strategies may be focused on U.S., non-U.S., and/or specialty mandates.
- *Global Macro strategies* such as all market portfolios, opportunistic long-only, managed futures, currency, dedicated short selling strategies or other specialty strategies.
- *Multi-strategies* where hedge funds invest using a combination of previously described strategies.

(2) **Hedge Fund Investment Targets.** For the Hedge Fund Program, the targeted and range of investment exposures to the various hedge fund styles are shown in the following table:

<b>Style</b>	<b>Target</b>	<b>Minimum</b>	<b>Maximum</b>
Market Neutral	5%	0%	20%
Event Driven	10%	0%	30%
Credit/Distressed	30%	15%	40%
Equity Long/Short	35%	15%	50%
Global Macro	15%	0%	30%
Multi-Strategy	5%	0%	15%
Total	100%		

(3) **Investment Vehicles.** The vehicles for hedge fund investments are typically a variety of commingled vehicles, such as limited partnerships, limited liability companies, or offshore corporations. Separately managed accounts and “fund of one” structures may also be utilized.

(4) **Investment Constraints.** No more than 15% of the Hedge Fund Program’s market value of assets may be invested in any single Multi-Strategy hedge fund, and no more than 15% of the Hedge Fund Program’s market value of assets may be invested in any single-strategy hedge fund (Market Neutral, Event Driven, Credit/Distressed, Equity Long/Short, Global Macro). The weightings to individual funds and exposures may temporarily exceed the limits previously indicated to the extent that lock-up periods or other liquidity restrictions with respect to a hedge fund prevent an immediate reallocation.

(5) **Liquidity.** Individual hedge fund investments may have specified liquidity parameters defining lock-up periods and withdrawal frequency. Liquidity risk is managed by monitoring and maintaining a schedule of the liquidity of the individual hedge funds and aggregating it at the total Hedge Fund Program level.

(6) **Distributed Securities.** TCDRS shall ordinarily direct the sale of securities distributed by its investment vehicles as soon as practically possible and strive to not impair the value of the security.

(7) **Performance Evaluation Benchmark.** The performance of individual hedge funds will be evaluated relative to peer universes, as measured by the Hedge Fund Program’s benchmark on Table 1 of Exhibit A.

## 14. Proxy Voting

TCDRS recognizes that publicly-traded securities and other assets of the System include certain ancillary rights, such as the right to vote on shareholder resolutions at companies’ annual shareholders’ meetings. The investment managers may be authorized to vote proxies or respond to “corporate action notifications” on such securities all in accordance with the contracts between the System and such managers. Each appropriate investment manager contract will include proxy voting guidelines that have been reviewed by the Investment Officer and an investment consultant.



## **15. Review and Modification of Investment Policy**

The Board will review this Policy on a regular basis and may modify this Policy from time to time at the Board's discretion. Modifications to the Policy may also be submitted for consideration to the Board by the Investment Officer as circumstances warrant.

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**Exhibits**

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**Exhibit A**

**Tables for Asset Allocation Parameters, Individual Investment Manager Portfolio Parameters, and Capital Market Assumptions**

**Table 1. Asset Allocation Parameters**

Asset Class (Portfolio)	Measurement Benchmark (Index)	Min %	Max %	Target %
U.S. Equities	Dow Jones U.S. Total Stock Market Index	7%	18%	10.5%
Global Equities	MSCI World (net) Index	0%	6%	2.5%
Intl Equities – Developed Markets	MSCI World ex USA (net) Index	6%	16%	10%
Intl Equities – Emerging Markets	MSCI Emerging Markets (net) Index	3%	11%	7%
Investment-grade Bonds	Bloomberg Barclays US Aggregate Bond Index	1%	15%	3%
Strategic Credit <sup>1, 2</sup>	FTSE High-Yield Cash-Pay Capped Index	5%	19%	12%
Direct Lending <sup>1, 2</sup>	S&P/LSTA Leveraged Loan Index	4%	18%	11%
Distressed Debt <sup>1</sup>	Cambridge Associates Distressed Securities Index <sup>5</sup>	1%	5%	2%
TIPS	Bloomberg Barclays US 10 Year Breakeven Inflation Index	0%	3%	0%
REIT Equities	67% FTSE NAREIT All Equity REITs Index +33% S&P Global REIT (net) Index	0%	5%	2%
Commodities	Bloomberg Commodities Index	0%	3%	0%
Master Limited Partnerships	Alerian MLP Index	1%	5%	3%
Private Real Estate Partnerships <sup>2</sup>	Cambridge Associates Real Estate Index <sup>3</sup>	1%	10%	6%
Private Equity <sup>2</sup>	Cambridge Associates Global Private Equity & Venture Capital Index <sup>4</sup>	10%	26%	18%
Hedge Funds <sup>2</sup>	Hedge Fund Research, Inc. (HFRI) Fund of Funds Composite Index	5%	20%	13%
Cash Equivalents <sup>2</sup>	90-day US Treasury	0%	10%	0%

<sup>1</sup>Although Strategic Credit, Direct Lending, and Distressed Debt are part of and subject to the investment guidelines of the Private Equity Program, the objectives and performance characteristics of these investments are more similar to credit investments and, thus, such investments are placed in separate asset classes as opposed to Private Equity.

<sup>2</sup> Due to the extended period required to transact in Hedge Funds, Strategic Credit, Direct Lending, Private Equity and Private Real Estate asset classes, the benchmarks for these asset classes will be incorporated into the TCDRS Policy Index at their actual weights until they approach their target allocations. Unfunded target allocations of the Strategic Credit, Direct Lending, Private Equity and Private Real Estate asset classes will be netted against overallocations to Cash Equivalents and Hedge Funds. Any remaining unfunded target allocations will then be invested equally between U.S. Equity and Investment-Grade Bonds with the TCDRS Policy Index weights for each increased accordingly.

<sup>3</sup> Includes vintage years 2007-present of Quarter Pooled Horizon IRRs.

<sup>4</sup> Includes vintage years 2006-present of Quarter Pooled Horizon IRRs.

<sup>5</sup> Includes vintage years 2005-present of Quarter Pooled Horizon IRRs.

**Table 2. Individual Investment Manager Portfolio Parameters**

Asset Classes (Portfolios)	Investment Manager	Investment Style	Long-term Performance Objective
U.S. Equities	State Street Global Advisors	Passive	Replicate return of Dow Jones U.S. Total Stock Market Index before fees
International Equities - Developed	State Street Global Advisors	Passive	Replicate return of MSCI World ex USA (net) Index before fees
	Marathon-London International Fund	Active	Annualized net returns > 150 bps* over MSCI EAFE (net) Index over rolling 5-year periods
International Equities - Emerging	State Street Global Advisors	Passive	Replicate return of MSCI Emerging Markets (net) Index
	Dimensional Fund Advisors	Active	Annualized net returns > 100 bps* over MSCI Emerging Markets (net) Index
	JP Morgan, Marshall Wace, and Wellington Management Co., LLP	Active	Annualized net returns > 200 bps* over MSCI Emerging Markets (net) Index
Global Equities	Viking Long Fund, LP	Active	Annualized net returns > 200 bps* over MSCI World (net) Index
	Marshall Wace		Annualized net returns > 200 bps* over MSC ACWI (net) Index
TIPS	Western Asset Management Co.	Active	Annualized net returns > 15 bps* over Bloomberg Barclays US 10 Year Breakeven Inflation Index
Investment-grade Bonds	Jennison Associates Dodge & Cox Prudential Investment Mgmt.	Active	Annualized net returns > 50 bps* over Bloomberg Barclays US Aggregate Bond Index & rank in top half of managers with similar objectives over 3-5 year horizon
Distressed Debt	Portfolio of Managers	Active	Annual net returns > Cambridge Associates Distressed Securities Index <sup>3</sup>
Direct Lending	Portfolio of Managers	Active	Annual net returns > S&P/LSTA Leveraged Loan Index
Strategic Credit	Portfolio of Managers	Active	Annualized net returns > FTSE High-Yield Cash-Pay Capped Index
REIT Equities	Cohen & Steers	Active	Annualized net returns > 200 bps* over FTSE NAREIT All Equity REITs Index & rank in top half of managers with similar objectives over 3 to 5-year horizon
	Dimensional Fund Advisors (global)	Active	Annual net returns > S&P Global REIT (net) Index
Commodities	Wellington Management Co., LLP Gresham Investment Management	Active	Annualized net returns > 100 bps over Bloomberg Commodities Index
Master Limited Partnerships	Harvest Fund Advisors	Active	Annualized net returns > Alerian MLP Index
Private Real Estate Partnerships	Portfolio of Managers	Active	Annual net returns > Cambridge Associates Real Estate Index <sup>1</sup>
Private Equity	Portfolio of Managers	Active	Annual net returns > Cambridge Associates Global Private Equity & Venture Capital Index <sup>2</sup>
Hedge Funds	Portfolio of Managers	Active	Annual net returns > Hedge Fund Research, Inc. (HFRI) Fund of Funds Composite Index
Cash Equivalents	Investment Officer	Active	Realize competitive, overnight returns

\*A return of one hundred basis points (bps) is equivalent to a 1% return.

<sup>1</sup> Includes vintage years 2007-present of Quarter Pooled Horizon IRRs.

<sup>2</sup> Includes vintage years 2006-present of Quarter Pooled Horizon IRRs.

<sup>3</sup> Includes vintage years 2005-present of Quarter Pooled Horizon IRRs.

**Table 3. Capital Market Assumptions---Expected Return, Risk and Correlations between Asset Classes  
(Adopted April 11, 2019)**

	Public Equity				Fixed Income	Cash	Real Assets					Private Equity	Hedge Funds	Credit		
	U.S. Stock	Dev. Intl Stocks	Emerging Mkt Stocks	Global Stocks	Inv Grade Bonds	LIBOR (cash)	10-yr TIPS	Public REITs	MLPs	Commodities	Pvt RE Funds	Private Equity	Hedge Funds	Distressed Debt	Direct Lending	Strategic Credit
Return (%Geometric)	7.10	7.10	7.60	7.40	3.30	2.30	2.70	5.85	7.05	4.25	8.00	10.10	5.60	8.90	9.65	6.09
Risk (%)	17.00	18.00	26.00	17.70	4.00	2.00	7.00	22.00	17.00	18.00	30.00	20.00	4.45	11.00	12.00	5.86
<u>Correlations:</u>																
U.S. Stock	1.00	0.85	0.85	0.90	0.00	0.00	0.00	0.70	0.50	0.35	0.60	0.80	0.70	0.65	0.65	0.60
Dev. Intl Stocks	0.85	1.00	0.80	0.90	0.00	0.00	0.15	0.65	0.50	0.50	0.55	0.70	0.70	0.60	0.60	0.60
Emerging Mkt Stocks	0.85	0.80	1.00	0.85	0.05	0.05	0.15	0.65	0.54	0.55	0.50	0.60	0.65	0.60	0.60	0.60
Global Stocks	0.90	0.90	0.85	1.00	0.00	0.00	0.10	0.65	0.51	0.45	0.50	0.70	0.70	0.60	0.60	0.60
Inv Grade Bonds	0.00	0.00	0.05	0.00	1.00	0.05	0.80	0.15	-0.05	0.05	0.00	0.00	0.00	0.19	0.19	0.00
LIBOR (cash)	0.00	0.00	0.05	0.00	0.05	1.00	-0.05	-0.15	0.00	-0.10	0.00	0.00	-0.10	-0.15	-0.15	0.00
10-yr TIPS	0.00	0.15	0.15	0.10	0.80	-0.05	1.00	0.20	0.15	0.35	0.00	0.00	0.15	0.30	0.30	-0.10
Distressed Debt	0.65	0.60	0.60	0.60	0.19	-0.15	0.30	0.65	0.65	0.35	0.70	0.65	0.70	1.00	0.80	0.80
Public REITs	0.70	0.65	0.65	0.65	0.15	-0.15	0.20	1.00	0.35	0.25	0.65	0.60	0.55	0.65	0.65	0.30
Pvt RE Funds	0.60	0.55	0.50	0.50	0.00	0.00	0.00	0.65	0.35	0.10	1.00	0.60	0.20	0.70	0.70	0.30
Private Equity	0.80	0.70	0.60	0.70	0.00	0.00	0.00	0.60	0.50	0.20	0.60	1.00	0.30	0.65	0.80	0.50
Hedge Funds	0.70	0.70	0.65	0.70	0.00	-0.10	0.15	0.55	0.60	0.60	0.20	0.30	1.00	0.70	0.70	0.70
Commodities	0.35	0.50	0.55	0.45	0.05	-0.10	0.35	0.25	0.40	1.00	0.10	0.20	0.60	0.35	0.35	0.60
MLPs	0.50	0.50	0.54	0.51	-0.05	0.00	0.15	0.35	1.00	0.40	0.35	0.50	0.60	0.65	0.65	0.30
Direct Lending	0.65	0.60	0.60	0.60	0.19	-0.15	0.30	0.65	0.65	0.35	0.70	0.80	0.70	0.80	1.00	0.80
Strategic Credit	0.60	0.60	0.60	0.60	0.00	0.00	-0.10	0.30	0.30	0.60	0.30	0.50	0.70	0.80	0.80	1.00

Source: Cliffwater LLC

Based on the asset allocation plan adopted by the Board and the capital market assumptions set forth above, the expected annualized investment return of the System is 8.3% and the expected risk is 12.4%.

## **Exhibit B**

### **TCDRS Policy for Placement Agents and Political Contributions**

In order to ensure the integrity and independence of the investments of the System and conformity with applicable fiduciary, ethical, and legal standards, the System will not knowingly invest with an investment manager or investment vehicle if (a) the manager or vehicle directly or indirectly pays finder's fees, brokerage fees, or similar fees or commissions ("Placement Fees"), other than to an officer, member, partner, or employee of such manager or vehicle, as a result of the System's investment with such manager or vehicle, (b) the manager or vehicle directly or indirectly pays any compensation or benefits to a Trustee, officer, or key employee (as defined in the TCDRS Code of Ethics) of the System (a "System Representative") or, to such investment manager's or vehicle's knowledge, to an immediate family member of such Trustee, officer, or key employee in connection with the System's investment, or (c) the System will bear any Placement Fees in connection with any investment, whether or not the Placement Fees arise as a result of the System's investment.

In addition, the System will not knowingly invest with an investment manager or investment vehicle if the manager or vehicle (or any officer, director, employee or owner of such manager or vehicle) has within the two previous years made a political contribution to a Trustee who is an elected official. Investment managers and vehicles with whom the System invests should also be aware that, for purposes of compliance with applicable law, Trustees are appointed under Texas Government Code section 845.002, which provides "The governor shall appoint the members of the board of trustees with the advice and consent of the senate."

In conjunction with this Policy, an investment consultant, when performing due diligence on prospective investments of the System, shall inquire as to the payment and expensing of Placement Fees and provide any relevant information to the Investment Officer.

Additionally, any investment manager or vehicle that contracts with the System should represent or confirm through provisions in its contract that such investment manager or vehicle (a) has not directly or indirectly paid, and no person is entitled to, Placement Fees in connection with the System's investment, (b) has not directly or indirectly paid compensation or benefits to any System Representative or, to such investment manager's or vehicle's knowledge, an immediate family member of a System Representative, in connection with the System's investment, (c) the System will not bear any Placement Fees, and (d) within the two previous years no political contributions have been made by the investment manager or vehicle (or any officer, director, employee or owner of such investment manager or vehicle) to any Trustee who is an elected official. Any investment manager or vehicle that contracts with the System should also acknowledge that Trustees are appointed under Texas Government Code section 845.002, as provided above.

The foregoing notwithstanding, in the event that an investment manager or vehicle cannot make the representations, confirmations or acknowledgements set forth in clauses (a), (b) or (c) above, the investment manager or vehicle shall disclose the relevant transactions or circumstances that prevent it from agreeing to such contractual provisions, and the Investment Officer and System legal counsel will determine whether or not (1) alternative contractual representations or



acknowledgements are appropriate and (2) the investment will otherwise satisfy the purpose of this Policy and applicable law; and, if so determined by the Investment Officer and System legal counsel, the System may make such investment.

**Exhibit C****List of Investment Service Providers**

In managing the assets of the System, the Board has retained the following providers of investment services to assist in the management of investment assets:

## Investment Service Providers

<b>Investment Services Provided</b>	<b>Provider</b>
Custodian	<ul style="list-style-type: none"> <li>• BNY Mellon Corporation (Boston, MA)</li> </ul>
Securities Lending Agents	<ul style="list-style-type: none"> <li>• BNY Mellon Corporation (Boston, MA)</li> </ul>
Performance Measurement Analyst	<ul style="list-style-type: none"> <li>• BNY Mellon Corporation (Boston, MA)</li> </ul>
Investment Consultant (General)	<ul style="list-style-type: none"> <li>• Cliffwater, LLC (Marina del Rey, CA)</li> </ul>
Investment Consultant (Private Equity)	<ul style="list-style-type: none"> <li>• Cliffwater, LLC (Marina del Rey, CA)</li> </ul>
Investment Consultant (Real Estate)	<ul style="list-style-type: none"> <li>• Cliffwater, LLC (Marina del Rey, CA)</li> </ul>
Investment Consultant (Hedge Funds)	<ul style="list-style-type: none"> <li>• Cliffwater, LLC (Marina del Rey, CA)</li> </ul>
Legal Counsel	<ul style="list-style-type: none"> <li>• Vinson &amp; Elkins LLP</li> <li>• Jackson Walker L.L.P.</li> <li>• DLA Piper LLP</li> </ul>

Whenever the System changes investment service providers on action by the Board, this table shall automatically be amended to reflect such action.

**Exhibit D****Policy for Terms and Conditions of Investment Agreements**

It is the policy of the System in connection with its investments that the System:

- will not agree to the arbitration of disputes arising out of or in connection with such investment;
- will not agree to consent to jurisdiction or venue in any courts other than applicable state or federal courts of the State of Texas;
- will require the investment manager, investment vehicle and such investment vehicle's general partner, managing member or investment manager to agree to bring any action which such investment manager or such general partner, managing member or investment manager of an investment vehicle (for itself or on behalf of the investment vehicle) may institute against the System only in applicable state or federal courts of the State of Texas; and
- will not agree to any representation, warranty or covenant which requires or could be construed to require the System to institute, or to join in, any proceeding in any state or federal court without the System's express consent.