# TEXAS MUNICIPAL RETIREMENT SYSTEM

## INVESTMENT POLICY STATEMENT

Adopted: June 24, 2021
Effective: July 1, 2021

**TEXAS MUNICIPAL RETIREMENT SYSTEM**
**INVESTMENT POLICY**

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**INVESTMENT POLICY STATEMENT**

## I. INTRODUCTION AND PURPOSE

This Investment Policy Statement (IPS) governs the investment of assets for the Texas Municipal Retirement System (TMRS or the System) and is established to provide a framework for the management of those assets. This IPS outlines objectives, beliefs, benchmarks, restrictions, risks and responsibilities so that members of the TMRS Board of Trustees (Board), TMRS investment staff, Investment Managers, the Board's Consultants, and TMRS stakeholders clearly understand them and how they impact the TMRS investment program.

The Board intends for this IPS to be a dynamic document subject to periodic review and refinement. Policies will be modified from time to time to reflect changes in assets and investment programs, benefit changes, and economic conditions. Deviation from this IPS is not permitted without prior Board authorization or as otherwise specifically allowed by this IPS.

## II. GOVERNING AUTHORITY

TMRS was created by the Texas Legislature in 1947 and began operations in 1948. TMRS is a statewide governmental pension plan qualified under section 401(a) of the Internal Revenue Code (IRC) and is not subject to Title I of the Employees Retirement Income Security Act of 1974 (ERISA). TMRS is created by statute and administered in accordance with Title 8, Subtitle G, Chapters 851 through 855 of the Texas Government Code (the "TMRS Act") and other applicable provisions of Title 8 of the Texas Government Code, and provides retirement, disability and death benefits for employees of over 850 Texas cities. TMRS administrative rules, adopted by the Board, may be found under the Texas Administrative Code, Title 34.

## III. MISSION STATEMENT

The TMRS Board has a fiduciary responsibility to the members and beneficiaries of the System. In recognition of this responsibility, the Board has adopted the following Mission and Vision Statements:

**TMRS Mission Statement**
Providing secure, reliable retirement benefits

**TMRS Vision Statement**
To be the model for empowering retirement

## IV. INVESTMENT OBJECTIVE

The overall objective of TMRS' investment program is to ensure that members, retirees and beneficiaries are provided with the benefits they have been promised by their employers at a reasonable and predictable cost to the employers.

Assets will be invested with a total return posture given appropriate consideration for portfolio volatility (risk) and liquidity. Total return includes dividends, interest, and realized and unrealized capital appreciation.

The actuarial Consultant recommends the actuarial return assumption for the investment program after consulting with both internal investment staff and the Board's retained Investment Consultant regarding the expectations surrounding the long-term investment returns available from a well-diversified investment portfolio. The Board is responsible for approving an Actuarial Return Assumption and accepting that the commensurate risk posture of that portfolio is in line with the Board's Risk Tolerance.

The specific investment return objective is to maximize the probability of achieving the Actuarial Return Assumption without exceeding the Risk Tolerance of the Board. The current Actuarial Return Assumption adopted by the Board is 6.75%.

## V. INVESTMENT BELIEFS

The investment beliefs of the Board are based on capital market theories that are generally accepted and followed by institutional investors, who by definition are long-term oriented investors. These beliefs hold that:

**A.** The System's asset allocation and funding strategies are based on our asset/liability framework and are designed to optimize the funding of our liabilities over time.

**B.** The most effective use of the Board's expertise and time is to set overall investment objectives and clearly articulate investment direction through the System's Investment Policy Statement while continually monitoring its compliance.

**C.** Good governance drives long-term value for the System and its membership.

**D.** Clearly defined roles and responsibilities are essential to good governance.

**E.** The best investment results come from the right people following prudent processes to make the right decisions and taking ownership of long-term performance outcomes.

**F.** Intelligent risk-taking is rewarded with compensating returns over time and, therefore, prudent risk-taking is justifiable for long-term investors.

**G.** Trust Fund risk must be managed.

**H.** The primary determinant of portfolio risk and return is the System's strategic, long-term asset allocation.

**I.** Capital markets have inefficiencies and opportunities that can be exploited.

**J.** Costs impact investment returns and should be monitored and managed.

**K.** As prudent stewards of the System's assets, we integrate environmental, social, and governance research into our rigorous investment process, where consistent with our fiduciary duty.

## VI. STANDARDS OF CARE

**A. Standard of Prudence Applicable**. All participants in the investment process will act responsibly. The standard of prudence to be applied by the Board and investment staff is as follows:

1. In satisfying this standard, Board members, Executive Director and investment staff shall exercise the degree of judgment and care, under the circumstances, that persons of prudence, discretion, and intelligence exercise in the management of their own affairs, considering the probable income from the securities and probable safety of their capital.

2. Investment and management decisions respecting individual assets will be evaluated not in isolation but in the context of the investment portfolio as a whole and as a part of an overall investment strategy having risk and return objectives reasonably suited to the trust.

**B. Conflict of Interest Prohibited**. Members of the Board, the Executive Director, investment staff, Investment Managers, and Consultants involved in the investment of TMRS assets will refrain from any activity that could conflict with the proper execution and management of the TMRS investment program, or that could impair their ability to make impartial recommendations and decisions. These parties are required to disclose, in writing, all relationships that could create or appear to create a conflict of interest in their unbiased involvement in the investment process and when appropriate to cure the conflict in a manner provided by the TMRS Ethics Policy or their contract with TMRS as applicable.

**C.** The Board requires all Trustees, the Executive Director and investment staff involved in the investment of TMRS assets to make all investment decisions in the best interest of the System and abide by the TMRS Ethics Policy. The TMRS Ethics Policy delineates many duties that covered persons must abide with including that they may not solicit, accept, or agree to accept any gifts of more than *$50.00*, personal benefits, or personal favors offered to them because of their positions with TMRS, among other requirements. Cash gifts are prohibited. Acceptance of invitations to seminars, conferences, receptions and business meals when the sponsor or a representative of the sponsor is present and such event has a presentation or discussion of topics pertinent to the investment of TMRS assets or relates to the official TMRS duties of the individual and is not otherwise prohibited by law, are permitted. In all cases, the Executive Director and investment staff should use reasonable care and judgment to not place themselves in a situation that might cause, or be perceived to cause, a loss of independence or objectivity. The Executive Director, and investment staff will also comply with TMRS policies on personal investment activities, where applicable. Please see the official TMRS Ethics Policy for more detail.

## VII. DELEGATED AUTHORITY

The Board maintains the ultimate oversight of the System's assets. In order to improve the efficient use of its resources, the Board has delegated day-to-day investment operations and implementation through the Executive Director (ED) to the Chief Investment Officer (CIO) and investment staff. The ED, CIO and investment staff, in concert with the Board's Investment Consultant(s), are responsible for performing these delegated duties consistent with this IPS and as otherwise directed by the Board. Included in the delegated authority, the ED is authorized by the Board, pursuant to a recommendation by the CIO, and the Board's applicable Investment Consultant(s), to retain, and terminate Investment Managers within each asset class as necessary to achieve the investment objectives of the System within the following limitations:

**A.** At the time of approval by the Staff Investment Committee (SIC), an investment made in an Actively Managed Strategy in the Public Markets may not exceed 3.00% of the market value of the System's assets as reported in the most recent TMRS Comprehensive Annual Financial Report (CAFR).

Capitalization Weighted Passively Managed Strategies will be implemented consistent with the applicable asset class limits in Section XI, Asset Allocation & Rebalancing Policy and Section XX, General Investment Management Guidelines.

The ED will provide the Board with appropriate due diligence information, as provided by the CIO and the Board's applicable investment Consultants, necessary for the Board to be fully informed of the nature of the investments. Notification of all Public Market investments approved by the ED under this Section since the last Board meeting will be provided to the Board at its next regularly scheduled Board meeting.

**B.** At the time of approval by the SIC, an investment made in Private Markets may not exceed 0.75% of the market value of the System's assets as reported in the most recent TMRS CAFR. Co-investments will be subject to additional limitations specified in Section XX, General Investment Management Guidelines.

The ED will provide the Board with appropriate due diligence information, as provided by the CIO and the Board's applicable Investment Consultants, necessary for the Board to be fully informed of the nature of the investment. The ED will prepare a report of investments approved by the SIC since the last Board meeting which will be included in the agenda for the Board to receive and file at the next regularly scheduled Board meeting.

Any investment mandate may be terminated or redeemed, fully or partially, by the ED upon recommendation by the CIO, and in consultation with the Board's applicable Investment Consultant(s) and/or Legal Counsel, if deemed appropriate. Notification regarding a termination approved by the ED since the last Board meeting under this Section will be provided to the Board at its next regularly scheduled meeting.

Any Public Market or Private Market investments that exceeds the limits described in this Section must be brought to the Board for presentation and approval.

In the event the ED rejects an investment recommendation pursuant to this Section, the ED shall return the recommendation to the CIO. The ED may not approve or recommend to the Board an investment that has not been recommended by the CIO and the Board's applicable Investment Consultant(s).

The delegation of authority set forth in this IPS shall be reviewed at least annually, upon the departure of either the ED or CIO, or at the request of the Board.

## VIII. RESPONSIBILITIES AND DUTIES

In addition to the responsibilities outlined in Section VII, the following parties have additional responsibilities and duties to the System.

For purposes of this IPS:

**A.** The **Board of Trustees** is ultimately responsible for the administration of the System and its investment program. The Board members are fiduciaries, collectively and individually, with respect to the System and must discharge their duties solely in the interest of the members and annuitants for the exclusive purpose of providing benefits to members, retirees and their beneficiaries. The Board also appoints the ED, Chief Legal Officer, Internal Auditor, and retains Fiduciary Counsel, Custodian Bank, Securities Lending Agent, Investment Consultants, Consulting Actuary; and certain Investment Managers consistent with this IPS.

As part of its fiduciary obligations, the Board has the ultimate legal responsibility for the System's overall investment strategy, including:

1. Establishing the strategic plan, investment goals and objectives, and investment beliefs of the System consistent with plan funding needs;
2. Establishing an explicit, written IPS consistent with identified goals and objectives, and applicable laws;
3. Approving an asset allocation strategy;
4. Monitoring and evaluating the System's investment performance and compliance with the provisions of this IPS and applicable state and federal laws; and
5. Periodically reviewing the performance of the Board's direct reports, Investment Service Providers, and Board Consultant(s).

**B.** The Board has determined that implementation of investment decisions within the limits set forth in this IPS shall be delegated to the supervision of the **Executive Director** or his or her designee(s). When the ED rejects a recommendation from the Staff Investment Committee or the CIO, the matter will be returned to investment staff for further consideration. Investment decisions in excess of the limitations outlined in Section VII, Delegated Authority, requires Board approval.

The responsibilities and duties of the ED include, but are not limited to, the following:

1. Supervising the investment program by ensuring that the CIO and investment staff invests the System's assets in accordance with this IPS, and that internal controls and compliance

framework are in place to safeguard the System's assets;

2. Negotiating, where necessary, and executing all contracts, agreements, and memorandum(s) of understanding in accordance with this IPS;
3. Taking prudent action deemed necessary to protect the assets of the System, upon recommendation by the CIO, and in consultation with the Board's applicable Investment Consultant(s) and/or Fiduciary Counsel or Chief Legal Officer, as appropriate.
4. With the advice and counsel of the CIO and the appropriate Board Consultant, retaining and executing master agreements with a pool of transition managers, designating their respective areas of expertise, for use by the CIO and investment staff, where appropriate;
5. Providing regular reports to the Board; and
6. Performing or delegating additional duties as assigned by the Board.

**C.** The **Chief Investment Officer (CIO)**, is part of the investment staff and, under the supervision of the ED, directs the TMRS investment program consistent with this IPS, and within applicable state and federal laws.

The responsibilities and duties of the CIO include, but are not limited to, the following:

1. Ensuring that adequate resources are requested to implement the Board's investment policies, including custody relationships, internal procedures, qualified investment staff and analytical and risk management tools, subject to the budget approval process;
2. Supervising investment staff;
3. Chairing the Staff Investment Committee;
4. Working closely with internal investment staff and the Board's Investment Consultant(s) to ensure that policies and procedures provide adequate controls to safeguard the System's assets; and.
5. Advising the ED on investment matters and keeps the ED apprised of situations which merit his or her attention.

**D.** The **Staff Investment Committee (SIC)** approves or disapproves investments to be recommended by the CIO to the ED. SIC minutes including recommendations to the ED with supporting investment staff and appropriate Board Consultant materials will be provided to the Board at the next regularly scheduled Board meeting. The SIC is chaired by the CIO and operates in accordance with its Charter (a current version of which is attached as Appendix A). Any changes to the Charter will be provided to the Board at the next regularly scheduled meeting.

**E.** The **Chief Legal Officer** serves as chief legal advisor to the System and reports to the Board (and administratively to the ED). In regard to the investment program, the Chief Legal Officer or his or her designee coordinates all legal services which include, but are not limited to: the review, drafting, and negotiation of investment-related contracts, drafting of legal opinions, providing legal advice, overseeing outside counsel with regard to regulatory compliance matters, monitoring legislation and legal issues, drafting bills and administrative rules, and coordinating contracted legal work, including the selection, supervision, retention and evaluation of outside law firms.

**F.** The **non-CIO Investment Staff** report to the CIO and are primarily responsible for the daily operation and implementation of the investment program. Investment staff members work with the CIO and the Board's investment Consultant(s) to advise the ED and the Board on investment-related issues in accordance with this IPS.

Investment staff are also responsible for supporting the investment program at the strategic, risk management, compliance and operational levels through the establishment of appropriate procedures as well as implementation and maintenance of analytical tools and processes to implement, measure and monitor the investment program as further described in this IPS and the procedures documents.

**G.** The **Finance Department Staff** is independent of the Investment Department and serves as an important part of the internal control framework for the investment program.

**H.** The **Internal Auditor** reports to the Board (and administratively to the ED). In regard to the investment program, the Internal Auditor is responsible for ensuring that there is an objective audit for all the investment functions. It is the Internal Auditor's objective to promote adequate and effective internal controls at a reasonable cost. Recommendations are expected to lead to economies and efficiencies in the System's investment operations and improvements in internal controls.

## IX. EXTERNAL PROVIDERS

**A.** The **General Investment Consultant** (Consultant) is hired by, and reports to, the Board. The Consultant provides advice to the Board on all investment-related matters, including the development of investment goals and objectives, investment policies and strategies, asset allocation decisions, high-level implementation issues, some manager search, selection, monitoring and terminations, investment management guidelines and restrictions, analysis of investment performance, and internal staffing issues. The Consultant also provides the Board with educational opportunities designed to improve each Trustee's knowledge of investment practices and issues.

Although the Consultant is retained to provide competent, objective and independent advice to the Board, the Consultant is a valuable resource for investment staff, working closely with them in all aspects of the investment program and to ensure that issues remain focused and addressed specifically to TMRS' investment objectives, and in accordance with applicable state and federal laws.

**B.** The **Specialized Consultants** are hired by, and report to, the Board to assist in the management of the portfolio. The Specialized Consultants provide advice to the Board on specific asset class policies, recommends pacing commitments, manager selection and terminations, manager guidelines and restrictions, participates in the due diligence process and ongoing monitoring of managers including policy compliance, provides analysis of investment performance, and provides advice on other investment-related issues. The Specialized Consultants work closely with investment staff in all aspects of the investment portfolio.

**C.** **External Investment Management firms (Managers)** are retained by the Board to manage or advise on specific strategies and asset classes, through a manager search process and according to specific qualifying criteria as set forth in this IPS. The Managers must manage or advise on the assets according to the terms of the contract governing the mandate and within guidelines and restrictions as set forth by TMRS. TMRS investment staff will monitor portfolio trade activity and are to be in regular communication with the Managers regarding market and economic conditions impacting a portfolio's strategy.

**D.** The **Fiduciary Counsel** provides advice to the Board, and to the ED or CIO on matters related to the sound exercise of the fiduciary standards mandated by the Texas Constitution, the TMRS Act, and the Texas Trust Code. Fiduciary Counsel also works with the Chief Legal Officer on related legal matters.

**E.** As needed, **External Counsel** will be retained by the System under the direction of the Chief Legal Officer or his or her designees, to provide legal counsel and ensure that investment contracts are legally binding and enforceable in an acceptable venue and to provide advice regarding regulatory matters related to investment matters**.**

**F.** The **Custodian Bank** serves as the master custodian of the System's assets and is responsible for maintaining the official book of record under the supervision of TMRS' Finance Department and investment staff, calculating investment performance, and serving as an additional layer of risk control in the safekeeping of System's assets.

**G.** The **Securities Lending Agent,** when utilized, is responsible for lending securities and reinvesting cash collateral according to this IPS and its guidelines. The Board may appoint the custodian bank or a third party to serve as the System's lending agent.

**H.** A **Transition Manager** may be retained to assist in the transfer of assets from one Investment Manager to another, and serves as a liaison between the investment staff, the Custodian, the Manager distributing assets, and the Manager receiving assets. This transition may occur either within an asset class or between asset classes. The Transition Manager, chosen from the ED pre-approved list of providers (Section VIII, B. Responsibilities and Duties, Executive Director), will facilitate clear communication between all parties, work to minimize market impact, trading costs and opportunity cost and may include interim investment management services of account assets for a limited period of time.

The Transition Manager is required to be a registered investment adviser under the Investment Advisers Act of 1940 as amended (unless properly exempted from registration by the SEC) or otherwise regulated by an appropriate governmental regulatory oversight organization (unless exempt from such registration requirement), act as a fiduciary to TMRS, not delegate such fiduciary responsibility, and provide agency-only execution services. The Transition Manager will provide a detailed post-trade analysis for investment staff.

## X. INVESTMENT CONSULTANTS

Investment Consultants must act as fiduciaries in their role as an investment consultant assisting and advising the TMRS Board and investment staff on investment matters, be bound by prudent expert standards, be approved registered investment advisers under the Investment Advisers Act of 1940 as amended, and be independent. Independence is defined as not having other business relationships that could be construed as posing a conflict of interest. Further, with respect to the scope of services required, Consultants must demonstrate substantial expertise and experience in providing investment consulting and assistance in implementing institutional portfolio management, and possess the resources, capacity, qualifications, staff support, databases, contacts, software, and methods to research, assist, and advise the TMRS staff and Board. It is imperative that any Consultant have the independence and ability to inform the Board in the event of any concerns related to investment activity. Accordingly, the Board directs the consultant to adhere to the following notification process if, in the Consultant's view, circumstances dictate.

**A.** Upon learning of an issue that the Consultant believes is material regarding deviation from prudence, objectivity, policy or parameter adherence or any other matter of concern involving the Board's investment program, the Consultant is to express that concern in writing to the Board, ED, CIO, Fiduciary Counsel or Chief Legal Officer, whichever the Consultant deems appropriate. A written response will be sent to the Consultant.

**B.** If the Consultant believes the issue warrants immediate action, the Consultant must make this clear in the original correspondence and, in addition, recommend the action to be taken. In this instance, a concerted effort must be made by the Consultant to contact TMRS by telephone, at the time the original correspondence is sent, in order to provide the Board, the ED or CIO with a verbal description of the issue, the proposed action, and the justification for both.

**C.** Upon receipt of TMRS' response, the ED, CIO, and the Consultant will review the response at the earliest practical time and determine the proper course of action. The Board will be contacted if it is concluded that further immediate action is required and is beyond the authority granted to the ED or investment staff. In any event, all such material matters will be reported to the Board at its next regularly scheduled meeting

## XI. ASSET ALLOCATION & REBALANCING POLICY

### A. Asset Allocation

The Board recognizes that the most important determinant of long-term return and risk is the asset allocation decision. The Board's Strategic Target Allocation is intended to reflect, and be consistent with, the return objective and risk tolerance expressed in this IPS. It is designed to provide the highest probability of meeting or exceeding the Board's objectives at a controlled level of risk and liquidity that is acceptable to the Board. In establishing the asset allocation, the Board considers TMRS' ability to withstand not only the long-term risk of underperforming its return objective but also short and intermediate-term volatility in investment performance and fluctuations in the financial condition of the fund. In addition, Staff should ensure the risk representations in the capital markets models and assumptions used by the Board in setting the Strategic Target Allocation and Risk Tolerance are internally consistent, consistent with industry best practice, and consistent with the Board's investment risk philosophy and with the risk analytics used for monitoring portfolio risk.

The Board has adopted the following framework for the asset allocation decision.

The Strategic Target Allocation must deliver:

1. A representation of the Board's long-term return objective with its implied Risk Tolerance;
2. Sufficient confidence for the Board to "stay the course" given extreme market moves; and
3. A benchmark against which to measure performance.

The following requirements are considered in setting the Strategic Target Allocation:

1. The Board's long-term return objective and implied Risk Tolerance, to support a "static" asset allocation;
2. Asset classes that represent all of the global investment opportunities appropriate for TMRS;
3. Modern portfolio theory as the basis for deciding one asset allocation is better than another; and
4. A representation of capital market opportunities consistent with the above basis.

The Strategic Target Allocation and acceptable ranges as determined by the Board to facilitate the achievement of long-term investment objectives within acceptable risk parameters are as follows:

| Asset Class | Minimum % | Strategic Target Allocation % | Maximum % |
|---|---|---|---|
| | | | |
| **Global Equity** | 25 | **35** | 45 |
| **Core Fixed Income** | 1 | **6** | 11 |
| **Non-Core Fixed Income** | 15 | **20** | 25 |
| **Real Estate** | 7 | **12** | 17 |
| **Other Public & Private Markets** | 7 | **12** | 17 |
| **Hedge Fund** | 0 | **5** | 10 |
| **Private Equity** | 5 | **10** | 15 |
| **Cash Equivalents** | 0 | **0** | 3 |

During the transition towards the 10% Strategic Target Allocation for Private Equity, the underweight to Private Equity will be held in Global Equity.

## B. Rebalancing Policy

The goal of the rebalancing policy is to maintain the Board-approved Strategic Allocation and its risk and return profile. The Board has chosen a rebalancing policy that is governed by allocation ranges rather than time periods. The ranges, specified in the table above, are a function of the volatility of each asset class and the proportion of the total fund allocated to the asset class.

Investment staff will ensure that the integrity of the Board's Strategic Target Allocation is preserved through a disciplined process that allows the flexibility to rebalance the portfolio between Managers within an asset class and between asset classes, within the Board-approved ranges, to adjust for market movements and consider current market conditions, or valuations, in portfolio allocations.

Investment staff is responsible for developing and implementing all portfolio re-balancing activities, subject to prior written approval by the CIO and the ED, that are appropriate for existing circumstances. Investment staff will consider cash flows, opportunity costs, transaction costs and portfolio disruptions in any rebalancing implementation.

The Consultant and/or investment staff will report the results of rebalancing activity to the Executive Director upon completion of the rebalance and to the Board at the next regularly scheduled Board meeting.

## XII. PERFORMANCE MONITORING

Performance measurement will be based on total rate of return and will be monitored over a sufficient time period to reflect the investment expertise of the Manager(s) over one full market cycle, or five years, whichever is less. Performance results and evaluation relative to objectives will be reported to the Board on a quarterly basis.

### A. Return Expectations

1. Total Portfolio specific performance objectives include, but may not be limited to, the following:
   - **a)** Achieve a total rate of return over rolling 5-year periods meeting or exceeding the Actuarial Return Assumption
   - **b)** Exceed an appropriate benchmark reflective of asset class participation over rolling five-year periods (i.e. actual allocation index during the implementation period and Strategic Target Allocation Index once fully implemented).

Based on recommendations by investment staff and Consultant, the Board has selected the following Asset Class Benchmarks and Strategic Target Allocation Index:

| Asset Class | Asset Class Benchmarks | | Strategic Target Allocation Index |
|---|---|---|---|
| | | | |
| Global Equity | MSCI All Country World Investable Market Index (Net) | | **35%** |
| Core Fixed Income | Bloomberg Barclays US Aggregate Bond Index | | **6%** |
| Non-Core Fixed Income | Bloomberg Barclays US Aggregate Bond Index + 1.50% | | **20%** |
| Real Estate | NCREIF-ODCE Index (Net) | | **12%** |
| Other Private & Public Markets | MSCI All Country World Investable Market Index (Net) | | **12%** |
| Hedge Fund | HFRI Asset Weighted Composite Index | | **5%** |
| Private Equity | MSCI All Country World Investable Market Index (Net) | | **10%** |
| Cash Equivalents | 30 Day US Treasury Bills | | **0%** |
| | | | **100%** |

2. **Individual Portfolio Accounts**. Investment staff and the Board's appropriate Consultant, subject to review by the CIO, will determine performance expectations for each manager. Specific performance objectives for Actively Managed strategies include, but may not be limited to, the following:

**a)** Exceed an appropriate index or benchmark net of fees over rolling five- year periods
**b)** Rank above median in an appropriate universe of Managers possessing a similar style over rolling five-year periods.
**c)** Investment staff and the Board's appropriate Consultant will evaluate performance relative to expectations and appropriate peer groups for each real estate, other public and private markets, private equity, hedge funds and other unique Manager or fund structure.

There may be short-term variations from these objectives; the Board believes, however, that over the long-term (market cycle to market cycle), these goals should be attainable.

### B. Consequences of Underperformance

If an investment portfolio's performance falls below expectations, and if the performance fails to improve relative to the standards detailed above and/or qualitative factor changes remain unresolved, the Manager may be considered for termination or redemption.

## XIII. COMPLIANCE PROGRAM

Under the supervision of the Chief Legal Officer, compliance personnel shall design and implement a detailed compliance program which uses a combination of daily, weekly and monthly testing of all testable parameters of this IPS and all Manager guidelines at the Manager, asset class and total fund level as appropriate. Testing may be completed either through systematic resources (i.e. automated custodial compliance) or manually if necessary. Compliance personnel shall create and present a quarterly report to the Board with the results of the testing performed during each period.

## XIV. INVESTMENT RISK MANAGEMENT

### A. Risk Management

TMRS will have a robust risk management program to ensure that investment risk is managed to be consistent with the risk appetite established in this IPS. To achieve this, the Three Lines of Defense risk governance model is adopted as follows:

1. 1st Line of Defense: Asset Class Investment Directors own and manage risks, ensuring that appropriate attention is paid to Manager specific risk contribution and portfolio impacts during the Manager selection process.
2. 2nd Line of Defense: The CIO establishes and oversees risk management and compliance functions to ensure the first line of defense is properly designed, in place, and operating as intended, including by ensuring that policies and procedures are documented and followed regarding risk identification, evaluation and management within the investment department.
3. 3rd Line of Defense: Internal Audit, as established by the Board, provides independent assurance on the effectiveness of governance, risk management, and internal controls, including the manner in which the first and second lines of defense achieve risk management and control objectives.

**B. Key Risks, Their Sources and Management**

The following are key risks that are identified and detailed in the internal procedures of the investment staff:

1. **Strategic Risk** - Strategic risk is the risk of pursuing the wrong investment strategy due to lack of clarity in investment beliefs, objectives and/or risk tolerance. To the extent any of these decision components change, the Strategic Target Allocation may no longer be appropriate and may require review. To ensure that the Strategic Target Allocation remains appropriate:

   a) The Strategic Target Allocation will be reviewed at least annually for reasonableness relative to significant economic and market changes or to changes in the Board's long-term goals and objectives.
   b) A formal asset allocation study will be conducted at least every three years to verify or amend the targets.
   c) A formal pension financial (asset-liability) study will be conducted at least every six years.

2. **Strategy Implementation Risk** – Strategy Implementation Risk is the risk that asset class portfolios and/or the total fund will underperform their strategic benchmarks.. Asset classes are invested to outperform their benchmarks over rolling 5 year periods, and to not exceed risk expectations defined for them in the asset allocation studies.

   For those asset classes where passive investment options exist, typically the traditional asset classes, implementation risk can be largely avoided by choosing the passive option. When active management is chosen in the traditional asset classes, some amount of implementation risk must be taken. For those asset classes where passive investment options do not exist, including all of the alternative asset classes, implementation risk must be taken simply to implement strategic policy.

   The sources of implementation risk are events or conditions that cause specific investments or Managers to not perform as we expect them to. These risks are managed through initial and ongoing due diligence that identifies, estimates, monitors, reacts as appropriate and properly communicates these risks.

3. **Investment Risk Reporting** - Investment risk reporting is the responsibility of the risk management function. The reporting will be done at least quarterly to senior management and the Board through implementation of internal analytical resources and are expected to address the following areas at a minimum:

   Range of risk implied by IPS Asset Class Guidelines and the risk in the current asset class implementations. Holdings based estimate of asset class total market risk and relative to risk expectations used in asset allocation studies.

## XV. INVESTMENT MANAGER RESPONSIBILITIES

### A. Legal Compliance

The Managers are responsible for strict compliance with any legal requirements as they pertain to their duties and responsibilities as fiduciaries in the management of the System's assets and for strict adherence to representations made in their contracts. Violations of these representations must be disclosed in writing within 3 business days.

Managers must meet qualifications as described in this section of this IPS and will be required to disclose in writing all actual, perceived, and potential conflicts of interest, including, without limitation, the details surrounding payment of any third-party marketing fees related to TMRS' potential investment with such Manager. Specific disclosure requirements and avoidance of such conflicts to the extent possible will be addressed in each Manager contract. Selected Managers must agree to comply with ongoing reporting of conflicts as required.

### B. Manager Qualifications

Managers must act as fiduciaries and be bound by prudent expert standard in the management of the TMRS account, and be registered investment advisers (RIA) under the Investment Adviser's Act of 1940 as amended (unless properly exempted from registration by the SEC) or otherwise regulated by an appropriate governmental regulatory oversight organization. SEC registration establishes certain regulated standards that are also addressed in TMRS due diligence activities such as implementation of a compliance system, establishment of a Code of Ethics governing the Manager's employees, maintenance of a wide range of books and records regarding their business and investment activity, best execution on transactions, and certain disclosures including financial and disciplinary actions. The Manager or its key investment professionals must be recognized as providing demonstrated expertise over a number of years in the management of institutional assets in the strategies for which the firms are retained, the firm must maintain liability and fiduciary insurance coverage, and must maintain adequate controls and operational support to fully execute the requirements of the Manager contracts.

### C. Evaluation Timetable

Managers will be expected to provide to the Board, their Consultant(s), and investment staff, on a timely basis each month/quarter or as requested, such data as is required for proper monitoring and defined in each Manager contract.

### D. Authority of Investment Managers

Subject to the terms and conditions of this IPS and a properly executed contract, Managers will have the authority to direct investment, re-invest, exchange, and liquidate the assets of the managed accounts or investment funds as described in the Manager's contract.

Regardless of whether assets are managed via separately managed accounts, fund of one structures or commingled funds and mutual funds, ownership rights, such as proxy voting, will be exercisable by the Managers with respect to such investment (see Proxy Voting, Section XIX).

If the Manager believes the IPS is too restrictive or should be amended in any way, written notification must be communicated by the Manager to the appropriate asset class director and CIO immediately for consideration.

## XVI. INVESTMENT MANAGER SELECTION, MONITORING, WATCHLIST AND TERMINATION

To better ensure that Managers will successfully manage to the TMRS objectives for their specific mandates, the Board supports disciplined processes for Manager selection, monitoring, watchlist and termination, which are documented in internal investment staff procedures. In addition, the process for selecting Managers is intended to protect against unethical behavior including bribery and corruption and contact between TMRS and Managers during the search process, related to the pending selection, and intended to influence the search outcome. Contact will be limited to that specified in the search process documentation. Direct inquiries by Managers to individual Board members regarding the TMRS investment program will be referred to the TMRS investment staff.

## XVII. INVESTMENT MANAGER RETENTION (IMR) POLICY

Manager retention decisions have the same potential impact on returns as do the initial selection of the Manager and should be afforded the same degree of attention. As in the search process, a discipline is needed which will minimize the probability of retaining an underperforming Manager that continues to underperform or terminating a currently underperforming Manager just before a period of very strong performance.

Managers may be evaluated using these criteria or other applicable standards:

1. Against appropriate market indexes on both a risk-adjusted and nominal basis;
2. Against peers within their style groups if data is available;
3. Adherence to their stated investment styles;
4. Adherence to this IPS and compliance with their established parameters; and
5. Against the specific expectations attributed to them in the Risk Budgeting and Allocation framework.

### A. Comprehensive Reviews

Comprehensive Manager reviews are to be conducted and documented at least annually, to include quantitative as well as qualitative factors and may incorporate a due diligence visit by staff to the Managers' offices and meeting with all key relevant participants in the management of the TMRS portfolio. The results of an annual or ad hoc comprehensive review will be reported to the Board along with recommended action, if appropriate.

Comprehensive reviews will include a review of the Manager's performance, current investment strategy or style, and other issues related to the Manager's organization, personnel, or investment philosophy and process including compliance with requirement for best execution. If performance or organizational issues arise for a specific Manager, investment staff should be in contact with the Manager on a regular basis until the issues are resolved.

### B. Watch List Additions and Recommended Actions

The Watch List is an internal procedure and is maintained by investment staff for the purpose of ensuring that concerns regarding any Manager are recognized, appropriately addressed and resolved. At the discretion of the CIO, a Manager may be included on the Watch List based on written internal procedures. Performance will be closely monitored and scrutinized until investment staff either removes a Manager from the Watch List or recommends termination of the Manager to the SIC.

The CIO, upon request of the ED, shall report on the status of the Watch List, where appropriate.

If termination is recommended by the SIC, the action will be elevated to the ED and will be addressed per Section VII. Delegated Authority.

## XVIII. INVESTMENT MANAGER TRANSITIONS

In the event of the need to perform transition management activities (including, but not limited to, the transfer of the management of assets from one investment management firm to another, exposure management during funding or de-funding of an investment management mandate, or the like), the CIO, with advice from the Board's appropriate Investment Consultant, will determine the most efficient and prudent manner to perform such transition, including determining whether to use a Transition Manager, whether to use interim asset management services from pre-approved providers and the legacy Manager(s) or the target Manager(s) to effect the contemplated asset restructuring.

If it is determined TMRS will use a transition manager (with or without interim asset management services), investment staff with guidance from the Board's appropriate Investment Consultant, will select a transition manager from the ED's pre-approved list (Section VII, B. Responsibilities and Duties, Executive Director) of transition managers after review of pre-trade analysis submitted by the transition managers, as well as each transition manager's expertise for the asset class(es) to be transitioned.

**A.** The CIO, is authorized to use a transition manager (with or without interim asset management services) from the ED's pre-approved list of transition managers under the terms of a master agreement executed by the ED (Section VII, B. Responsibilities and Duties, Executive Director).

**B.** Transition Managers are specifically authorized to utilize derivatives to efficiently manage exposures and risks in any transition.

**C.** Following the completion of each transition event, the CIO will report to the ED the results of the selection process, the estimated costs of the transition, and the actual costs of the transition. The ED will summarize the findings in his or her next report to the Board.

## XIX. PROXY VOTING

Active voting of proxies is an important part of the Board's investment program.

**Separately Managed Accounts**. As per the Authority of Investment Managers in the

Investment Manager Responsibilities section of this IPS, proxy voting for separately managed accounts is delegated to Investment Managers and will be authorized via the Manager's contract to represent TMRS on issues of corporate governance regarding the portfolio in a prudent manner. Records of proxy votes will be maintained by the Managers and submitted to investment staff and/or external service providers on request or at specified intervals.

Investment staff will monitor the proxy voting practices of the Managers. External service providers may be retained by the Board to assist staff in its monitoring efforts. This monitoring will be coordinated with each Manager to reasonably assure investment staff that Managers are fulfilling their fiduciary responsibilities with respect to proxy voting.

Investment staff will provide a proxy voting summary report for separately managed accounts to the SIC on an annual basis and through the SIC meeting minutes to the ED and Board as soon as practical after fiscal year-end. At a minimum, the summary report will contain, for each applicable Manager, the number of ballots cast, the number of issues voted upon, and percent of issues voted with management, against management and designated as abstaining.

## XX. GENERAL INVESTMENT MANAGEMENT GUIDELINES

General investment guidelines are described within the asset class guidelines contained in this section of this IPS; in addition, guidelines more specific to a Manager's mandate may be appropriate and will be documented in the Manager's contract. The investment staff, the Board's Investment Consultant(s), and the Manager, in advance of funding, will agree upon specific parameters to be contained in the Manager's contract which will include, at a minimum, specific descriptions of the mandate and relevant restrictions reflecting the risk management policies, authority of the Manager, communication requirements, proxy voting responsibilities, benchmarks, performance standards, reporting requirements, fees, and termination clauses. This IPS and subsequent revisions must be referenced and become a part of all separately managed account agreements.

### CURE FOR POLICY VIOLATIONS

Managers are expected to maintain a robust compliance system that tests compliance with TMRS guidelines on a daily basis and ideally to do so on a pre-trade basis to ensure that they are managing the portfolio in accordance with TMRS guidelines and the terms of the properly executed contract at all times.

In the event that a TMRS guideline is violated after a security is purchased, Managers must notify TMRS investment staff within three business days of the detection of the policy violation. The Manager must provide a written plan for curing the violation or provide the investment thesis regarding why the security will be held and not be sold immediately.

### PRINCIPAL PORTFOLIO ASSET CLASS GUIDELINES

1. Funds of the System will be invested, without distinction as to source, only in securities as that term is defined in the TMRS Act, and as authorized by this IPS.

2. In the event TMRS allows an Investment Manager in a separately managed account to purchase or sell derivatives, the purchase or sale of derivatives shall only be used to manage transaction, currency exchange, or interest rate risk in the purchasing, selling or holding of securities.

3. Leverage is prohibited unless specifically authorized in writing in the IPS, Manager guidelines or controlling documents. For the avoidance of doubt, derivatives used solely to manage transaction, currency exchange, or interest rate risk in the purchasing, selling, or holding of securities are not considered leverage under this IPS.

4. Co-investments are allowed in each asset class and will be restricted to Managers and funds previously approved for investment. A proposed co-investment Manager's most recent review by staff must be positive (rated in good standing or above) and have been completed within the previous 15 months. For the avoidance of doubt, a Manager's initial hire date is considered a review for these purposes. Proposed co-investments must meet IPS guidelines and limitations and be consistent with overall portfolio objectives for the strategy. Co-investment fees must be at or below approved fund management fees. If the Manager does not earn management fees or carry (or similar fees or incentives) in the Co-investment vehicle, the Manager's fiduciary duty obligation, for purposes of this IPS, may be met if the terms of the Co-investment vehicle require the management of the Co-investment assets to be identical, in all material respects, with the management of the fund assets, or a subset thereof, in which the manager is a fiduciary.

   The SIC must agree that the terms of a single asset Co-investment vehicle meet this standard before such a Co-investment may be approved. Single asset co-investment, size is in addition to the approved mandate size and is limited to 25% of current commitment of the previously approved fund, or $25 million, whichever is lower. Upon approval by the SIC, the Co-investment will be recommended to the ED who will exercise his or her authority as stated in Section VII, Delegated Authority of this IPS.

## A. <u>GLOBAL EQUITY</u>

1. **Objective**:
   The Global Equity allocation is intended to provide capital appreciation and is structured using a Core-Satellite Approach with the overall objective of exceeding its benchmark performance net of fees over rolling five year periods.

   The benchmark and expected tracking error for a specific mandate will be stated in the Manager contract or otherwise agreed to in writing between TMRS and the Investment Manager.

   Actively Managed Strategies are expected to add excess return within established tracking error limits and will meet quality, diversification, and liquidity guidelines as specified in the Managers' contracts or otherwise agreed to in writing between TMRS and the Investment Manager.

2. **Asset Class Benchmark**
   The performance objective is to exceed the MSCI All Country World Investable Market Index (Net), net of fees, over rolling five year periods.

3. **Implementation**:
   This allocation will be implemented as follows:

   Core Component will be implemented through traditional Passively Managed strategies and Rules-based Strategies. Passively Managed strategies will be diversified by replicating a broad capitalization weighted market index.

   Satellite Component will be implemented through Actively Managed strategies. Strategy selection will be determined through a quantitative process to identify an optimal risk/reward mix, together with a qualitative assessment of the implementation and due diligence costs. Specific styles or strategies are expected to outperform or underperform the general market at varying times.

   Eligible Manager types may include managers that focus on US, non-US, emerging market or global equity securities.

4. **Permissible Investments**:
   **a)** Index funds of broad market benchmarks.
   **b)** Active and passive commingled funds
   **c)** Separately managed accounts for Actively Managed, Rules Based Strategies and Passively Managed or custom strategies
   **d)** Other equity instruments which qualify as a "security" under TMRS' statutory authority, including exchange traded futures and options on currencies and securities;
   **e)** All other derivatives not listed in #4 above may be used as permitted under Principal Portfolio Guidelines of this IPS.

5. **Emerging Market Separately Managed Accounts**
   No More than 15% of the Global Equity Asset Class may be invested in dedicated emerging market separately managed accounts.

## B. CORE FIXED INCOME

1. **Objective:**

   The Core Fixed Income allocation diversifies the risk of the overall investment portfolio with a secondary goal of capital preservation.

2. **Asset Class Benchmark**

   The performance objective is to exceed the Bloomberg Barclays US Aggregate Bond Index, net of fees, over rolling five-year periods.

3. **Asset Class Structure**

   Core Fixed Income portfolio target allocation is structured as follows:

| | % of Asset Class* |
|---|---|
| US Core Fixed Income | 100% |

a) **Interest Rate Risk** will be controlled through duration management. Duration must be maintained within +/- 25% of the Bloomberg Barclays US Aggregate Bond Index

b) **Sector Risk** will be managed through maximum sector limits as set forth below based on Bloomberg Barclay's US Aggregate Bond Index Sector Classification Scheme (see Glossary). Sector and subsector ranges may be further defined within the Manager's contract.

TOTAL CORE FIXED INCOME PORTFOLIO WEIGHTINGS

| Sector | Sector Max vs. Index Weight |
|---|---|
| US Treasury | No Limit |
| Government-Related | 200% |
| Corporates | 200% |
| Securitized (Aggregate of RMBS, CMBS & ABS) | 200% |
| Residential Mortgage-Backed Securities | 200% |
| Commercial Mortgage-Backed Securities | 200% |
| Asset-Backed Securities | 200% |

LIMITS AS % OF PORTFOLIO

| Category/Sector | % of Portfolio |
|---|---|
| Investment Grade Securities | Minimum 85% |
| Non-Dollar, High Yield & Emerging Market Combined | Maximum 20% |
| Non-Investment Grade Corporates | Maximum 15% |

c) **Credit Default Risk.** When calculating/evaluating credit quality, TMRS will use the middle rating when three or more ratings are available from a Nationally Recognized Statistical Rating Organization. If only two ratings are available, the lower rating shall be used and if only one rating is available, that rating shall be used.

The following are the minimum credit quality constraints:

**i.** All securities must be rated at least B- or equivalent.
**ii.** The portfolio shall maintain a minimum weighted average credit quality of A+ or equivalent.
**iii.** Global US Dollar Denominated Bonds: Both the issue and the national government of the country where the issuer's primary operations are located (if the issuer is not the national government itself) must be rated investment grade, at least BBB- or equivalent.
**iv.** Securitized: The weighted average credit quality of securitized product must be AA or equivalent.
**v.** Municipal Bonds: Municipal issues must be rated investment grade, at least BBB- or equivalent.
**vi.** Non US Dollar Denominated Bonds: Both the issue and the issuer's national government (if the issuer is not the national government itself) must be rated at least A- or equivalent.

3. **Concentration Risk**
   a) **Issuer risk** will be managed through the following limits.
      i. Investments in a single government related issuer (excluding US Treasuries and US Agencies) will not exceed 5% of the total market value of the Core Fixed Income portfolio and Manager mandates.
      ii. Investments in a single corporate issuer will not exceed 2% of the total market value of the Core Fixed Income portfolio and Manager mandates.

      iii. For asset-backed, non-agency mortgage-backed and commercial mortgage-backed securities, each separate trust (pool of assets) is defined as a separate issuer and will not exceed 2% of the total market value of the Core Fixed Income portfolio and Manager mandates.

   b) For purposes of these guidelines, the term "issuer" will mean a given entity and its affiliates.

4. **Permissible Investments:** The following are permissible investments for the Core Fixed Income portfolio, subject to minimum credit quality constraints outlined above.
   a) Security types qualified as eligible for the Bloomberg Barclays Capital US Aggregate Bond Index ("Eligible Security Types");
   b) US Treasury Futures: US Treasury Note contracts and US Treasury Bond contracts cleared on a US futures exchange, with a maximum maturity of the futures contract being no greater than 360 days. US Treasury Futures used to gain nominal exposure in a portfolio must be fully backed by Cash Equivalents equaling the notional contract value of the US Treasury Futures. US Treasury Futures used solely as permitted under Principal Portfolio Guidelines of this IPS do not need to be backed by Cash Equivalents.
   c) Collateralized Mortgage Obligations created from US Agency Mortgage-Backed Pass-Thru Securities except leverage structures such as Inverse Floaters, Interest Only, Inverse Interest Only, Accrual (Z), and other residual types.
   d) Forward purchase or to-be-announced (TBA) mortgages are allowed for obtaining Agency mortgage exposure for liquidity and relative value purposes. TBA mortgage transactions require positive trade date cash until settled or paired with offsetting TBA sale to avoid leverage in the overall portfolio.
   e) US privately placed investment grade Mortgage-Backed Securities including single-family residences, commercial loans, and other privately placed mortgage-backed securities.
   f) Limits on Commercial Mortgage-Backed Securities and non-agency Mortgage-Backed Securities may be specified in the manager's contract.
   g) Floating-rate issues
   h) Global US Dollar Denominated Bonds
   i) Municipal Bond
   j) Non-US Dollar Denominated Bonds
   k) High Yield Corporate Bonds
   l) US Treasury Inflation-Protected Securities
   m) Foreign currency for purposes of settling a transaction
   n) Currency forward commitments for purposes of hedging or settling a transaction

o) The portfolio may invest in non-dollar securities on a currency hedged or unhedged basis.
p) Cash equivalent securities per TMRS Cash Equivalents investment policy guidelines.

## C. NON-CORE FIXED INCOME

### 1. Objective:

The Non-Core Fixed Income allocation diversifies the risk of the overall investment program and is designed to provide both income and capital appreciation. The overall objective is to exceed its benchmark performance net of fees over rolling five year periods.

### 2. Asset Class Benchmark

a) The performance objective is to exceed the Bloomberg Barclays US Aggregate Bond Index + 1.50%, net of fees, over rolling five-year periods.

### 3. Eligible Markets

Against the Policy benchmark for the Non-Core Fixed Income asset class, the following fixed income sub-sectors will be eligible in the overall construction of the portfolio.

a) US Government, Agency and Global Sovereign Securities
b) Global Corporate Investment Grade Debt
c) Global High Yield Debt
d) Loans
e) Emerging Market Debt
f) Opportunistic Fixed Income (distressed, mezzanine, multi-strategy, etc.)
g) Structured Credit (CLO's, RMBS, CMBS, ABS, etc.)

**Sub-asset class limits** are outlined below:

| Sector | Guidance Allocation Limit |
|---|---|
| Global High Yield Debt | 0%-55% |
| Loans/Direct Lending | 0%-50% |
| Emerging Market Debt | 0%-20% |
| Opportunistic Fixed Income | 0%-50% |
| Structured Credit | 0%-40% |

### 4. Interest Rate Risk

Interest rate risk will be controlled through duration management in certain Non-Core Fixed Income allocations. If appropriate, any limitations will be specified in each individual Manager agreement.

### 5. Portfolio Guidelines

No more than 25% of the Non-Core Fixed Income portfolio may be invested with any single manager.

No more than 15% of the Non-Core Fixed Income portfolio may be invested in any one investment vehicle.

No commitment to any single closed end fund may account for more than 50% of that fund's total expected commitments.

For Direct Lending strategies, leverage shall not exceed 100% of the commitment amount.

For Opportunistic strategies, leverage shall not exceed 300% of the commitment amount.

## D. OTHER PUBLIC & PRIVATE MARKETS

**1. Objective:**

The Other Public & Private Markets asset class is used for return enhancement, diversification and inflation protection.

The Other Public & Private Markets portfolio will include strategies that provide both favorable stand-alone risk-adjusted returns as well as the benefit of hedging inflation for the System. Other Public & Private Markets strategies are not necessarily a separate asset class but may include real assets as well as financial assets that have a positive correlation to inflation. Additionally, Other Public & Private Markets Managers may attempt to add value by tactically allocating to various asset classes according to how each asset class performs across an economic cycle and the manager's perception of where we are in the cycle. The goal is to invest in inflation sensitive assets during inflationary periods, and avoid those assets in deflationary periods, thus providing a positive real return across the cycle.

The Other Public & Private Markets opportunity set includes, but is not limited to, the following:

- GTAA (Global Tactical Asset Allocation)/ Global Macro
- Inflation Linked Securities
- Inflation Sensitive Equities
- Commodities
- Private Real Estate / REITS
- Private Infrastructure / Listed Infrastructure
- Natural Resources
- Private Assets
- Financing Strategies

**2.** Asset Class Benchmark

The performance objective is to exceed the MSCI All Country World Investable Market Index (Net), net of fees, over rolling five year periods.

**a)**

3. **Portfolio Guidelines**

No more than 35% of the total net assets of the Other Public & Private Markets portfolio may be invested in any one registered investment vehicle, mutual fund, Commingled Investment Trust (or similar funds), or separately managed account that invests in public assets.

No more than 15% of the total net assets of the Other Public & Private Markets portfolio may be invested in any single closed-end or open-end investment vehicle that invests in Private Market assets.

No investment in any commingled open-ended investment vehicle may account for more than 20% of the net assets in that investment vehicle (or as a fund founder, be *expected* to account for more than 20% of fund).

No investment with any one single Manager may account for more than 25% of that Manager's total assets under management at the time of commitment.

## E. HEDGE FUND

1. **Objective:**

The Hedge Fund portfolio is to identify strategies that provide both favorable stand-alone risk-adjusted returns as well as the benefit of diversification for the overall plan. Hedge Funds, by definition, are not necessarily a separate asset class, but broaden the opportunity set within existing asset classes or exposures such as stocks, bonds, currencies and commodities by going both long and short, employing derivatives and leverage, shortening and extending investment horizons, and moving across Public and Private Markets, amongst others. By focusing on the idiosyncratic risks of security selection and often attempting to minimize systematic market risks through hedging activities, Hedge Fund Managers can make investment decisions unconstrained by restrictive relative benchmarks, and add value to portfolios by achieving favorable risk-adjusted returns in most market environments while also reducing overall portfolio volatility.

The Hedge Fund opportunity set is generally considered to include hedge funds and other strategies attempting to achieve positive returns without heavy reliance on the assumption of traditional systematic risk factors. Investment vehicles used to access this opportunity set can include limited partnerships, but also mutual funds, ETFs, and separately managed accounts, amongst others. Hedge Fund strategies are extremely heterogeneous, as Managers have both greater variability within a strategy and the flexibility to evolve across styles and asset classes. This is a key benefit of Hedge Fund strategies however, it also makes strategy classifications less meaningful and Manager selection significantly more important. It also necessitates relatively broader allowable strategy ranges than in other more traditional asset classes.

TMRS can only invest in securities as defined in the TMRS Act. The list of strategies that the TMRS Hedge Fund portfolio may utilize includes, but is not limited to:

- Equity Strategies

- Event Driven
- Credit Strategies
- Relative Value:
- Multi-Strategies:
- Global Macro: and
- CTA/Commodity/Currency.

**2. Asset Class Benchmark**

The performance objective is to exceed the HFRI Asset Weighted Composite Index, net of fees, over rolling five year periods with similar risk relative to the benchmark.

**3. Portfolio Guidelines**

No more than 10% of the total net assets of the Hedge Fund portfolio allocation may be invested with any single separately managed account.

No more than 15% of the total net assets of the Hedge Fund portfolio allocation may be invested (through multiple products) with any single hedge fund manager (excluding Funds of Funds).

No more than 20% of the total net assets of the Hedge Fund portfolio allocation may be invested with any mutual fund or similarly registered investment vehicle.

No investment in any investment vehicle may account for more than 25% of the net assets in that commingled fund or limited partnership.

No investment with any single Manager may account for more than 25% of that Manager's total assets under management (including Funds of Funds).

Policy allocations and ranges for the strategies in the Hedge Fund allocation are:

| Allocation Targets | Range | |
|---|---|---|
| Equity Strategies | 15% | 0% to 35% |
| Event Driven Strategies | 15% | 0% to 35% |
| Credit Strategies | 15% | 0% to 35% |
| Relative Value Strategies | 15% | 0% to 35% |
| Multi-Strategies | 10% | 0% to 35% |
| Global Macro | 15% | 0.0% to 35% |
| CTA/Commodity/Currency | 0% | 0% to 20% |

**Important note:** The Allocation Targets are not intended to add up to 100%.

As the Hedge Fund allocation can invest in various investment vehicles and strategies with differing liquidity profiles, it is important to consider liquidity as a separate risk spectrum. In order to manage the portfolio and provide the System liquidity as necessary, but remain flexible enough to capture returns available in moderately illiquid opportunities, the Hedge Fund allocation will adhere to the following liquidity targets:

No more than 60% of the Hedge Fund portfolio as a whole is to be committed to vehicles that provide liquidity on a greater than annual basis.

No more than 20% of the portfolio may be committed to vehicles with a greater than 3 year lock-up in the Hedge Fund portfolio.

## F. REAL ESTATE

### 1. Objective

The purpose of the real estate allocation is to enhance total return and provide diversification to the overall investment portfolio. Due to the illiquid and cyclical nature of the real estate asset class, investment staff and the Real Estate Investment Consultant ("RE Consultant") recommend that the Strategic Target Allocation be invested over a multi-year period in order to avoid considerable vintage year risks.

### 2. Asset Class Benchmark

The performance objective is to exceed the National Council of Real Estate Investment Fiduciaries Open End Diversified Core Equity Index (Net), ("NCREIF-ODCE"), net of fees, over rolling five year periods

### 3. Investment Sectors

TMRS' allocation to real estate will be diversified among a variety of Private and Public Market investment types in order to reduce the volatility of real estate returns and the risk of loss of capital. The following are general categories used for diversification of the real estate portfolio:

a) **Core Investments.** Stable and Income Producing with Limited Risk.

b) **Value-Added Investments.** Generally, core property types with an identifiable deficiency that can be corrected and converted to Core.

c) **Opportunistic Investments.** Similar to Value-Added investments but with greater risk characteristics such as distressed assets, development, land and international properties.

d) **Public Real Estate Securities.** Publicly listed and traded global real estate securities.

4. **Investment Structures.** Due to the size of the TMRS portfolio, the preferred investment structure for private real estate investments is commingled funds. Both Commingled Fund and Separate Account Structures may include private real estate investments including but not limited to Co-Investments, public real estate securities, or commercial mortgages.

### 5. Diversification and Risk Management Guidelines

TMRS will seek to control risk in its real estate investment program by diversifying the investments through investments in the following:

6. **Sector Diversification** - Core, Value-Added, and Opportunistic.

TMRS shall seek diversification in Real Estate sectors as follows:

| Sector | Target Allocation Range |
|---|---|
| Core | 50-100% |
| Value-Added | 0-50% |
| Opportunistic | 0-25% |
| Public Securities | 0-20% |

7. **Property Type Diversification** – TMRS shall seek diversification through investments in the following property types:

| Type | Target Allocation Range |
|---|---|
| Office[a] | 0-50% |
| Retail | 0-35% |
| Multi-family[b] | 0-45% |
| Industrial | 0-35% |
| Other[c] | 0-30% |

a Office includes medical office
b Multi-family includes for-rent student housing
c Other includes hotel, land, self-storage, senior housing, etc.

8. **Geographic and Economic Location Diversification**. The TMRS' real estate portfolio shall seek to include investments diversified across various locations with different economic concentrations. The portfolio shall be at least 80% invested in US markets.

9. **Real Estate Investment Manager Diversification**. TMRS shall utilize various Investment Managers for real estate. TMRS will limit the amount committed to one Investment Manager to no more than twenty percent (20%) of the total allocation for real estate investments.

10. **Vintage Year Diversification**. To avoid excessive exposure to any one real estate cycle, TMRS shall not commit more than 30% of the total real estate allocation for investment during any one calendar year.

11. **Public Real Estate Security Limits.** TMRS shall not invest more than 20% of the TMRS real estate portfolio in public real estate securities.

12. **Commercial Mortgage Limits**. TMRS shall not invest more than 20% of the TMRS real estate portfolio in commercial mortgages.

13. **Leverage.** TMRS recognizes that leverage is an inherent component of real estate investments and the use of leverage can be an effective means to increase overall returns from time to time on a risk-adjusted basis. There will be a limit of 65% loan to value of the total real estate portfolio.

    All portfolio leverage will be secured through the individual fund investments. There will be no recourse debt to TMRS permitted.

14. **Investment Size.** The maximum investment size for any single investment (e.g. commingled fund, commercial mortgage account, real estate securities account) shall be limited to fifteen percent (15%) of the total real estate allocation at the time of Board approval.

15. **Valuation Policy.** Consistent with best practices for valuation of real estate investments, TMRS requires that real estate values be reported by the Real Estate Funds in which it invests (the "Real Estate Funds") on a quarterly basis. Quarterly valuations are preferred but must be conducted no less than semi-annually. Exceptions to this policy include non-stabilized properties which can be held and valued at cost by the Real Estate Funds and so will not be externally valued until stabilized. Non-stabilized properties may include but are not limited to those under construction or renovation as well as land held for future expansion or entitlement.

    a) **Valuation Requirements.** The scope must be sufficient to demonstrate that the value of each property held has been appropriately determined. The scope should include, but not be limited, to the following:

    **i.** Must have and follow their own written valuation policies
    **ii.** Must notify TMRS if the written internal valuation policy is changed
    **iii.** Must use appropriate, established valuation techniques
    **iv.** Valuation process oversight, review, and approval must be independent of the portfolio manager with approval so documented
    **v.** Sufficient documentation for Real Estate Fund auditors to re-compute the calculations during audit
    **vi.** Reconciliation of any significant variance from the previous appraisal
    **vii.** If an external valuation firm is used to conduct any part of the appraisal process they must:

    a. be performed in accordance with Uniform Standards of Professional Appraisal Practice (USPAP) for US investments and either the International Valuation Standards as set forth by the International Valuation Standards Committee (IVSC) or the appropriate authoritative standard in the country in which the property exists, and
    b. Differences between external valuation and the valuation used in reporting by the Real Estate Funds, and the reason for the differences, must be disclosed by the Real Estate Funds.

**b)** TMRS' real estate Consultant in conjunction with investment staff is required to confirm compliance by the Real Estate Funds with appropriate valuation procedures on an annual basis.

## G. PRIVATE EQUITY

### 1. Objective:

The Private Equity asset class is intended to enhance the total fund performance through 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.

Private equity strategies generally include, but are not limited to, buy-outs in private companies, venture capital, growth oriented or minority equity investments; and special situations or opportunistic investments such as distressed securities and lending strategies, mezzanine and hybrid positions or other structured investments. The private equity market can be accessed using the primary market as well as secondaries and co-investments.

### 2. Asset Class Benchmark

The performance objective is to exceed the MSCI All Country World Investable Market Index (Net), net of fees, over rolling five year periods.

### 3. Structure

| **Strategy** | **Range** |
|---|---|
| Control/Buy-out | 40% to 75% |
| Venture/Growth/Minority | 10% to 45% |
| Special Situations/Opportunistic | 5% to 35% |

**Geography**

| | |
|---|---|
| U.S.A. | Min. 75% |
| International | Max. 25% (measured as a % of Net Asset Value) |

### 4. Guidelines

No more than 35% of the total net assets of the Private Equity portfolio may be invested with any one Manager across multiple funds, except for Managers of a fund-of-funds, secondaries funds or funds-of-one established to buy fund-of funds or secondaries.

No more than 25% of the total net assets of the Private Equity portfolio may be invested in any one investment vehicle, including limited partnerships or limited liability companies, with the exception of a fund-of-funds, secondaries funds or funds-of-one established to buy fund-of funds or secondaries.

No investment with any one Manager may account for more than 25% of that Manager's total assets under management at the time of commitment.

No more than 35% of the total net assets of the Private Equity portfolio may be committed on a primary basis in any one calendar year. Secondary funds and fund-of-funds that have, or will have, vintage year diversification, are excluded from this calculation.

## H. CASH EQUIVALENTS

1. **Objective**:

   Cash balances are generated for the purpose of satisfying cash flow requirements of the System, reallocating assets between portfolios, and from ordinary investment activity within a Manager's portfolio. The investment objective is to safeguard principal, maintain adequate liquidity to meet anticipated needs, and earn incremental yield.

2. **Asset Class Benchmark**

   The performance objective for the commingled vehicles individually, and for the unallocated cash investments in the aggregate, is to exceed the return of 30-day US Treasury Bills.

3. **Unallocated Cash** will be invested by investment staff in the following commingled vehicles.

   **a)** Custodian bank's STIF vehicles,
   **b)** AAA-rated money market mutual funds registered with the US Securities and Exchange Commission under Section 2(a)-7 as an investment company under the Investment Company Act of 1940, when authorized by the CIO.

4. **Concentration Limits**

   **a)** Investments in the Custodian Bank's short-term investment fund and investments in AAA-rated SEC registered 2(a)-7 money market funds are limited to 5% of the money market fund size at the time of purchase; except that

   **b)** Investments in 100% US Treasury or 100% US Agency only funds are limited to 10% of the money market fund size at time of purchase.

5. **Manager Guidelines for Investment of Cash Equivalents**
   Note: Managers apply different strategies to meet cash flow liquidity needs. For the purposes of this IPS, cash balances and Cash Equivalents within a manager's mandate are defined as:

   **a)** those necessary to fully support derivatives and unsettled trades as well as withdrawal requirements;
   **b)** having maturities of up to 397 days;
   **c)** securities that satisfy the Credit Risk requirements in this section;
   **d)** listed as Permissible Investments within this section.

   Cash equivalents will fall within the concentration limits of the manager's mandate.

6. **Credit Risk** will be controlled by requiring minimum ratings by sector as outlined below and through rigorous credit analysis. The following is the minimum credit quality for each of the sectors.

   **a)** Commingled Vehicles
      **i.** The minimum credit quality of SEC-registered 2(a)-7 Money Market Funds is AAA.
      **ii.** The Custodian Bank's short term investment fund can be non-rated but will maintain a minimum average credit quality of A1/P1.

   **b)** Money Market Instruments, and Notes, Bonds, and Debentures shall have a minimum short-term rating as provided by a Nationally Recognized Statistical Rating Organization ("NRSRO") as follows:
      **i.** Any two of the following: P-1, F-1 or equivalent rating.
      **ii.** For securities with stated maturity 366 days or more from time of purchase, long-term ratings shall be used only if a security is not short-term rated and no security of the same issuer that is comparable in priority with such security is rated. Where a long-term rating is used, the issuer must have a minimum investment grade rating.

7. Permissible Investments. The following are permissible investments as cash equivalents, subject to credit quality restrictions outlined above.
   **a)** Debt obligations issued by the US Government, its agencies and instrumentalities
   **b)** Debt obligations of a US state or local government
   **c)** Commingled Vehicles
      **i.** Money market mutual funds registered with the US Securities and Exchange Commission under Section 2(a)-7 as an investment company under the Investment Company Act of 1940
      **ii.** Custodian bank's short term investment funds.
   **d)** Money Market Instruments:
      **i.** Bankers' Acceptances
      **ii.** Certificates of Deposit
      **iii.** Commercial Paper
      **iv.** Time Deposits
   **e)** Notes, Bonds, Debentures:
      **i.** Corporate Bonds
      **ii.** Medium Term Notes
      **iii.** Floating Rate Corporate Bonds
   **f)** Repurchase Agreements
   Repurchase Agreements with a maximum term of seven (7) days and subject to the following requirements:
      **i.** Permitted Collateral: US Government Securities, which will include securities issued or guaranteed as to principal and interest by the United States Government, its agencies, instrumentalities, establishments or the like, marked to market on a daily basis.
      **ii.** Manager must monitor and manage counterparty risk in the context of the total portfolio.
      **iii.** Margin Requirements: Collateral must have an initial collateral margin of 102%.

## I. SECURITIES LENDING

### 1. Objective

The objective of the securities lending program is to generate incremental income from overnight and certain term loans of securities held, subject to guidelines described herein, utilizing a high-quality and reasonably conservative cash collateral re-investment program that safeguards the return of principal and maintains adequate daily liquidity to support trade settlement activity and portfolio restructuring activities.

### 2. Lending Agent

#### a) Agent Qualifications

The Securities Lending Agent or its parent organization must:

- **i.** be experienced in the operation of a fully secured securities lending program;
- **ii.** indemnify the System against any loss resulting from borrower default or from its own failure to properly execute its responsibilities under the lending agreement;
- **iii.** maintain a favorable SSAE18 or ISAE 3402 report reflecting appropriate risk controls;
- **iv.** be rated at least "A" or equivalent by two NRSRO; and
- **v.** maintain Tier 1 and Total Capital Ratios of 7% and 10%, respectively.

Should a violation of these guidelines occur, the Securities Lending Agent will notify investment staff within 3 business days who will promptly notify the CIO of the guidelines breach and appropriate steps to remedy the breach (if any), accompanied by a recommendation. A breach will not in itself cause the suspension or termination of the lending program.

#### b) General Standards of Care and Practices of Securities Lending Agent

**i. Lending Agent as Fiduciary**
The Securities Lending Agent must act as a fiduciary in the management of the TMRS account, and will manage the market risk of the reinvestment of cash collateral through careful monitoring and consideration of the maturity structure of the reinvested cash collateral relative to the System's outstanding loans.

**ii. Collateral Segregation**
Cash Collateral or US Government securities must be received by the Securities Lending Agent and held in a fully-paid segregated account invested according to approved guidelines described below.

### 3. Program Guidelines

**i. Borrower Limits and Collateralization**

The securities lending agent will be responsible for in-depth ongoing credit review of borrowers, independent of the agent's securities lending decision-makers. The lending agent will regularly report to TMRS investment staff regarding counterparty exposures. TMRS investment staff will review the borrower list with the lending agent on at least a semi-annual basis.

The market value of TMRS' securities loans outstanding to an approved borrower at the end of each business day should be no greater than 25% of the total market value of TMRS' securities on loan. Market price volatility and fluctuating demand for securities may cause the market value of TMRS' securities lent to an approved borrower to temporarily exceed these limitations. If such an event occurs, the securities lending agent will reduce the amount of loans outstanding to that borrower to comply with the stated limits.

Because the securities lending agent provides borrower default indemnification, the securities lending agent has the ability to reduce the amount of loans it makes to borrowers on TMRS' behalf, without approval from TMRS investment staff.

The Securities Lending Agent will collect and maintain proper overcollateralization as follows:

a) Domestic (United States domiciled and Non-US domiciled issued in US dollars) securities: Initial Margin of 102%
b) International (non-United States domiciled) securities: Initial Margin of 105%

c) **Eligible Collateral**
   i. Cash (US dollars)
   ii. US Government Securities

d) **Cash Collateral Reinvestment Guidelines**

Cash collateral may be reinvested through a pooled fund managed by the Securities Lending Agent or through a separately managed account structure. Investment staff will evaluate and may recommend the use of a commingled pool considering the benefits of liquidity that a pool structure offers in conjunction with its investment objectives, guidelines, restrictions, and strategy. Such analysis will also consider transparency of the investment process and internal controls.

## GLOSSARY OF TERMS

**Actively Managed Strategy** - Investment strategies that require judgement and rely on an investment manager's skill and experience with analytical research, financial forecasts, or a process in making investment decisions. Actively Managed Strategies are intended to outperform their respective Passively Managed index, net of fees.

**Asset Allocation Decision** – choosing among broad asset classes such as equities, fixed-income securities and real estate.

**Asset-Backed Security (ABS)** – bonds that are typically securitized by receivables – such as credit cards, second mortgages, automobile loans, equipment leases, airline ticket receivables, boat and recreational-vehicle loans, unsecured personal loans, automobile and truck dealer inventories, and mobile homes. These securities are typically structured to offer a variety of credit ratings to satisfy different investors' risk tolerances.

**Asset Class** - A broad category of investments, such as equity securities (stocks), fixed income securities (bonds), cash equivalents, and real estate (etc.).

**Asset Class Structure –** strategic target allocations of sub-asset classes and implementation strategies within a specific asset class. The asset class structure objective is to improve on the risk and return profile of the asset class benchmark.

**Benchmark** – a gauge in the securities market by which investment performance can be measured.

**Buy-out** – the purchase of a controlling interest in the stock of a targeted firm, often utilizing some borrowed funds, and generally to effectuate some corporate change.

**Capitalization Weighted Passively Managed Strategies -** A capitalization-weighted passive strategy is a type of market index with individual components, or securities, weighted according to their total market capitalization. Market capitalization uses the total market value of a firm's outstanding shares. The calculation multiplies outstanding shares by the current price of a single share.

**Closed End Real Estate Fund** - a private real estate fund with a fixed fund size and a limited term, typically 8-15 years.

**Collateralized Loan Obligation (CLO)** - a structured credit vehicle that purchases a diverse pool of senior secured bank loans made to businesses that are generally rated below investment grade. The debt issued by CLOs is divided into separate tranches, each of which has a different risk/return profile based on its priority of claim on the cash flows produced by the underlying loan pool.

**Commercial Mortgages.** Commercial mortgages are a type of real estate investment and can be classified as Core, Value Added or Opportunistic as discussed herein. The attributes for commercial mortgages are summarized below.

a. Commercial Mortgage returns are sensitive to interest rates, spreads and credit quality. The duration of a Commercial Mortgage portfolio can be high due to yield maintenance pre-payment penalties in many commercial mortgages.

b. Commercial Mortgages have bond-like risk/investment characteristics, with real estate serving as collateral. Commercial Mortgage backed securities may be priced from time to time with varying upside potential.

c. Investment in Commercial Mortgages can be accomplished through Public or Private Market vehicles and can be investment grade (Core) or non-investment grade (value-add or opportunistic).

d. The long-term expected return from mortgages, depending on the strategy, is 150-300 basis points over comparable treasuries or considerably higher for value added and opportunistic debt strategies.

**Commercial Mortgage Backed Securities (CMBS)** - securitized form of commercial real estate debt in which multiple loans are placed in a pool, which typically secures multiple tranches of higher rated publicly traded bonds plus lower rated or unrated bonds with limited liquidity.

**Committed Capital** - total capital committed to a fund by both the limited and general partners.

**Co-investment** - investments alongside other partnerships in all types of private equity and private real estate, leveraging their due diligence, usually on a non-promoted basis; co-investment allocations lower the overall cost of private equity and real estate programs.

**Commingled Fund** – a pooling of funds from multiple investors, managed as one account. The client owns units in the pool. Similar to a mutual fund. The commingled funds shall be structured as limited partnerships, limited liability companies, private REITs, corporations or other investment vehicles provided that the commingled funds are structured in a manner enabling TMRS to comply with Texas law requiring investments be structured as securities.

**Convertible securities** – securities, usually bonds or preferred stock, which can be converted into common stock.

**Core Fixed Income** – an approach to fixed income portfolio management that typically limits the investment opportunity set to those securities eligible for inclusion in the Bloomberg Barclays US Aggregate Bond Index (defined previously).

**Core Real Estate Investments** - Operating, substantially leased office, retail, industrial or multi-family properties. Generally, have institutional qualities for size, physical attributes and location. Target unleveraged total returns of 7%-9% per year, gross of fees, with a high proportion of the total return to be generated from current income with a smaller portion of the total return generated from appreciation. Target leverage for Core investments is limited to no more than 50% loan to value at acquisition with comfortable debt service coverage ratios, depending on property type, cash flow coverage and interest rate environment. Exceptions will be considered by the Board's Specialty Consultant and investment staff based on characteristics of individual investments. Core may include property types other than traditional Core investments when the cash flow or appreciation characteristics are similar to traditional core property types. Core has historically been accessed through the private real estate funds or separate accounts, although Public Market securities and certain low risk commercial mortgages will be classified as core to the extent they have investment attributes consistent with traditional core investments.

**Core Plus Fixed Income – a**n approach to fixed income portfolio management that allows some percentage of a Core Fixed Income portfolio to be invested in securities outside the Bloomberg Barclays US Aggregate Bond Index (defined previously).

**Counterparty** – the entity that is in the opposing position to a transaction.

**Counterparty Risk** – the risk that the counterparty fails to make required payments, experiences rating downgrades, or files for bankruptcy protection.

**Credit Default Swaps (CDS) –** a type of credit derivative that allows the transfer, between parties, of the credit risk of a referenced bond for a specific issuer. CDS are used by some investors as risk management tools and by others to speculate about the credit quality of a referenced bond.

**Credit Quality** – the assessed level of credit worthiness or risk of default, as assigned by a rating agency resulting from a formal evaluation of the ability to meet obligations.

**Currency Forward Contract** – an agreement to buy or sell a specified amount of a currency at a specified future date at an agreed upon price.

**Currency Risk** – the risk that a domestic investor's holding of foreign currency will change in purchasing power when converted back to the home country's currency.

**Distressed securities** – securities of entities that are under financial or operational distress, in default or undergoing a restructuring or bankruptcy process.

**Diversification** – spreading a portfolio over many investments to avoid excessive exposure to any one source of risk.

**Duration** – the average time to receipt of all the cash flows of a bond weighted by the present value of each of the cash flows. The duration value of the bond gives bond investors an indication of how interest rate changes will affect the bond's price. It is the approximate percentage by which a bond's price will move, given a 100 basis point change in yield.

**Economic Cycle** - a period during which a country's economy moves from strength to weakness and back to strength, driven by many forces including inflation, the money supply, domestic and international politics, and natural events. The length of the cycle is difficult to predict and may be measured in months or in years. Certain investments that thrive in one phase of the cycle may lose value in another. When evaluating the aggregate of different investment types, it is important to do so through a full economic cycle.

**Equity Investment** – claims held by the residual owners of a firm. May also be referred to as common stock. Investments in Real Estate and certain Private Markets classifications may also be considered equity.

**External Investment Risks** - Except for Counterparty Risk these are all risks which are taken in the investment portfolio for the purpose of, and with the expectation of, earning returns. The strategy chosen by the Board has been developed by combining investments with the best risk return tradeoffs and the least amount of interdependence.

**a.** Capital Market Risk is the risk that stock, fixed income or alternative investment markets go down in value. This risk includes economic risk in that poor economic growth typically has negative effects on most if not all capital markets. For virtually all securities, market risk (measured by the rise or fall of market indices) explains most of the rise or fall of the securities price.

**b.** Foreign Currency Risk is the risk due to changes in currency exchange rates. Currency risk is generally considered in the diversification benefits of foreign investments and so is not expected to be hedged except as specifically authorized by TMRS and according to the relevant asset class sections of this IPS. Otherwise, foreign securities managers may engage in forward currency transactions only to eliminate foreign currency risk in the settlement of trades.

**c.** Counterparty Risk is the risk that a counterparty to an investment contract defaults and does not fulfill their obligation. Where derivatives have been used to hedge against an exposure (such as currency) this risk is highest exactly when the contract is most valuable. This type of risk is only assumed by TMRS through outside managers and the securities lending agent and is managed through oversight of the managers' counterparty risk management process.

**d.** Credit Default Risk is the risk that the bond issuer will not be able to fulfill its payment obligations of principal and interest over the life of the security. Typically investment grade bonds have lower probabilities of default and their pricing reflects lower risk premiums relative to non-investment grade bonds. This risk is managed primarily through security concentration and credit rating limits in manager guidelines.

**e.** External Manager Risk refers to the risk taken by external managers relative to their benchmark and within their management guidelines. The incremental return managers deliver relative to the incremental risk is expected to be better than purely passive opportunities in the capital markets. This tradeoff is included in the risk monitoring and reporting of the Risk Management function.

**f.** Legal Risk involves the legal documentation for all accounts, investment subscriptions, external managers, investments in private investment funds and derivatives. Investment staff in consultation with internal or external legal counsel, or both, will review and negotiate all such documents to ensure that they reflect TMRS positions on business issues, legally protect TMRS interests to the extent reasonably possible, and are legally binding and enforceable in an acceptable venue.

**Fiduciary** – one who can exercise discretionary authority or can control important aspects of a pension plan's management.

**Global Investment Performance Standards (GIPS)** - a set of standardized, ethical principles promulgated by the CFA Institute that provide investment firms with guidance on how to calculate and report their investment results.

**Hedge Fund Strategies** – strategies that seek to deliver positive returns regardless of market conditions across a wide range of asset classes and trading techniques. Hedge Fund Managers focus on absolute risks and returns, instead of viewing risk relative to a benchmark. Since these strategies are less constrained, they rely more on manager skill. Funds of hedge funds are a common method of gaining exposure to Hedge Fund strategies and are generally comprised of a diversified pool of hedge funds that may include the use of derivatives, leverage, and short selling.

**Investment Service Providers** – all external service providers who perform investment-related services for the System, including, but not limited to, Consultants, Custodians, Investment Managers, Legal Counsel, data aggregators, Security Lender Agents, etc.

**Leverage** – the use of borrowed money to make an investment, including all forms of debt and financing structures. In other words, this is the control of a large amount of money by a smaller amount of money, such as buying on margin. In finance, this is the relationship of debt to equity on a company's balance sheet in the form of the debt/equity ratio.

**Liquidity Risk** - the risk that there will be insufficient cash on hand to meet TMRS' disbursement requirements. This risk will be managed based on periodic reviews by investment staff with each Manager regarding future cash payout requirements based on net cash flow projections of the System by the Finance Department. It is also the risk that securities cannot be bought or sold without affecting their market price. Each Public Market Manager will select securities within the authority granted in their contract, which, in the Manager's opinion, have a capitalization sufficient to enable the Manager to purchase or sell such securities expeditiously without significantly affecting the market price. Within Fixed Income, Cash Equivalents, and Securities Lending liquidity risk is managed by maturity and asset type limits as described in the guideline sections to this IPS. For Separately Managed Accounts (SMA), where liquidity has been determined to be a concern by investment staff or the Board's Investment Consultant(s), specific criteria for measuring liquidity of the portfolios will enable TMRS to more effectively monitor the Manager's process for managing liquidity risk.

**Long Position** – a party who buys a traded asset has a long position in the asset. In the case of a forward purchase of an asset, the long position holder has a future entitlement to receive the asset, under the terms of the forward purchase contract.

**Market Cycle** – the movement from a period of increasing prices and strong performance (bull market), through a period of weak performance and falling prices (bear market), and back again to new strength. Different markets or strategies (stocks vs bonds, growth vs value, small cap vs large cap) often operate on different cycles and should be evaluated through a full market cycle.

**Mixed Use Property Type** - properties that are any mix of the five product types: office, retail, industrial, multifamily and hotels. Properties that include only a small percentage of a second product type are generally not considered mixed use (for example, an office building with a retail shop).

**Mortgage-Backed Security (MBS)** – a debt instrument with a pool of real estate loans as the underlying collateral. These financial instruments are designed to channel funds from the capital markets to the mortgage borrowers.

**Multi-Family Property Type** - includes high-rise, low rise and garden style rental residential properties. May be specialized rental properties such as student housing, military housing, affordable housing or age restricted housing. Development projects (vertical construction) which are primarily multifamily are included in this category.

**Nationally Recognized Statistical Rating Organization (NRSRO) –** a credit rating agency that is registered with and overseen by the U.S. Securities and Exchange Commission.

**Nominal Basis** - an investment return that does not account for risk or inflation.

**Office Property Type** - includes central business district high-rise and suburban low and mid-rise buildings with finished office space. May be single tenant or multi-tenant. Includes specialized buildings such as medical office buildings and government buildings. May include attached parking structures and miscellaneous uses. Development projects (vertical construction) which are primarily office are included in this category.

**Operational Risk**

- **a.** Custody Risk is the risk associated with owning and safeguarding assets. This risk is managed through appropriate qualifying standards and controls. The bank selected as the custodian for TMRS investment securities must be financially sound and TMRS Staff will evaluate the creditworthiness of the custodian bank on an annual basis. For the purpose of this IPS, the custodian bank must maintain a favorable SSAE18 report reflecting satisfactory internal operational controls and must maintain above satisfactory ratings by TMRS Investment and Finance Departments' staff in all areas critical to a custody relationship, including but not limited to the settlement of trades, collection of investment-related cash flows, custody of all securities in which TMRS is invested, a sub-custodian network consistent with the standards of the Code of Federal Regulations §270.17f-5, accurate and timely record-keeping, and overall customer service. Custodial Risk is not strictly a function of credit or operational quality, however. The legal agreements in place between TMRS and its custodial bank, if properly constructed and effective, serve to minimize the risks connected with the use of a custodial bank.
- **b.** Investment Administration Risk is the risk associated with accuracy and timeliness of recording and reporting of investment activity. The Accounting Agent (also the System's custodian bank) is responsible for accurate and timely accounting of portfolio activity, accurate and timely performance reporting, and overall customer service. The roles and responsibilities of the Investment and Finance Departments in this respect, as defined in the relevant section of this IPS are the first part of addressing this risk. The second part of managing this risk is adherence to documented policies and procedures, maintained by the Investment and Finance Departments, which include the specification of internal and external deliverables, accountability, reconciliations, accuracy requirements and timing.

**Opportunistic Real Estate Investments** - Opportunistic investments can be comprised of any property sector. Opportunistic investments can include office, retail, industrial and multi-family with high-risk attributes. These high-risk attributes may include a combination of hotels, international and domestic non-performing loans, operating companies, development, land and distressed properties and other high risk investments. Target leverage for Opportunistic investments can be up to 80% loan to value at acquisition (property and portfolio level). Exceptions will be considered by the Board's Specialty Consultant and investment staff based on characteristics of individual investments. Target gross-of-fee total returns for Opportunistic investments are at least 600 basis points or higher than for Core Properties per year in order to compensate for the increased risk. Opportunistic investments have historically been accessed through the private real estate funds, although non-US Public Market securities and certain higher risk commercial mortgages will be classified as Opportunistic to the extent they have investment attributes consistent with Opportunistic investments.

**Passively Managed Strategies** – an investment strategy that attempts to replicate a selected capitalization weighted index performance, in contrast with active management which attempts to better the performance of an index benchmark. Passively Managed strategies are less expensive than Actively Managed strategies.

**Policy Benchmarks** - Capital market indices that represent the broad investment opportunities of each asset class in which the Board has chosen to invest.

**Preferred Stock** – class of stock which provides priority over common stockholders on earnings in the event of liquidation; preferred stock typically has less potential for appreciation and does not provide voting rights.

**Private Equity** - seeks to gain from investments in private companies. Investments range from debt to equity instruments across a broad spectrum of company types and uses of capital. Examples of private equity strategies include venture capital, leveraged buyouts, and distressed debt. Private equity may be used for financing of start-ups, the purchase of significant portions of companies for control, or the purchase of troubled companies' debt at a fraction of face value. Private equity investments are commingled funds structured as limited partnerships with capital commitments that are drawn down over time based on Manager discretion. Potential distributions are made as a fund matures and investments are realized over an 8-12 year horizon. Investments in private equity can offer high returns and diversification, but lack liquidity, have infrequent valuation, are slow to generate initial returns and therefore have significant risk.

**Private Equity Secondaries** – the buying and selling of pre-existing limited partner investments and/or commitments to private equity funds or partnerships. In the secondary market, buyers and sellers do not typically transact through the private equity manager, but transfer ownership of their partnership stakes directly.

**Private Markets** – The universe of investment opportunities that fall outside of Public Markets and are typically invested in through GP/LP, or LLC structures.

**Private Placement** – issuance of debt or equity directly to an investor or investors without registration with a governmental body. SEC Rule 144-a permits large institutions to trade privately placed securities among themselves that might otherwise be restricted.

**Proxy** – an instrument empowering an agent to vote for a shareholder.

**Public Markets** - Public Markets generally refers to markets that trade securities (stocks and fixed income) or derivatives which are traded on internationally recognized exchanges, or are traded over-the-counter on a regular basis.

**Other Public & Private Markets** - a disparate group of strategies with a generally common theme of investing with an orientation towards inflation or other macroeconomic environments. While there are a wide variety of Other Public & Private Markets strategies, one common theme is their goal to generate a return premium over inflation (or deflation). Other Public & Private Markets strategies invest in a variety of securities such as Treasury inflation protected securities (TIPS), commodities, natural resource stocks, currencies, and traditional asset classes. Other Public & Private Markets strategies may be pursued through a series of dedicated sub-asset class mandates, or through broader globally and tactically managed mandates.

**Real Estate (Private)** - aims to provide income and capital appreciation through investments in diversified properties or debt securities. Valuations of private real estate are infrequent and done through an appraisal method. Open-end, core real estate funds may generate income through rental agreements of high quality, well leased properties. Debt interest maybe be gained via the purchase of whole mortgages or portions of mortgages and other real estate debt (e.g. commercial mortgage backed securities, or mortgage backed securities). Closed-end, value added real estate investment properties can vary by quality, occupancy, leverage, and income. Closed-end funds are considered higher risk due to generally higher levels of leverage and the potential of developments, improvements or re-positioning efforts not being successful. Investors in open-end funds tend to have moderate fees and liquidity while private real estate structures are more similar to private equity with a lack of liquidity, higher fees and a longer-term investment horizon, capital commitments and capital calls.

**Real Estate Investment Trusts** (**REITs**) - securities that sell like a stock on major exchanges and invest in real estate directly, either through real estate operating companies, properties or mortgages. REITs are companies that own and most often manage commercial real estate. REITs receive special tax considerations and typically offer investors moderate yields as they are required to distribute at least 90% of their taxable income to shareholders annually in the form of dividends. REITs offer a daily-valued and liquid method of investing in real estate.

**Real Estate Securities (Public)** – securities that can be classified as Core, Value Added or Opportunistic. The attributes for public real estate securities are summarized below.

a. Public real estate investment trusts ("REITs") and real estate operating companies ("REOCs") have modestly higher risk and return characteristics than core properties due to leverage and operating company risks.

b. Daily pricing and Public Market trading provide liquidity. However, due to the small float and limited market capitalization of REITs and REOCs relative to the companies in other sectors, liquidity may come at a price.

c. The emergence of the international Public Real Estate Securities market has broadened the universe to include Asia, European, Australian and North and South America property companies.

d. Historical returns are approximately 9%-11% over 10-year periods of time. Public real estate securities are generally considered to have risk/return attributes consistent with core real estate.

**Rebalancing –** realigning the proportions of assets in a portfolio as needed.

**Residential Mortgage-Backed Security (RMBS) –** a debt-based security (similar to a bond), backed by the interest paid on loans for residences.

**Retail Property Type** - multi-tenant or single tenant buildings where tenants sell goods, food, services, or entertainment. Includes enclosed malls, open air malls, power centers, neighborhood centers and street retail. Also includes theaters and entertainment centers. Development projects (vertical construction) which are primarily retail are included in this category.

**Risk** – the uncertainty of outcome or the likelihood of a loss.

**Risk Adjusted Return** - For two investments having an equal total return over an investment period, that investment which experiences the least volatility of returns has the higher risk-adjusted rate of return. The standard calculation of risk-adjusted total rate of return is the "Sharpe ratio," defined as the difference between the investment return and the average T-Bill rate over the same period, divided by the standard deviation of the investment return over the period.

**Risk Tolerance** - the degree of uncertainty that an investor can handle in regard to a negative change in the value of his or her portfolio. For institutions this is typically determined based on financial consequences of the negative changes in the investment portfolio over a specific time horizon.

**Rules-Based Strategies** – investment strategies that adhere to a strict set of rules governing the trading decisions within a specific strategy. Some examples of rules-based strategies are Equal Weighted Indexes, Fundamental Indexing, Low-Volatility, and Efficient Indexing.

**Separate Account** – funds managed on an individual account basis; no pooling with other investors. The client owns the securities.

**Short Position** – a position that is owed or borrowed or results from selling what is not owned.

**Short selling** –selling an asset that one does not already own. The short seller will have to close out the position prior to settlement, or purchase the asset in order to deliver.

**Sovereign bond** – a security issued by a foreign government or government sponsored agency.

**Sovereign Risk** – the additional risk assumed by investors with funds invested in foreign countries. Sovereign risk includes currency translation losses, default on foreign government debts, and misuse of company assets by foreign governments.

**Staff Investment Committee** – TMRS' Staff Investment Committee is comprised of the CIO, all Investment Directors, and the Director of Risk Management. The Investment Support Analyst serves as the Secretary. The ED, Internal Audit, and Legal are invited to all Staff Investment Committee meetings. Other Investment Department personnel may also attend.

**Standard Deviation** – a measure of the degree to which an individual probability value varies from the distribution mean. The higher the number, the greater the risk.

**Strategic Target Allocation** – the percentage allocation to each asset class, based on long-term capital market assumptions, designed to achieve risk and return objectives over a long time horizon. Ranges around the target allocations are typically allowed to accommodate market volatility and violations are addressed through rebalancing policies. This is distinguished from tactical asset allocation which over- or under-weights asset classes relative to the strategic target allocation, based on shorter-term market conditions.

**Strategy Implementation Risk**

- **a.** Manager Selection Risk is the risk that the manager's capabilities to produce performance are different than our expectations. Operational Risk and Governance Risk (organizational structure and oversight mechanisms) exist in both Manager and Consultant relationships and are addressed in other sections of this IPS and in the Manager and Consultant search/review due diligence policies maintained by the Investment Department.
- **b.** IPS Compliance Risk addresses compliance with the guidelines of this IPS. This IPS prescribes numerous requirements in the form of due diligence, monitoring, reporting and holdings guidelines with the purpose of minimizing the risk of avoidable errors. Compliance risk is the risk that any part of these requirements is not properly followed. To manage this

risk, a compliance checklist created by the Compliance function refers to the due diligence, monitoring, reporting and portfolio holdings guideline requirements which collectively are sufficient to demonstrate compliance with the provisions and guidelines of this IPS. Furthermore, this checklist is used to produce a quarterly report of compliance covering each item of the checklist.

**c.** Legal Compliance Risk addresses compliance with all legal documents related to the investment program. A compliance checklist will be created to address key terms and provisions such as the term of the agreement and notification and reporting requirements, and will be reviewed no less than annually.

**Swap** – agreement between two parties to exchange a series of future cash flows based on pre-determined market-related benchmarks.

**Total Return** – interest or dividend income plus any realized or unrealized capital gain (or loss) on an investment, net of any capital contributions or distributions from the corpus.

**Value-Added Real Estate Investments -** Office, retail, industrial or multi-family properties that have moderate risk associated with their investment. The additional risk associated with Value-Added investments is generally a deficiency that is identifiable and correctable through leasing, re-development, management and/or recapitalization. Value-Added investments may include property types other than traditional Value-Added investments when the risk/return characteristics are similar to traditional value-added property types. Target gross-of-fee total returns for Value-Added investments are at least 200 basis points per year higher than for Core Properties. Target leverage for Value-Added investments is up to 70% loan to value at acquisition (portfolio and property level). Exceptions will be considered by the Board's Specialty Consultant and investment staff based on characteristics of individual investments. Value-Added investments have historically been accessed through the private real estate funds or separate accounts, although Public Market securities and certain moderate risk commercial mortgages will be classified as Value-Added to the extent they have investment attributes consistent with Value-Added properties.

**Venture or Venture Capital** – a kind of equity investment made to seed, early-stage and emerging companies. This often involves a partial equity stake in order to fund expansion for an entrepreneurial firm whose management does not want to sell all of the equity to external investors.

**Vintage Year** - the period that the closed-end fund first draws down or calls capital from the investors and makes the initial investment in real estate.

## APPENDIX A

### Staff Investment Committee (SIC) Charter

October 21, 2021

**Objective:** To establish and maintain a robust internal oversight committee for certain investment and investment operations related decisions and recommendations within the investment department. This document will be reviewed at least annually and will be provided to the Board, at the next available Board meeting, any time a change is made to this document.

**Representation:** The Chief Investment Officer (CIO), each Asset Class Director and the Director of Risk Management are members of the SIC. Additional TMRS employees may be designated a member of the SIC at the discretion of the CIO or Executive Director. The Investment Support Analyst (ISA) will serve as the Secretary of the SIC. Other TMRS personnel may attend SIC meetings. The TMRS Executive Director, Internal Audit and Legal will be invited to all SIC meetings. In the absence of a CIO, the Executive Director may take such actions as he or she deems appropriate to allow the SIC to fulfill its obligations as required under the Investment Policy Statement (IPS).

Executive Sessions are permitted and are restricted to SIC members only (and the TMRS Executive Director if they are in attendance).

**Frequency of Meeting:** Meetings will typically be held monthly and on an ad hoc basis as necessary. Best efforts will be made to send meeting materials to all SIC members, and invited guests, at least 48 hours prior to any meeting.

**Agenda:** The CIO is responsible for creating the meeting agenda. Any SIC member may request an item be added to an upcoming agenda by submitting the title of the discussion topic and appropriate background information to the CIO. The CIO is solely responsible for item inclusion, prioritization or escalation parameters needed to efficiently implement the Board's Investment program.

**Voting:** Many items brought to the SIC will not require a vote. Any item that will be taken to the Board for a formal vote requires prior approval of the SIC. Any item that is taken up under delegated Board authority, as detailed in the IPS, must be presented to the SIC for a formal vote.

For those items that require a vote, a quorum of the SIC must be in attendance. Attendance may be in-person, or by teleconference or videoconference. For a quorum to be established, a majority of the SIC members, one of which must be the CIO, must be in attendance.

Each SIC member shall have one vote.

A simple majority of the members in attendance must vote in favor of a measure for it to pass. A tie vote is a no vote. A No vote by the CIO is a No vote in total. SIC members may vote in real time through e-mail if they attended the discussion electronically or telephonically. No votes may be taken in Executive Session.

**Minutes:** The Secretary, or their designee, is responsible for taking the minutes of the meeting. Minutes from the meeting will be available in a timely manner following the meeting for participants to review. Attendance at the meeting will be documented. The minutes shall reflect only the title of each topic discussed, the motions appropriately made in the meeting and an unattributed vote count. SIC members not present for a particular meeting should take the opportunity to review the minutes and materials discussed.

Issues that will come before the SIC for discussion and/or vote may include, but are not limited to:

- Final recommendation(s) or selection of new investment managers in accordance with the TMRS IPS. Documents to be presented should include, but are not limited to:
    1. A Staff Due Diligence Memo
    2. A consultant recommendation memo
    3. Manager Presentation decks
    4. A sizing rational and recommendation
- Decisions related to the termination of existing investment managers
- Recommendations related to the System's transition management program, including selection of the transition manager pool and analysis of transition manager performance
- Addition or deletion to the manager Watch List
- IMA/Side Letter revision requests including modification, additions and deletions to investment manager guidelines and any changes to fee structures
- Custodian related issues including, but not limited to, cash management, securities lending, manager compliance, FX or other areas of high importance
- Annual Asset Class and Investment manager reviews for all asset classes
- Asset class structure study recommendations
- Legislative activity review, as necessary
- Annual Asset Allocation review, including a review of the capital market assumption set
- Annual Investment Budget review
- Tactical opportunity discussions
- Certain matters related to the Risk Management Program
- Asset Class and Manager benchmark review (investment and risk, if different)

Effective 6/6/2020
Amended: 3/1/2017, 1/29/2018, 9/10/2018, 7/30/2020, 10/1/2020, 10/21/2021