TEXAS MUNICIPAL RETIREMENT SYSTEM

INVESTMENT POLICY STATEMENT

FEBRUARY 2013

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INVESTMENT POLICY

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INVESTMENT POLICY STATEMENT
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I. INTRODUCTION / PURPOSE

This Investment Policy Statement ("IPS") governs the investment of assets for the Texas Municipal Retirement System ("TMRS") and is established to provide a framework for the management of those assets. It sets forth the Board of Trustees' investment objectives and tolerance for investment risk (Risk Tolerance). The overarching objective of the investment program is to guide the program to the highest long-term investment rate of return within the Board's risk tolerance and to satisfy the liquidity needs of the fund.

This IPS outlines objectives, benchmarks, restrictions and responsibilities so that members of the Board, TMRS investment staff, investment managers, consultants, and TMRS stakeholders clearly understand the policies, goals and objectives, and risks connected with the TMRS investment program.

This IPS serves to encourage communication, facilitate transparency, and provide a framework for reporting on investment performance. This IPS also helps to ensure the Board fulfills its fiduciary responsibilities with regard to the management of TMRS investments.

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. Exceptions to this IPS may be made by the Board in rare instances if they support a prudent decision and a policy revision is not deemed appropriate at the time. Justification for such exceptions must be well-documented. The general investment policies are found in the main body, with portfolio guidelines (asset class and investment manager guidelines) in the Appendix.

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, the trustee 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 and in consideration of the purposes, terms, distribution requirements and other circumstances of the trust.

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

B. Conflict of Interest Prohibited. Members of the Board of Trustees, 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 reveal all relationships that could create or appear to create a conflict of interest in their unbiased involvement in the investment process.

II. 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 for total return with appropriate consideration for portfolio volatility (risk) and liquidity. Emphasis should be on both capital appreciation as well as the production of income in order to satisfy the short-term and long-term funding needs of TMRS. Total return includes dividends, interest, and realized and unrealized capital appreciation.

III. ROLES AND RESPONSIBILITIES

A. The **Board of Trustees** is responsible for the administration of the System and its investment program. The Trustees are individually fiduciaries 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 and their beneficiaries. The Board also appoints the investment consultants, investment managers, Executive Director, General Counsel, Internal Auditor, Custodian Bank/Securities Lending Agent, and Consulting Actuary; and approves the annual operating budget.

As part of their fiduciary obligations, the Trustees have the legal responsibility for managing the System's overall investment strategy, including:

1. Establishing investment goals and objectives consistent with plan funding needs.
2. Approving an asset allocation strategy.
3. Establishing an explicit, written investment policy consistent with identified goals and objectives, and applicable laws.
4. Delegating responsibilities for day-to-day management of the investment program through the Executive Director to the Chief Investment Officer and investment staff.
5. Hiring investment consultants to advise the board, and investment managers for prescribed mandates to implement this IPS.
6. Monitoring the activities of the investment program for compliance with the provisions of this IPS.
7. Avoiding conflicts of interest and prohibited transactions.

B. The **Executive Director** is appointed by the Board of Trustees to manage and administer the System and its assets under the supervision and direction of the Board, and in accordance with applicable state and federal laws. In carrying out these responsibilities, the Executive Director has fiduciary responsibilities delegated by the Board under applicable law and is authorized to exercise his best judgment and discretion in planning, organizing, and administering the operations and investments of the System and ensuring that internal controls are in place to safeguard System assets. The Executive Director is hereby authorized by the Board to exercise his fiduciary responsibilities to take such action(s) as are necessary or appropriate to protect the assets of the System using his best judgment and discretion, based on advice of the investment consultant(s) and the Chief Investment Officer, and reviewed by Fiduciary Counsel, General Counsel and Chairman of the TMRS Board of Trustees. The Executive Director is also responsible for informing the Board of any such action taken or other situation involving the investment program and investment activities that merit its attention.

C. The **Chief Investment Officer (CIO)** directs the TMRS investment program consistent with Board-adopted investment goals and objectives, investment policy statements as contained in this IPS, and with applicable state and federal laws. The CIO ensures that adequate resources are available to implement the Board's investment policies, including qualified investment staff and analytical risk management tools, subject to the budget approval process. The CIO works closely with the investment consultant(s), ensures that policies and procedures provide adequate controls to protect the integrity of the investment program, and oversees all investment processes including the selection and due diligence oversight of investment managers.

D. The **General Counsel** serves as legal advisor to the System and reports to the Board of Trustees (and administratively to the Executive Director). In regards to the investment program, the General Counsel or designee coordinates all legal services which include the review, drafting, and negotiation of contracts, drafting of legal opinions, providing legal advice, 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.

E. The **Internal Investment Staff** reports to the CIO and is primarily responsible for the daily operation and implementation of the investment program. Under the direction of the CIO, investment staff members are responsible for adding value through the investments and manager selection process; manager and asset class benchmark selection and Asset Class Structure; and identifying and managing the risks associated with the investment program including investment, operational, and depository/custodial risks. Investment staff members work with the investment consultant(s) to advise the Board of Trustees on investment policy and management issues. Such issues may include without limitation, the development of investment goals and objectives, investment policies and strategies, investment risk management policies, asset allocation decisions, the hiring or termination of investment managers, the establishment of investment performance benchmarks, and the development of investment management guidelines and restrictions.

Investment staff responsible for risk management supports the investment program at the strategic and operational levels through the establishment of appropriate policies and procedures as well as implementation and maintenance of analytical tools to measure and monitor risk.

In identifying and managing risk, internal investment staff will engage in active oversight of the investment program and its activities at the total portfolio, asset class, sub asset class, and manager levels. For example, oversight of investment managers, including the securities lending agent, is a critical staff role and involves ongoing analysis at the ground level. This includes:

1. Developing a thorough understanding of the manager's investment strategy, style and decision-making processes.
2. Identifying the risks associated with a manager's investment strategy, and developing appropriate restrictions to avoid unintended consequences.
3. Monitoring the execution of the manager's investment strategy to ensure compliance with their contract's requirements, and with TMRS investment guidelines and restrictions.
4. Monitoring a manager's investment activities to identify deviations from the agreed-to investment strategy and objectives.
5. Verifying the manager's ability to meet their agreed to goals and objectives, including monitoring for changes in the quality of the manager's investment team.
6. Ensuring that the manager's system of internal controls continues to be adequate to ensure best practices are followed, including efficient trade execution, and that conflict of interest issues are avoided.
7. Ensuring investment activities are reported in a timely manner and accurately reflect investment activities and performance.
8. Monitoring the manager's customer service practices to ensure that the manager remains responsive to the needs of TMRS investment staff.

F. The **Finance Department Staff** is independent of the Investment Department and serves as the record-keeper for the investment program. They are responsible for oversight of the System's custodian bank, which serves as the official book of record for the System's investment assets. In carrying out their responsibilities, finance staff is responsible for ensuring that managers have reconciled holdings and transactions with the official book of record as well as security valuations to ensure all activities and assets are properly accounted for. In regards to the real estate allocation, Finance Staff ensures the cash flow transactions (capital calls, distributions and funding from other accounts) are appropriately authorized, timely processed and reflected in the books and records of the custodian; reviews the quarterly NAV adjustments recorded by the custodial accounting agent; and reconciles quarterly balances with the appropriate investment funds. Finance staff is also responsible for developing net cash flow projections of the System, the posting of investment activities to the System's general ledger, ensuring those activities are reported in accordance with generally accepted accounting principles and for performing certain administrative and operational functions related to implementation of the investment program.

G. The **Internal Auditor** reports to the Board of Trustees. In regards to the investment program, the Internal Auditor is responsible for providing objective audit and review services for the investment operations. 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.

H. Code of Ethics All TMRS staff involved in the investment of TMRS assets are charged with making all investment decisions in the best interest of the System, and may not solicit, accept, or agree to accept any gifts of more than *de minimus* value, personal benefits, or personal favors offered to them because of their positions with TMRS. Cash gifts are prohibited. In all cases, 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. TMRS investment staff will also comply with TMRS policies on personal investment activities, where applicable.

I. Investment Personnel Resignation Policy The Director of Human Resources will, immediately upon notification of a resignation or termination of a member of the TMRS Investment Staff:

1. notify the Director of Information Resources or his designated representative, requesting that the employee's access to automated TMRS systems be terminated immediately in accordance with the Information Technology Procedures for deleting users as well as initiating procedures to ensure that the employee's access to vendor web-based systems be terminated; and
2. in the case of a key employee who may be authorized to issue instructions on behalf of TMRS to vendors such as the custodian bank, investment managers, and consultants, notify the legal department to take immediate steps to revoke such authority and remove the employee's name from any documents naming the employee as an authorized signer.

IV. <u>OUTSIDE PROVIDERS</u>

A. The **General Investment Consultant** ("Consultant") is hired by, and reports to, the Board of Trustees. 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, manager searches 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 member'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 **Real Estate Consultant** ("RE Consultant") is hired by, and reports to, the Board of Trustees to assist in the management of the real estate allocation. The RE Consultant provides advice to the Board on real estate policies and procedures, recommends pacing of real estate commitments, manager selection and terminations, manager guidelines and restrictions, participates in the due diligence monitoring of managers including policy compliance, provides analysis of investment performance, and provides advice on other real estate investment-related issues. The RE Consultant works closely with investment staff in all aspects of the real estate asset class.

C. The Board may retain other **Specialized Investment Consultants** for specific asset classes, such as private equity, that warrant more hands-on consulting services and that require a certain expertise.

D. **External Investment Management firms ("managers")** are retained by the Board of Trustees to manage or advise on specific strategies and asset classes, through a manager search process and according to specific qualifying criteria are 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. Portfolio management responsibilities include trade execution and the internal investment staff may affect manager trade decisions that are inconsistent with TMRS' objectives. TMRS investment staff will closely monitor all portfolio trade activity and are to be in regular communication with the managers regarding all market and economic conditions impacting a portfolio's strategy.

E. The **Fiduciary Counsel** is retained by the Board of Trustees to provide the Board with legal advice as to whether it is properly discharging its fiduciary responsibility in all decisions including those regarding the investment program. Fiduciary Counsel is responsible for outlining the potential legal consequences of various courses of action taken by the Board and for ensuring that all actions by the Board and Staff are in compliance with the statutory plan. It is not contemplated that such Fiduciary Counsel will provide any investment advice (as opposed to legal advice regarding the Board's fiduciary duties), in regard to any specific investment decision being considered by the Board.

F. As needed, **External Counsel** will be retained under the direction of the General Counsel or designee particularly for investment matters regarding private investment funds, to provide legal counsel and ensure that all such investment contracts are legally binding and enforceable in an acceptable venue.

G. The **Consulting Actuary** values plan liabilities, forecasts benefit cash flows and provides input to the asset allocation process as appropriate.

H. 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 Dept. Staff, calculating investment performance, and serving as an additional layer of risk control in the safekeeping of System assets.

I. The **Securities Lending Agent** 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.

J. A **Transition Manager** may be retained by the Board to assist in the transfer of assets from one investment manager to another, and serves as a liaison between the Board, the custodian, the manager distributing assets, and the manager receiving assets. The transition manager is to facilitate clear communication between all parties, work to minimize market impact, trading costs, and opportunity cost. The transition manager will provide a detailed post-trade analysis for investment staff. Investment staff will provide a summary of activity to the Board as needed.

V. INVESTMENT CONSULTANTS

A. CONSULTANT SELECTION

1. Consultant Qualifications

Consultants must act as fiduciaries in their role as an investment consultant assisting and advising the TMRS Board on investment matters, be bound by prudent expert standards, be approved registered investment advisors under the Investment Advisor's 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.

2. Consultant Selection and Monitoring

To better ensure that consultants to the Board of Trustees are well-qualified and have adequate resources to provide the scope of services required by the Board, general and specialty investment consultants will be selected through an in-depth, process. Unless otherwise directed by the Board, Investment Staff will adhere to the following selection process. Investment staff will identify the pool of candidates based on industry publications and relevant databases as well as determine the appropriate search criteria and system for ranking the firms. An in-depth questionnaire addressing all relevant quantitative and qualitative factors will be distributed to qualifying firms. Responses will be evaluated by investment staff to select finalist(s) for site visit(s). Background investigations of key investment professionals will be conducted as appropriate Following further evaluation of the finalist candidate(s), the investment staff will recommend to the Board, the selection of the consultant, and will provide proper supporting documentation including analysis of the criteria used to support the recommendation. The Board may wish to interview the candidate recommended for selection.

Investment consultants will be evaluated by staff through a systematic annual review addressing their ability to adequately deliver the scope of services required.

B. CONSULTANT'S ROLE IN BOARD NOTIFICATION PROCESS

A professional relationship between the Consultant and the internal investment and management staff is essential to the successful completion of the tasks involved in the investment management process. Together, the investment staff and Consultant prepare and present reports on investment performance and the results of manager due diligence meetings, as well as recommend investment opportunities to the Board.

A significant amount of qualitative judgment must be employed in the investment management process, hence the concept of "checks and balances." This concept provides the foundation for the Board's assurance that the recommendations and information it receives from the staff and Consultant are, in their collective professional opinions, in the best interest of the System. As an additional safeguard, the Board charges both the staff and the Consultant with the responsibility of monitoring the implementation of its policies. It is the Board's position that it is imperative for the Consultant to 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:

1. 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 Executive Director & CIO. A response will be sent to the Consultant.

2. If the Consultant believes the issue warrants immediate action, the Consultant must make this clear in the original correspondence and, in addition, recommend 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 Executive Director or CIO with a verbal description of the issue, the proposed action, and the justification for both.

3. Upon receipt of TMRS' response, the Executive Director, 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. In any event, all such material matters will be reported to the Board at its next regularly scheduled meeting.

VI. ASSET ALLOCATION & REBALANCING POLICY

A. Investment Risk Philosophy

The investment risk philosophy of the Board is based on the precepts of capital market theory that are generally accepted and followed by institutional investors, who by definition are long-term oriented investors. This philosophy holds that:

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

2. Risk can be decreased through broad diversification of asset classes and investment strategies/managers, as well as diversification of individual securities.
3. Over time the relative performance of different asset classes is reasonably consistent. For example, over the long term, equity investments have provided and should continue to provide superior returns over other security types and short term fixed-income securities can protect capital and provide liquidity in periods of depressed economic activity.
4. The primary determinant of long-term investment performance is the strategic or long-term allocation of assets among various asset classes.
5. The risk of short term (tactical) shifts between asset classes is hard to diversify and is therefore unlikely to be rewarded with any degree of reliability.
6. The potential to increase risk adjusted returns, through active management, exists in most capital markets and is inversely dependent on the efficiency of the market.
7. Some appropriate basis, like financial measures of pension system health, is required to define risk appetite, i.e. how much incremental risk it is acceptable to bear in exchange for incremental return.

B. Asset Allocation

The Board of Trustees 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 its Risk Tolerance, the Board considers its 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.

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

The Strategic Target Allocation must deliver:

1. A representation of the Board's long term return objective and risk tolerance
2. Sufficient confidence for the Board to "stay the course" given extreme market moves
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 risk tolerance, to support a "static" asset allocation
2. Asset classes that add a unique, significant and compensated market risk factor to the asset mix and together should 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,
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 %
US Equity	12.5	**17.5**	22.5
International Equity	12.5	**17.5**	22.5
Core Fixed Income	25	**30**	40
Non-Core Fixed Income	5	**10**	15
Real Estate	5	**10**	15
Real Return	2	**5**	10
Absolute Return	0	**5**	10
Private Equity	0	**5**	10
Cash Equivalents	0	**0**	10

The Board will authorize implementation to this Strategic Target Allocation in stages.

C. Rebalancing Policy

The goal of the rebalancing policy is to ensure that the integrity of the strategic target allocation is preserved through a disciplined process that allows flexibility for market movements and consideration of current market conditions. The Board has chosen to adopt a re-balancing 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. While the allocation to all asset classes remains within these limits, staff will allocate available cash flow to underweighted asset class(es) according to current market conditions.

When any one of the asset classes hits a trigger point (i.e. violates the lower or upper limits), the entire fund will be re-balanced back to asset class target allocations or half-way to the target allocation as market conditions permit. At such times, investment staff will be responsible for developing and implementing a re-balancing plan, subject to approval by the Chief Investment Officer and Executive Director that is appropriate for existing circumstances. While the primary goal is to rebalance to the targets, a secondary objective is to minimize transaction costs and portfolio disruptions. The Consultant and/or investment staff will report the results of rebalancing activity to the Board at the regular Board meetings.

VII. ASSET CLASS STRUCTURE PHILOSOPHY

The Board has adopted the following philosophy as a framework for the asset class structure decision.

The Asset Class Structure must deliver:

- An improvement in the risk/return tradeoff of the Strategic Target Allocation
- A better risk/return tradeoff than the individual asset class
- Sufficient confidence for the Board to "stay the course" given extreme market moves
- A benchmark against which to measure Manager performance

The following requirements are considered in setting the Asset Allocation Structure

- A belief that a portfolio of subasset classes can improve the risk/return tradeoff
- A basis for deciding one Asset Allocation Structure is better than another
- A representation of capital market opportunities that supports both of the above points.

VIII. PERFORMANCE BENCHMARKS

A. Total Portfolio Return Objective

The most important investment return objective to be considered when evaluating the fund's performance is measured by a comparison of the fund's return over longer time periods (5 to 30 years) to the return that must be achieved in order for the fund to meet its benefit obligations. The Strategic Target Allocation adopted by the Board has the objective of generating the highest level of return consistent with the Board's Risk Tolerance while also providing sufficient liquidity to meet the System's cash flow needs.

B. Asset Allocation Benchmarks

Another important return objective to be considered when evaluating the fund's performance is measured by a comparison of the fund returns to Policy Benchmarks that represent the broad investment opportunities of each asset class in which the Board has chosen to invest. The returns of the Policy Benchmarks should be used as reference points against which the Board, staff and the Consultant compare the fund's individual asset class returns. The implementation of the Strategic Target Allocation will be measured versus a set of Policy Benchmarks (hereinafter referred to as the "Policy Index") that (1) reflects the Strategic Target Allocation and does not reflect interim allocations or changes to the underlying portfolio, and 2) reflects the asset allocation of the portfolio by weighting the appropriate Policy Benchmarks according to their corresponding weight in the portfolio.

Based on recommendations by investment staff and Consultant, the Board has selected the following Policy Benchmarks and Policy Index:

Asset Class	Policy Benchmarks	Policy Index*
Domestic Equities	*Russell 3000*	***17.5%***
Int'l. Equities	*MSCI ACW-ex US IMI*	***17.5%***
Core Fixed Income	*Barclays US Aggregate Bond Index ****	***30%***
Non-Core Fixed Income	****	***10%***
Real Estate	*NCREIF-ODCE*	***10%***
Real Return	*CPI +4%*	***5%***
Absolute Return	*HFN FOF Multi-Strategies*	***5%***
Private Equity	*S&P 500 +5%*	***5%***
Short-term Investments	*30 Day T-Bill*	***0%***
	TMRS Policy Index	***100%***

*As stated above the Board will authorize implementation to the Strategic Target Allocation in stages****Effective 7/1/09; prior periods benchmarked to the Barclays US Long Government/Credit Bond Index **Pending*

The Policy Index allows the fund to be judged (1) by its performance relative to broad market indexes, and (2) by its performance relative to its implemented asset allocation. In addition to the Policy Index, additional benchmarks for comparison will include actuarial assumptions and the performance of other public pension systems. While the performance of other systems is not an objective of the TMRS fund given the wide range in investment objectives and different benefit plan structures, it is generally of interest to be aware of the performance of other public pension systems.

In situations in which the Board makes decisions to manage a portion of the assets actively, then this comparison should not be made to draw conclusions over time periods of less than a full economic cycle. However, if over a full economic cycle favorable results are not experienced, every effort should be made to determine if the active implementation decisions remain justified given current information.

IX. 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.

A. Return Expectations

1. The **total portfolio** will be reviewed quarterly. Specific performance objectives include, but may not be limited to, the following:
   a) Achieve a total rate of return over rolling 5-year periods consistent with the assumed long term rate of return on TMRS assets established by the actuary
   b) Exceed an appropriate benchmark reflective of asset class participation over rolling five-year periods (i.e., Policy Index).

2. **Individual portfolio accounts** will be reviewed quarterly. Investment staff and the Consultant, subject to review by the CIO, will determine performance expectations for each manager. Specific performance objectives for active 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 on a Risk-Adjusted basis
   b) Rank in the top 50th percentile of an appropriate universe of managers possessing a similar style over rolling five- year periods on a Risk-Adjusted basis.

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

In accordance with the Investment Manager Termination Guidelines section of this IPS, 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.

X. INVESTMENT RISK MANAGEMENT

A. Risk Management Function

The objective and responsibility of the risk management function is identification, evaluation and management of all risks related to investment results. There are several key components to achieving this objective.

1. Ensuring that the risk representations in the capital markets models and assumptions used for the Board's setting of the Strategic Target Allocation and Risk Tolerance are internally consistent, consistent with industry best practice, consistent with the Board's Investment Risk Philosophy and with the risk analytics used for monitoring portfolio risk.
2. That policies and procedures are documented and followed regarding risk identification, evaluation and management, not only in the investment department, but in other functional areas as necessary (operational and administrative risks).
3. Risk and compliance reporting (further described below) which provides senior management and the Board with a tool for ensuring that the intent of this IPS regarding investment risk is being followed.

B. Key Risks

1. **Strategic Risk**

   The Risk Tolerance of the Board is defined by the risk inherent in the Strategic Target Allocation as represented by the Policy Index. In determining its Risk Tolerance, the Board has properly considered, as part of its fiduciary obligations and statutory requirements, the System's purpose and characteristics, current and projected financial condition, liquidity needs, sources of contribution, and capital market opportunities. To the extent any of these decision components change, the Risk Tolerance may no longer be appropriate and may require review. To ensure that the Risk Tolerance 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 five years.

2. **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** This 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 the Appendix to 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 side of it. 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. Security Specific Risk** This includes **credit risk** and is the remaining risk associated with a specific investment after the effect of capital market risks have been factored out. This risk is managed primarily through security concentration and credit rating limits in manager guidelines.
   - **e. External Manager Risk** This 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 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.

3. **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 will be created by the risk management function. It will refer 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 will be 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.

4. **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. For the purpose of this IPS, the custodian bank must maintain a favorable SSAE16 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 subcustodian 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.

c. **Liquidity Risk**
   1. 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.
   2. 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 of the Appendix to this IPS. Further, specific criteria for measuring liquidity of the portfolios will enable TMRS to more effectively monitor the manager's process for managing liquidity risk.

C. <u>Investment Risk Reporting</u>

Investment Risk Reporting is the responsibility of the Risk Management Function. The reporting will be done on a monthly basis through implementation of internal analytical resources and are expected to address the following areas:

1. Significant market exposure deviations from benchmarks in the portfolio
2. Risk and return from attributed manager performance relative to manager benchmarks
3. Risk and return from manager benchmark performance relative to Policy Benchmark
4. Breakdown of forward looking risk in the portfolio relative to the Policy Benchmark

XI. INVESTMENT MANAGEMENT GUIDELINES

The Appendix contains specific asset class and manager guidelines which will be reviewed annually and will contain, at a minimum, the following information.

A. <u>Asset Allocation and Manager Structure</u>

The asset allocation decision is extremely complex and relies on quantitative computer models of the capital markets and financials of the System. The Asset Allocation and Rebalancing Strategy section of this IPS contains a general discussion of the asset allocation process and the end results of the model with specific asset allocation targets and ranges. The Consultant develops risk, return and correlation assumptions for individual strategies within each asset class and together with the investment staff, recommends asset class structures that are expected to deliver or outperform the general asset class benchmarks as described in the Asset Class Structure Philosophy section. Board-approved asset class structures are described within the asset class guidelines.

B. <u>Specific Manager Operational Parameters</u>

General manager guidelines are described within the asset class guidelines; in addition, guidelines more specific to a manager's mandate may be appropriate and will be documented in the manager's contract. The staff, the Consultant, 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 manager contracts.

C. Miscellaneous Information

The Board, the Consultant, Executive Director, CIO and/or investment staff may request any other information pertinent to the investment operations of the Board that they deem appropriate.

The Board expects that its managers will not be reactive to short-term investment developments. The objectives recognize that the investment horizon is long-term and that investment competence must be measured throughout a meaningful period of time. While the quantitative assessment of managerial competence will be measured over a complete market cycle (or five years, whichever is shorter), the Board anticipates that its Consultant will make interim quantitative and qualitative judgments. Specific quantitative and qualitative factors are described in the Investment Manager Retention Policy section of this IPS.

As further described in the Roles Definition section of this IPS, investment staff and consultant(s) are responsible for implementation of the investment strategy, supervision of the Board's managers, performance monitoring and reporting. Updates will be provided to the Board (i) as requested by the Board, or (ii) as deemed necessary by staff and Consultant.

XII. 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 Board assets.

B. Manager Qualifications

Managers must act as fiduciaries and be bound by prudent investor standards in the management of the TMRS account, and be registered investment advisors (RIA) under the Investment Advisor's Act of 1940 as amended, unless exempt from registration by the SEC and otherwise regulated. 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 firm 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 staff, on a timely basis each quarter or as requested, such data as is required for proper monitoring.

D. Authority of Investment Managers

Subject to the terms and conditions of this IPS, managers will have the authority to direct investment, exchange, and liquidate the assets of the managed accounts as described in the manager's contract.

While each manager's compliance with this IPS is monitored periodically, the Board also expects that the managers will recommend changes to this IPS when the managers view any part of this IPS to be at variance with the overall market, economic conditions, and relevant investment policies.

Regardless of whether assets are managed via separately managed accounts or commingled funds and mutual funds, ownership rights, such as proxy voting, will be exercisable by the managers with respect to such investment and in accordance with the Proxy Voting section of this IPS. The managers will keep accurate written records as to the exercise of such ownership.

The managers may be requested to meet with the Board periodically to review the following items:

a) Short, intermediate and long-term investment forecast for the overall market and forecast for the manager's specific mandate in relation to their overall market forecast.

b) The effect of that outlook on the attainment of the Board's objectives.

c) The manager's actual results for the preceding forecast period compared to the previously established return goal for the reporting period including agreed upon benchmarks and peer results.

d) Compliance with the concepts and guidelines included in this IPS. If the manager believes the IPS is too restrictive or should be amended in any way, written notification must be communicated immediately for consideration.

XIII. INVESTMENT MANAGER SELECTION

To better ensure that managers will successfully manage to the TMRS objectives for their specific mandates, a disciplined process is important to their selection. In addition, the process for selecting managers is intended to protect against unethical behavior including bribery and corruption.

Following Board authorization to proceed, managers are selected through an in-depth, objective search process that considers the specific mandate needed, relevant criteria based on both quantitative and qualitative factors as described in the Investment Manager Retention Policy section of this IPS, and proposed fee schedules. They must also meet qualifications as described in the Manager Responsibilities section of this IPS and will be required to disclose all conflicts of interest including the payment of any third party marketing fees related to potential clients. Selected managers must agree to comply with ongoing reporting of conflicts as required.

The Consultant and investment staff will together determine the appropriate search criteria and the process for ranking the firms, and the search process may begin through screening of the Consultant's manager database for specific minimum qualifying criteria. An in-depth questionnaire addressing all relevant quantitative and qualitative factors will be distributed to qualifying firms and responses will be evaluated by the Consultant and investment staff to select finalists for face-to-face meetings. Face-to-face meetings may involve manager site visits as appropriate. Background investigations of key investment professionals will be conducted as appropriate, particularly in regards to searches for alternative investment managers, given the risk characteristics of the asset class and investment structure. Following further evaluation of the finalist candidates, the Consultant and investment staff will recommend to the Board, the selection of a manager, and will provide proper supporting documentation including analysis of the criteria used to support the recommendation. The Board may wish to interview the manager candidate that has been recommended for selection.

XIV. 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.

A. IMR Policy Objectives

The following framework for the IMR Policy allows for the identification of existing and potential problems, and outlines how and when the Board should address specific issues and events, thereby avoiding untimely or ad-hoc decisions that may adversely impact fund returns. This IMR Policy will apply to all of the Board's external managers, except where otherwise noted, and is intended to accomplish these objectives:

1. Foster a long-term approach to manager evaluations,
2. Provide a logical and statistically valid framework for manager skill evaluation,
3. Promote timely and appropriate responses to actual and potential performance issues, and
4. Provide flexibility to allow application across all asset classes, management styles, and market environments.

B. Monitoring and Evaluation Criteria

Managers may be evaluated using these criteria or standards:

1. Against appropriate market indexes on both a risk-adjusted and nominal basis;
2. Against peers within their style groups;
3. Adherence to their stated investment styles; and
4. Adherence to this IPS and compliance with their established parameters.

C. Comprehensive Reviews & Performance Reporting

Comprehensive Reviews are 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 framework for retention analysis relies on a formal performance reporting process that includes:

1. Regular performance reports from custodian and/or Consultant to the investment staff. These reports will detail the individual performance of managers and the overall performance of the fund.
2. Quarterly performance reports from the managers to investment staff.
3. Regular reports from the investment staff and Consultant to the Board at regular Board meetings.

D. Investment Manager Contact

The formal performance reports are supplemented by qualitative analysis that is generated in the course of regular, on-going contact between the managers, Board, investment staff and the Consultant. Generally, that contact takes the following form:

1. Investment staff will meet with each active manager no less than annually. Each meeting 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. If performance or organizational issues arise for a specific manager, investment staff may be in contact with the manager on a regular basis until the issues are resolved.
2. The Consultant will participate in many of the staff-scheduled manager meetings and will meet with managers at other times during the year in the normal course of their monitoring process.
3. The Board or its Chair, the staff, and/or the Consultant may call any manager to appear before the Board at any time during the fiscal year.

E. Quantitative Factors Resulting in Watch List Additions and Recommended Actions

A Watch List will be 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 the following criteria:

1. Traditional Long-Only Mandates
   a) If the manager's rolling, three-year return (gross of fees) plots below the rolling, three-year benchmark return for two (2) consecutive quarters; or
   b) If the manager's rolling, three-year return (gross of fees) for two (2) consecutive quarters, ranks in the bottom quartile of the Consultant's peer group.

2. Real Estate
   a) Commingled fund investments will be reviewed on the same basis as traditional long-only managers with consideration given to the expected "J" curve effect in the early stages of implementation;
   b) Due to the longer life and the illiquid nature of real estate investments, separate account managers of private real estate investments will undergo a formal review in conjunction with the expiration of the contracts with the manager. Interim performance reviews may be conducted as warranted after the completion of the annual appraisals.

Once a manager is placed on a Watch List, the Board will be notified and performance will be closely monitored and scrutinized. Additional actions could include staff meetings with the manager or a formal re-interview of the manager by the Board. A recommendation from staff and Consultant to retain or terminate the manager must be made to the Board at the meeting following inclusion on the Watch List and in accordance with the Investment Manager Retention and Termination Guidelines of this IPS. If the manager is not terminated, the manager will remain on the Watch List subject to a subsequent recommendation by staff and Consultant as to the manager's ongoing relationship. Generally, one period of a rolling, three-year return following placement on the Watch List, that plots above the benchmark line or above the bottom quartile, as appropriate, will result in the manager's removal from that list.

F. Qualitative Factors Resulting in Watch List Addition and Recommended Actions

In-depth qualitative analysis is conducted on potential managers during the Board's systematic manager search process. This analysis covers areas such as style, philosophy, process, personnel, and organizational structure. Similar analysis will be employed on an ongoing basis during the contract period with each manager hired by the Board, whether passive or active.

1. A significant and potentially adverse event related, but not limited, to any of the following qualitative issues or events will be considered a reason to add the manager to the Watch List. Watch List additions will be reported to the Board at its next regular meeting. Examples include, but are not limited to, these events:

   a) Significant changes in firm ownership and/or structure,
   b) Loss of one or more key personnel,
   c) Significant loss of clients and/or assets under management,
   d) Shifts in the firm's philosophy or process,
   e) Significant and persistent lack of responsiveness to client requests,
   f) Chronic violations of this IPS or guidelines, or

g) Any other issue of which the staff and/or Consultant become aware and that are deemed material.

2. Should any of these events occur, the recommended courses of action are similar to those contained in the preceding section on quantitative factors. After an assessment of the nature of the problem or potential problem, and as soon as is practicable, the Board should then make a determination as to the appropriate course of action. Possible responses include, but are not limited to, the following:

   a) No action,
   b) Immediate staff meetings with the manager,
   c) Formal re-interview of the manager by the Board,
   d) Initiation of a Comprehensive Review, or
   e) Termination or initiation of redemption process.

   Each situation should be handled on a case-by-case basis. Under certain circumstances, the Executive Director may act in accordance with Section XIII Investment Manager Termination Guidelines, Subsection E Delegation of Authority for Manager Terminations, of this IPS.

G. Conclusion

This framework provides guidelines that are useful in determining the conditions under which a contract relationship between a manager and TMRS should be called into question. In addition, circumstances are depicted in which the Board may elect to terminate a manager for cause and are further described in the Investment Manager Termination Guidelines that follow.

A manager retention decision is very important to the continued success of an investment strategy within the fund. As such, it should not be taken lightly nor should it be made with blind reliance on quantitative or qualitative guidelines. The ultimate decision rests in the collective judgment and authority of the Board following consultation with investment staff and/or the Consultant. **Nothing contained in this Investment Manager Retention Policy mandates retention or termination of a manager.**

XV. INVESTMENT MANAGER TERMINATION GUIDELINES

A. Introduction

From time to time it will be necessary for the Board to terminate a contractual relationship with a manager and these actions must be viewed in the context of a business decision. Due to the sensitivity of this issue, the Board has established the following guidelines to assist in making these termination decisions. In establishing these guidelines, it is the Board's intention to assure all interested parties that decisions made in carrying out these actions occur in a full disclosure environment characterized by objective evaluation, and proper documentation. The overriding consideration with respect to all decisions is that they will be made solely in the best interest of plan participants and beneficiaries.

B. Clearly Defined Issues

The Board may wish to consider one or more of the following primary criteria in manager termination decisions. Some are directly related to the watch-listing of a manager while others are driven by TMRS investment strategy decisions.

1. Significant changes in firm ownership and/or structure,
2. Loss of one or more key personnel,
3. Significant loss of clients and/or assets under management,
4. Shifts in the firm's philosophy or process,
5. Significant and persistent lack of responsiveness to client requests,
6. Chronic violations of this IPS or the manager's guidelines,
7. Unsatisfactory investment performance,
8. Changes in the Board's investment strategy eliminating the need for a particular style or strategy,
9. Identification of a new asset class or approach which has been approved in advance by the Board, or
10. A need for diversification of styles within an existing asset class.

C. Evaluation

Prior to the termination decision, the primary and other relevant considerations will be identified, described, and ranked by importance. An evaluation covering the quantitative and qualitative issues to be considered will be developed for each case and the relative importance of each evaluation area will be determined. Documentation regarding any recommended action should include, but is not limited to, the following items:

1. A full description of the reason for the recommended action, including the specific elements serving as the basis for the evaluation and identification of the relevant issues from the Board's perspective,
2. The assumptions made in the evaluation, if any,
3. The results considered and/or qualitative issues upon which the recommendation was based, and
4. An objective discussion of the risks, costs, and expected benefits, if appropriate to the subject matter.

D. Proper Documentation and Full Disclosure

When reviewing the documentation regarding the termination of an external investment service provider, the primary focus of the Board will be on ensuring that the Board will be able to satisfy any interested party that decisions were well-reasoned, thoroughly considered, and prudent. Toward this end, the staff and Consultant will provide written supporting documentation to ensure disclosure of all relevant issues as described above. In evaluating a termination decision, the Board should review documentation to ensure that the evaluation process was fair and consistently applied. Candidates for termination may, at the pleasure of the Board or upon the recommendation of staff and Consultant, be asked to make a formal presentation to the investment staff and/or Board prior to a termination decision, but any such meeting will not be permitted to delay any action the Board deems appropriate.

E. Delegation of Authority for Manager Terminations

The Board of Trustees delegates to the Executive Director, the authority to terminate a manager or initiate redemption procedures from a fund in which TMRS is invested, where it would be imprudent to delay such action pending formal Board approval. Such termination or withdrawal must be based on recommendation by the investment staff and consultant, supported by proper documentation and full disclosure as described above, and reviewed by both Fiduciary Counsel and General Counsel.

In the event that a manager is terminated in accordance with this section, the Executive Director is authorized to act on the following, as appropriate, based on recommendation by the investment staff and consultant:

1. Transfer assets from the terminating manager to another manager under contract with the System; or
2. Initiate a manager search to replace the terminating manager, and for the interim, transfer the assets from the terminating manager to another manager under contract, pending selection of the replacement manager.

The Executive Director is authorized to negotiate a contract with the Manager receiving the assets to reflect the scope of their responsibility and related fees in regards to the assets. In determining the proper course of action, consideration will be given to the actual asset and subasset allocations relative to target allocations, impending portfolio structure changes, and investment manager exposure. In the event that any such action affects Board-approved asset and subasset allocation targets, the Board will ratify this action or otherwise direct Staff at the next scheduled Board meeting.

In the event that the Executive Director terminates a manager or initiates a fund redemption process under these circumstances, the Executive Director will immediately notify the members of the Board regarding such action, and provide a full report on the matter at the next scheduled Board meeting.

XVI. PROXY VOTING

Active voting of proxies is an important part of the Board's investment program. Investment staff will develop proxy voting guidelines for portfolios managed through a separately managed account structure, to reflect TMRS' positions that are solely and exclusively in the interests of the members of the System and managers will be required to comply with TMRS proxy voting guidelines. TMRS staff will review the proxy voting guidelines for commingled fund structures to ensure that they reflect the best interest of the investors in the funds. Records of proxy votes will be maintained by the managers and submitted to 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 the staff that managers are fulfilling their fiduciary responsibilities with respect to proxy voting.

Investment staff will provide a proxy voting summary report to the Chief Investment Officer and Executive Director, on an annual basis 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.

APPENDIX
PORTFOLIO GUIDELINES

Grandfather Clause
Existing holdings that are not in compliance as of the date of this policy are grandfathered into the portfolios and may continue to be held until liquidation is deemed prudent, provided that a plan for reaching compliance is immediately developed and approved by the CIO.

Further, at such times as portfolios and securities lending cash collateral investments are transitioned from one provider to another or from one strategy to another, whereby securities may not be in compliance with the newly applicable policy guidelines, those securities may continue to be held until liquidation is deemed prudent, provided that a plan for reaching compliance is immediately developed and approved by the CIO.

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 at all times. However, in the event that a TMRS guideline is violated, managers must notify TMRS investment staff immediately or within one business day of detection of a policy violation, and must provide a plan for curing that violation subject to approval by TMRS.

I. <u>PRINCIPLE GUIDELINE</u>
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.

II. <u>US EQUITY ASSET CLASS</u>

A. Objective:
The US 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 on a Risk Adjusted Basis.

Passive strategies, traditional and Rules-Based, are expected to track the performance of their respective index within a de minimus tracking error that will vary somewhat according to the strategy employed. The benchmark and expected tracking error for a specific mandate will be stated in the manager contract or otherwise agreed upon in writing between TMRS staff and the investment manager.

Active and Rules-Based Strategies with an active component 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.

B. Asset Class Structure
US Equities are structured as follows:

	% of Asset Class*
Core Component	50%
Satellite Component	50%

*to be implemented over a multi-year period

C. Implementation:
This allocation will be implemented as follows:

Core Component will be implemented through traditional passive strategies. Passive strategies will be diversified by replicating a broad market index.

Satellite Component will be implemented through Rules-Based (passive strategies as well as strategies with an active component) and active 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.

D. Permissible Investments:
1. Index funds of broad US market benchmarks are eligible.
2. Active and passive commingled funds are eligible.
3. Separately managed accounts for active and passive strategies are eligible.
4. Other equity instruments which qualify as a "security" under TMRS' statutory authority are eligible.

III. INTERNATIONAL EQUITY ASSET CLASS

A. Objective: The international equity allocation is intended to provide capital appreciation and diversification, 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 on a Risk Adjusted Basis.

Passive strategies, traditional and Rules-Based, are expected to track the performance of their respective index, within a de minimus tracking error that will vary somewhat according to the passive strategy employed. The benchmark and expected tracking error for a specific mandate will be stated in the manager contract or otherwise agreed upon in writing between TMRS staff and the investment manager.

Active and Rules-Based Strategies with an active component 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.

B. Asset Class Structure

International Equities are structured as follows:

	% of Asset Class*
Core Component	50%
Satellite Component	50%

*to be implemented over a multi-year period

C. Implementation:

This allocation will be implemented as follows:

Core Component will be implemented through traditional passive strategies. Passive strategies will be diversified by replicating a broad market index or by investing across various regional market indexes.

Satellite Component will be implemented through Rules-Based (passive strategies and strategies with an active component) and active 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.

D. Permissible Investments:

1. Index funds of broad non-US market benchmarks are eligible and may include developed and emerging markets.
2. Active and passive commingled funds are eligible.
3. Separately managed accounts for active and passive strategies are eligible.
4. Other equity instruments which qualify as a "security" under TMRS' statutory authority are eligible.

IV. FIXED INCOME ASSET CLASS

A. Objective:

The fixed income asset class diversifies the risk of the overall investment program and is classified for capital preservation. The overall objective is to exceed its benchmark performance net of fees over rolling five year periods.

B. Asset Class Structure

Fixed income is structured as follows:

	% of Asset Class*
US Core Fixed Income	70%
Core Plus Fixed Income	30%

*Based on Strategic Target Allocation

US Core Fixed Income will fund diversification efforts and in the interim, actual allocation will exceed allocation targets.

C. US CORE FIXED INCOME (CORE FI)

1. **Objective**
   The purpose of the core fixed income allocation is to enhance total return and provide diversification to the overall investment portfolio. This allocation may be managed actively and/or passively through multiple managers in consideration of manager concentration risk.

   Mandates will be relative to the designated broad US fixed income benchmark. Benchmark characteristic constraints will be further defined within the manager's contract.

   The **performance objective** is to exceed the Barclays US Aggregate Bond Index net of fees over rolling five-year periods and within tracking errors as specified in the manager contracts or otherwise agreed to in writing, determined according to the specific strategies employed.

2. **Investment Guidelines**
   The following investment guidelines apply to the overall Core FI, and at the manager level. Additional parameters within these guidelines, including benchmark characteristic constraints, may be further defined within the manager's contract with significantly tighter constraints for passive strategies.

   a) **Investment Risk**. The following risks will be managed according to the following constraints.

   b) **Interest Rate Risk** will be controlled through duration management. Duration must be maintained within +/- 10% of the Barclays US Aggregate Bond Index on an option-adjusted or effective basis.

   c) **Yield Curve Risk** will be managed through close monitoring of key rate durations versus the Barclays US Aggregate Bond Index at a portfolio level and within portfolio components.

   d) **Convexity Risk** is intended to measure both call option and prepayment risks. It is monitored through monthly reporting of portfolio characteristics and is controlled by the manager in accordance with their philosophy and process for the specific strategy.

   e) **Sector Risk** will be managed through maximum sector limits as set forth below based on 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	200%
Government-Related	200%
Corporates	150%
Securitized (Aggregate of RMBS, CMBS & ABS)	150%
Residential Mortgage-Backed Securities	150%
Commercial Mortgage-Backed Securities	200%
Asset-Backed Securities	200%

f) **Credit Risk** will be controlled by requiring minimum credit ratings by sector as outlined below. Credit risk will be actively managed through rigorous credit analysis. Compliance violations, whether related to the acquisition of a security or a downgrade of a current holding, are subject to the terms of the Cure for Policy Violations section.

The following are the minimum credit quality constraints:

(1) All securities must be rated investment grade, at least BBB- by S&P or Fitch, or Baa3 by Moody's, using the middle rating of all three agencies or the lower of two agencies when only two are available. If only one rating is provided, that rating shall be used.

(2) The portfolio shall maintain a minimum weighted average credit quality of A+ using the middle rating of all three agencies (S&P, Fitch and Moody’s) or the lower of two agencies when only two are available. If only one rating is provided, that rating shall be used.

(3) 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- by S&P or Fitch, or Baa3 by Moody's using the middle rating of all three agencies or the lower of two agencies when only two are available.

(4) Securitized: The weighted average credit quality of securitized product must be AA.

g) **Reinvestment Risk** will be managed through call risk and cash flow analyses.

h) **Liquidity Risk** will be managed by maintaining a 10% minimum allocation to the combination of US Treasury securities, cash, and cash equivalent securities. Issue size of permissible investments will be a consideration and should be sufficiently large enough to provide the liquidity necessary for accumulation and disposition of the securities.

i) **Concentration Risk**

(1) **Issuer risk** will be managed through the following limits.

a. 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 FI and manager mandates.

b. Investments in a single corporate issuer will not exceed 2% of the total market value of the Core FI and manager mandates.

c. 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 1.5% of the total market value of the Core FI and manager mandates.

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

(2) **Counterparty risk** will be managed through diversification at the mandate level.

3. **Permissible Investments:** The following are permissible investments for the Core FI, subject to credit quality restrictions outlined above.
   a) US Treasuries
   b) Government Related Securities including Agencies, Local Authorities, Sovereign and Supranational debt obligations.
   c) Corporate and foreign debt guaranteed by the US Government
   d) Publicly Traded Corporate Obligations including Bonds, Notes, Debentures, Pass-Through Certificates and Equipment Trust Certificates.
   e) When-issued and Privately Placed Corporate Bonds eligible for trade exemption under SEC Rule 144a. Non-rated bonds must be authorized by the System according to the manager's contract prior to investment.
   f) Real Estate Investment Trust (REIT) debt obligations.
   g) Publicly Traded Investment Grade Mortgage-Backed Securities, including CMOs/ REMICs whose deliverable instrument or underlying collateral is a US mortgage-backed security. Forward purchase or to-be-announced (TBA) mortgages (requires positive trade date cash until settled or paired with offsetting TBA sale).
   h) US Privately Placed Investment Grade Mortgage-Backed Securities including single-family residences, commercial loans, and other privately placed mortgage-backed securities; Commercial Mortgage-Backed Securities must be multi-borrower, multi-property, multi-property type transactions. Limits on non-agency Mortgage-Backed Securities may be specified in the manager's contract.
   i) Investment Grade Asset-Backed Securities.
   j) US Dollar Denominated Global Bonds, whose country must be part of the Barclay's Global Aggregate Bond Index, a widely followed index which includes only those local markets that are fairly liquid and fairly well developed.

D. <u>CORE PLUS FIXED INCOME (CORE PLUS FI)</u>

1. **Objective**

The purpose of the Core Plus Fixed Income allocation is to enhance total return and provide diversification to the fixed income asset class and the total portfolio. This allocation will be managed actively through one or more managers in consideration of manager concentration risk.

Mandate will be relative to the designated broad US fixed income benchmark. Benchmark characteristic constraints will be further defined within the manager's contract.

The **performance objective** is to exceed the Barclay's Aggregate Index net of fees over rolling five-year periods by a greater margin than that of the US Core Fixed Income Portfolios. Excess return and tracking error objectives will be defined in the manager contracts or otherwise agreed to in writing according to the specific strategies employed.

2. **Investment Guidelines**

The following investment guidelines apply to the overall Core Plus program, and at the manager level. Additional parameters within these guidelines, including benchmark characteristic constraints, may be further defined within the manager's contract.

3. **Investment Risk.** The following risks will be managed according to the following constraints:

a) **Interest Rate Risk** will be controlled through duration management. Duration must be maintained within +/- 25% of the Barclays US Aggregate Bond Index on an option-adjusted or effective basis.

b) **Yield Curve Risk** will be managed through close monitoring of key rate durations versus the Barclays US Aggregate Bond Index at a portfolio level and within portfolio components.

c) **Convexity Risk** is intended to measure both call option and prepayment risks. It is monitored through monthly reporting of portfolio characteristics and is controlled by the manager in accordance with their philosophy and process for the specific strategy.

d) **Sector Risk** will be managed through maximum category /sector limits as set forth below. Index based sector limits are based on Barclay's US Aggregate Bond Index Sector Classification Scheme (See Glossary). Sector and subsector ranges may be further defined within the manager's contract.

INDEX-BASED SECTOR LIMITS

Barclay's US Aggregate Bond Index Sector	Max as % of Index
US Treasury Securities	No Limit
Investment Grade Government Related	200%
Investment Grade Corporates	200%
Investment Grade Securitized (Aggregate of RMBS, CMBS, ABS)	200%
Residential Mortgage-Backed Securities	200%
Commercial Mortgage-Backed Securities	225%
Asset Backed Securities	225%

NON-INDEX BASED 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%

e) **Credit Risk** will be controlled by requiring minimum credit ratings as outlined below. Credit risk will be actively managed through rigorous credit analysis. Compliance violations, whether related to the acquisition of a security or a downgrade of a current holding, are subject to the terms of the Cure for Policy Violations section.

The following are the minimum credit quality constraints:

(1) At least 85% of the portfolio shall be invested in fixed-income securities with a quality rating of investment grade by the nationally recognized statistical rating organizations (NRSRO), such as Moody's, Standard & Poor's, or Fitch with no rating below investment grade.

(2) The portfolio shall maintain a minimum weighted average credit quality of A. Where ratings differ among rating agencies, the middle of the Moody's, Standard & Poor's and Fitch ratings will be used to determine compliance with quality guidelines, so long as all three ratings exist. If two ratings are provided, the lower (more conservative) rating shall be used. If only one rating is provided, that rating shall be used.

(3) **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- by S&P or Fitch, or Baa3 by Moody's using the middle rating of all three agencies or the lower of two agencies when only two are available.

(4) **Securitized:** All securitized product must be rated investment grade and the weighted average credit quality must be AA Exceptions to credit quality constraints for individual residential mortgage backed securities may be authorized in manager's mandate with maximum limits defined.

(5) **Municipal Bonds**: Municipal issues must be rated investment grade, at least BBB- by S&P or Fitch, or Baa3 by Moody's using the middle rating of all three agencies or the lower of two agencies when only two are available.

(6) **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- by S&P or Fitch, or A3 by Moody's using the middle rating of all three agencies or the lower of two agencies when only two are available.

(7) **High Yield or Non-Investment Grade Corporates**: Corporate issues must be rated at least B- by S&P or Fitch or B3 by Moody's with no ratings below B- or B3.

f) **Reinvestment Risk** will be managed through call risk and cash flow analyses.

g) **Liquidity Risk** will be managed through prudent investment of liquid securities. Issue size of permissible investments will be a consideration and should be sufficiently large enough to provide the liquidity necessary for accumulation and disposition of the securities.

h) **Concentration Risk**

(1) **Issuer risk** will be managed through the following limits.

a. 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 Plus FI and manager mandates.

b. Investments in a single corporate issuer will not exceed 2% of the total market value of the Core Plus FI and manager mandates.

c. 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 1.5% of the total market value of the Core Plus FI and manager mandates.

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

(2) **Counterparty risk** will be managed through diversification at the mandate level.

i) **Currency Risk.** The portfolio may invest in non-dollar securities on a currency hedged or unhedged basis.

4. **Permissible Investments:** The following are permissible investments for the Core Plus FI, subject to credit quality restrictions outlined above.

a) US Treasuries
b) Government Related Securities including Agencies, Local Authorities, Sovereign and Supranational debt obligations and
c) Corporate and foreign debt guaranteed by the US government.
d) Corporate obligations including bonds, notes, debentures, pass-through certificates and equipment trust certificates.
e) When-issued and privately placed securities eligible for trade exemption under SEC Rule 144a. Non-rated bonds must be authorized by the System according to the manager's contract prior to investment.
f) Real Estate Investment Trust (REIT) debt obligations.
g) Publicly Traded Mortgage-Backed Securities, including CMOs/ REMICs whose deliverable instrument or underlying collateral is a US mortgage-backed security. Forward purchase or to-be-announced (TBA) mortgages (requires positive trade date cash until settled or paired with offsetting TBA sale).
h) US Privately Placed Mortgage-Backed Securities including single-family residences,

commercial loans, and other privately placed mortgage-backed securities; Commercial Mortgage-Backed Securities must be multi-borrower, multi-property, multi-property type transactions. Limits on non-agency Mortgage-Backed Securities may be specified in the manager's contract.

i) Asset-Backed Securities.

j) US Dollar Denominated debt of non-US issuers including: corporate, sovereign, foreign agencies, foreign local government entities and supranationals.

k) Convertible debt securities.

l) Non-US dollar denominated fixed income securities including: government, government-related, and currency related to transactions.

m) Securities received in exchange offers or as the result of exercising an option related to an otherwise eligible security are not subject to prohibitions herein. However, manager will immediately notify TMRS and provide an analysis and plan of action.

V. REAL RETURN ASSET CLASS

A. Objective:

The Real Return asset class is classified for investment protection. As the asset class structure becomes diversified, the performance objective for the asset class will be CPI + 4% over rolling 5-year periods on a risk-adjusted basis.

B. Asset Class Structure

Real Return Asset Class is structured as follows:

	% of Asset Class
Global Inflation-Linked Bonds	100%

C. GLOBAL INFLATION-LINKED BONDS

1. **Objective**

The purpose of the Global Inflation-Linked allocation is to enhance total return, provide diversification and hedge against inflation risks to the overall investment portfolio. This allocation will be managed actively through one or more managers in consideration of manager concentration risk.

Mandate will be relative to the designated inflation-linked benchmark. Benchmark characteristic constraints may be further defined within the manager's contract.

The **performance objective** is to exceed the Barclays Capital World Government Inflation-Linked Bond Index Unhedged in US Dollars (the "Benchmark") net of fees.

2. **Investment Guidelines**

a) **Investment Risk**

(1) **Interest Rate Risk** will be controlled through duration management. Duration must be maintained within +/-25 % of the Barclays Capital World Government Inflation-Linked Bond Index on a modified duration basis.

(2) **Yield Curve Risk** will be managed through close monitoring of key rate durations or other equivalent yield curve risk measure versus the Barclays Capital World Government Inflation-Linked Bond Index at a portfolio level and within portfolio components.

(3) **Sector Risk** will be managed through maximum sector limits as set forth below. Sector and subsector ranges may be further defined within the manager's contract.

Sector	Limit
Inflation-Linked Government Bonds	Minimum 80%
Nominal Government Bonds	Maximum 20%
Bonds issued in Non-Benchmark Countries and contained in Barclays Global Aggregate Bond Index.	Maximum 50%
Local Currency/Non US Dollar Denominated Debt issued by countries not contained in Barclays Global Aggregate Bond Index	Maximum 5%

(4) **Credit Risk** will be controlled by requiring minimum credit ratings as outlined below. Credit risk will be actively managed through rigorous credit analysis and compliance violations, whether related to the acquisition of a security or a downgrade of a current holding, are subject to the terms of the Cure for Policy Violations section.

The following are the minimum credit quality constraints:

a. The portfolio shall maintain a minimum weighted average credit quality of A. Where ratings differ among rating agencies, the middle of the Moody's, Standard & Poor's and Fitch ratings will be used to determine compliance with quality guidelines, so long as all three ratings exist. If two ratings are provided, the lower (more conservative) rating shall be used. If only one rating is provided, that rating shall be used.

b. The portfolio shall be invested in fixed-income securities with a quality rating of investment grade by the nationally recognized statistical rating organizations (NRSRO), such as Moody's, Standard & Poor's, or Fitch.

i. **Local-Currency/Non US Dollar Denominated Debt securities**

(a) Both the issuer and 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. Within this set, investments rated BBB+/Baa1 and below using the middle rating of all three agencies or the lower of two agencies when only two are available, shall be at a maximum of 10%.

(b) Long-Term Foreign Currency Ratings will apply instead of Local Currency Ratings.

(c) Country must be part of the Barclays Global Aggregate Bond Index, a widely followed index which includes only those local markets that are fairly liquid and fairly well developed. See item (d) below for exception.

(d) Exception to item (c) above: The portfolio may invest up to 5% of the total market value of the portfolio in countries that are not a part of the Barclays Global Aggregate Bond Index, subject to credit quality restrictions.

ii. **Global US Dollar Denominated Debt securities**

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- by S&P or Fitch, or Baa3 by Moody's using the middle rating of all three agencies or the lower of two agencies when only two are available.

iii. **Non-Benchmark Country Securities**. Maximum portfolio allocation to each country not contained in the Benchmark is subject to concentration constraints according to credit quality.

(5) **Reinvestment Risk** will be managed through call risk and cash flow analyses.

(6) **Liquidity Risk** will be managed through prudent investment of liquid securities.
a. Issue size of permissible investments will be a consideration and should be sufficiently large enough to provide the liquidity necessary for accumulation and disposition of the securities; conversely, position size will be limited according to issue size/liquidity.
b. Foreign currency must be fully convertible in the spot market for foreign investors.

(7) **Concentration Risk**
a. **Issuer Concentration Risk** will be managed through the following limits. Investments in a single issuer (excluding US government guaranteed bonds and sovereign government guaranteed bonds) will not exceed 5% of the total market value of the portfolio.

b. **Country Concentration Risk**

i. Benchmark Countries

(a) Minimum portfolio allocation to each country contained in the Benchmark (excluding US and U.K.) will be greater of either zero or ten percentage points less than Benchmark weight.

(b) Maximum portfolio allocation to each country contained in the Benchmark (excluding US and U.K.) will be ten percentage points greater than Benchmark weight.

(c) Minimum and maximum portfolio allocations for U.K. will be Benchmark weight +/- fifteen percentage points.

ii. Non-Benchmark Countries

Maximum portfolio allocation to each country not contained in the Benchmark will be no greater than 5%, 8% or 10% based on credit quality as set forth below.

Non-Benchmark Country Credit Quality	**Max % of Portfolio**
AAA/Aaa	10% Maximum
AA-/Aa3 to AA+/Aa1	8% Maximum
< or = A+/A1	5% Maximum

(3) **Counterparty Concentration Risk** will be managed through a counterparty selection and monitoring process contained in the Investment Management Agreement.

(4) **Currency Concentration Risk.** Permissible currency ranges shall be consistent with Country ranges. Combined ranges will apply for Euro denominated countries.

(8) **Currency Risk** will be managed through the use of spot and forward currency contracts (including non-deliverable forward currency contracts).

a. The portfolio may invest in non-dollar securities on a currency hedged or unhedged basis.
b. Shorting of currencies is prohibited (selling an amount of currency forward in excess of the total value of underlying assets held in that currency).

b) **Permissible Investments and Activities**

The following are permissible investments and activities for the Global Inflation-Linked portfolio, subject to credit quality restrictions outlined above.

(1) Benchmark constituents
(2) Inflation-linked and non inflation-linked obligations issued or guaranteed by national governments, their subdivisions, agencies, international agencies and supranational entities.
(3) State, provincial, county and city governments as well as those of public utilities and other quasi-governmental bodies.
(4) Supranational entities.
(5) Entities guaranteed by any of the above. (a, b, c, d).

(6) Eurobonds.
(7) Global Bonds.
(8) Yankee Bonds.
(9) Cash equivalent securities per TMRS Cash Equivalents investment policy guidelines.
(10) Long and short currency forward commitment positions for purposes of hedging currency risk.
(11) Securities on a when-issued basis for forward settle.
(12) Private placement or Rule 144A securities.

c) **Prohibited Investments and Activities**

(1) Mortgage or asset backed securities.
(2) Corporate bonds defined as a bond issued by a borrower whose equity capital is at least 50% owned by an entity or entities not classified individually or collectively as a sovereign government, quasi or semi government body, province, state, region, local authority, county or city, supranational body, or any body backed by the full faith and credit of any of the foregoing non-corporate entities.
(3) Inverse floaters.
(4) Convertible securities.
(5) Preferred Stock.
(6) Bank Loans.
(7) Swaps, Credit Spreads, Caps and Floors.
(8) Credit Default Swaps.
(9) Foreign currency for purposes other than settling a transaction
(10) Currency forward commitments for purposes other than hedging or settling a transaction.
(11) Shorting of currencies is prohibited (selling an amount of currency forward in excess of the total value of underlying assets held in that currency).
(12) Portfolio leverage is not permitted.

Unless otherwise covered in these investment guidelines, all other investments are strictly prohibited without the written permission of the Chief Investment Officer.

VI. REAL ESTATE ASSET CLASS

A. 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, 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.

TMRS' approach to investing in the real estate asset class is based on the following:

1. **Attractive risk adjusted returns** relative to expectations are more likely to be achieved through active management and the ability to access managers with the expertise and capabilities to exploit market inefficiencies in the asset class.

   The illiquid nature of real estate investments combined with the complexity of investments make it difficult for many investors to effectively access the asset class. It is the belief of TMRS that by investing with top tier managers and by favoring managers whose interests are aligned through manager co-investment and incentive based compensation, TMRS can maximize risk adjusted returns from its real estate investments.

2. **Diversification benefits** of the real estate asset class are derived through low correlations with other asset classes through normal market cycles.

B. Return Objective

The return objectives shall be viewed on a long term basis. For early periods of the investment program, there will likely be a "J" curve effect where investment management fees may be paid on committed capital.

Due to the emerging nature of the TMRS real estate program, the first several years of the investment program will be negatively impacted by this "J" curve effect. As the program matures, the impact will diminish as returns are realized on liquidating funds to balance out fees on new investment funds.

TMRS will seek, where possible, to limit the impacts of the "J" curve, although not at the expense of mid to long term performance.

1. **Absolute Return**

   The long term objective for the TMRS real estate portfolio is a real rate of return (adjusted for inflation) of five percent (5%), net of investment management fees.

   This return shall be calculated on a time-weighted basis using industry standard reporting methodologies as defined by Global Investment Performance Standards ("GIPS") and the National Council of Real Estate Investment Fiduciaries ("NCREIF") on a three, five and ten year basis.

2. **Relative Return**

   The real estate portfolio is expected to generate returns, net of all fees and expenses, in excess of the National Council of Real Estate Investment Fiduciaries Open End Diversified Core Equity Index ("NCREIF ODCE") over rolling five year investment time horizons.

TMRS anticipates that the real estate portfolio may under-perform its benchmark returns on an absolute basis during the initial years of the funding to the asset class. During this period of time, consideration will be given to the portfolio building process (e.g., vintage year exposure, fund cash flow considerations and lack of diversification).

When evaluating real estate investment performance, the real estate portfolio is expected to generate returns, net of all fees and expenses once fully invested, (i) in excess of the NCREIF ODCE Index over rolling five year investment time horizons for private market investments; (ii) in excess of the FTSE NAREIT US Real Estate Index for US public market investments; (iii) in excess of the FTSE EPRA/NAREIT Global Real Estate Index for global public market investments (if any).

C. Risk and Return Assessment

As with other types of investments, real estate investment includes the risk of **loss of capital** on any individual investment, which can be mitigated by the diversification of investments through commingled fund structures that spread investments across multiple properties, locations and strategies. This diversification of investment through commingled funds will mitigate the risk of loss for any one investment.

Other key risk considerations for real estate include:

1. **Illiquidity** of investments.

2. **Market risks**, including unexpected changes in the overall economy, an increase in competitive supply of new properties and a change in real estate demand patterns due to an economic slowdown or other factors impacting the demand for space.

3. **Leverage**. Most real estate investments utilize leverage in order to enhance expected returns. This leverage may cause increased volatility in reported and realized returns and increases the risk of complete loss of capital if cash flow is insufficient to pay regular debt service.

4. **Capital**. Real estate is a capital intensive asset class. Unexpected capital events or repairs may significantly impact returns.

5. **Obsolescence**. Certain forms of real estate or locations can become less desirable over time leading to decreases in value.

6. **Manager risk**. The success of real estate investments is often highly dependent on manager skills and timing.

7. **Valuation.** Valuation policies vary from manager to manager and the lack of consistently applied mark to market mechanisms across funds/managers can impact reported portfolio performance.

8. **Capital market shifts**. A change in capitalization rates due to, for example, an unexpected rise in interest rates, may have a negative impact on real estate values.

TMRS believes that the expectation of net-of-fees total returns in excess of the NCREIF ODCE Index and the diversification benefits of the asset class justify the risks associated with real estate investing.

D. 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 guidelines for diversification of the real estate portfolio:

TMRS has divided the global real estate investment universe into the following sectors, with descriptive attributes to follow:

1. **Core Investments.** Stable and Income Producing with Limited Risk.

    a) Operating, substantially leased office, retail, industrial or multi-family properties.

    b) Generally have institutional qualities for size, physical attributes and location.

    c) 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.

    d) 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 based on characteristics of individual investments.

    e) Core may include property types other than traditional Core investments when the cash flow or appreciation characteristics are similar to traditional core property types.

    f) 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.

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

    a) Office, retail, industrial or multi-family properties that have moderate risk associated with their investment.

    b) 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.

c) 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.

d) Target gross-of-fee total returns for Value-Added investments are at least 200 basis points per year higher than for Core Properties.

e) Target leverage for Value-Added investments is up to 70% loan to value at acquisition (portfolio and property level). Exceptions will be considered based on characteristics of individual investments.

f) 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.

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

   a) 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.

   b) Target leverage for Opportunistic investments can be up to 80% loan to value at acquisition (property and portfolio level). Exceptions will be considered based on characteristics of individual investments.

   c) 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.

   d) 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.

E. 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, Public Real Estate Securities, or Commercial Mortgages.

1. **Commingled Funds.** Commingled funds are collective investment vehicles where investors pool capital alongside other investors. The commingled fund structure provides discretion to investment managers within the stated strategy and allows the investors in commingled funds to benefit from diversification that is greater than TMRS could achieve by acquiring properties on a direct basis through separate accounts. The commingled fund emphasis

should enable TMRS to access top tier managers in various strategies and diversify the risk of the real estate portfolio across numerous funds, managers and strategies.

The commingled funds shall be structured as limited partnerships, limited liability companies, private REITs, corporations or other investment vehicle provided that the commingled funds are structured in a manner enabling TMRS to comply with Texas law requiring investments be structured as securities.

2. **Separate Account for Real Estate Investments.** A separately managed account is an arrangement between an investor and a real estate manager through which the real estate manager is responsible for managing individual investments (i.e., individual properties, single public securities account) for the investor. The manager makes the investment, disposition, and debt financing decisions on behalf of the investor following guidelines developed by the investor. The investor may be the only investor in the property or may have other partners invested in the property. A legal opinion would be required to determine the legality of this structure for TMRS.

F. Diversification and Risk Management Guidelines

The Policy ranges for the real estate portfolio have been set with reasonably wide ranges in order to allow TMRS to capitalize on market inefficiencies and attractive opportunities, while also maintaining a certain level of low risk stability to the portfolio.

Since many of the real estate investments will be private market investments in commingled funds, TMRS will not have precise control over the exact investment targets. As a result, there may be instances from time to time where the portfolio composition is outside the target ranges. In those cases, TMRS and RE Consultant will work to rebalance the portfolio to move the portfolio toward the target ranges. This process may take time due to the private market nature of real estate investments in commingled fund vehicles, many of which have broad investment mandates.

The ranges for the portfolio are set forth below by category. It is expected that the denominator used in calculating the ranges will be the total real estate allocation. As a result, it is possible that the portfolio will not be in compliance on an invested basis during the first several years as the initial allocations become invested.

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

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

   TMRS shall maintain a minimum (>50%) percentage of the portfolio in low-risk investments that will be generally considered core, but may be structured in the form of equity or debt and may be public or private securities. The remainder of the portfolio will not be tied to specific targets, but will be monitored regularly to maintain prudent levels of diversification, as determined by Staff and RE Consultant.

Sector	Target Allocation Range
Core	50-100%
Value	0-25%
Opportunistic	0-25%

2. **Property Type Diversification** – TMRS shall seek diversification through investments in office, retail, multi-family, industrial and non-traditional categories such as hotels, self-storage, senior housing, student housing, medical office, land and other property types.

Type	Target Allocation Range
Office[a]	10-35%
Retail	10-35%
Multi-family[b]	10-35%
Industrial	10-35%
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.

3. **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.

   The portfolio will be monitored on a regular basis and geographic diversification shall be achieved in a sufficient manner as measured by the professional judgment of Staff and RE Consultant. Over the long term, TMRS should seek geographic diversification of its private real estate investments with regard to major regional areas both domestically, e.g., Pacific, Mountain, Southwest, Southeast, Mideast, Northeast, East North Central, West North Central and internationally, e.g., Asia, Europe, Americas, Australia.

4. **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.

5. **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.

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

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

8. **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 portfolio. Should the leverage limit be exceeded, Staff and RE Consultant will develop a plan to rebalance the portfolio in order to comply with the target leverage percentage.

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

9. **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.

10. **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 and can be completed by the Real Estate Funds either internally or externally as further described below and approved by Real Estate Fund manager personnel in writing. Exceptions to this 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 those under construction or renovation as well as land held for future expansion or entitlement.
    a) External valuation requirements
       i. Each direct real estate investment held in any commingled open-end fund must be valued by an independent, professionally designated property valuer or appraiser at least annually. Properties held in closed-end funds will be externally valued by such a property valuer or appraiser, upon request by TMRS.
       ii. External appraisals completed by independent third-party appraisers must 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.
       iii. Material 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) Internal valuation requirements
       i. 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:
          1. Use of appropriate, established valuation techniques
          2. Valuation process oversight, review, and approval must be independent of the portfolio manager and so documented
          3. Sufficient documentation for Real Estate Fund auditors to re-compute the calculations during audit

4. Reconciliation of any significant variance from the previous external appraisal

c) 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.

VII. CASH EQUIVALENTS

A. Objective:

Cash balances are generated for the purpose of satisfying cash flow requirements of the pension plan, 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.

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 T Bills.

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

1. Custodian bank's STIF vehicles,
2. AAA-rated money market mutual funds registered with the US Securities and Exchange Commission under Section 2a-7 as an investment company under the Investment Company Act of 1940, when authorized by the CIO.
3. **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.

C. Manager Guidelines for Investment of Cash Equivalents

Note: Cash balances and cash equivalents within a manager's mandate are defined as those necessary to fully support derivatives and unsettled trades as well as withdrawal requirements, and will be invested by that manager according to the following guidelines:

1. **Investment Risk**
   a) **Interest Rate Risk** will be managed using economic analysis, Federal Open Market Committee analysis, and projected cash flow requirements of TMRS. All securities purchased shall have a maximum final stated maturity not to exceed 397 days. Aggregate Cash Equivalent investments will maintain a combined weighted average maturity that will not exceed 45 days.

   b) **Sector Risk** will be managed through maximum asset limits as set forth below.

Asset Type	Max
US Treasury & US Government Agencies	100%
Commingled Funds	100%
Repurchase Agreements	100%
Money Market Instruments	50%
Notes, Bonds & Debentures	30%

*as percentage of Manager's cash allocation

c) **Credit Risk** will be controlled by requiring minimum ratings by sector as outlined below and through rigorous credit analysis. A downgrade of a security which creates a violation in the guidelines shall not require an immediate sale if the manager determines that risk of further credit deterioration does not exist and obtains TMRS approval with appropriate documentation to continue holding the security. The following is the minimum credit quality for each of the sectors.

(1) Commingled Vehicles
  a. The minimum credit quality of SEC registered 2a7 Money Market Funds is AAA.
  b. The Custodian Bank's short term investment fund can be non-rated but will maintain a minimum average credit quality of A1/P1.

(2) 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:
  a. Any two of the following: A-1 by Standard & Poor's ("S&P"), P-1 by Moody's Investor Services ("Moody's"), F-1 by Fitch or an equivalent rating by another NRSRO.
  b. 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 long-term rating as follows:
  Any two of the following: A- by S&P, A_3 by Moody's, A- by Fitch or an equivalent rating by another NRSRO.

d) **Reinvestment Risk** will be managed through cash flow analysis.

e) **Liquidity Risk** will be managed through cash flow analysis and in consideration of TMRS' cash flow needs.

f) **Concentration Risk**

i) Issuer

Investments in a single issuer shall not exceed 2% of the total portfolio, with the exception of US Treasury and US Agency investments, Repurchase Agreements which are subject to restrictions defined under Permissible Investments, and investment in commingled vehicles. For purposes of these guidelines, the term "issuer" will mean a given entity and its affiliates.

ii) Commingled Vehicle limits will be coordinated across managers by investment staff, particularly at such times as cash/cash equivalent balances within manager portfolios are unusually high,

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, Investments in 100% US Treasury or 100% US Agency only funds are limited to 20% of the money market fund size at time of purchase.

2. **Permissible Investments**. The following are permissible investments for the Cash Equivalents Asset Class, 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
      (1) Money market mutual funds registered with the US Securities and Exchange Commission under Section 2a-7 as an investment company under the Investment Company Act of 1940
      (2) Custodian bank's short term investment funds.
   d) Money Market Instruments:
      (1) Bankers' Acceptances
      (2) Certificates of Deposit
      (3) Commercial Paper
      (4) Time Deposits
   e) Notes, Bonds, Debentures:
      (1) Corporate Bonds
      (2) Medium Term Notes
      (3) Floating Rate Corporate Bonds
   f) Repurchase Agreements
      Repurchase Agreements with a maximum term of seven (7) days and subject to the following requirements:
      (1) 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.
      (2) Manager must monitor and manage counterpary risk in the context of the total portfolio.
      (3) Margin Requirements: Collateral must have an initial collateral margin of 102%.

3. **Restrictions/Prohibitions**
   The following security types are prohibited:
   a) Non-US Issuers
   b) Asset-Backed Commercial Paper
   c) Extendible Notes/Secured Liquidity Notes
   d) Auction Rate Securities
   e) Range Notes

f) Inverse floaters
g) Constant Maturity Treasury (CMT) Floaters
h) Dual Index Floaters
i) Cost of Funds Index (COFI) Floaters, Prime Floaters

VIII. SECURITIES LENDING

A. 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.

B. Lending Agent

1. Agent Qualifications

The securities lending agent or its parent organization must:

a) be experienced in the operation of a fully secured securities lending program;
b) indemnify the System against any loss resulting from borrower default or from its own failure to properly execute its responsibilities under the lending agreement;
c) maintain a favorable SSAE16 or ISAE 3402 report reflecting appropriate risk controls;
d) be rated at least "A" by two of the following nationally recognized rating services: Moody's Investors Service, Standard and Poor's Corporation, and Fitch Ratings; and
e) 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 who will promptly notify the Board 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.

2. General Standards of Care and Practices of Securities Lending Agent

a) **Lending Agent as Fiduciary**
The 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.

b) **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.

c) **Fee Arrangements**
Traditional fee arrangements provide for a sharing of revenue between the System and the lending agent, net of rebate rates paid to borrowers. These fees must be negotiated to ensure that the lending agent is fairly compensated while incentivized to deliver a prudently managed program.

C. Program Guidelines

1. 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. TMRS investment staff will work with the securities lending agent to create and maintain a custom approved borrower list. The lending agent cannot make loans to borrowers who do not appear on TMRS' approved borrower list, and will regularly report to TMRS investment staff regarding counterparty exposures. TMRS investment staff will review the custom borrower list with the lending agent on at least a semi-annual basis to make revisions as agreed upon by TMRS and the lending agent.

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%

2. Eligible Collateral

a) Cash (US dollars)
b) US Government Securities

3. 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.

D. Cash Collateral Separate Account Guidelines

Should a separately managed cash collateral reinvestment portfolio be utilized, the Securities Lending Agent or third-party cash manager is authorized to invest according to the following guidelines:

1. **Objectives**
   a) To safeguard principal,
   b) Assure that all cash collateral is invested in a timely manner,
   c) Maintain a diversified portfolio of investments,
   d) Maintain adequate liquidity to meet anticipated needs, and
   e) Consistent with these objectives, to optimize the spread between the collateral earnings and the rebate rate paid to the borrower of securities.

2. **Investment Risk**
   a) **Liquidity, Duration Mismatch, and Maturity**
      (1) Overnight liquidity will be maintained at a minimum of 15% of the cash collateral reinvestment portfolio expressed as a percentage of amortized cost. Overnight is defined as having a final maturity of one business day.
      (2) Investments will maintain a combined weighted average maturity that will not exceed 45 days. For purposes of calculating the weighted average maturity, a floating rate instrument will be deemed to have a maturity equal to the period remaining until the next readjustment of the interest rate.
      (3) The maximum average mismatch of loan maturities versus investment maturities should not exceed 12 days or 10 days if Indemnified Repurchase Agreements as defined in Item 3(d) (Permissible Investments-Repurchase Agreements) are the primary vehicle for investment of cash collateral.
      (4) Fixed rate instruments will have a Final Maturity at the time of purchase that does not exceed 397 days.
      (5) Floating rate instruments will have a Final Maturity that does not exceed 397 days.
      (6) "Final Maturity" for purposes of these guidelines means the earliest of (i) the date noted on the face of the instrument as the date on which the principal amount must be paid or (ii) in the case of an instrument with an unconditional put or unconditional demand feature, the date on which the principal amount of the instrument can be recovered by demand.
      (7) A repurchase agreement will be deemed to have a maturity equal to the period remaining until the date on which the repurchase of the underlying securities is scheduled to occur or, where no date is specified but the agreement is subject to a demand, the notice period applicable to a demand for the repurchase of the securities.

   b) **Sector Risk** will be managed through maximum asset limits as set forth below

Asset Type	Sector Max as % of Cash Collateral Reinvestment Portfolio at Amortized Cost
US Treasury & US Government Agencies	100%
Commingled Funds	100%
Repurchase Agreements	100%
Non-govt Money Market Instruments maturing < 1 year	50%

Notes, Bonds & Debentures maturing > 1 year	30%

c) **Credit Risk** will be controlled by requiring minimum ratings by sector as outlined below. Credit risk shall be actively managed through rigorous credit analysis. The following is the minimum credit quality for each of the sectors.

(1) Commingled Vehicles
The minimum credit quality of SEC registered 2a7 Money Market Funds is AAA.

(2) 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:

a. Any two of the following: A-1 by Standard & Poor's ("S&P"), P-1 by Moody's Investor Services ("Moody's"), F-1 by Fitch or an equivalent rating by another NRSRO.

b. 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 long-term rating as follows:
Any two of the following: A- by S&P, A_3 by Moody's, A- by Fitch or an equivalent rating by another NRSRO.

Securities may not be purchased based on an S&P, Moody's, Fitch or another NRSRO's rating where the applicable NRSRO has announced publicly that it is examining the relevant rating for a possible downgrade and that downgrade would result in a rating below the quality guidelines stated above.

In the event that an investment held is downgraded by an NRSRO and falls below the minimum quality guideline, the Securities Lending Agent will immediately make every effort to notify the System and will provide a written opinion with appropriate justification as to whether the position should be sold. The System will instruct the Securities Lending Agent how to administer the downgraded security. In the absence of a contrary instruction, the Securities Lending Agent will take no action with respect to the affected investment.

d) **Reinvestment Risk** will be managed through cash flow analysis

e) **Concentration Risk**
As measured at the time of purchase, 2% of the aggregate cash collateral received on behalf of the System may be invested on behalf of the System in the instruments of a single issuer. There will be no concentration limitation on US Government Securities, repurchase agreements and the commingled vehicles included in the list of

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

3. **Permissible Investments**

Provided that the Minimum Overnight Liquidity level is met, and subject to the credit quality restrictions subsequently described, both fixed-income securities and other instruments with debt-like characteristics on a fixed rate and floating rate basis are permitted, including:

a) **Bank Obligations:**
   (1) Bank Bills
   (2) Bank Notes
   (3) Bankers' Acceptances
   (4) Certificates of Deposit
   (5) Non-extendible Commercial Paper
   (6) Deposit Notes
   (7) Loan Participations
   (8) Medium Term Notes
   (9) Time Deposits

b) **Corporate Obligations:**
   (1) Non-extendible Commercial Paper
   (2) Corporate Bonds
   (3) Medium Term Notes

c) **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.

d) **Repurchase Agreements**

Repurchase Agreements with a maximum term of forty-five (45) days and subject to the following requirements:

(1) Gap Risk (Interest Rate Sensitivity)

If Repurchase Agreements are indemnified by the Securities Lending Agent from counterparty insolvency ("Indemnified Repo") and are the primary vehicle for investment of cash collateral, the Gap Risk shall not exceed 10 days. Gap Risk is defined as the difference, expressed in days, between the weighted average maturity of all repurchase agreements and the weighted average maturity of all outstanding loans.

(2) Permitted Collateral

i. 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 including agency mortgage-backed securities;
ii. Investment grade corporate fixed income securities;
iii. Investment grade municipal bonds; and
iv. Money market instruments with a minimum rating of A2 or P2.

(3) Counterparties

Counterparties (or if such counterparty is not rated, their parent company) must be rated a minimum of A- or better by one nationally recognized rating service and are limited to 25% of the cash collateral reinvestment portfolio.

(4) **Margin Requirements**
Collateral must have an initial collateral margin of 102% for government securities and 105% for money market instruments, municipal securities, and corporate securities.

e) **Commingled Vehicles**
AAA rated money market mutual funds registered with the US Securities and Exchange Commission under Section 2a-7 as an investment company under the Investment Company Act of 1940, as amended, are permissible investments and:
(1) are subject to no limitation under the Concentration Guidelines in these Cash Collateral Separate Account Guidelines,
(2) are deemed to have a "Final Maturity" of one day for purposes of the Maturity Guidelines in these Cash Collateral Separate Account Guidelines,
(3) underlying holdings are not be subject to the Quality Guidelines in these Cash Collateral Separate Account Guidelines; and
(4) are limited to 5% of the fund size at the time of purchase.

f) **Lending Agent Affiliate Issues**
Investment in a security or other instrument issued by the Lending Agent or an Affiliate must receive approval from the CIO prior to investment.

4. Prohibited Investments

a) Non-US issuers are prohibited
b) Asset-Backed Commercial Paper
c) Extendable Notes (EN)/Secured Liquidity Notes (SLN)
d) Auction Rate Securities (ARS)
e) Equity Securities are generally prohibited, except that equity securities that have predominantly debt characteristics (such as owner trust certificates) must receive approval from the CIO prior to investment.
f) Range Notes
g) Inverse Floaters, Reverse Floaters or Leveraged Floaters
h) Constant Maturity Treasury (CMT) Floaters
i) Dual Index Floaters
j) Cost of Funds Index (COFI) Floaters, Prime Floaters

5. Quality Guidelines

Except with respect to permitted collateral for reverse repurchase agreements and as noted below, a permissible investment must have a minimum short-term rating as provided by a Nationally Recognized Statistical Rating Organization ("NRSRO") as follows:

a) Any two of the following: A-1 by Standard & Poor's ("S&P"), P-1 by Moody's Investor Services ("Moody's"), F-1 by Fitch or an equivalent rating by another NRSRO.
b) An investment without its own rating will be considered to be rated if the issuer thereof is rated with respect to: (i) a class of short-term debt obligations, in the case of short-term ratings, or (ii) a class of long-term debt obligations, in the case of long-

term ratings, or (iii) any security of the issuer within a class the same as the unrated investment that is comparable in priority of payment to the unrated security to be purchased.

c) For securities with stated maturity 366 days or more from time of purchase, long-term ratings will 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 long-term rating as follows: any two of the following: A- by S&P, A_3 by Moody's, A- by Fitch or an equivalent rating by another NRSRO.

GLOSSARY OF TERMS

Absolute Return Strategies - seek to deliver positive returns regardless of market conditions across a wide range of asset classes and trading techniques. Absolute return 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. Absolute return strategies are generally comprised of a diversified pool of hedge funds and may include the use of derivatives, leverage, and short selling.

Agent – any individual or entity acting on behalf of another.

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

Asset-Backed Security (ABS) – bonds that are 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 high credit ratings.

Asset-Backed Commercial Paper is issued by a special purpose vehicle or conduit that generally uses the proceeds of issuance to obtain interest in various types of assets.

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.

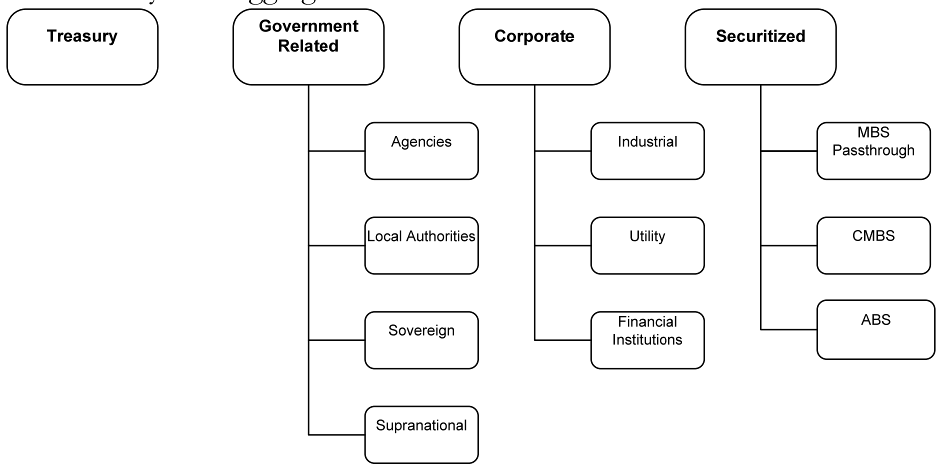
Auction Rate Securities (ARS) are debt instruments with a long-term nominal maturity whose interest rate is regularly reset through a dutch auction.

Bank Loans – common term for high yield or leveraged bank loans; although they are senior secured instruments, they can be highly volatile and experience equity-like returns as well as significant price erosion and permanent loss of capital

Benchmark – a gauge in the securities market by which investment performance can be measured. The following benchmarks apply to the TMRS investment program.

- **Barclays US Aggregate Bond Index -** generally represents investment grade bonds being traded in the United States and includes Treasury securities, Government Related bonds, Mortgage-backed bonds, and Corporate bonds.

Barclays US Aggregate Bond Index Sector Classification Scheme



- **Barclays Global Aggregate Bond Index –** a broad-based measure of global investment grade fixed-rate debt and includes Treasury, government-related, corporate, and securitized in the following markets: Australia, Canada, Chile, Czech Republic, Denmark, Eurozone (Austria, Belgium, Cyprus, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, Netherlands, Portugal, Slovakia, Spain), Hong Kong, Hungary, Japan, Malaysia, Mexico, New Zealand, Norway, Poland, Singapore, South Africa, South Korea, Sweden, Switzerland, Taiwan, Thailand, UK, and the US

- **Barclays US Long Government/Credit Bond Index** - a subset of the Barclays US Aggregate Bond Index reflecting a longer average maturity. It includes Treasuries, Government Related and Corporate issues that have remaining maturities of 10 years or more.

- **Barclay's World Government Inflation-Linked Bond Index –** includes only government issuers of inflation-linked bonds in the following major markets: Australia, Canada, France, Germany, Italy, Japan, Sweden, UK, and the US.

- **Consumer Price Index –** inflation indicator that measures the change in the price of a fixed basket of goods and services including housing, electricity, food, and transportation.

- **iMoneyNet Money Fund Average** – average yield of a comprehensive database of institutional money market funds and widely used by the cash investment industry as an index for benchmarking performance.

- **HFN FOF Multi-Strategies Index - Hedge Fund Net Fund of Funds Multi-Strategies** average is created by HedgeFund.net and is a broad representation of hedge funds that are each invested in multiple investment strategies.

- **MSCI-ACW ex US IMI (All Country World ex US Investable Market Index)** is a free float-adjusted market capitalization weighted index that is designed to measure the equity market performance of developed and emerging markets. As of May 27, 2010 the MSCI ACWI-ex US IMI consisted of 44 country indices comprising 23 developed and 21 emerging market country indices. Note: Free float adjustment of outstanding shares excludes shares held by strategic investors such as governments, corporations, controlling shareholders, and management, and shares subject to foreign ownership restrictions. From the MSCI-ACWI, the revised IMI market coverage increases from 60% of total market capitalization to 85% of free float-adjusted market capitalization.

- **MSCI EAFE –** Morgan Stanley Composite Index – Europe, Australasia, and Far East Index includes 21 MSCI country indices, representing the developed markets outside of North America.

- **NCREIF FI-ODCE** – National Council of Real Estate Investment Fiduciaries Fund Index – Open End Diversified Core Equity that includes 26 open-end commingled funds pursuing a core investment strategy.

- **FTSE NAREIT US Real Estate Index**– reflects exposure to all investment and property sectors across the US economy.

- **FTSE EPRA/NAREIT Global Real Estate Index** – currently represents over 400 stock-exchange listed real estate companies in 37 countries around the globe and is widely used by institutional investors, money managers and funds.

- **Russell 3000 Index –** includes 3,000 publicly held US companies based on total market capitalization, which represents approximately 98% of the investable US market.

- **S&P 500 Index –** capitalization-weighted index of the prices of the top 500, in terms of capitalization, actively traded US stocks.

Caps – an over-the-counter investment instrument designed to provide insurance against the rate of interest on a floating rate loan rising above a certain level

Cap Rate - for real estate investments, any rate of return used to convert income into value.

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

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.

Commitment - limited partner's obligation to provide a certain amount of capital to a fund as the fund requests it.

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.

Constant Maturity Treasury (CMT) Floaters are floating rate securities whose interest rate reset provisions are tied to long-term interest rates so that a change in the slope of the yield curve could result in the value of the instrument falling below par.

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

Convexity – a measure of the shape of the curve that describes the relationship between bond prices and bond yields.

Core-Satellite Approach - refers to controlling asset class exposure through low risk or passive (core) allocations and using less constrained (satellite/active) mandates for excess return.
It is a method of portfolio construction designed to minimize costs and volatility while providing an opportunity to outperform the broad stock market as a whole. The core component of the portfolio consists of passive allocations that provide broad market exposure, while mandates within the satellite component consist of actively managed allocations to provide excess return.

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.

Country Risk – the risk that a country or entity within a country will not be able to honor its financial obligations.

Coupon Rate – the stated interest rate on a bond at issue. Coupon payments are typically made semiannually.

Credit Default Swaps (CDS) – a type of credit derivative that allows the transfer, between parties, of the credit risk of a referenced bond. 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 foreign 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.

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

Debt Service Coverage Ratio - the annual net operating income divided by the annual debt service.

Drawdown Schedule - plan for the actual transfer of funds from the limited partners' to the general partners' control -- with most private equity and real estate funds, capital is called on an as-needed basis.

Dual Index Floaters are floating rate securities whose interest reset provisions are tied to more than one index so that a change in the relationship between these indexes may result in the value of the instrument falling below par.

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 percentage by which the bond's price will move, given a 100 basis point change in yield.

Due Diligence in Private Equity or Real Estate Fund Selection - detailed research of the business or property, the management team, and other factors to insure their accuracy, completeness, and soundness; or the investigation and evaluation of a management team's characteristics, investment philosophy, and terms and conditions prior to committing capital to a fund.

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.

Extendible Notes (EN)/Secured Liquidity Notes (SLN) are short-term bonds in which the maturity date may be extended.

Eurobond – a bond issued in a currency other than the currency of the country or market in which it is issued.

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

Fixed Income Investment – a security issued by a borrower that obligates the issuer to make specified payments to the holder over a specific period. May also be referred to as "debt" or "bonds."

Floors – an over-the-counter investment instrument designed to provide insurance against the rate of interest on a floating rate loan dropping below a certain level.

Forward Commitment – a forward commitment is a contract between two (or more) parties who agree to engage in a transaction at a specified later date and at a specified price.

Global Bond - Bonds that can be offered within several markets simultaneously.

Global Investment Performance Standards (GIPS) - a set of standardized, industry-wide ethical principles that provide investment firms with guidance on how to calculate and report their investment results to prospective **Hedging** – buying or selling a product or security to offset a possible loss from price changes on a corresponding asset.

Hotel Property Type - includes budget, mid-scale, upscale, luxury, and extended stay properties. May include attached convention centers, retail, parking structures and entertainment facilities. Development projects (vertical construction) which are primarily hotel are included in this category.

Industrial Property Type - multi-tenant or single tenant buildings including manufacturing, warehouse (logistics), light industrial/assembly, truck terminals, trailer storage lots and bulk distribution. Also includes Research and Development, Flex and Office Showroom space. Typically a portion of the building is finished out into office space. Development projects (vertical construction) which are primarily industrial are included in this category.

Inflation-linked Bonds – issued by governments, agencies, municipalities, and corporations, whose principal and/or interest payments automatically adjust with changes in some measure of inflation.

Inverse Floaters, Reverse Floaters or Leveraged Floaters are defined as floating rate instruments where the coupon rate moves in the opposite direction of the change in the reference rate. These may also be referred to as "yield curve notes." Leveraged floaters have provisions that magnify changes in interest rates.

J-Curve - **t**ypical profile of private equity or real estate fund returns over the life of a partnership; IRR at the initial investment is 0%, then drops during drawdowns for fees, then trends upward with value creation, and finally plateaus as distributions are made and the fund is liquidated. The plot of the partnership values over time generally resembles a letter J.

Joint Venture - a partnership, limited liability company or corporation formed by two or more entities for the purpose of investing or operating a business as co-owners.

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.

Loan to Value (LTV) - a lending risk assessment comparing the portion of the amount borrowed to the cost or value of the property purchased. The calculation for LTV is mortgage debt divided by the value of the property.

Local currency debt – debt issued by a national government, subnational entity or corporation denominated in local currency and issued in the local market.

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.

Metropolitan Statistical Area (MSA) - **MSA's** are established by the US Office of Management and Budget for population census and compilation of related statistical data. MSA's define specific geographic areas with a population in the urban center of at least 50,000 and a total MSA population of 100,000 or more.

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.

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

Non-deliverable forwards (NDFs) – cash settled forward contracts, used predominately with respect to foreign exchange forwards.

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.

Passive strategies – an investment strategy that attempts to replicate a selected index performance, in contrast with active management which attempts to better the performance of an index benchmark. Passive strategies are less expensive than active 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 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.

Qualitative Analysis – a subjective analysis of a security, with the judgment not based on financial information, such as that found on a balance sheet or income statement. Instead, the judgment may be based on such issues as labor relations.

Quantitative Analysis – an analysis of a security, with the judgment based on financial information such as that found on a balance sheet or an income statement.

Quasi-sovereigns – entities that possess legal characteristics of both governmental and private sectors. Their credit risk is driven by both sovereign and standalone credit trends.

Range Notes are floating rate instruments where at each reset date the reference rate is compared to an upper limit and lower limit. At the time of reset, if the reference rate is either higher than the upper limit or below the lower limit, the coupon rate is zero for that period.

Real Estate Operating Company (REOC) - a company that invests in real estate and whose shares trade on a public exchange. Similar to a real estate investment trust (REIT) except in two regards: the absence of the pass-through benefit afforded REITs and exemption from the requirement that REITs pay back 95% of income to shareholders.

Real Return - is 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 real return strategies, one common theme is their goal to generate a return premium over inflation (or deflation). Real return strategies invest in a variety of securities such as Treasury inflation protected securities (TIPS), commodities, natural resource stocks, currencies, and traditional asset classes. Real return strategies may be pursued through a series of dedicated sub-asset class mandates, or through broader globally and tactically managed mandates.

Private Real Estate - 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**) are 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.

Public Real Estate Securities. Public real estate securities 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.

Reference rate – an interest rate benchmark for a floating-rate security or interest rate swap. The reference rate is tied to index rates such as LIBOR, prime, or Treasuries.

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 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.

Risk Adjusted Basis or Return - the total investment return that accounts for associated risks and is adjusted for volatility of returns over time. That is, 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 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.

Rules-Based Strategies – are 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.

Senior Housing Property Type - includes independent living, assisted living, skilled nursing, and congregate care facilities. Development projects (vertical construction) which are primarily senior housing are included in this category.

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.

Short-Term Investments – Any fixed income investment with less than one year to maturity.

Spot Market – commodities or securities are traded for immediate delivery and payment, also known as the cash market.

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.

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.

Supranational bonds - the debt of international organizations whereby member states transcend national boundaries or interests; examples are the World Bank and the International Monetary Fund.

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

Time-weighted returns - a time-weighted return is determined by calculating the rate of return between two or more periods, multiplying those returns together geometrically, and then taking the geometric mean of the result. Example: [(1.15*1.20*1.25)1/3]-1 = 20% return. Time-weighted returns are an approximation of an IRR and are usually easier to calculate than the IRR. The term is a misnomer as it does not consider the time value of money, but rather produces a return that does not penalize fund managers for timing decisions; the calculation treats a dollar distributed today the same as a dollar distributed ten years ago. Time-weighting was created to overcome the fact that the public securities manager has no control over the timing of the cash flow into or out of his management by his clients due to liquid secondary markets. The investment manager's performance is therefore measured strictly on the investment decisions they make, not on the timing of cash flows.

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.

Unhedged Benchmark – a benchmark in which the underlying securities' returns are translated from their local currency back to US dollars at each measurement date.

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.

Yankee Bonds – a bond denominated in US dollars that is publicly issued in the US by foreign banks, corporations, and governments, and must first be registered with the SEC.

Yield Maintenance Pre-payment Penalty - the prepayment penalty applies because the borrower is paying off the loan prior to the maturity date; it allows the lender to attain the same yield as if the borrower had made all scheduled mortgage payments until maturity. The penalty is based on the difference between the interest rate on the loan and a specified reference rate (generally defined in the "NOTE"), and the remaining payments on the loan multiplied by this interest rate differential.