TEXAS MUNICIPAL RETIREMENT SYSTEM

INVESTMENT POLICY STATEMENT

JULY 2009

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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. 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. The broad policies are found in the main body, with 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 personal business 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.

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.

ROLE DEFINITIONS

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, Chief Investment Officer, General Counsel, Internal Auditor, Custodian Bank/Securities Lending Agent, and Consulting Actuary.

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 to the Chief Investment Officer and investment staff.
5. Hiring investment managers for prescribed mandates, under non-discretionary operational authority, 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 under the supervision and direction of the Board, and to invest the assets of the System consistent with Board-adopted investment goals and objectives, investment policy statements as contained in this IPS, and with applicable state and federal laws. In carrying out these responsibilities, the Executive Director 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 also responsible for informing the Board of any situation involving the investment program and investment activities that merit its attention.

C. The Executive Director is also the **Chief Investment Officer (CIO)** and in that capacity directs the TMRS investment program, ensures that adequate resources are available, including qualified investment staff, to implement the Board's investment policies, works closely with the investment consultant(s) 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 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 work with the investment consultant(s) to advise the Board of Trustees on investment policy and management issues. Such issues may include the development of investment goals and objectives, investment policies and strategies, 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.

Internal investment staff is responsible for identifying and managing the risks associated with the investment program. These include investment, operational, and depository/custodial risks. In identifying and managing risk, internal investment staff will engage in active oversight of the investment program and its activities. 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 **Accounting Staff** reports to the Director of Finance and serves as the independent 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, accounting staff reconciles each manager's reported investment activities with the official book of record to ensure all activities are properly accounted for. Accounting staff are also responsible for the posting of investment activities to the System's general ledger, and ensuring those activities are reported in accordance with generally accepted accounting procedures.

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.

<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.

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

B. **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 based on recommendations by the Consultant and CIO. Specific qualifying criteria are set forth in this IPS. The managers must manage or advise on the assets according to the terms of their contract and within guidelines and restrictions as set forth by TMRS. Portfolio management responsibilities include trade execution. While TMRS operates under statutory restriction against discretionary management relationships, the internal investment staff may affect 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.

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

D. 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' accounting staff, calculating investment performance, and serving as an additional layer of risk control in the safekeeping of System assets.

E. 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.

F. The **Transition Manager** 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.

CONSULTANT 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:

A. Upon learning of an issue that the Consultant believes is material regarding deviation from prudence, objectivity, policy or parameter adherence or any other matter of concern involving the Board's investment program, the Consultant is to express that concern in writing to the Executive Director & CIO. A response will be sent to the Consultant.

B. If the Consultant believes the issue warrants immediate action, the Consultant must make this clear in the original correspondence and, in addition, recommend 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.

C. 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.

ASSET ALLOCATION & REBALANCING POLICY

A. Asset Allocation

The Board of Trustees recognizes that the most important determinant of long-term return and volatility is the asset allocation decision. The Board's asset allocation policy 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 short and intermediate-term volatility in investment performance and fluctuations in the financial condition of the fund.

The target asset 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 Percent	Target Percent	Maximum Percent
U.S. Equity	12	**20**	25
International Equity	12	**20**	25
Fixed Income	30	**35**	69
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 of these targets in stages. The 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. A formal asset allocation study will be conducted at least every three years to verify or amend the targets and an asset-liability study at least every five years.

B. Rebalancing Policy

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 use cash flow, as available, to maintain the overall allocation as close as possible to the target.

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 as market conditions permit. At such times, investment staff will be responsible for developing and implementing a re-balancing plan 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.

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 Board has adopted a long-term return objective of generating the highest level of return within an acceptable level of risk while providing sufficient liquidity to meet the System's cash flow needs and has adopted an asset allocation target that it believes is appropriate to this objective.

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 asset allocation will be measured versus a set of Policy Benchmarks (hereinafter referred to as the "Policy Index") that (1) reflects the investment policy target allocations and does not reflect interim allocations or changes to the underlying portfolio, or 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	Percent of Target Allocation Benchmark*
Domestic Equities	*Russell 3000*	***20%***
Int'l. Equities	*MSCI EAFE***	***20%***
Fixed Income	*Custom Fixed Income (Barclays Aggregate and Long Gov/Credit)*	***35%***
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%***

*will reflect interim targets and the impact of averaging into the market

**MSCI ACWI-ex US at such time as the Board authorizes emerging markets for the international equity allocation.

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 strategically overweight/underweight certain areas and/or 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 strategic decisions remain justified given current information.

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 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 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 manager's performance fails to improve relative to the standards detailed above and/or qualitative factor changes remain unresolved, the manager may be considered for termination.

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. Asset Allocation and Manager Structure

The asset allocation decision is extremely complex and relies on quantitative computer models. 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.

B. Specific Manager Operational Parameters

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.

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, be registered investment advisors under the Investment Advisor's Act of 1940 as amended, 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, maintain liability and fiduciary insurance coverage, and 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 within the parameters of a non-discretionary mandate 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 are requested to meet with the Board periodically to review the following items:

1. 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.

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

3. 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.

4. 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.

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.

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 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. 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. The Board may wish to interview the manager candidate that has been recommended for selection.

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. 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
2. 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.

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.

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. If the issue is considered serious enough, a special meeting of the Board may be requested by the CIO, based on recommendations by the staff or Consultant. Examples include, but are not limited to, these events:

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 guidelines, or
7. Any other issue of which the staff and/or Consultant become aware and that are deemed material.

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:

1. No action,
2. Immediate staff meetings with the manager,
3. Formal re-interview of the manager by the Board,
4. Initiation of a Comprehensive Review, or
5. Termination.

Each situation should be handled on a case-by-case basis.

H. 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.**

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. **T**he 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.

PROXY VOTING

Active voting of proxies is an important part of the Board's investment program. Investment staff will develop proxy voting guidelines 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. 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 Board 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.

RISK MANAGEMENT

A. Risk Philosophy

The investment risk philosophy for 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 controlled through broad diversification of asset classes and investment approaches, as well as diversification of individual securities.
3. Risk is reduced by time, and 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 fixed-income securities can dampen volatility 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. Relative performance of various asset classes is unpredictable in the short term and attempts to shift tactically between asset classes are unlikely to be rewarded with any degree of reliability.

Given these principles, the Board has established a long-term asset allocation policy that balances the return required to meet the Board's objectives and the risk level that is appropriate under existing circumstances. In determining its risk posture, the Board has properly considered, in addition to its fiduciary obligations and statutory requirements, the plan's purpose and characteristics, current and projected financial condition, liquidity needs, sources of contribution, income, and general business conditions.

B. Diversification in Asset Allocation

The Board will rely on an investment strategy utilizing an appropriate long-term, diversified asset allocation model. Diversification distributes a portfolio across many investments to avoid excessive exposure to any one source of risk. Other considerations in the asset allocation model take into account the purpose and objectives of the investment portfolio, the size and financial condition of the fund, and general business conditions. The factors mentioned here are not intended to be limiting; rather, they are outlined as a general indication of the importance of diversification to proper asset allocation. Under such an allocation, the Board's assets may be invested by some combination of internal and/or external managers. While the Board favors passive strategies in efficient markets, active strategies may be pursued when attractive risk/reward outcomes are more likely. The Board will determine the proper allocation among asset classes and managers, based on advice and analysis provided by staff and Consultants.

C. Risk Policies

1. **Custodial 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 SAS70 report reflecting satisfactory internal operational controls and must maintain above satisfactory ratings by TMRS staff in all areas critical to a custody relationship where the custodian bank is also the System's book of record, including but not limited to the settlement of trades, collection of investment-related cash flows, custody of all securities in which TMRS is invested, accurate and timely accounting record-keeping, accurate and timely performance reporting, and overall customer service.

   Custodial risk is not strictly a function of credit 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.

2. **Credit risk** is measured by credit ratings and is managed by credit rating standards and asset type limits as described within the Fixed Income and Cash Equivalents asset classes as well as the Securities Lending sections of the Appendix to this IPS.

3. **Liquidity risk** is the risk there will be insufficient cash on hand to meet TMRS' disbursement requirements and is also the risk that certain securities cannot be bought or sold without affecting their market price. In the first instance, this risk will be managed through periodic reviews by staff with each manager regarding future cash payout requirements. In the second instance, 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. Liquidity risk is managed by maturity and asset type limits as described within the Fixed Income, Cash Equivalents, and Securities Lending sections of the Appendix to this IPS.

4. **Concentration Risk** is managed through security diversification and subject to limits as a percent of market value. As reflected in the Appendix, the equity asset class provides limits at the company level and the fixed income asset class provides diversification limits at the sector and issuer level. Except for government securities, parent company exposure across all asset classes is monitored with a target limit of 3%.

5. **Interest Rate Risk** is defined as market value fluctuations due to changes in interest rates and will be controlled through duration management restrictions relative to a designated market benchmark or set of investment objectives as described in the Fixed Income, Cash Equivalents, and Securities Lending sections of the Appendix to this IPS.

6. **Foreign Currency Risk** is the risk that an investment's value will change 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.

7. **Operational Risks** are risks that occur in both the ordinary course of business and disasters. **Governance Risk** is related to organizational structure and oversight mechanisms. Operational Risk and Governance Risk exist in both manager and consultant relationships and will be addressed in the manager and consultant contracts as appropriate.

8. Additional investment risks specific to a particular manager's mandate will be addressed in the manager contract.

APPENDIX

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.

I. PRINCIPLE GUIDELINE

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.S. EQUITY

A. Objective:

The U.S. Equity allocation is intended to provide capital appreciation and is modeled to provide a broad representation of the U.S. stock market.

Passive strategies are expected to track the respective index within a reasonable manner, based on the mandate and as compared to similar portfolios, within 9-12 basis points over a rolling three-year period gross of fees. The benchmark and expected tracking error for a specific mandate will be stated in the manager contract.

B. Implementation:

This allocation will be implemented through non-discretionary active and/or passive strategies with the overall objective of exceeding the designated broad U.S. stock market benchmark. Active strategies will meet quality, diversification, liquidity and tracking error mandates as specified in the managers' contracts. Passive strategies will be diversified by replicating a broad market index or by investing across various equity styles such as core, growth, and value and across capitalization sectors. Specific styles or strategies are expected to outperform the general market at varying times.

C. Permissible Investments:

1. Index funds of broad U.S. market benchmarks are eligible.
2. Active and passive commingled funds are eligible.
3. Separately managed accounts that are structured to be non-discretionary are eligible.
4. Futures contracts may be used by passive index fund managers to facilitate rebalancing to the benchmark index in a lower cost and efficient manner as appropriate.

III. INTERNATIONAL EQUITY

A. Objective:

The International Equity allocation is intended to provide capital appreciation and diversification, and is modeled to provide a broad representation of the foreign markets.

Passive strategies are expected to track the respective index within a reasonable manner, based on the mandate and as compared to similar portfolios, within 15-20 basis points over a rolling three-year period gross of fees. The benchmark and expected tracking error for a specific mandate will be stated in the manager contract.

B. Implementation:

This allocation will be implemented through non-discretionary active and/or passive strategies with the overall objective of exceeding the designated broad non-U.S. market benchmark. Active strategies will meet quality, diversification, liquidity and tracking error mandates as specified in the managers' contracts. Passive strategies will be diversified by replicating a broad market index or by investing across various equity styles and regions..

C. Permissible Investments:

1. Index funds of broad non-U.S. developed market benchmarks are eligible.
2. Active and passive commingled funds are eligible
3. Separately managed accounts that are structured to be non-discretionary are eligible.
4. Futures contracts may be used by passive index fund managers to facilitate rebalancing to the benchmark index in a lower cost and efficient manner as appropriate.
5. Upon Board approval based on recommendations of the CIO and Consultant, the performance benchmark may include emerging market exposure. In such instance, strategies utilizing emerging markets are authorized.

IV. U.S. CORE FIXED INCOME (CORE FI)

A. 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 U.S. 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.

B. 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.

1. **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 +/- 10% of the Barclay's Aggregate Index on an option-adjusted basis.

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

c) **Convexity Risk** will be managed through option-adjusted and scenario analyses.

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

TOTAL CORE FIXED INCOME PORTFOLIO WEIGHTINGS

Sector	**Sector Max as % of Index**
US Treasury	200%
Government-Related	200%
Corporates	150%
Securitized	150%
Commercial Mortgage-Backed Securities	200%
Asset-Backed Securities	200%

e) **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. A downgrade of a security which creates a violation in the guidelines will require an immediate sale unless the manager determines that, based on market conditions, a temporary delay is expected to provide a better return to TMRS and obtains TMRS approval to do so. In such instance, the manager must provide TMRS supporting justification for that recommendation and a reasonable exit strategy. Decisions to temporarily hold the security must be documented for compliance purposes.

The following is the minimum credit quality for each of the sectors:

(1) **U.S. Treasury & Government-Sponsored**: Weighted average credit quality must be AAA.
(2) **Global US Dollar Denominated Bonds**: Both the issuer and the issuer's national government (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.
(3) **Corporates**: Corporate issuers must be rated investment grade (at least Baa3 by Moody's or BBB- by S&P).
(4) **Securitized:** Securitized product must be rated investment grade and the weighted average credit quality must be AAA.
(5) **Municipal Bonds**: Municipal issuers must be rated at least AA.

f) **Structure Risk** will be managed through option-adjusted, scenario and prepayment variability analyses.

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

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

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

a) U.S. Treasury and Government Sponsored Bonds.
b) Publicly Traded Corporate Obligations including Bonds, Notes, Debentures, Pass-Through Certificates and Equipment Trust Certificates.
c) 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.
d) Real Estate Investment Trust (REIT) debt obligations.
e) Publicly Traded Investment Grade Mortgage-Backed Securities, including CMOs/ REMICs whose deliverable instrument or underlying collateral is a U.S. mortgage-backed security. Forward purchase or to-be-announced (TBA) mortgages (requires positive trade date cash until settled or paired with offsetting TBA sale).
f) U.S. 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 transactions. Limits on non-agency Mortgage-Backed Securities may be specified in the manager's contract.
g) Investment Grade Asset-Backed Securities.
h) U.S. Dollar Denominated Global Bonds, whose country must be part of the Barclay's Global Aggregate Index, a widely followed index which includes only those local markets that are fairly liquid and fairly well developed.
i) General Obligation Municipal Bonds.

V. CORE PLUS FIXED INCOME (CORE PLUS FI)

A. 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 U.S. 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 by 35 bps net of fees with a tracking error of 150 bps.

B. 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.

1. **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 Barclay's Aggregate Index on an option-adjusted basis.
    b) **Yield Curve Risk** will be managed through close monitoring of key rate durations versus the Barclay's Aggregate Index at a portfolio level and within portfolio components.
    c) **Convexity Risk** will be managed through option-adjusted and scenario analyses.
    d) **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.

TOTAL CORE PLUS FIXED INCOME PORTFOLIO WEIGHTINGS

Category/Sector	Sector Max as % of Index
US Treasury & Government Sponsored	No Limit
Investment Grade Corporates	200%
Securitized	200%
Commercial Mortgage-Backed Securities	225%
Asset Backed Securities	225%

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

f) **Credit Risk** will be controlled by requiring minimum credit ratings as outlined below. Credit risk will be actively managed through rigorous credit analysis. A downgrade of a security which creates a violation in the guidelines will require an immediate sale unless the manager determines that, based on market conditions, a temporary delay is expected to provide a better return to TMRS and obtains TMRS approval to do so. In such instance, the manager must provide TMRS supporting justification for that recommendation and a reasonable exit strategy. Decisions to temporarily hold the security must be documented for compliance purposes.

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 one or more nationally recognized statistical rating organizations (NRSRO), such as Moody's, Standard & Poor's, or Fitch.

(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 issuer and the issuer's national government (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.

(4) **Securitized:** Securitized product must be rated investment grade and the weighted average credit quality must be AA.

(5) **Municipal Bonds**: Municipal issuers must be rated at least AA.

(6) **Non US Dollar Denominated Bonds**: Both the issuer 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.

(7) **High Yield or Non-Investment Grade Corporates**: Corporate issuers must be rated at least B- by S&P or Fitch or B3 by Moody's. If two ratings are provided, the lower (more conservative) rating shall be used.

j) **Structure Risk** will be managed through option-adjusted, scenario and prepayment variability analyses.

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

l) **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.

m) **Concentration Risk**

(1) **Issuer risk** will be managed through the following limits. Investments in a single corporate issuer will not exceed 2% of the total market value of the Core Plus FI and manager mandates. 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.

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

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

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

j) U.S. Treasury and Government Sponsored Securities.

k) Corporate obligations including bonds, notes, debentures, pass-through certificates and equipment trust certificates.

l) 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.

m) Real Estate Investment Trust (REIT) debt obligations.

n) Publicly Traded Investment Grade Mortgage-Backed Securities, including CMOs/ REMICs whose deliverable instrument or underlying collateral is a U.S. mortgage-backed security. Forward purchase or to-be-announced (TBA) mortgages (requires positive trade date cash until settled or paired with offsetting TBA sale).

o) U.S. 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 transactions. Limits on non-agency Mortgage-Backed Securities may be specified in the manager's contract.

p) Investment Grade Asset-Backed Securities.

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

r) Municipal Bonds, both taxable and tax-exempt issues.

s) Convertible debt securities.
t) Non-U.S. dollar denominated fixed income securities including: government, government-related, and currency related to transactions.
u) 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.

VI. 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 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 in the following commingled vehicles.

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

C. Manager Guidelines for Investment of Cash Equivalents

Note: Cash balances within a manager's mandate will be invested by that manager in the following permissible investments according to these guidelines, or in the custodian bank's STIF vehicles as directed by staff.

1. U.S. Treasury and Government sponsored securities.
2. AAA-rated money market mutual funds registered with the U.S. Securities and Exchange Commission under Section 2a-7 as an investment company under the Investment Company Act of 1940, as approved by investment staff

D. Controls

1. Investment staff is responsible for monitoring the permissible commingled vehicles for **liquidity and credit risks**.
2. **Concentration Risk** will be managed according to the following limits on the commingled vehicles for both unallocated and manager portfolio cash equivalents.
   a). Investments in the Custodian Bank's short-term investment funds and investments in AAA-rated SEC registered 2(a)7 money market funds are limited to 5% of the fund size at the time of purchase.

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

VII. 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 SAS70 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 U.S. 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 is permitted to lend securities only to its approved counterparties, as regularly disclosed to the investment staff and System.

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

a) Domestic (United States domiciled) securities: Initial Margin of 102%
b) International (non-United States domiciled) securities: Initial Margin of 105%

Consistent with the securities lending agent's indemnification of the System for loss resulting from borrower default, the agent will be responsible for the limits placed on individual borrowers in accordance with their in-depth ongoing credit reviews while remaining cognizant of the System's preference for return of the securities on loan over the collection of cash collateral. However, under normal circumstances, no more than 10% of the total value of the System's securities on loan will be with a single borrower. If this limit is exceeded, the lending agent must provide the System with documentation of and rationale for the current concentration levels and a plan for reaching compliance within a timeframe acceptable to the investment staff.

2. **Eligible Collateral**
   a) Cash (U. S. dollars)
   b) U.S. 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. **Liquidity, Duration Mismatch, and Maturity**
   a) 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.
   b) Investments will maintain a combined weighted average maturity that will not exceed 45 days.
   c) The maximum average mismatch of loan maturities versus investment maturities should not exceed 12 days.

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) **Sovereigns**
   (1) Non-extendible Commercial Paper
   (2) U.S. 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.
   (3) Sovereign obligations of any country other than the U.S. that is a member of the Organization for Economic Co-operation and Development or any country that is a member of the European Union, which will include securities issued or guaranteed as to principal and interest by such a sovereign, or by its agencies, instrumentalities, establishments or the like (with U.S. Government Securities and such other obligations being collectively "Sovereign Obligations")

d) **Supranational Issues**

e) **Repurchase Agreements**

   Reverse Repurchase Agreements with a maximum term of seven (7) days and subject to the following requirements:

   (1) **Permitted Collateral**

   U.S. 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.

   (2) **Counterparties**

   Counterparties must be rated a minimum of A1/P1.

   (3) **Margin Requirements**

   Collateral must have an initial collateral margin of 102%.

f) **Commingled Vehicles**

   AAA-rated money market mutual funds registered with the U.S. 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.

g) **Non-U.S. Issuers**
Non-U.S. issuers are prohibited with the exception of sovereigns or supranationals.

h) **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) **Equity Securities**
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.

b) **Range Notes**
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.

(c) **Inverse Floaters, Reverse Floaters or Leveraged Floaters**
These particular 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." Securities with provisions that magnify changes in interest rates are also prohibited.

d) **Constant Maturity Treasury (CMT) Floaters**
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.

e) **Dual Index Floaters**
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.

f) **Cost of Funds Index (COFI) Floaters, Prime Floaters**
COFI and Prime Floaters are floating rate securities whose interest rate reset provision is tied to an index materially lagging short-term interest rates.

5. Concentration Guidelines

As measured at the time of purchase, the greater of $25 million or 5% 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; provided that, where an investment in a given issuer is maturing during the period beginning with the purchase date for a new investment in such issuer and ending on the settlement date for such new investment, the new investment will not be included in the concentration calculation during such period (it being understood that, other than during any such settlement period, the issuer concentration limits will not exceed the stated amounts (*i.e.*, the greater of $25 million or 5%)). There will be no concentration limitation on U.S. Government Securities, repurchase agreements and the commingled vehicles included in the list of permissible investments above. For purposes of these guidelines, the term "issuer" will mean a given entity and its affiliates.

Sector Limits:

Sector	Sector Max as % of Cash Collateral Reinvestment Portfolio at Amortized Cost
Corporate Bonds	50%
Commercial Paper	50%
Asset Backed Commercial Paper	25%

6. **Maturity Guidelines** are calculated from Settlement Date to Final Maturity utilizing next good business day methodology.

   a) Fixed rate instruments will have a Final Maturity at the time of purchase that does not exceed 397 days.
   b) Floating rate instruments will have a Final Maturity that does not exceed 397 days.
   c) "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.
   d) 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.
   e) The maximum weighted average maturity of all investments hereunder will not exceed 45 days at the time of purchase. 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.

7. **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 & Poors ("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.

8. Downgrades

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 Ssecurities 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.

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.

Benchmark – a gauge in the securities market by which investment performance can be measured, such as the Standard & Poor's 500 Index.

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.

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

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

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.

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

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

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

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

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."

Leverage – in investments, 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.

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.

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.

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

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.

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.

Real Return - is a disparate group of strategies with a generally common theme of investing with an orientation towards inflation or other macro economic 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.

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

Real Estate (Public) - 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.

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.

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

Risk-Adjusted Basis – an investment return that accounts for associated risks.

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

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

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.

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.