Funding and Investment Policy Statement

of

The Municipal Employees' Retirement Fund
of the City of Hartford

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Pension Commission

Adopted by
The City of Hartford Pension Commission
March 11, 1994

Amended most recently in 2022

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Article I. Introduction

This Funding and Investment Policy Statement (the "Policy") sets forth the general principles that govern the investment of the Municipal Employees' Retirement Fund ("MERF", or the "Fund"), as established by the City of Hartford Pension Commission (the "Commission"). The purpose of this Policy is to provide a framework for the management of MERF assets. The Policy outlines objectives, benchmarks, restrictions and responsibilities so that the Commission, the City Treasury, the MERF's Investment Staff ("Investment Staff" or "Staff"), consultants, investment managers, members and beneficiaries, and all MERF stakeholders clearly understand the objectives and policies of the MERF investment program. The Policy also encourages effective communication, facilitates transparency and compliance, and provides a framework for reporting back to the Commission, as appropriate.

Specifically, this document addresses the following issues as they relate to this matter:

- Governing authority;
- Roles and responsibilities;
- Funding policy;
- Investment objectives;
- Risk tolerance;
- Asset allocation;
- Investment management structure;
- Investment manager performance;
- MERF as a corporate citizen.

This investment policy statement reflects the Commission's preferences regarding a number of important pension management issues. It is also an outline of the Commission's long-term strategic planning based on an analysis of the capital markets, the MERF's financial condition and the structure of the MERF pension liabilities. In formulating this policy, the Commission has sought to allow sufficient flexibility to capture investment opportunities as they occur, while establishing reasonable parameters to ensure that prudence and care are exercised in the execution of the MERF investment program. The intent is for the Policy to be a dynamic document, which will be reviewed regularly. The investment policy will be modified periodically to reflect the changing nature of the MERF's assets and liabilities, investment program, benefit and structural changes, and economic conditions.

The authority to amend the specific goals, objectives and guidelines as contained in this document rests solely with the Commission unless otherwise established by the City of Hartford Municipal Code. The Commission shall view its investment policy statement as the standard against which to review any proposed policy changes.

Article II. Governing Authority

Pursuant to the Charter of the City of Hartford, the City Treasurer and the Commission are the named fiduciaries of the MERF. The Commission has the responsibility to administer the MERF and, in so doing, to adopt rules and regulations governing the same. On the recommendation of the City Treasurer, the Commission also must approve the investment of all pension funds and the retention or termination of investment managers and other MERF service providers.

An elected official of the City of Hartford, the City Treasurer holds the position of Secretary of the Commission *ex officio*. The City Treasurer has the sole responsibility for the care and custody of all MERF assets except to the extent that such responsibility is delegated by him to an appropriate entity with the approval of the Commission and consistent with his other legal obligations. The City Treasurer also has the sole responsibility to invest the assets of the MERF, as well as to recommend all investment managers and other financial services providers, subject to the approval of the Commission.

Article III. Roles and Responsibilities

Pension Commission

The Pension Commission is charged as fiduciary for the MERF. The Commission may delegate functions that a prudent entity acting in a like capacity and familiar with those matters could properly delegate under the circumstances. This does not, however, relieve the Commission of its fiduciary duty, but may be used as a tool to ensure that expert advice may be received to allow for the implementation of the most informed decisions to be made on behalf of the MERF's participants.

As all investment decisions must be approved by the Commission, these decisions include, but are not limited to the following areas:

- Investment Goals and Objectives
- Strategic Asset Allocation
- Investment Policy Statement & Guidelines
- Investment Manager Selection and Evaluation

In addition to approval of the decisions noted above the Commission will review the ongoing operations of the MERF consistent with the following schedule.

Formal Review Schedule:

Subject	Frequency
Investment goals and objectives	Minimum of three to five years
Strategic asset allocation	Minimum of three to five years
Investment Policy Statement and guidelines	Annually
Total Fund investment performance	Annually
Investment manager evaluation	Periodically

City Treasurer

The City Treasurer is charged as fiduciary for the MERF. As such, the City Treasurer shall make recommendations to the Commission on the prudent investment of MERF assets and on the retention and dismissal of Investment Staff, investment consultants, investment managers and other MERF service providers. The City Treasurer oversees the activities of the Investment Staff upon whom he shall rely for investment advice.

Investment Staff

Investment Staff is charged with the coordination of all investment activities and matters on behalf of the MERF. Staff shall report to the Commission and City Treasurer, as applicable, on emerging trends and issues of concern to public pension funds generally and to the MERF in particular.

The Investment Staff will be managed by the Chief Investment Officer who reports to the City Treasurer. The Investment Staff is responsible to the Commission and City Treasurer for a continuous review and analysis of the current investment climate and shall recommend adjustments with respect to the investment policy and investment program as appropriate. The Investment Staff also continually reviews and analyzes the philosophies, policies and strategies employed by the Fund's investment managers, examining their decision-making processes and their investment styles in relation to stated investment objectives. The Investment Staff will ensure that the investment goals and objectives of the MERF and the specific guidelines imposed upon particular investment managers are being met.

Subject to the City Treasurer's direction and Pension Commission approval, Investment Staff's responsibilities shall also include, without limitation, liquidation of assets needed to acquire investments or to pay benefits and expenses, investment of cash proceeds, implementation of Commission decisions regarding asset allocation, funding modifications, hiring and termination of external investment managers and negotiating investment management agreements with investment managers where required. MERF's Investment Staff will also work closely with the external investment consultant(s). Accordingly, recommendations will generally be developed in a collaborative way by the City Treasurer, Investment Staff and investment consultant(s).

Investment Consultant

The investment consultant's responsibility is to work with the Commission, City Treasurer and Investment Staff in a fiduciary capacity to assist in the management of the MERF investment program. This includes participating in regular meetings with the Commission, the City Treasurer and Investment Staff to provide an independent perspective on the MERF's goals, structure, performance and investment managers. In the course of the investment consultant's normal functions, the investment consultant will work directly with the Investment Staff to review asset allocations and performance and make recommendations to the City Treasurer and Commission as appropriate.

The investment consultant will assist Investment Staff, the City Treasurer and the Pension Commission with external investment manager selection. The investment consultant will conduct routine due diligence on the MERF's investment managers and will report to Investment Staff on its findings. The investment consultant will also promptly inform the MERF and discuss the impact of material changes taking place within any current investment manager's organization or investment process. The investment consultant shall also provide Investment Staff, City Treasurer and the Commission with such research and educational training as may be required from time to time. The investment consultant will perform any other duties as specified in the contractual agreement with the MERF.

Investment Managers

The primary responsibility of the investment manager is to invest assets in accordance with the investment manager(s) specific guidelines and objectives. Investment managers shall act as fiduciaries and have the following responsibilities:

- Using the care, skill, prudence and diligence, under the circumstances then prevailing, when managing the MERF's assets that a prudent person would use in the conduct of an enterprise of a similar character with similar aims;
- Exercising full investment discretion subject to its mandate and the corresponding investment guidelines in regards to buying, selling and managing the assets held in their respective portfolios;
- Communicating with MERF's Investment Staff and investment consultant(s) regarding performance, market values and significant changes pertaining to the MERF's assets being managed by the investment manager;
- Vote proxies on behalf of the MERF (if so authorized);

Any investment manager may request that a change be made to its mandate or guidelines. Furthermore, investment managers may request temporary exemptions from certain guidelines contained within this Policy (including limitations on cash), given changes to market or industry conditions. Such requests must be made in writing.

The investment manager shall promptly notify Investment Staff and the investment consultant, if there are any significant changes to the firm, the investment team assigned to the MERF's account, investment process, or if the portfolio fails to comply with the terms of its contract, its investment guidelines or this Policy.

Master Custodian

The MERF’s master custodian shall be responsible for holding in custody all the securities, cash and cash equivalents of the MERF; which are housed in separate accounts of the MERF’s Investment Managers. The exception to this is the case of commingled or mutual funds invested in by the MERF. The master custodian shall make available, upon the request from Investment Staff, reports detailing the net asset value of the Fund and all related changes therein regarding securities transactions processed or pending, market values and all other pertinent information regarding the MERF’s investments. The master custodian may also, at the direction of the Commission, engage in a securities lending program. Alternatively, the Commission may choose to retain a third-party firm to provide securities lending services to the Fund.

Article IV. Funding Policy

The overall goal of the MERF is to maintain a fully funded plan, such that its assets and future contributions at least equal the present value of all projected benefits. In addition to helping to secure plan participant benefits, it is believed that this goal will help the City of Hartford (the “City”) maintain a reasonable price for its debt, and otherwise remain on a solid financial footing so as to ensure stable and predictable City rates of contribution to the MERF.

Article V. Risk Tolerance

Given the MERF's adequate funding and its participant demographics, the Commission has determined to take a long-term view in establishing the Fund's risk-reward parameters to safeguard the MERF’s principal while meeting overall investment and return objectives. The Commission also adheres to the Capital Market Theory, which maintains that over the long term, varying degrees of judicious investment risk-taking are rewarded with incremental returns. Consequently, while capital preservation is regarded to be of paramount importance, the Commission regards prudent risk-taking as justifiable.

Article VI. Investment Objectives

The investment objectives for both the overall portfolio and the individual portfolio components are as follows:

1. Over a full market cycle, the MERF's overall rate of return is expected to be equal to or exceed the rate assumed by sound actuarial principles; it is also expected that the MERF will achieve a real rate of return of 350 basis points over and above inflation as measured by the Consumer Price Index (“CPI”). A full market cycle for a given asset class is defined as a period over which the market performance cycle completes and reverses in the opposite direction (peak to trough, or vice versa) and then reverses and trends again in the initial direction. A full market cycle is generally expected to occur over a 5 to 7 year period but it is acknowledged that it may extend over longer periods. To better judge success the Fund is also measured by its ability to exceed, after investment management fees, a customized blended policy benchmark. This benchmark represents a passive implementation of the historical investment policy targets and it is re-balanced

regularly. To evaluate success, the Commission will compare the performance of the Fund to the actuarial assumed rate of return, the performance of a custom policy benchmark and the real rate of return 350 basis points above the CPI. In the case of a disparity between the various measurement methodologies, the higher rate shall prevail over a market cycle.

2. MERF's individual asset classes are expected to achieve returns consistent with or in excess of specific market benchmarks over the length of a market cycle. This objective will be incorporated in periodic reviews of the MERF's performance.

3. The portfolio managed by each MERF investment manager is expected to generate net of fee returns in excess of its respective target benchmark index with risk (defined as volatility of returns) that is consistent with that of managers with a similar style over rolling three-year periods.

Article VII. Asset Allocation

The MERF's asset mix shall be set by the Commission from time to time based upon (1) the structure of the MERF's pension liabilities, (2) Capital Markets Theory, (3) the MERF's full funding policy and (4) MERF liquidity needs. The following table shows the current strategic policy targets and permissible ranges for the allocation of assets within asset classes, as adopted by the Commission. These ranges are intended to serve as boundaries for the MERF's individual asset classes as more particularly described in the table below. They will help signal the need to rebalance such classes when allocation weights fall outside these ranges.

The Commission believes that its adoption of these targets and ranges will provide an appropriate mechanism for maintaining the integrity of the asset allocation policy.

City of Hartford
Municipal Employees' Retirement Fund
Strategic Asset Allocation Policy and Relative Ranges

Asset Class	Policy Target	Range Around Policy Target
U.S. Large Cap Equities	21	+/- 3%
U.S. Small/Mid Cap Equities	7	+/-2%
International Developed Markets Equities (unhedged)	11	+/-3%
Emerging Markets Equities	7	+/-2%
Total Public Equity	**46**	**+/-5%**
Private Equity	11	-2% /+3%
Total Equity	**57**	
Core Bonds	4	+/-1.5%
Absolute Return Fixed Income	0	+/-1.5%
High Yield Bonds	2	+/-1.5%
Global Bonds	0	+/-1%
Emerging Markets Debt	6	+/-2%
TIPS	4	+/-1.5%
Long Gov't/Credit	0	+/-2%
Opportunistic Credit	0	+1/-3%
Total Public Fixed Income	**16**	**+/-5%**
Private Debt	7	+/-2%
Total Fixed Income	**23**	
Private Real Estate	7	+/-3%
Private Real Assets	6	+/-2%
Total Real Assets	**13**	
Hedge Funds	5	+/-2%
Global Asset Allocation	0	+/-1.5%
Total Multi Asset	**5**	
Cash	**2**	**+/-1.5%**

Differences due to rounding.

The asset allocations will be reviewed quarterly for rebalancing purposes with the maximum interval between necessary rebalancing being one year (as of fiscal year end) such that, if an asset class exceeds the ranges noted in the preceding table, there will be at least one rebalancing transaction per fiscal year. In addition, rebalancing transactions will generally occur no more than once per quarter with a preference for no more than semi-annual activity.

It is understood that for all asset classes, exceptions to preferred policy weights may be acceptable given certain market and other conditions, providing that such exceptions are made consciously, monitored carefully by the City Treasurer and Investment Staff and reported to the Pension Commission.

The asset classes will be compared to the appropriate benchmarks on a monthly, quarterly, annual basis in addition to annualized 1, 3, 5 and since inception time periods. Appropriate policy benchmarks are indicated in the table below:

City of Hartford
Municipal Employees' Retirement Fund
Asset Class Policy Benchmarks

Total MERF	Custom Policy Index*
Total Public Equity	40% Russell 3000/ 60% Russell Global ex-U.S.
Domestic Equity	Russell 3000 Index
International Equity	Russell Global ex-U.S. Index
Total Fixed Income	Custom Fixed Income Benchmark**
Domestic Fixed Income	Barclays Aggregate Bond Index
International Fixed Income	Barclays Global Aggregate Bond Index
Total Alternatives	Custom Alternatives Benchmark***
Private Equity	Russell 3000 Index plus 300 basis points
Private Debt	Credit Suisse Leveraged Loan Index
Real Estate	NCREIF ODCE
Real Assets	Consumer Price Index + 4% (Unadjusted)
Hedge Funds	HFRI Fund of Funds
Other	N/A
Global Asset Allocation	60% MSCI World/ 40% Citigroup WGBI
Commodities	Standard & Poors GSCI
Cash	U.S. Treasury 3 Month T-Bills

* The custom MERF benchmark will be comprised of the relative weights of each component of the asset allocation listed above.
** The custom fixed income benchmark will be comprised of the relative weights of each component of the fixed income portion of the asset allocation listed above
*** The custom alternatives benchmark will be comprised of the relative weights of each component of the alternatives portion of the asset allocation listed above

The Commission anticipates that it will revise these targets only when it is clear that significant changes have occurred in the demographics of the participant group and/or in the capital markets such that assumptions upon which the present allocations have been made no longer appear reasonable, or as may be necessary from time to time pursuant to the findings of a periodic asset/liability study of the MERF. Accordingly, the MERF's investment managers should pursue a strategy of being fully invested in the market consistent with the foregoing guidelines to ensure that cash-equivalent positions do not interfere with the overall asset allocation strategy. In addition, in order to meet the MERF's cash disbursement needs, the Commission may direct that dividends and interest income from the investment managers' accounts be swept into the MERF's short-term investment fund ("STIF") account.

Article VIII. Asset Class Guidelines

The permissible investments included within each asset class, and special limitations or other considerations governing the investment of any funds therein, are set forth below:

A. Domestic Equities

Investments in domestic equities are defined as commitments to U.S. dollar denominated, publicly-traded common stocks of U.S. domiciled companies and securities convertible into common stock. The domestic equity portfolio should be diversified by the number of stocks, industries, economic sectors and other appropriate investment characteristics.

The aggregate domestic equity portfolio is expected to produce, over time, a total, risk-adjusted return greater than its designated benchmark index. To accomplish this objective, a combination of different investment styles and capitalization ranges may be employed in the portfolio's management. An investment in any single issue may not exceed 5% of the outstanding shares. In the case of small or illiquid companies, the MERF's commitment to any single issue may not exceed 5% of the average daily float. The securities of any single issuer may not exceed 5% of the manager's total portfolio market value. Finally, total investment by domestic equity managers in non-U.S. holdings and American depository receipts ("ADRs") shall not exceed the level within the Russell 3000 index (or the level within an individual manager's respective benchmark).

Any cash reserve held by domestic equity portfolio managers will be counted for asset allocation and investment performance as common stock. Domestic equity portfolio managers will inform a designated person on the MERF staff of any significant changes contemplated in their cash reserve and adhere to the guidelines on cash approved by the Commission.

All cash normally will be invested in short-term investment funds of the MERF's custodian bank; unless otherwise directed by the City Treasurer with the approval of the Pension Commission.

Individual investment managers may be given guidelines that do not conform to the overall domestic equity policy so long as the aggregate of the MERF domestic equity portfolio is in line with policy guidelines.

The performance of individual managers shall be judged based upon the foregoing principles as well as with reference to appropriate external indices approved by the Commission. The Commission's emphasis will be on long-term (minimum of three years) rather than short-term performance.

B. International Equities

Investment in international equities is defined as commitments to common stock, preferred stock, ADRs, Global Depository Receipts ("GDRs") or other permissible securities issued by companies domiciled outside the U. S.

The aggregate international common stock portfolio is expected over time to produce total, risk-adjusted returns greater than its designated benchmark index. To accomplish this objective, a combination of different investment styles and capitalization ranges may be employed in the portfolio's management. An investment in any single issue may not exceed 5% of the outstanding shares. In the case of small or illiquid companies, the MERF's commitment to any single issuer may not exceed 5% of the average daily float. The securities of any single issuer may not exceed 5% of the manager's total portfolio.

Any cash reserves held by international stock portfolio managers will be counted for asset allocation and investment performance as common stock. As is the case for domestic equity portfolio managers, all cash will be invested in short-term investment funds of the MERF's custodian bank unless otherwise directed by the City Treasurer with the approval of the Pension Commission.

Individual managers may be given guidelines that do not conform to the overall international equity policy so long as the aggregate of the MERF international equity portfolio is in line with policy guidelines.

The performance of individual managers shall be judged based upon the foregoing principles as well as with reference to the appropriate external indices approved by the Commission. The Commission's emphasis will be on long-term (minimum of three years) rather than short-term performance.

C. Fixed Income

Investments in fixed income securities are defined broadly as commitments to government and corporate bonds, preferred stocks, mortgage investments, non-U.S. bonds, and annuities. This asset class is expected to provide regular, predictable income. In the fixed income category, the Fund will utilize both broad mandates (e.g., core bonds, long government/credit) and specialized mandates (e.g., high yield, Treasury inflation protected securities ("TIPS"), emerging markets debt) to gain exposure to all sectors of the market in a manner that balances return and risk consistent with the goals and objectives of the Fund.

The aggregate fixed income portfolio is expected over time to produce total risk-adjusted returns greater than the Custom Fixed Income benchmark, which is comprised of a blend of the underlying broad and specialized benchmarks utilized by the underlying mandates and any other fixed income components of the Fund's asset allocation policy.

Individual guidelines shall be established for each manager that specify the overall risk characteristics and exposures that are allowable under each mandate. These guidelines shall establish ranges and limitations on duration and interest-rate exposure, credit quality, liquidity and use of non-benchmark sectors and securities. The goal of these guidelines will be to limit unintended exposure to interest rate, credit, liquidity and other risks that are not part of the fixed income policy mandate.

Within the set policy ranges for the broad fixed income mandates there are no limitations on the Fund's investment in the following categories of fixed income securities:

- Bonds or notes issued by the U.S. government or U.S. government agencies, including TIPS.
- Mortgage-backed pass-through securities issued by U.S. government agencies.
- Investment grade U.S. corporate bonds, commercial paper or notes issued in the U.S. and denominated in U.S. dollars. "Investment grade" issues shall be defined as those rated BBB- (or equivalent) or higher by at least two major rating agencies.

The performance of individual managers shall be judged based upon the foregoing principles as well as with reference to appropriate external indices approved by the Commission. The Commission's emphasis will be on long-term (minimum of three years) performance rather than current performance.

D. Global Asset Allocation Managers

The Global Asset Allocation ("GAA") asset class provides access to products that invest across multiple asset classes by tactically allocating capital to broad asset classes, specialty asset classes, sectors, industries and individual securities that are attractive from a fundamental, relative-value perspective. GAA managers construct specialized portfolios primarily of global equity and fixed income securities, in order to meet specified risk and return goals. The intent of including these products in the MERF portfolio is to provide a complementary source of both market exposure and manager alpha that will enhance the long-term performance and risk characteristics of the MERF.

The GAA investment selection universe is unconstrained. Via a combination of sub-portfolios and commingled vehicles, GAA portfolios may invest directly in securities and other investment instruments, and may take both long and short positions. The currency exposure in GAA portfolios will normally be un-hedged.

In the Global Asset Allocation strategy category, where the use of commingled funds to access manager products is typically more efficient, the Commission acknowledges that those commingled funds are governed by separate operating documents and investment guidelines that may include different policies on the use of derivatives. The Commission, staff and investment consultant will evaluate the policies and practices of these commingled funds as part of the manager selection process and document review prior to investing in these categories.

Index representation is not a factor in determining permissible investments and GAA managers will have no geographic restrictions. A GAA investment manager may invest in relatively liquid investments and may also invest in listed and unlisted equity and equity-related securities. GAA managers may invest in private placements and other restricted securities deemed appropriate by the portfolio manager.

GAA managers may invest in underlying commingled pool vehicles offered by an affiliate of the applicable investment firms, as deemed by the portfolio manager to be consistent with the investment discipline, provided that there is no duplication of investment management fees due to such investments. Any assets invested in a commingled pool vehicle will be governed by the prospectus for that vehicle.

GAA portfolios are expected to make use of derivatives in pursuit of the portfolio's investment objective. Gross investment exposure may exceed 100% of the market value of the portfolio. Net investment exposure (i.e., long market exposure minus the absolute value of all short positions, will not normally exceed 100% of the market value of the portfolio).

It is expected that GAA managers will exceed the return of an appropriate style related balanced benchmark over a market cycle and will be evaluated over rolling three-year performance evaluation periods.

GAA portfolios are measured by current market exposure or current market value. To the extent that market conditions or other changes cause the portfolio to deviate from established guidelines, the GAA manager will take corrective action.

GAA managers are required to provide the Investment Staff and investment consultant with detailed information on their underlying asset class, sector, country and currency exposures on a monthly or quarterly basis. In addition, each product is expected to maintain an overall risk and return profile that is consistent with its design and the representations made by the manager upon retention.

E. Alternative Investments

Alternative investments consist of investments in relatively illiquid assets, which, by virtue of their illiquidity, command a premium return over comparable publicly traded securities. Examples of these assets include non-registered limited partnership interests, other private placement securities, hedge fund interests and equity positions in real estate. To ensure optimal implementation, specific Alternative Investment Guidelines are included herewith. Economically Targeted Investments ("ETIs") may be included in the private equity, real estate, private debt and real assets asset classes and specific guidelines for ETIs are included herewith in Schedule F.

Investments in the private equity, real estate, private debt and real assets asset classes will generally be made in the form of liability remote vehicles such as limited partnerships. In order to make meaningful investments across several partnerships, the MERF generally is expected to make commitments of $5 million to $15 million, and shall not, in any event, commit more than $15 million to any one partnership. The Commission will review the overall commitment and minimum partnership commitment levels periodically as the MERF's assets increase and may adjust these levels accordingly.

Article IX. Use of Derivatives

Derivative instruments are defined as any security, contractual agreement or investment vehicle whose performance, risk characteristics, or value is derived from a specific underlying financial asset, market interest rate, commodity, currency or market index value. Derivative instruments may be used for any of the following purposes:

- To gain broad stock or bond market exposure in a manner that does not create the effect of leverage in the overall portfolio.

- To convert financial exposure in a given currency to that of another currency (e.g., to hedge Japanese Yen exposure back to the U.S. dollar). Any and all international managers may enter into foreign exchange contracts on currency provided that: a) such contracts are one year or less, and b) use of such contracts is limited solely and exclusively to hedging currency exposure existing within the manager's portfolio. There shall be no foreign currency speculation or any related investment activity.

- To adjust the duration of a bond portfolio in a manner that is consistent with the accepted approach of the manager and other policies and guidelines provided to the manager.

- To allow investment managers to gain exposure to assets and asset classes consistent with the exposure that would be allowed if created with the underlying assets. For example, in the case of commodity managers it is anticipated that derivatives would be used to create exposure to the underlying commodity markets.

- To make portfolio adjustments, including the hedging of risk or country and currency exposure, that are consistent with other elements of the MERF's investment policies and guidelines and that, when viewed from a total portfolio standpoint, do not increase risk or expected volatility of the rate of return in the portfolio.

All other uses of derivatives are prohibited unless specifically approved by the Commission, including the purchase or sale of interest-only strips, principal-only strips, options, futures, swaps, inverse floaters and other unusual structures, such as securities with coupon rates tied to an unrelated asset class. Investment managers are expected to have internal risk management programs in place to ensure that derivatives-based strategies do not result in magnified risks to the portfolio. For the purpose of this investment policy statement, derivatives shall not include (a) 15 and 30 year GNMA, FNMA and FHLMC mortgage pass-throughs, or (b) fixed-rate and adjustable-rate collateralized mortgage obligations or (c) corporate mortgage-backed securities, or (d) low-risk asset-backed securities collateralized by home equity loans, credit cards and automobile loans, or (e) zero-coupon Treasury bonds.

Each manager using derivatives shall submit within thirty days of the end of each quarter a report with the following information:

a) A list of all derivative positions as of quarter-end.

b) An assessment of how the derivatives positions affect the risk exposures of the total portfolio.

c) An explanation of any significant pricing discrepancies between the manager and custodian bank.

d) An explanation of any events of non-compliance.

e) For managers of commingled funds, a list of derivative positions and assessment of the effect on the risk exposure of the portfolio.

Article X. Investment Diversification

Assets are to be broadly diversified to limit the impact of large losses in individual investments on the total portfolio. Index funds may be used to diversify assets and as a vehicle to temporarily invest monies that are to be re-allocated. Professional investment managers will be selected and monitored based on (i) conformity of investment style with the MERF's return objectives, (ii) demonstrated ability to achieve above average results consistently, and (iii) continuity of senior personnel. Passively managed strategies may be utilized to compliment active managers and provide market exposure, including during manager transitions. As part of managing ongoing Fund liquidity, passive strategies may also be utilized within an asset allocation component of the Fund's liquidity pool to maintain market exposure consistent with the Fund asset allocation and minimize transaction costs.

The Commission desires to maintain a well-diversified investment manager program. Toward this end, the Commission will refrain from placing additional funds with investment managers who exercise discretionary authority over more than 10% of the MERF's inventory of assets. This restriction shall not apply to passively managed index portfolios.

While it is the Commission's preference that the MERF be primarily externally managed; the Commission, at its discretion, may choose to have a portion of the actively managed portfolio assigned to the City Treasurer's Office.

The specific guidelines unique to each manager will be developed cooperatively by the City Treasurer and manager and shall be incorporated into the investment management contract executed by the City Treasurer and the manager, subject to approval by the Pension Commission. Sector and security selection of investment grade instruments and the timing of purchases and sales are delegated to the investment manager, subject to any restrictions established by the Commission. In case of a conflict between a manager's specific guidelines and the general guidelines of the Fund, the former shall prevail.

The Commission may also select one or more managers whose investment styles do not conform to the guidelines herein, providing the total of the funds so managed does not exceed 10% of the total market value of the pension fund as of the date the managers are hired.

Article XI. Investment Manager Performance

Due Diligence

The MERF will utilize the investment consultant and other appropriate resources to perform due diligence on potential investment managers for any given investment mandate. Such candidates will be required to manage funds consistent with the desired mandate and will have adequate history, performance track record and capabilities to succeed in this role. The Commission and City Treasurer will coordinate on the appropriate vetting process to allow (i) the City Treasurer to recommend a candidate to be put forward to serve as an investment manager for the MERF and (ii) the Commission to review and approve the City Treasurer's recommendation. Both the Commission and the City Treasurer shall rely on the advice of Investment Staff and the investment consultant in developing the recommendation of investment manager candidates for consideration and ultimate hiring.

Due diligence procedures will include the review of peer group comparisons, performance statistics and other appropriate firm level information and in person interviews, office visits and other procedures as is consistent with industry best practices.

Due diligence will continue on an ongoing basis for all investment managers hired by the MERF.

Evaluation

The Commission shall regularly monitor the investment performance of the MERF at the total fund, asset class, and individual manager levels. The Commission will analyze the Fund's overall results relative to the rates of return available over a given market cycle.

For performance evaluation purposes, rate of return objectives will be based on a time-weighted total return calculation. These return objectives will be long-term based upon compounded and annualized market returns, adjusted for the manager's risk and style, and will be examined on a net-of-fees basis.

A report of the performance of the MERF and each individual manager will be prepared monthly and quarterly by the City Treasurer and submitted to the Commission for its review. It is expected that such reports will be confirmed by or reconciled with the performance data compiled by an independent consultant or the MERF's master custodian bank. On the asset class and individual manager levels, the Commission will use designated benchmarks and the investment guidelines as essential parts of the criteria to monitor investment performance. As previously mentioned, the City Treasurer and investment manager shall cooperatively develop the specific guidelines unique to each manager, and these guidelines shall be incorporated into the investment management contract executed by the City Treasurer and the manager. In the case of a conflict between a manager's specific guidelines and the general guidelines of the Fund, the former shall prevail. In addition, the Commission will hold annual meetings with each individual manager to review performance and retain outside investment advisors as deemed appropriate and in the best interests of the MERF.

Probation and Termination Criteria

The Investment Staff or investment consultant will recommend placing an investment manager on "watch" status when there has been a change to an investment manager or strategy; when the characteristics of the portfolio no longer satisfy the desired or expected elements of the mandate. The following are a list of scenarios that would lead to a manager being placed on "watch":

- **Performance:** Continued performance shortfalls or risk profile discrepancies versus a peer group of managers with a similar style and market index. A manager that does not remain in the upper half of the universe or lags the pre-specified policy benchmark, net of fees, over a rolling three years for three consecutive quarters will be considered for placement on watch status.
- **Changes in strategy:** If the manager departs from the strategy and/or style it was originally hired to implement, such as a switch from a quantitative process to a fundamental one and or the strategy deviates from the universe and benchmark dramatically and in a manner that would not have been expected given the tracking error expectations of the particular strategy.
- **Change in organizational structure or personnel:** A significant change in culture through a merger or acquisition that is likely to distort incentives and promote turnover, or if there are significant departures from the investment team
- **Compliance:** Any gross negligence, willful misconduct, investment policy violation or breach of federal and state securities laws or regulations.
- **Other:** Any other reason the Investment Staff and investment consultant may deem necessary for a heightened review of the manager is warranted.

The City Treasurer, Investment Staff and investment consultant's recommendations may fall into one of the following three categories:

- **Retain:** There is confidence in the investment manager's ability to add future value. The manager's investment performance is satisfactory, and has no significant organizational or strategic issues.
- **Place on Watch:** The manager's investment performance is unsatisfactory and/or issues relating to the organization or strategy are of concern.
- **Terminate:** There is not confidence in the manager's ability to add future value over a benchmark or if significant concerns exist as to the manager's organization or strategy.

On an ongoing basis the City Treasurer and Investment Staff, with assistance from the investment consultant, will review manager performance at least quarterly, conduct formal investment manager reviews annually, or more frequently if necessary, in order to provide recommendations to the Commission regarding manager retention, watch status or termination. Managers can be placed on watch status prior to a recommendation for termination, however, there may be circumstances under which the Commission may elect to terminate a manager without first placing them on the watch list.

When a manager is placed on the watch list the City Treasurer, Investment Staff and investment consultant will conduct additional review and monitoring of the manager and strategy in order to provide the Commission with additional information and recommend a course action, including criteria and timeline for the removal of the manager from the watch list. In general, managers that are placed on the watch list will not receive additional assets.

Article XII. Liquidity

Owing to such factors as investment strategy, cash flow and benefit payments, the Commission delegates to the City Treasurer the authority to maintain a portfolio to meet liquidity requirements, subject to the Commission's preference that at least a two-month cash cushion be maintained for benefit payments.

Article XIII. Prohibited Transactions and Securities Lending

The following transactions are prohibited except as previously mentioned in Article VII and specifically included in the manager agreement: securities lending (except as the City Treasurer may contract with the MERF's master custodian bank or other approved provider), buying on margin, and short sales. The Commission acknowledges that individual commingled funds may utilize securities lending programs as a way to lower the cost to underlying participants, and in those cases the securities lending policies of those commingled funds shall be determined by the fund documents.

Article XIV. Brokerage

All individual security transactions shall be executed at competitive cost, based on primary goal of achieving best execution within the parameters established by the City Treasurer for all brokerage transactions. Directed brokerage and commission recapture programs may be established by the City Treasurer in order to manage overall brokerage costs to the Fund. Individual asset managers are responsible for broker selection and ensuring best execution within the parameters established under the directed brokerage and commission recapture program.

The City Treasurer may establish relationships with portfolio transition managers to assist in the liquidation of manager portfolios and transition of assets. In all cases, transition managers shall have individual transition management agreements in place that specify their obligation to act as a fiduciary to the Fund and that specify their role in executing transactions on behalf of the Fund (e.g., agent, principal). With the exception of transition managers, and unless specifically authorized by the City Treasurer, transactions that involve a broker acting as a "principal," where such broker is also the investment manager who is making the transaction, are prohibited.

Article XV. MERF as a Corporate Citizen

The Commission believes that the MERF should be managed in a manner that is consistent with the values of the City and the MERF while still meeting the goals and objectives set out in this FIPS.

Toward that end, the Commission believes in responsible investing, which considers both financial returns and positive social factors. The consideration of environmental, social, and governance ("ESG") values as part of its investment decisions should enhance the MERF's financial security and long-term sustainability. ESG policies can and have had a positive material impact on investing and the management and operations of investment firms.

The Commission believes this pursuit will drive positive investment outcomes for the MERF and contribute to the evolution of both investment processes and the investment industry.

Consistent with the foregoing, the Commission values the proactive inclusion of people, providers, investment managers, and Consultants from a broad diversity of backgrounds. Furthermore, the Commission affirms the City's commitment to diversity, including the principles of affirmative action, non-discrimination and equal opportunity employment. This is consistent with the Commission's belief that investing in a way that incorporates Diversity, Equity, and Inclusion ("DEI") values will lead to better investment outcomes for the MERF.

While DEI is an often-used term, the Commission finds it valuable to define each of its components.

- "Diversity" is a range of differences including but not limited to gender, race, age, socio-economic background, sexual orientation, disability, and nationality/ethnicity.

- "Equity" is defined as giving as much advantage, consideration, or opportunity to one group or individual as you would another.

- "Inclusion" is defined as offering universal acceptance and full and equal access to ongoing professional opportunities to everyone within a group or organization.

The Commission defines a Diverse investment service provider as a qualified firm that is at least 51% owned by minorities and/or women or that has incorporated significant diversity in all levels of its business activities.

To facilitate these principles and beliefs, the Commission shall approve a Diversity & Inclusion Report Card to facilitate the monitoring, benchmarking and performance of all investment service providers of the MERF. Through the use of the Diversity & Inclusion Report Card, the MERF will regularly evaluate the status of diversity of its investment service providers in an effort to encourage and confirm best practices with regard to development and maintenance of diversity in these firms. Such review will focus on senior leadership, recruitment and hiring, development, retention, investment committee membership and Board of Directors composition. In addition, the Commission will be proactive in including DEI integration into the selection process for future investment service providers. The Commission also believes in responsible investing, which considers both financial returns and positive social factors. Based on this belief, the MERF will strive to align itself with firms that include environmental, social, and governance ("ESG") values in their business practices. We believe that there are additional environmental and societal benefits to businesses that are run in this manner.

The integration of both DEI and ESG values as part of the investment decision should enhance the MERF's financial security and long-term sustainability. Consideration of these material factors alongside traditional fundamental factors should provide a better understanding of the risk and return characteristics of investments in specific investment managers, companies, and securities.

Article XVI: Ongoing Supervision of Assets

It is the City Treasurer's obligation and responsibility to carry out the day-to-day administration of the MERF. Consequently, the City Treasurer is expected to establish written procedures for the MERF's operation consistent with this investment policy. Such procedures shall include a system of internal controls, which shall be documented in writing.

Article XVII: Other Issues

The City Treasurer shall be responsible for managing and exercising the MERF's proxy-voting responsibilities. The Commission expects proxies to be voted vigorously and in the best interests of the MERF. Additionally, the City Treasurer shall be responsible for the management and use of the pool of soft dollars generated by the MERF's transactions, if any. Such funds are to be used exclusively toward the purchase of performance measurement, research, general consulting and administrative services.

Funding and Investment Policy Statement
of
The Municipal Employees' Retirement Fund
of the City of Hartford

Schedule A: Private Equity

I. INTRODUCTION

These guidelines have been established to formalize a process by which the MERF shall invest in the private equity asset class. Private equity investments are generally higher risk and higher returning investments that consist of relatively illiquid assets that, by virtue of their illiquidity, command a premium return over comparable publicly traded securities. This premium is called the liquidity premium.

Since the MERF has a relatively long-term investment horizon (like the majority of defined benefit plan sponsors), its risk tolerance for these relatively illiquid assets is higher than that of other, more short-term oriented investors. Accordingly, the MERF is in a position to capture the liquidity premium.

The fundamental reasons for including these investments within the MERF portfolio include the potential for higher returns than in the public equity markets, exposure to investment opportunities not available in the public capital markets, enhanced diversification and long-term focus.

The MERF shall seek to lower the related risk through diversification and other means. Accordingly, the MERF's private equity portfolio shall be diversified by economic sector, investment type, vintage year, number of transactions, geographic location, and by stage of company maturity.

II. GENERAL CHARACTERISTICS

Private equity frequently involves the indirect acquisition of interests in the equity or debt of private or public companies by negotiation. Exposure to these investments generally is obtained through the purchase of interests in limited partnerships that are formed for the purpose of providing a vehicle through which sophisticated, tax-exempt, institutional investors may prudently avail themselves of these opportunities. The limited partnerships (separate and distinct from the institutional investors who comprise the limited partners) acquire securities that constitute the actual ownership interests in the equity or debt of these companies.[1]

[1] Investments in limited partnerships are the most common method by which exposure to this asset class is effected. Reference to them here or elsewhere in this document is not intended to exclude the possibility of the MERF's obtaining that exposure in some other fashions which otherwise comport with these guidelines.

Private equity limited partnership investments will have clearly specified liquidation and maturity terms. Private Equity partnerships commonly have a ten-year term with the potential for additional one-year extensions for orderly liquidation, as necessary.

III. IMPLEMENTATION AND ONGOING MANAGEMENT

The implementation and ongoing management of a private equity program requires significant resources. Since the MERF has finite staff resources, the MERF has substantially outsourced the oversight and management of its private equity program, on a non-discretionary basis, to a private equity consultant (the "PEC"). Under this structure, virtually all due diligence functions have been delegated to and performed by the PEC, subject to the policies detailed herein. This role will not limit the ability of the MERF to perform initial and ongoing due diligence if deemed appropriate.

The PEC shall identify, review and recommend limited partnership or like vehicles that will meet the objectives and broad investment criteria of the MERF. These vehicles will directly invest in the debt and/or equity of individual companies or in other limited partnerships that, in turn, make such investments (i.e., "fund-of-funds").

The City Treasurer, subject to the Pension Commission's approval, will determine the amount of capital that the MERF will commit to specific investment vehicles.

IV. RISK MANAGEMENT

The private equity program shall be structured to mitigate a variety of risks associated with investing in private markets. Four primary approaches will be used to manage investment risk: namely, (i) utilizing the PEC to assist in structuring the portfolio, pacing of commitments and selecting investments, (ii) investing only in private partnerships (or in vehicles that provide equivalent liability protection) while avoiding direct investments, (iii) limiting the size of investment/commitment in specific partnership vehicles, and (iv) investing across multiple partnerships and in funds-of-funds.

The MERF will further endeavor to limit private equity risks in additional ways. One way will be to utilize investment vehicles that limit the MERF's net exposure in any investment to the amount of capital the Commission has approved. The MERF will also limit its overall exposure to private equity to be consistent with its Strategic Asset Allocation Policy and will review the level of exposure on an annual basis. In addition, the MERF (with the assistance of the PEC and legal counsel) will seek to negotiate and structure specific fundamental rights and protections that will govern its interests and provide potential mechanisms for taking remedial action when appropriate. Since such rights often prove difficult to obtain and may be of limited value due to the nature of private equity investing, the MERF will evaluate the benefits of such terms relative to the desirability of the corresponding investment opportunity. As part of its due diligence, the MERF will only consider investing with general partners that have exhibited a demonstrated capability to perform adequate investment evaluation and monitoring, consistent with the form and character of its investments. Lastly, the PEC will utilize systems, processes and procedures adequate to monitor the partnerships in which the MERF invests.

The MERF will utilize diversification to further manage the investment risk of the private equity program. The diversification factors that shall be considered include, but are not limited to:

1. Economic sectors (e.g., technology, healthcare, financial services, etc.);

2. Type of investment (e.g., buyouts, special situations, secondaries and venture capital);

3. Expected payback period;

4. Geography (e.g., locations of companies in which investments are made, although this may be a secondary issue); and

5. Time (e.g., vintage years of the partnerships)

V. ALLOCATION OF ASSETS

The MERF private equity program will target a level of investment that is consistent with the MERF's Strategic Asset Allocation Policy. Annual commitment activity shall occur at a level that ensures a reasonable, controlled level of involvement in the asset class.

VI. PORTFOLIO STRUCTURE

The Commission will review the overall private equity program, sub-strategy allocations, and vintage year diversification within the framework of the Annual Private Equity Strategic Plan. The Private Equity Strategic Plan shall provide a recommendation on the appropriate sub-strategy allocation and commitment amounts for specific vintage years taking into consideration liquidity, risk and return objectives coupled with the available opportunities given the current economic cycle. The Private Equity Strategic Plan will be evaluated on an annual basis.

VII. ANALYSIS OF LIMITED PARTNERSHIP INVESTMENTS

The PEC shall perform due diligence with respect to potential individual partnership and fund-of-funds investments. Staff will participate in the due diligence process to the extent practicable. Legal due diligence will be performed by counsel adequately familiar with such matters. If adequate capability for legal due diligence is not resident within the Treasurer's staff, outside legal counsel shall be retained.

Recommendations to the City Treasurer by the PEC concerning a specific partnership opportunity will be based upon, among other factors, the specific strategy presented by the general partners, then-current market conditions, the experience and competence of a general partner's staff, and its ability to implement the partnership's specific investment strategy.
In considering the appropriateness of private equity partnerships, the following minimum criteria will be evaluated:

1. Organization

a. experience investing in the proposed strategy
b. ownership
c. employee turnover

2. Appropriateness of the strategy relative to market conditions

3. Type of investments
   a. liquidity
   b. diversification

4. Acquisition process
   a. deal flow
   b. investment process

5. Investment management
   a. resources
   b. responsibilities of investment managers relative to supervisory staff

6. Sell discipline

7. Use of leverage

8. Staff
   a. depth of staff
   b. incentives
   c. capability/qualifications

9. Size of limited partnership

10. Size of individual investments

11. Minimum investment size accepted by the partnership

12. Performance and expected return

13. Legal terms and conditions/governance

14. Alignment of interests with investors

VIII. DUE DILIGENCE

A due diligence review by the PEC is required before any commitments are undertaken by the MERF. The PEC shall submit a summary report of its due diligence efforts and findings and a related recommendation to the City Treasurer. The City Treasurer shall, in turn, present a recommendation to the Pension Commission. Prior to being asked to approve any commitment recommendation by the City Treasurer, all due diligence reports shall be made available to the Commission. In addition to the foregoing, and depending on the circumstances surrounding a potential investment, the City Treasurer may recommend that an additional independent expert be retained to provide further analysis and commentary as to the merits of a particular investment.

IX. INVESTMENT EVALUATION STANDARDS

All private partnership transactions will be evaluated based on fiduciary standards with reference to ERISA, ILPA or equivalent standards as appropriate. Because of its private, illiquid nature, the overall private equity program will be expected to achieve a premium return above commensurate marketable securities portfolios. Specifically, the private equity portfolio, in the aggregate, will be expected to achieve an average internal rate of return equal to the MERF's domestic equity return assumption plus 300 basis points per year over an appropriate market cycle (typically between five and ten years). The expected internal rate of return for individual private partnerships should be in the range of 10-25%, depending on their respective capabilities of balancing risk and return with the aggregate portfolio.

X. MONITORING AND REPORTING

The PEC will have primary responsibility for monitoring the MERF's investments in this asset class using material provided by the general partners, including attending periodic general partners' meetings and holding periodic meetings with the Commission to review all investments included in a specific partnership portfolio. The City Treasurer shall review and provide the Commission with a report regarding the performance of the aggregate Private Equity Portfolio (including all fund-of-funds and other partnerships) at least semi-annually.

XI. DOCUMENTATION

Due to the complex nature of private equity transactions, the City Treasurer and Pension Commission may utilize specialized legal counsel to assist them in evaluating the legal merits of any proposed investment or to document or assist in the negotiation of the investment terms negotiated by the PEC. The PEC may also be utilized to assist with the negotiations associated with the documents.

All relevant legal and other documents pertaining to the MERF's private equity investments will be maintained by the MERF.

XII. GOVERNANCE

As circumstances dictate, the MERF will retain the right to be represented on a partnership's limited partner advisory board/committee.

Funding and Investment Policy Statement
of
The Municipal Employees' Retirement Fund
of the City of Hartford

Schedule B: Private Debt

I. INTRODUCTION

These guidelines have been established to formalize a process by which the MERF shall invest in the private debt asset class. Private debt investments are generally higher risk and higher returning investments that consist of relatively illiquid assets that, by virtue of their illiquidity, command a premium return over comparable publicly traded securities. This premium is called the liquidity premium.

The fundamental reasons for including these investments within the MERF portfolio include the potential for higher returns than in the public debt markets, exposure to investment opportunities not available in the public capital markets, enhanced diversification.

The MERF shall seek to lower the related risk through diversification and other means. Accordingly, the MERF's private debt portfolio shall be diversified by economic sector, investment type, vintage year, number of transactions, geographic location, and by maturity/duration.

II. GENERAL CHARACTERISTICS

Private debt frequently involves the indirect acquisition of interests in the debt of private or public companies by negotiation. Exposure to these investments generally is obtained through the purchase of interests in limited partnerships that are formed for the purpose of providing a vehicle through which sophisticated, tax-exempt, institutional investors may prudently avail themselves of these opportunities. The limited partnerships (separate and distinct from the institutional investors who comprise the limited partners) acquire securities that constitute the actual ownership interests in the debt or debt of these companies.[2]

The underlying private debt investments that the MERF will indirectly invest in shall primarily be focused on the investments within direct lending, mezzanine, and distressed debt but may also include bank loans, privately placed senior and subordinated loans, infrastructure debt and other categories that meet the criteria described within. Mezzanine debt is a form of subordinated debt financing that is used by borrowers to facilitate changes in ownership and business recapitalizations. It may also be used to finance acquisitions or support other business growth initiatives.

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[2] Investments in limited partnerships are the most common method by which exposure to this asset class is effected. Reference to them here or elsewhere in this document is not intended to exclude the possibility of the MERF's obtaining that exposure in some other fashions which otherwise comport with these guidelines.

Distressed debt investing consists of trading strategies which seek to exploit opportunities in high yielding financial instruments that may include publicly traded debt, private debt, trade claims, mortgage debt, common and preferred stock and commercial paper. It may also include strategies that seek to influence and control companies with poorly organized capital structures or that are in turnaround situations or in bankruptcy. Long and short positions are often used to lock in profit or reduce risk in these influence and control strategies.

In addition, the private debt allocation may include opportunistic investments that are often shorter-term in nature and/or may be in a relatively small segment of the capital markets. Opportunities in these types of investments will arise from an imbalance of capital in the market. Due to the flexible nature of these opportunistic strategies their investment vehicle and liquidity profile may vary.

Private debt limited partnership investments will have clearly specified liquidation and maturity terms. Private debt partnerships commonly have a ten-year term with the potential for additional one-year extensions for orderly liquidation, as necessary. In some cases open and closed-end commingled funds with shorter terms may also be considered.

III. IMPLEMENTATION AND ONGOING MANAGEMENT

The implementation and ongoing management of a private debt program requires significant resources. Since the MERF has finite staff resources, the MERF has substantially outsourced the oversight and management of its private debt program, on a non-discretionary basis, to its consultants. Under this structure, virtually all due diligence functions have been delegated to and are performed by the MERF's consultants, subject to the policies detailed herein. This role will not limit the ability of the MERF to perform initial and ongoing due diligence if deemed appropriate.

The MERF's consultants shall identify, review and recommend limited partnership or like vehicles that will meet the objectives and broad investment criteria of the MERF. These vehicles will directly invest in the debt and/or equity of individual companies or in other limited partnerships that, in turn, make such investments (i.e., "fund-of-funds").

The City Treasurer, subject to the Pension Commission's approval, will determine the amount of capital that the MERF will commit to specific investment vehicles.

IV. RISK MANAGEMENT

The private debt program shall be structured to mitigate a variety of risks associated with investing in private markets. Four primary approaches will be used to manage investment risk: namely, (i) utilizing consultants to assist in structuring the portfolio and selecting investments, (ii) investing only in private partnerships (or in vehicles that provide equivalent liability protection) while avoiding direct investments, (iii) limiting the size of investment/commitment in specific partnership vehicles, and (iv) investing across multiple partnerships and in funds-of-funds.

The MERF will further endeavor to limit private debt risks in additional ways. One way will be to utilize investment vehicles that limit the MERF's net exposure in any investment to the amount of capital the Commission has approved. The MERF will also limit its overall exposure to private debt to be consistent with its Strategic Asset Allocation Policy and will review the level of exposure on an annual basis. In addition, the MERF (with the assistance of the consultants and legal counsel) will seek to negotiate and structure specific fundamental rights and protections that will govern its interests and provide potential mechanisms for taking remedial action when appropriate. Since such rights often prove difficult to obtain and may be of limited value due to the nature of private debt investing, the MERF will evaluate the benefits of such terms relative to the desirability of the corresponding investment opportunity. As part of its due diligence, the MERF will only consider investing with general partners that have exhibited a demonstrated capability to perform adequate investment evaluation and monitoring, consistent with the form and character of its investments. Lastly, the consultants will utilize systems, processes and procedures adequate to monitor the partnerships in which the MERF invests.

The MERF will utilize diversification to further manage the investment risk of the private debt program. The diversification factors that shall be considered include, but are not limited to:

1. Economic sectors (e.g., technology, healthcare, financial services, etc.);

2. Type of investment;

3. Credit quality (considered in the context of the MERF's broader debt/credit exposure);
4. Duration/expected payback period;

5. Geography (e.g., locations of companies in which investments are made, although this may be a secondary issue); and

6. Time (e.g., vintage years of the partnerships)

V. ALLOCATION OF ASSETS

The MERF private debt program will target a level of investment that is consistent with the MERF's Strategic Asset Allocation Policy. Annual commitment activity shall occur at a level that ensures a reasonable, controlled level of involvement in the asset class.

VI. PORTFOLIO STRUCTURE

The Commission will review the overall private debt program, sub-strategy allocations, and vintage year diversification within the framework of the Annual Private Debt Strategic Plan. The Private Debt Strategic Plan shall provide a recommendation on the appropriate sub-strategy allocation and commitment amounts for specific vintage years taking into consideration liquidity, risk and return objectives coupled with the available opportunities given the current economic cycle. The Private Debt Strategic Plan will be evaluated on an annual basis.

VII. ANALYSIS OF LIMITED PARTNERSHIP INVESTMENTS

The MERF's consultants shall perform due diligence with respect to potential individual partnership and fund-of-funds investments. Staff will participate in the due diligence process to the extent practicable. Legal due diligence will be performed by counsel adequately familiar with such matters. If adequate capability for legal due diligence is not resident within the Treasurer's staff, outside legal counsel shall be retained.

Recommendations to the City Treasurer by the MERF's consultants concerning a specific partnership opportunity will be based upon, among other factors, the specific strategy presented by the general partners, then-current market conditions, the experience and competence of a general partner's staff, and its ability to implement the partnership's specific investment strategy.

In considering the appropriateness of private debt partnerships, the following minimum criteria will be evaluated:

1. Organization
   a. experience investing in the proposed strategy
   b. ownership
   c. employee turnover

2. Appropriateness of the strategy relative to market conditions

3. Type of investments
   a. liquidity
   b. diversification
   c. income and cash flow characteristics

4. Acquisition process
   a. deal flow
   b. investment process

5. Investment management
   a. resources
   b. responsibilities of investment managers relative to supervisory staff

6. Sell discipline

7. Use of leverage

8. Staff
   a. depth of staff
   b. incentives
   c. capability/qualifications

9. Size of limited partnership

10. Size of individual investments

11. Minimum investment size accepted by the partnership

12. Performance and expected return

13. Legal terms and conditions/governance

14. Alignment of interests with investors

VIII. DUE DILIGENCE

Due diligence reviews by the MERF's consultants are required before commitments are undertaken by the MERF. The consultants shall submit a summary report of it's due diligence efforts and findings and a related recommendation to the City Treasurer. The City Treasurer shall, in turn, present a recommendation to the Pension Commission. Prior to being asked to approve any commitment recommendation by the City Treasurer, all due diligence reports shall be made available to the Commission. In addition to the foregoing, and depending on the circumstances surrounding a potential investment, the City Treasurer may recommend that an additional independent expert be retained to provide further analysis and commentary as to the merits of a particular investment.

IX. INVESTMENT EVALUATION STANDARDS

All private partnership transactions will be evaluated based on fiduciary standards with reference to ERISA, ILPA or equivalent standards as appropriate. Because of its private, illiquid nature, the overall private debt program will be expected to achieve a premium return above commensurate marketable securities portfolios. Specifically, the private debt portfolio, in the aggregate, will be expected to achieve an average internal rate of return equal to the MERF's domestic debt return assumption plus 200 basis points per year over an appropriate market cycle (typically between five and ten years). The expected internal rate of return for individual private partnerships should be in the range of 10-25%, depending on their respective capabilities of balancing risk and return with the aggregate portfolio.

X. MONITORING AND REPORTING

The consultants will have primary responsibility for monitoring the MERF's investments in this asset class using material provided by the general partners, including attending periodic general partners' meetings and holding periodic meetings with the Commission to review all investments included in a specific partnership portfolio. The City Treasurer shall review and provide the Commission with a report regarding the performance of the aggregate private debt portfolio (including all fund-of-funds and other partnerships) at least semi-annually.

XI. DOCUMENTATION

Due to the complex nature of private debt transactions, the City Treasurer and Pension Commission may utilize specialized legal counsel to assist them in evaluating the legal merits of any proposed investment or to document or assist in the negotiation of the investment terms negotiated by the consultants. The consultants may also be utilized to assist with the negotiations associated with the documents.

All relevant legal and other documents pertaining to the MERF's private debt investments will be maintained by the MERF.

XII. GOVERNANCE

As circumstances dictate, the MERF will retain the right to be represented on a partnership's limited partner advisory board/committee.

Funding and Investment Policy Statement
of
The Municipal Employees' Retirement Fund
of the City of Hartford

Schedule C: Real Estate

I. INTRODUCTION

These guidelines have been established to formalize a process by which the MERF shall invest in the real estate asset class. Real estate investments are traditional private market oriented investments in real properties and publicly-traded real estate securities.

The role of real estate within the MERF program shall be to provide diversification given its relatively low correlation with other asset classes.

Additional attributes relate to the ability of real estate to:

- Generate attractive risk-adjusted rates of return
- Provide access to stable cash flowing assets that generate returns from both current income and capital appreciation;
- Preserve capital;
- Provide a partial hedge against inflation

The MERF shall seek to lower the related risks of real estate investing through diversification and the use of indirect ownership structures that limit the MERF's potential liability.

II. GENERAL CHARACTERISTICS

Real estate offers various investment vehicle structures through which to invest:

- Publicly-traded Real Estate Investment Trust ("REIT") Funds
- Separate Accounts
- Direct Investments
- Open-End Funds
- Closed-End Funds

These different vehicles invest in four main investment strategies: core, value add, opportunistic and debt/mezzanine. The sector focus will be broad and include office, retail, multifamily/apartment, industrial, hotel/lodging, healthcare, senior housing, self-storage and other niche sectors. The specific allocation amongst the sectors will be identified in MERF's Real Estate Strategic Plan developed with the assistance of the investment consultant ("IC").

III. IMPLEMENTATION AND ONGOING MANAGEMENT

The implementation and ongoing management of a real estate program requires significant resources. Since the MERF has finite staff resources, the MERF has substantially outsourced the oversight and management of its real estate program, on a non-discretionary basis, to the IC. Under this structure, virtually all due diligence functions have been delegated to and performed by the IC, subject to the policies detailed herein. This role will not limit the ability of the MERF to perform initial and ongoing due diligence if deemed appropriate.

The IC shall identify, review and recommend real estate investment vehicles that will meet the objectives and broad investment criteria of the MERF.

The City Treasurer, subject to the Pension Commission's approval, will determine the amount of capital that the MERF will commit to specific investment vehicles.

IV. RISK MANAGEMENT

The real estate program shall be structured to mitigate a variety of risks associated with investing in private and public market real estate.

A. Private Markets

Risk will be managed through diversification of investments by property and investment type, vintage year, number of transactions, geographic location, and by maturity/duration. The commingled funds or separate accounts, which, in aggregate, will be subject to a combination of quantitative and qualitative constraints to further manager risk. The following are the most significant risks with private market real estate investments and the corresponding methods of control.

- ***Property Type Risk***: There are unique risks associated with each of the various property sectors which include office, retail, multifamily/apartment, industrial, hotel/lodging, healthcare, senior housing, self-storage and other niche sectors. Strategic and tactical property type allocations are a function of economic, capital and property market conditions. The Real Estate Strategic Plan will address the appropriate property type exposures with a focus on managing the risks associated with each of them.
- ***Life Cycle Risk***: Real estate investments can generally be classified into two life cycle risks, Core and non-Core. Core is defined as stable income producing assets having high occupancy rates, high quality creditworthy tenants, long-term leases, and lower leverage. Non-Core real estate is defined as value add, opportunistic or debt related, which inherently has less current income, lower occupancy rates and potentially higher leverage. MERF will maintain a prudent allocation to Core as an anchor to the program relative to its non-Core investments as specified by the Real Estate Strategic Plan.
- ***Liquidity Risk***: Private market real estate investments are illiquid and should be assumed to have an expected holding period of 7-10 years or longer. Core real

estate in particular should be viewed as a very long term investment with income being the primary return driver.

- ***<u>Geographic Risk</u>***: MERF will endeavor to ensure that its private market real estate portfolio is well diversified by location. Exposure to any single geographical location (defined as a single National Council of Commercial Real Estate Investment Fiduciaries ("NCREIF") region and/or a single country except for investments in the United States) should not exceed 30% of the total targeted real estate portfolio. Within the U.S., no more than 25% allocation into any single metropolitan statistical area ("MSA"). International investments will be limited to no more than 30% of the total targeted real estate portfolio.
- ***<u>Single Investment Risk</u>***: MERF will seek to avoid concentration in its real estate investment portfolio such that the failure of a single investment would have a severe impact on the performance of the total real estate program. Hence, MERF will limit the amount of any single commingled investment to 30% of the target real estate portfolio.
- ***<u>Manager Risk</u>***: Manager risk in a private market real estate portfolio consists of two elements, the level of exposure to a given manager and the level of diversification across managers. To control manager exposure, the allocation to a single real estate manager is limited to 30% of the real estate portfolio. The optimum number of managers in the portfolio will vary with time.
- ***<u>Leverage</u>***: Leverage will have a target of 60% of the planned real estate allocation.
- ***<u>Currency Risk</u>***: The real estate program accepts the currency risk consistent with the geographic exposures. Real estate managers may or may not hedge currency risk, but the real estate program will not implement currency hedges.
- ***<u>Valuation Risk</u>***: The private real estate market lacks the trading frequency to establish values and relies on the appraisal process to periodically value investments. MERF will utilize valuation procedures consistent with industry standards for the sub-asset class of real estate. All investments in separate accounts and/or directly owned investments will be independently valued not less than every three years by a qualified, third party expert (i.e., a certified Member of the Appraisal Institute).

B. Public Markets

Risk is managed by accessing public market real estate through investments in externally managed commingled or separate account portfolios of real estate securities featuring a combination of quantitative and qualitative constraints. The primary approach to manage risk is to control the characteristics and risk factors of the aggregate portfolio within reasonable tolerances of the benchmarks to minimize biases and unintended portfolio mismatches. The following sections identify the significant elements of risk at the individual portfolio level.

- ***<u>Liquidity Risk</u>***: While public market securities are more liquid than illiquid private markets, there is the risk that swings in the public market can have a negative effect on the ability to trade security while maintaining its value. This risk is managed through disciplined rebalancing. A small allocation to cash equivalents is normal to provide operating liquidity.

- ***Sector Risk***: Sector risk is also known as property risk, which is defined above in section IV-A. Public market real estate will achieve diversification across property sectors of the benchmark. Diversification is a primary risk control element.

V. ALLOCATION OF ASSETS

The MERF real estate program will target a level of investment that is consistent with MERF's Strategic Asset Allocation Policy. Further, annual commitment activity shall occur at a level that is in line with the MERF's Annual Real Estate Strategic Plan.

VI. PORTFOLIO STRUCTURE

The Pension Commission will review the overall real estate commitment levels within the framework of the Real Estate Strategic Plan. The Real Estate Strategic Plan analyzes the appropriate allocation to investment styles, sector focus, geographic and market focus, taking into consideration economic cycle, current opportunities and liquidity needs of the MERF. The Real Estate Strategic Plan will be evaluated on an annual basis.

VII. DUE DILIGENCE

The IC shall perform due diligence with respect to potential investments in private market real estate funds and publicly traded real estate funds and/or externally managed portfolios. Staff will participate in the due diligence process to the extent practicable. Legal due diligence will be performed by counsel adequately familiar with such matters. If adequate capability for legal due diligence is not resident within the Treasurer's staff, outside legal counsel shall be retained.

Recommendations to the City Treasurer by the IC with regard to the real estate asset class will be based upon, among other factors, the specific strategy presented, its fit into the overall Real Estate Strategic Plan and the competence of the investment manager. In reviewing the appropriateness of a single real estate investment the following metrics will be evaluated: organization, management team, type of investment (style), sector focus, use of leverage, geographic / market focus, return drivers, performance and expected return.

A due diligence review by the IC is required before any commitments are undertaken by the MERF. The IC shall submit a summary report of its due diligence efforts and findings and a related recommendation to the City Treasurer. The City Treasurer shall, in turn, present a recommendation to the Pension Commission. Prior to being asked to approve any commitment recommendation by the City Treasurer, all due diligence reports shall be made available to the Commission. In addition to the foregoing, and depending on the circumstances surrounding a potential investment, the City Treasurer may recommend that an additional independent expert be retained to provide further analysis and commentary as to the merits of a particular investment.

VIII. INVESTMENT EVALUATION STANDARDS

All real estate investments will be evaluated based on fiduciary standards with reference to ERISA, ILPA or equivalent standards as appropriate and shall be considered in the context of the relevant risk/reward factors of this asset class. Because of private real estate's illiquid nature, the overall real estate program will be expected to achieve a premium return above commensurate marketable securities portfolios. Specifically, the real estate portfolio, in the aggregate, will be expected to achieve an average internal rate of return that meets or exceeds the benchmark over rolling five year periods (a full market cycle).

IX. MONITORING AND REPORTING

The IC will have primary responsibility for monitoring the MERF's investments in this asset class using material provided by the MERF's real estate investment managers. The City Treasurer shall review and provide the Commission with a report regarding the performance of the aggregate real estate portfolio quarterly.

X. DOCUMENTATION

Due to the complex nature of private market real estate, the City Treasurer and Pension Commission may utilize specialized legal counsel to assist them in evaluating the legal merits of any proposed investment or to document or assist in the negotiation of the investment terms negotiated by the IC. The IC may also be utilized to assist with the negotiations associated with the documents.

All relevant legal and other documents pertaining to the MERF's real estate investments will be maintained by the MERF.

XI. GOVERNANCE

As circumstances dictate, the MERF will retain the right to be represented on a partnership's limited partner advisory board/committee.

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Schedule D: Commodities

I. INTRODUCTION

These guidelines have been established to formalize a process by which the MERF shall invest in the commodities asset class. Commodities investments will provide exposure to global commodities and are expected to achieve returns comparable to or in excess of the benchmark return, net of fees.

The role of commodities within the MERF program shall be to provide diversification and to enhance long-term risk adjusted returns by preserving capital and lowering overall volatility. Additionally, the commodities program should act as a partial hedge against unanticipated inflation.

II. GENERAL CHARACTERISTICS

Commodities offer returns by investing in raw or primary products where asset prices move in direct response to changes in expected supply and demand. Commodities have historically delivered returns that have relatively low correlation with equity and fixed income markets, providing an opportunity to enhance returns and reduce volatility.

Access to the commodities asset class can be gained through (i) investment instruments such as listed securities that have a high correlation to an appropriate index, (ii) overlay exposures, and (iii) collateral investments, including but not limited to the following:

- Futures contracts
- Forward contracts
- Swaps
- Structured notes
- Options

Individual commodities positions may be held long, short or a combination of both. Instruments incorporating multiple commodity risk exposures, such as commodity baskets and commodity indices are allowed. The program will be implemented through a combination of passive and/or active management in both liquid and illiquid structures. Additionally, the commodity program shall be managed in a manner that **at no time results in MERF taking physical delivery of commodities**.

Listing and Credit Requirements: Commodities derivative investments may be either exchange traded, or non-exchange traded. Exchange traded commodity futures, options, and other instruments may be those traded on any exchange regulated by the Commodities Futures Trading Commission ("CFTC") of the United States and/or the Financial Services Authority ("FSA") of the United Kingdom. For allowable non-exchange traded derivatives, counterparty creditworthiness shall be at a minimum of "A3" as defined by Moody's Investor Service, "A-" by Standard & Poor's, and/or "A-" by Fitch. The use of unrated counterparties is prohibited unless such counterparty is a wholly-owned affiliate of a parent organization that guarantees payment and meets the above-noted counterparty creditworthiness standards.

III. IMPLEMENTATION AND ONGOING MANAGEMENT

The implementation and ongoing management of a commodities program requires significant resources. Since the MERF has finite staff resources, the MERF has substantially outsourced the oversight and management of its commodities program, on a non-discretionary basis, to the investment consultant ("IC"). Under this structure, virtually all due diligence functions have been delegated to and will be performed by the IC, subject to the policies detailed herein. This role will not limit the ability of the MERF to perform initial and ongoing due diligence if deemed appropriate.

The IC shall identify, review and recommend commodities investment managers that will meet the objectives and broad investment criteria of the MERF.

The City Treasurer, subject to the Pension Commission's approval, will determine the amount of capital that the MERF will commit to specific managers.

IV. RISK MANAGEMENT

The commodities program shall be structured to mitigate a variety of risks associated with investing in this asset class. Risk is managed through a combination of quantitative and qualitative constraints. Together the Staff and IC shall establish parameters in each manager's portfolio guidelines to control such risks as the following:

- ***Counter Party Risk***: The risk that the counterparty in an investment transaction fails to perform its obligation under the agreement. This risk is mitigated by the use of exchange traded instruments regulated by the CFTC or the FSA and by the use of credit standards for non-exchange traded derivatives as noted in the above section entitled "**Listing and Credit Requirements.**"

- ***Delivery Risk***: In commodities investing there is a risk of a commodity being delivered to an investor. All commodities investments will be managed and monitored to prevent physical delivery.

- ***Liquidity Risk***: The risk that a given security or asset cannot be traded quickly enough in the market to prevent a loss (or make the required profit). Liquidity risk will be managed by adhering to the counterparty requirements.

- ***Legal Risk***: The risk related to the transfer of security interests and potential issues around the giver and taker of collateral. Legal risk will be minimized by engaging in over-the-counter ("OTC") derivative transactions only where such transactions are enforceable under the laws of the governing jurisdiction and will be governed by an International Swaps and Derivatives Association, Inc. ("ISDA") agreement where applicable.

- ***Pricing Risk***: The risk that the valuation of the security is not accurate. Pricing risk will be minimized by using standardized or market accepted instruments for OTC derivatives. Exchange-traded derivatives will be used when appropriate to minimize pricing risk.

V. COMMODITY COLLATERAL

- ***Collateral Investment***: The commodities program collateral shall only be invested in cash or government obligations used for futures margin requirements, inflation linked bonds held for investment, a short-term investment fund, or any receivable due from an approved counterparty to a commodities-related investment. The Commission must approve any collateral investment not listed above.

- ***Collateral Value***: The market value of commodities collateral shall be maintained at 100% or greater of the net option-adjusted notional value of any commodities overlay exposure at the consummation of any new commodities overlay position. If the collateral market value falls below the net option-adjusted value of the overlay, the manager shall adjust their Portfolio at the earliest feasible opportunity to bring collateral value up to the notional value of the overlay.

VI. ALLOCATION OF ASSETS

The MERF commodities program will be subject to the allocation decisions set forth by the commodity managers within the MERF program. The MERF, with the guidance of the IC, will evaluate the commodities strategy and allocation of assets within the strategy when determining whether to utilize a particular commodities manager.

VII. PORTFOLIO STRUCTURE

Commodities portfolios shall be governed by manager portfolio guidelines that establish management parameters to achieve commodities-based returns.

VIII. DUE DILIGENCE

The IC shall perform due diligence with respect to potential commodities managers. Staff will participate in the due diligence process to the extent practicable. Legal due diligence will be performed by counsel adequately familiar with such matters. If adequate capability for legal due diligence is not resident within the Treasurer's staff, outside legal counsel shall be retained.

Recommendations to the City Treasurer by the IC with regard to the Commodities asset class will be based upon, among other factors, the specific strategy presented, its fit into the overall Commodities Strategic Plan and the competence of the investment manager. In reviewing the appropriateness of a single commodities investment, the following metrics will be evaluated: organization, management team, type of investment (style), sector focus, use of leverage, geographic / market focus, return drivers, performance and expected return.

A due diligence review by the IC is required before any commitments are undertaken by the MERF. The IC shall submit a summary report of its due diligence efforts and findings and a related recommendation to the City Treasurer. The City Treasurer shall, in turn, present a recommendation to the Pension Commission. Prior to being asked to approve any commitment recommendation by the City Treasurer, all due diligence reports shall be made available to the Commission. In addition to the foregoing, and depending on the circumstances surrounding a potential investment, the City Treasurer may recommend that an additional independent expert be retained to provide further analysis and commentary as to the merits of a particular investment.

IX. INVESTMENT EVALUATION STANDARDS

All commodities investments will be evaluated in the context of the relevant risk/reward factors of this asset class. It is expected that the Commodities program will be assessed over a rolling 3 and 5 year period in which time the investment should have achieved a return that is comparable or in excess of the benchmark.

X. MONITORING AND REPORTING

The IC will have primary responsibility for monitoring the MERF's investments in this asset class using material provided by the investment managers on a quarterly basis. The City Treasurer shall review and provide the Commission with a report regarding the performance of the aggregate real estate portfolio quarterly.

XI. DOCUMENTATION

Due to the complex nature of commodities, the City Treasurer and Pension Commission may utilize specialized legal counsel to assist them in evaluating the legal merits of any proposed investment or to document or assist in the negotiation of the investment terms negotiated by the IC. The IC may also be utilized to assist with the negotiations associated with the documents.

All relevant legal and other documents pertaining to the MERF's commodities investments will be maintained by the MERF.

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Schedule E: Economically Targeted Investments

I. INTRODUCTION

These guidelines have been established in order to formalize the process by which the MERF shall invest in Economically Targeted Investments ("ETIs"). ETIs consist of investments in a variety of asset classes (including fixed income, private equity and real estate) that generate rates of return commensurate with the overall risk, liquidity, security and structure of comparable non-targeted investments while providing collateral economic benefits that enhance the quality of life and promote economic development and activity in the City of Hartford. ETIs are designed to provide investment capital to help fill financing needs and capital gaps to promote economic growth, development and job creation in the City of Hartford, Connecticut and its metropolitan area ("Targeted Areas"). The design of these guidelines shall ensure that MERF ETI investment managers will take prudent and careful action while managing ETIs for the MERF. The MERF expects that commitments to and investments in ETIs will establish, maintain and continually improve the reputation of the MERF as an investor. The Fund will adhere to best practices of public fund investors in ETI programs and will value the achievement of risk-adjusted, market rates of return above the achievement of collateral results. The MERF will also seek investments which exhibit a commitment to standards of good conduct, including compliance with all Federal, State and local laws, including, but not limited to, labor, anti-discrimination, environmental and health and safety laws.

II. GENERAL OBJECTIVES

The MERF herein establishes and mandates its intent to investment in ETIs with a goal of achieving the following objectives:

1) generate competitive returns commensurate with the associated risk, liquidity and structural characteristics of the underlying investment;

2) provide collateral economic benefits, including economic growth and job creation in Targeted Areas, when not in conflict with the MERF's fiduciary obligations;

3) address market inefficiencies in Targeted Areas, and, in particular, capital gaps that affect the low, moderate and middle-income neighborhoods and populations of Targeted Areas;

4) promote economic development and attract additional investment from other investors into Targeted Areas;

5) increase the diversification of the MERFs assets;

6) reduce the volatility of the MERF's overall portfolio.

III. IMPLEMENTATION AND ONGOING MANAGEMENT

The MERF's fiduciary duties to its participants shall take precedence over all other considerations, with such other considerations being entertained only when not in conflict with these fiduciary duties. The MERF will consider only ETIs which, when judged solely based on economic value, would be financially comparable to alternatively available investments. Comparability will be judged on a risk-adjusted basis with the MERF being willing to accept no less in return and incur no additional risk or cost.

Collateral benefits shall not be considered part of the return to the MERF nor shall any improvement to the City's economy be considered part of risk reduction. The decision to choose an ETI in consideration of its broader benefits may occur only after the investment is deemed acceptable to the MERF exclusively on its economic investment merits.

Any benefit that an ETI may confer is neither the responsibility of nor within the ability of the MERF to control. Those who serve as the MERF's ETI investment managers or are otherwise responsible for the MERF's ETI investments will be solely responsible for the achievement of the intended results. This shall be made expressly clear to third parties and the MERF's beneficiaries.

For allocation purposes, ETIs will be included with similar non-ETI investments, and the combined assets will be subject to the MERF's asset allocation guidelines, ranges, and targets. The goal for all assets in targeted areas shall be 2% to 4% of Fund assets. ETI investments shall not alter the overall risk/return profile of the MERF's investments, as these derive from the MERF's asset allocation and its associated liability profile.

When evaluating ETI opportunities, the MERF will discount projected returns anticipated to be derived from any subsidies, deferral of income, higher risk levels, and other concessions in order to develop a real rate of return for comparison with other ETI and non-ETI investment alternatives. Similarly, ETI benefits will not justify higher investment risk. However, where appropriate, the MERF staff, its investment managers, and its consultants will actively seek out and develop guarantees, third party recourse, hedging, and other acceptable and customary risk management vehicles to reduce or eliminate risk in ETI investments.

ETI investments will be placed with qualified, experienced and capable investment managers who will be selected through an objective and transparent process. Such investments shall be managed on a discretionary basis by investment managers that will serve as fiduciaries to the MERF. The MERF will not make any direct ETI investments. Investments will be tracked (both investment performance and collateral benefits) and managed with the same rigor and discipline imposed on other investments. Investments will be reviewed and monitored by the Treasurer, MERF staff and consultants without disproportionate expenditure of time and resources owing to their economically targeted nature unless otherwise provided for herein.

The City Treasurer, subject to the Commission's approval, will determine the amount of capital that the MERF will commit to specific ETI investment vehicles

IV. DUE DILIGENCE

Proposed ETI investments will be evaluated in a similar manner to other portfolio investments according to the following factors:

1) The fit within the MERF's portfolio structure, including the size of the proposed investment relative to the size of the Fund;

2) The clarity of the proposed investment and its parameters & goals;

3) The extent to which the proposed investment manager demonstrates that the proposed ETI investment or program will produce the anticipated risk-adjusted return and collateral benefits;

4) The quality, experience and reputation of the investment managers and their ability to implement the proposed program or investment, including their ability to raise additional 3rd party capital and commit their own firm capital to the proposed investment vehicle;

5) The quality of the controls and reporting systems of the proposed investment manager (including audited financial statements and risk management systems);

6) The appropriateness of terms and conditions of the proposed investment; and

7) To the extent that the MERF considers a specific partnership or investment having an ETI emphasis, the MERF's consultants, in addition to performing typical due diligence tasks, may be asked to: (i) assist in the development of further policies and guidelines to accommodate specific ETI issues; (ii) performing specialized partnership and/or investment due diligence and selection; and/or (iii) assist in the development of overall portfolio structuring with consideration for ETIs.

8) In addition, from time to time, the Commission, on the City Treasurer's recommendation, may also consider committing additional assets to specific ETI-oriented opportunities. Such commitments will also be restricted to limited partnerships or equivalent vehicles. Commitments to ETI-oriented partnerships should be in the range of $2.5M to $5M and in no event will exceed $5M per investment.

V. ETI CONSIDERATIONS FOR ALL MERF INVESTMENT MANDATES

With regard to any investment manager selection or partnership investment, the MERF shall favor entities that have a significant presence in the Targeted Area ("Local Entity") when comparing such manager or partnership to its peers in filling a competitive investment mandate. Such favor will only result when the Local Entity is substantially equal, with regard to all relevant selection criteria, to the most desirable of the competing entities.

VI. INVESTMENT EVALUATION STANDARDS

The performance of each ETI investment shall be measured against an appropriate benchmark, to be identified initially in conjunction with the selection of the investment manager or partnership investment and the corresponding strategy. To the extent possible, the benchmark should reflect the performance relative to investments with similar levels of risk, return, liquidity and structure. The collateral economic benefits shall be quantified to the extent possible and measured alongside the performance benchmark within the goals of the investment.

Investment Staff shall be responsible for monitoring the performance of the ETI investment program investments with periodic direct input from the investment consultant.

VII. MONITORING AND REPORTING

The private equity consultant (PEC) will have primary responsibility for monitoring the MERF's investments in this asset class. The City Treasurer shall review and provide the Commission with a report regarding the performance of the aggregate ETI at least semi-annually.

VIII. DOCUMENTATION

All relevant legal and other documents pertaining to the MERF's ETI investments will be maintained by the MERF.

IV. GOVERNANCE

As circumstances dictate, the MERF will retain the right to be represented on a ETI entity's advisory board/committee or other relevant legal governance structure.

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Schedule F: Hedge Funds

I. INTRODUCTION

These guidelines have been established to formalize a process by which the MERF shall invest in hedge funds. Hedge fund investments look to broaden the opportunity set of the MERF investment portfolio, and generally provide reasonably stable absolute returns which will provide long-term enhancement of the investment program.

The specific role of hedge fund investments are to preserve capital, provide competitive returns with a low correlation to traditional asset classes, add diversification and reduce volatility, especially in rising interest rate environments.

II. GENERAL CHARACTERISTICS

Hedge funds offer returns that are generated by the use of a range of strategies that are unavailable to most long only funds; including shorting stocks, bonds and indices, engaging in the use of derivatives and applying financial leverage to their portfolios. Hedge fund investment services are offered in a limited partnership ("LP") or limited liability company ("LLC") form. Hedge funds may include investments in domestic and international equity and fixed income asset classes including, but not limited to, the following areas:

- Multi-Strategy
- Equity Hedge
- Event Driven
- Credit/Distressed
- Relative Value
- Macro/Tactical
- Hedge Fund of Funds

Staff, in conjunction with the Investment Consultant ("IC") and Investment Advisors, will classify each hedge fund investment in the hedge funds sub-asset classes based on the following descriptions:

A. Multi-Strategy

Multi-strategy managers combine several strategies within the same fund in order to provide diversification benefits to reduce return volatility and decrease asset-class and single-strategy risks. These funds typically add incremental returns through active allocation adjustments based on market opportunities. Fund of hedge fund structures that are diversified by strategy and hedge fund replication strategies may also be included in this category.

B. Equity Hedge

Equity hedge managers maintain both long and short positions in primarily equity and equity derivative securities. A wide variety of investment processes can be employed to arrive at an investment decision, including both quantitative and fundamental techniques; strategies can be broadly diversified or narrowly focused on specific sectors and can range broadly in terms of levels of net exposure, leverage employed, holding period, concentrations of market capitalizations and valuation ranges of typical portfolios.

C. Event Driven

Event driven managers maintain positions in companies currently or prospectively involved in corporate transactions of a wide variety including, but not limited to, mergers, restructurings, financial distress, tender offers, shareholder buybacks, debt exchanges, security issuance or other capital structure adjustments. Security types can range from most senior in the capital structure to most junior or subordinated, and frequently involve additional derivative securities.

Event driven exposure includes a combination of sensitivities to equity markets, credit markets and idiosyncratic, company specific developments. Investment insights are typically predicated on fundamental characteristics (as opposed to quantitative), with the realization of the thesis predicated on a specific development exogenous to the existing capital structure.

D. Credit/Distressed

Credit managers typically invest in high yield and high grade bonds, bank loans, credit default swaps, and structured products. Managers use fundamental credit analysis to identify mispriced debt instruments and express their views through both long and short positions. Distressed managers seek to take advantage of corporate securities in default, under bankruptcy protection, in distress, or heading toward such a condition, or in liquidation. Some distressed managers attempt to add value by becoming actively involved in the restructuring process.

E. Relative Value

Relative value managers maintain positions in which the investment thesis is predicated on the realization of a valuation discrepancy in the relationship between multiple securities. Managers employ a variety of fundamental and quantitative techniques to establish investment insights, and security types range broadly across equity, fixed income, derivative or other security types. Fixed income strategies are typically quantitatively driven to measure the existing relationship between instruments and, in some cases, identify attractive positions in which the risk adjusted spread between these instruments represents an attractive opportunity for the investment manager.

F. Macro/Tactical

Macro/Tactical managers trade a broad range of strategies in which the investment process is predicated on movements in underlying economic variables and the impact that these variables have on equity, fixed income, hard currency, and commodity markets. Managers employ a variety of techniques, both discretionary and systematic analysis, combinations of top down and bottom up disciplines, quantitative and fundamental approaches, or long and short term holding periods.

G. Hedge Fund of Funds ("HFoF")

A fund of hedge funds is an investment vehicle whose portfolio consists of shares in a number of hedge funds, potentially across a variety of hedge fund sub-asset classes. HFoF do not invest directly in the securities. Funds of hedge funds follow their strategy by constructing a portfolio of other hedge funds. How the underlying hedge funds are chosen can vary. A fund of hedge funds may decide to invest only in hedge funds using a particular management strategy. Or, a fund of hedge funds may invest in hedge funds using many different strategies in an attempt to gain exposure to all of them.

III. IMPLEMENTATION AND ONGOING MANAGEMENT

The implementation and ongoing management of a hedge fund program requires significant resources. Since the MERF has finite staff resources, the MERF has substantially outsourced the oversight and management of its hedge fund program, on a non-discretionary basis, to the IC. Under this structure, virtually all due diligence functions have been delegated to and performed by the IC, subject to the policies detailed herein. This role will not limit the ability of the MERF to perform initial and ongoing due diligence if deemed appropriate.

The IC shall identify, review and recommend hedge fund and/or HFoF investment managers that will meet the objectives and broad investment criteria of the MERF.

The City Treasurer, subject to the Pension Commission's approval, will determine the amount of capital that the MERF will commit to specific managers.

IV. RISK MANAGEMENT

Risk is managed through a combination of quantitative and qualitative measures. Staff and the IC shall establish appropriate risk metrics for each hedge fund and/or HFoF for risk measurement purposes. Proper risk management requires an adequate level of transparency from hedge funds and/or HFoF's into the underlying portfolios. Requirements include the following:

- All hedge funds and/or HFoF must provide risk parameter and performance reporting on a monthly basis.
- Staff will seek advice from legal counsel and the IC to determine if audited financial statements are required based on the specific structure of each investment.

A. Market Risk

The Hedge Funds sub-asset class is designed to have a low overall level of sensitivity to broad market risk factors such as equity markets, interest rates, and commodity prices. Risk management processes include the monitoring of risk factors at both the individual fund and hedge fund sub-asset class level.

B. Manager Risk
Staff and IC will identify hedge funds and HFoF using industry best practices. In addition to the investment due diligence process, each hedge fund and HFoF will undergo an operational due diligence review prior to funding to evaluate non-investment related risk factors.

C. Liquidity Risk
Liquidity risk includes both the underlying holdings in a hedge fund or HFoF and the provisions for making redemptions from the hedge fund or HFoF. Redemption provisions will be evaluated for consistency with underlying security holdings in order to reduce the risk of forced selling of holdings at inopportune times caused by other investors in the hedge fund or HFoF. An annual review will report liquidity provisions, including lock-ups, gates, and withdrawal restrictions of each hedge fund and HFoF investment.

D. Leverage Risk
The use of leverage and the ability to short securities are intrinsic characteristics of hedge funds. Hedge fund managers may use leverage to implement their strategies and to control risk within their portfolios. The MERF, in consultation with the IC, will evaluate the acceptable levels for leverage at the Hedge Funds sub-asset class level with both Staff and IC monitoring leverage of each individual hedge fund. HFoF managers are not permitted to add leverage (in addition to that of the underlying hedge funds) without written consent from MERF. The use of derivatives by hedge funds or underlying hedge fund managers in an HFoF structure shall comply with MERF's Derivatives Policy.

Leverage can be defined in several ways and the measure will vary widely depending on the strategy and its associated liquidity, and by manager.

E. Legal Risk
Hedge funds have unique characteristics which require legal expertise including the use of outside counsel. Legal limitations required by the MERF to reduce risk include requirements that:

- Assets may only be invested in structures which limit losses to the amount invested.
- All managers must be registered with the United States Securities and Exchange Commission or with a similar regulator if they are domiciled outside of the United States.

V. ALLOCATION OF ASSETS

The MERF hedge fund program will target a level of investment that is consistent with the MERF's Strategic Asset Allocation Policy. Further, the sub-asset class allocation targets will be in line with the Annual Hedge Fund Strategic Plan.

VI. PORTFOLIO STRUCTURE

The Pension Commission will review the overall hedge fund sub-asset class allocation target levels within the framework of the Hedge Fund Strategic Plan. The Hedge Fund Strategic Plan analyzes the appropriate allocation to the sub-asset classes taking into consideration liquidity and risk and return objectives relative to available opportunities given the current economic cycle. The Hedge Fund Strategic Plan will be evaluated on an annual basis.

VII. DUE DILIGENCE

The IC shall perform due diligence with respect to potential hedge fund managers. Staff will participate in the due diligence process to the extent practicable. Legal due diligence will be performed by counsel adequately familiar with such matters. If adequate capability for legal due diligence is not resident within the Treasurer's staff, outside legal counsel shall be retained.

Recommendations to the City Treasurer by the IC with regard to the hedge fund asset class will be based upon, among other factors, the specific strategy presented, its fit into the overall Hedge Fund Strategic Plan and the competence of the investment manager. In reviewing the appropriateness of a single hedge fund or HFoF the following metrics will be evaluated: organization, management team, type of investment (style), sector focus, and use of leverage, geographic/market focus, return drivers, performance and expected return.

A due diligence review by the IC is required before any commitments are undertaken by the MERF. The IC shall submit a summary report of its due diligence efforts and findings and a related recommendation to the City Treasurer. The City Treasurer shall, in turn, present a recommendation to the Pension Commission. Prior to being asked to approve any commitment recommendation by the City Treasurer, all due diligence reports shall be made available to the Commission. In addition to the foregoing, and depending on the circumstances surrounding a potential investment, the City Treasurer may recommend that an additional independent expert be retained to provide further analysis and commentary as to the merits of a particular investment.

VIII. INVESTMENT EVALUATION STANDARDS

All hedge fund investments will be evaluated in the context of the relevant risk/reward factors of this asset class. It is expected that the hedge fund program will be assessed over a rolling 3 and 5 year period in which time the investment should have achieved a return that is the greater of 3-month LIBOR + 400 basis points or 700 basis points per annum, net of fees and expenses.

IX. MONITORING AND REPORTING

The IC will have primary responsibility for monitoring the MERF's investments in this asset class using material provided by the investment managers on a quarterly basis. The City Treasurer shall review and provide the Commission with a quarterly report regarding the performance of the aggregate hedge fund portfolio.

X. DOCUMENTATION

Due to the complex nature of hedge funds, the City Treasurer and Pension Commission may utilize specialized legal counsel to assist them in evaluating the legal merits of any proposed investment or to document or assist in the negotiation of the investment terms negotiated by the IC. The IC may also be utilized to assist with the negotiations associated with the documents.

All relevant legal and other documents pertaining to the MERF's hedge fund investments will be maintained by the MERF.

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Schedule G: Real Assets

I. INTRODUCTION

These guidelines have been established to formalize a process by which the MERF shall invest in the real assets asset class. A real asset is an investment whose value is derived from a contractual claim on an underlying physical or tangible asset. Real assets are relatively illiquid assets that generally have a lower expected return than publicly traded equities but historically have exhibited a low correlation to stocks and bonds and offer a hedge against inflation.

The fundamental reasons for including these investments within the MERF portfolio include diversification away from the public markets, a strategic hedge against inflation, and the benefits of current income and capital appreciation.

The MERF shall seek to build a diversified and mature real assets program. Accordingly, the MERF's real assets portfolio shall be diversified by economic sector, investment type, vintage year, and geographic location.

II. GENERAL CHARACTERISTICS

The real assets asset class offers various investment vehicle structures through which to invest:

- Publicly-traded real asset investments
- Separate accounts
- Direct investments
- Closed-end funds
- Open-end funds

These different vehicles invest in two main investment strategies: core, and opportunistic. The sector focus will be broad and could include core infrastructure, farmland, timber, upstream/midstream energy, metals and mining, opportunistic infrastructure, and power generation/renewables. The specific allocation amongst the sectors will be identified in MERF's Real Asset Strategic Plan developed with the assistance of the MERF's investment consultant ("IC").

III. IMPLEMENTATION AND ONGOING MANAGEMENT

The implementation and ongoing management of a real assets program requires significant resources. Since the MERF has finite staff resources, the MERF has substantially outsourced the oversight and management of its real assets program, on a non-discretionary basis, to its IC. Under this structure, virtually all due diligence functions have been delegated to and are to be performed by the IC, subject to the policies detailed herein. This role will not limit the ability of the MERF to perform initial and ongoing due diligence if deemed appropriate.

The IC shall identify, review and recommend vehicles that will meet the objectives and broad investment criteria of the MERF. These vehicles will directly invest in real assets investments or in other entities (e.g., fund-of-funds) that, in turn, make such investments.

The City Treasurer, subject to the Pension Commission's approval, will recommend the amount of capital that the MERF will commit to specific investment vehicles. Such recommendation will be based on input from the IC and the MERF's investment unit staff.

IV. RISK MANAGEMENT

The real assets program will be structured to mitigate the risks associated with investing in the asset class and private markets more broadly. To mitigate these risks, the MERF will adhere to the following practices: (i) utilizing the IC to assist in structuring the portfolio and performing due diligence on potential investments, (ii) investing only in private partnerships or other vehicles that provide liability protection in lieu of making direct investments, (iii) limiting the commitment size to specific investment vehicles, (iv) investing across multiple vehicles in a manner that provides vintage year and sector diversification.

The Commission shall approve the commitment amount for each investment within the real assets program. The MERF will also limit its overall exposure to real assets to be consistent with the target ranges laid out in its Strategic Asset Allocation Policy and will review the level of exposure on an annual basis. As part of its due diligence, the MERF will only consider investing with investment advisors/general partners that have exhibited a demonstrated capability to perform superior investment evaluation and monitoring in a manner that is consistent with the form and character of its investments. Lastly, the IC, on the behalf of the MERF, will utilize systems, processes and procedures adequate to monitor the partnerships in which the MERF invests.

V. ALLOCATION OF ASSETS

The MERF real assets program will target a level of investment that is consistent with the MERF's Strategic Asset Allocation Policy. Annual commitment activity shall occur at a level that ensures a reasonable, controlled level of involvement in the asset class as outlined by MERF's Annual Real Assets Strategic Plan.

VI. PORTFOLIO STRUCTURE

The Commission will review the overall real assets program, sub-strategy allocations, and vintage year diversification within the framework of the Annual Real Assets Strategic Plan. The Real Assets Strategic Plan shall provide a recommendation on the appropriate sub-strategy allocation and commitment amounts for specific vintage years taking into consideration liquidity, risk and return objectives coupled with the available opportunities given the current economic cycle. The Real Assets Strategic Plan will be evaluated on an annual basis.

VII. ANALYSIS OF LIMITED PARTNERSHIP INVESTMENTS

NEPC shall perform due diligence with respect to potential individual partnership and fund-of-funds investments. Staff will participate in the due diligence process to the extent practicable. Legal due diligence will be performed by counsel adequately familiar with such matters. If adequate capability for legal due diligence is not resident within the Treasurer's staff, outside legal counsel shall be retained.

Recommendations to the City Treasurer by the IC concerning a specific investment opportunity will be based upon, among other factors, the specific strategy presented by the investment advisors/general partners, then-current market conditions, the experience and value add of an investment advisor/general partner, and its ability to implement the proposed investment strategy.

VIII. DUE DILIGENCE

A due diligence review by the IC is required before commitments are undertaken by the MERF. The IC shall submit a summary report of it's due diligence efforts and findings and a related recommendation to the City Treasurer. The City Treasurer shall, in turn, present a recommendation to the Pension Commission. Prior to being asked to approve any commitment recommendation by the City Treasurer, all due diligence reports shall be made available to the Commission. In addition to the foregoing, and depending on the circumstances surrounding a potential investment, the City Treasurer may recommend that an additional independent expert be retained to provide further analysis and commentary as to the merits of a particular investment.

IX. INVESTMENT EVALUATION STANDARDS

All real asset investments will be evaluated based on fiduciary standards with reference to ERISA, ILPA or equivalent standards as appropriate and shall be considered in the context of the relevant risk/reward factors of this asset class. Because of the illiquid nature of private real asset investments,, the overall real asset investment program will be expected to achieve a premium return above commensurate marketable securities portfolios. Specifically, the real asset portfolio, in the aggregate, will be expected to achieve an average internal rate of return that meets or exceeds the benchmark over rolling five year periods (a full market cycle).

X. MONITORING AND REPORTING

The IC will have primary responsibility for monitoring the MERF's investments in this asset class using material provided by the investment advisors/general partners, including attending periodic investment advisor/general partners meetings and holding periodic meetings with the Commission to review all investments included in a specific partnership portfolio. Investment unit staff, the City Treasurer and the Pension Commission members may participate in monitoring activities, as deemed appropriate.

The IC shall prepare and the City Treasurer shall review and provide the Commission with a report regarding the performance of the aggregate real assets program (including all fund-of-funds and other partnerships) at least semi-annually.

XI. DOCUMENTATION

Due to the complex nature of real assets investments, the City Treasurer and Pension Commission may utilize specialized legal counsel to assist them in evaluating the legal merits of any proposed investment or to document or assist in the negotiation of the investment terms, including any such terms negotiated by the IC, on the MERF's behalf. All relevant legal and other documents pertaining to the MERF's real assets investments will be maintained by the MERF.

XII. GOVERNANCE

As circumstances dictate, the MERF will retain the right to be represented on a partnership's limited partner advisory board/committee.