City of Philadelphia
Board of Pensions and Retirement

Investment Division
Policies and Procedures Manual

Revision 8
January 26, 2012

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Section 1 - Introduction

Terminology

Board

As used in this document, the Board is the Board of Pensions of the City of Philadelphia, acting directing or through its Investment Committee.

Median Manager

As used in this document, the median manager refers the median of an appropriate universe, depending on the context, provided by a source accepted as representative and authoritative for the purpose intended. In general, this universe will be provided by the Fund's consultant but may also be provided by an alternate source such as a second consultant, custodian bank, or other commercial source.

Section 2 - Responsibilities of Parties

Policy 2.1 - Responsibilities of Chief Investment Officer and Investment Staff

Revision: 0
Approved: January 26, 2012

Policy:

The day-to-day oversight and management of the Fund's investment program are delegated to the Chief Investment Officer (CIO) and the Investment Staff. The CIO is responsible for execution of those elements of the Investment Policies and Procedures identified to the CIO and for keeping the Investment Committee informed of developments regarding the Fund, its investments including asset classes, manager strategies, and managers, and developments within the financial marketplace which may impact the Plan.

The Investment Staff is responsible for the monitoring of asset classes, manager strategies, and managers and for preparation of Forms and other exhibits required by the Policies and Procedures for monitoring and review purposes. This material will be submitted to the CIO for review and approval prior to being placed on the Investment Committee agenda for action.

It is intended that the role of the Investment Staff be proactive in bringing matters of concern and opportunity to the attention of the CIO and Investment Committee. The CIO shall recommend to the Investment Committee that independent consultants be retained as required to supplement the resources of the Investment Staff and to provide an independent source of review to the Investment Committee.

Rationale:

It is the desire of the Investment Committee that the CIO and Investment Staff assume a larger role in the review and control of the Fund and its investments. The Investment Committee will be relying upon the Investment Staff to prepare the monitoring and review reports mandated by these Policies and Procedures and with the endorsement of their recommendations by the CIO, provide actionable proposals to the Investment Committee for approval.

Procedure:

1. The CIO shall make and update as appropriate, a recommendation to the Investment Committee to divide responsibility for asset classes, manager strategies, and managers among the members of the Investment Staff.

   In order to provide for a diversity of ideas and to protect the integrity of the CIO review and approval process, it is not the desire of the Investment Committee that the CIO assume primary responsibility for any asset class, manager strategy, or manager in which Fund managers are selected pursuant to Philadelphia Code Chapter 17-1400.

2. The CIO shall organize and chair periodic meetings of the Investment Staff to review the operation of the Fund's investments and to reach agreements on routine and extraordinary recommendations to be presented to the Investment Committee.

Policy 2.2 - Responsibilities of Investment Managers

Revision: 0
Approved: July 27, 1995

Policy:

The Investment Committee has delegated to various Investment Managers, subject to the Investment Policy and manager-specific guidelines and restrictions, the responsibility to manage the assets of the plan including purchasing and selling securities as appropriate.

The relevant portions of the Investment Policy and manager-specific guidelines and restrictions are incorporated into the individual manager contracts pursuant to Policy 10.5 and their compliance is reviewed by the Investment Staff as part of the manager review.

In addition to the prudent and effective management of the Fund's assets, the Investment Committee desires that the managers proactively communicate with the CIO and Investment Staff concerns and opportunities.

In order to provide an opportunity for the Investment Committee to directly interact the Fund's Investment Managers, each Investment Manager will meet with the Investment Committee at least once per year.

Rationale:

The Investment Committee has, at present, determined that external investment managers will be used to manage many assets of the Fund. The responsibilities of those external investment managers are defined by their contracts and all other applicable legal requirements.

Procedure:

1. The CIO will maintain a schedule to implement the requirement for annual Investment Committee meetings with each manager.

Policy 2.3 - Responsibilities of Investment Consultants

Revision: 0
Approved: July 27, 1995

Policy:

While the Investment Committee places primary responsibility to provide analysis and recommendations with the CIO and Investment Staff, the Investment Committee may, from time-to-time, utilize external consultants to provide additional expertise, a broader view, or an independent oversight role.

Rationale:

As the Fund's investments and opportunities of additional investments are wide-ranging, there is a requirement for industry-wide relative rankings, and it is desirable to have a broader view than is available to any single sponsor, it is desirable to utilize outside consultants with expertise in the appropriate areas.

These consultants can supplement the resources available to the CIO and Investment Staff and address issues for which internal development of those resources is not feasible or cost effective.

Procedure:

None is required for implementation of this policy.

Section 3 - General Operations

Policy 3.1 - Operating Cash Balance Requirement/Liquidity Fund

Revision: 1
Approved: February 25, 1999

Policy:

It is the policy of the Investment Committee to minimize the 'cash drag' on performance resulting from the maintenance of large cash equivalent balances in the portfolio. It is further the policy of the Investment Committee to minimize the impact on the investment process on the active managers of routine inflows and outflows of cash from the portfolio.

In furtherance of the above, the Investment Committee has established a Liquidity Fund to provide for the investment of the volatile portion of the portfolio. The volatile portion of the portfolio can be considered to be the annual benefits payroll that is approximately matched by the City's contribution to the Fund.

The Liquidity Fund, which may include assets other than those planed to be used for benefit payments and other expenses, shall be invested in a manner as to minimize the impact of cash transfers on the overall asset mix of the portfolio as established by the asset allocation process.

Rationale:

The fund, in the ordinary course of its operations, has substantial cash inflows from periodic contributions by the City and outflows to make payments to beneficiaries. Fund assets maintained in cash equivalents either awaiting investment or held to fund future benefits payments may have an adverse impact on the fund's performance. This is due to the lower expected return of cash investments *vis-à-vis* that of longer term investments. This common phenomenon is called 'cash drag'.

It is also undesirable to invest this volatile portion of the portfolio with managers and then liquidate these investments shortly thereafter, as cash is needed. Disruptions of manager strategies occasioned by frequent requests for cash can negatively impact portfolio returns and generate increased transactions costs.

It is also undesirable to have the inevitable inflows and outflows disrupt the Fund's strategic asset allocation plans, which are developed to provide the target balance between risk and return for the total portfolio. The volatile portion of the portfolio should be invested in a manner that, to the extent reasonably possible, maintains the performance characteristics assumed for the entire portfolio.

To avoid these negative consequences, the Liquidity Fund shall be invested in a manner to:

1. Provide easy and low-cost investment and disinvestment of the volatile portion of the fund.

2. Provide for the investment in a manner that mirrors the strategic asset allocation of the total portfolio.

As the Liquidity Fund provides a low-cost, passive vehicle for the investment of Fund assets, it can also be used for the investment of ‘passive-core assets’ in addition to those assets that constitute the volatile portfolio of the portfolio.

Procedure:

1. The Investment Staff shall determine the expected performance of the volatile portion of the portfolio on a periodic basis, at least annually, based on expected benefit payments and City contributions.

2. The Investment Staff, working with the manager selected by the Board, shall develop a portfolio consisting of funds mirroring the performance of the Russell 3000 Index, the EAFE Index, and the Barclay’s Aggregate Index.

3. The Investment Staff shall direct the investment of the volatile portion of the portfolio, as well as any other assets designated as ‘passive-core,’ to the Liquidity Fund.

4. In the management of contributions of, deposits to, and withdrawals from the Plan, the Investment Staff shall direct transactions to/from the Liquidity Fund in such a manner that the portion of the Liquidity Fund that represents the volatile portion shall continuously have the approximate percentage of Domestic Equity, International Equity, and Fixed Income funds represented in the current strategic asset mix.

Policy 3.2 - Generation of Required Cash Balances, Routine Shortfall

Revision: 1
Approved: January 26, 2012

Policy:

Should cash required for benefits payments or other plan expenses be beyond that available from the Liquidity Fund, such cash shall be generated with steps in the following order:

1. The Independence Fund shall transfer all cash not required to settle already-traded transactions to the Liquidity Fund. The Independence Fund shall receive cash equal to the amount so transferred upon determination by the CIO and Investment Staff that the Liquidity Fund has sufficient cash to satisfy future benefits payments.

2. Managers should be requested to transfer income cash when received to the Liquidity Fund. This process does not negatively impact their performance as the performance calculations reflect the income received.

3. Managers with uninvested cash not required to settle already-traded purchases shall be requested to transfer the cash required to the Liquidity Fund.

4. Managers will be requested not to reinvest proceeds from prospective sales which they would execute in the ordinary course of their management and to transfer the cash so generated to the Liquidity Fund.

5. Managers will be requested to make sales based on an identification of the least attractive securities presently held, based on their investment strategy and process, and to transfer the cash so generated to the Liquidity Fund. This step shall be continued until the funding requirements are met.

In all cases, it is the policy of the Investment Committee to spread the burden of the imposition of this requirement among the managers and asset classes to fairly share the disruption to investment processes.

To the extent not already contained in the Board's investment management agreements with managers, all such agreements shall reserve to the Board the explicit right to demand from managers income cash, uninvested cash, proceeds from prospective sales, and sales of the least attractive securities presently held.

The Investment Committee delegates to the CIO the authority to permit exceptions to the strict application of the procedure with respect to any given manager or transaction if the best interests of the Fund are enhanced by that exception.

Rationale:

While undesirable, it is occasionally necessary to request funds from the managers in order to maintain an appropriate level of liquid reserve. The process established in this policy is intended to minimize the impact on the total Fund's performance, the performance of each manager upon which they are reviewed, and to fairly share the burden of providing the funds.

Procedure:

1. Upon the identification of a circumstance where cash must be generated, and where the Independence Fund has insufficient cash to cover the shortfall, the CIO shall direct the Investment Staff to determine the amount required and to communicate with each manager as to their responsibility.

2. In order to preserve fairness, the CIO will ensure that steps 2-4 are each completed for all managers prior to moving to step 5 for any manager.

3. The CIO will advise the Investment Committee of the circumstances where the pre-delegated exception authority is used and further to advise the Investment Committee where application of this policy, while in the best interests of the Fund, acts to create an injustice to an manager in their evaluation.

4. The CIO will advise the Investment Committee and reflect on the individual manager's next review cases of non-cooperation with this policy.

Policy 3.3 - Generation of Required Cash Balances, Funding Suspension

Revision: 1
Approved: January 26, 2012
Policy:

In the event that the City does not provide and does not appear to be able to provide an anticipated contribution and that non-provision can be expected to continue for a period where treatment using Policy 3.2 is insufficient or would become disruptive to the investment process, the Investment Committee has determined that an alternative process for generating the required cash shall be used:

1. The Independence Fund shall liquidate as many assets as necessary, up to and including its entire portfolio, to cover the cash shortfall incurred. Provided, that the CIO may, after meeting with Investment Staff, advise the Investment Committee that liquidation of some or all Independence Fund assets would cause the Fund serious, immediate financial harm.

2. If liquidation of the Independence Fund does not generate the required level of cash, those asset classes which are above the target levels for the current asset allocation shall be reduced to target levels. The cash shall be requested entirely from the poorest performing managers, relative to their peer-group, in order of ascending performance, based on one-year relative performance. The Investment Staff shall also consider the performance of the passive funds in the Liquidity Fund in this analysis.

3. If reducing those asset classes above target levels to target levels does not generate the required level of cash, the asset classes with the lowest expected returns will be reduced to the lower limit of the target range. The cash shall be requested entirely from the poorest performing managers relative to their peer-group, in order of ascending performance based on one-year relative performance. The Investment Staff shall also consider the performance of the passive funds in the Liquidity Fund in this analysis.

The cash to be generated using this procedure should be limited to that required to replace the non-provided contribution.

The Investment Committee pre-delegates to the CIO the authority to deviate from the strict application of this policy if the interests of the Fund are best served by that flexibility.

Rationale:

If an expected contribution is delayed, it is desirable to immediately implement an alternative strategy which will generate a replacement for those funds rather than treat the situation as a protracted application of the routine shortfall procedure. Continuing application of the routine shortfall procedure will significantly disrupt the Fund's managers' investment strategies and negatively impact the Fund's total performance.

It is most prudent to take the funds required from the Independence Fund, and from the poorest performing managers and asset classes.

Procedure:

1. Upon the identification of an expected non-provision of a City contribution, the CIO shall determine if the application of this policy is required. If so, the CIO shall so advise the Investment Committee and direct Investment Staff to liquidate the least attractive assets in the Independence Fund, up to and including the entire portfolio of the Independence Fund, to make up any cash shortfall.

2. If liquidation of the Independence Fund does not make up the entre cash shortfall, and/or the CIO, after meeting with Investment Staff, advises the Investment Committee that liquidation of some or all Independence Fund assets would cause the Fund serious, immediate financial harm, the CIO shall direct the Investment Staff to identify which managers and asset classes are to be impacted.

3. After advising the Investment Committee of the actions to be taken, the CIO shall direct the managers affected to make any required transactions to generate the cash required.

4. The CIO will report to the Investment Committee any use of the flexibility to deviate from the strict application of the policy.

Policy 3.4 - Investment of Available Excess Cash Balances

Revision: 1
Approved: February 25, 1999

Policy:

The investment of available excess cash balances shall be used, to the extent possible to rebalance the asset class weights to the policy targets. Should the liquid reserve exceed the upper limit of the target range, such cash shall be distributed with steps in the following order:

1. Those asset classes which are below the target levels for the current asset allocation shall be increased to target levels. The cash shall be distributed entirely to the best performing managers, relative to their peer-group, in order of descending performance, based on one-year relative performance. The Investment Staff shall also consider the performance of the passive funds in the Liquidity Fund in this analysis.

2. If cash remains after increasing asset classes to target levels, the asset classes with the highest expected returns will be increased to a level between the target and the upper limit of the target range. The cash shall be distributed entirely to the best performing managers, relative to their peer-group, in order of descending performance based on one-year relative performance. The Investment Staff shall also consider the performance of the passive funds in the Liquidity Fund in this analysis.

The Investment Committee pre-delegates to the CIO the authority to deviate from the strict application of this policy if the interests of the Fund are best served by that flexibility.

Rationale:

If additional cash is available for investment, it should first be used to increase asset classes with current allocations below target and then used to increase allocations to those asset classes with the best expected returns.

Procedure:

1. Upon the identification that excess cash is available, the CIO shall advise the Investment Committee and direct the Investment Staff to identify which managers and asset classes are to be impacted.

2. After advising the Investment Committee of the actions to be taken, the CIO shall advise the managers of the forthcoming cash.

3. The CIO will report to the Investment Committee any use of the flexibility to deviate from the strict application of the policy.

Policy 3.5 - Permitted Deviations from Asset Allocation Weights and Rebalancing Procedures

Revision: 0
Approved: July 27, 1995

Policy:

In order that the asset allocation implemented will generate the desired Fund performance, it is necessary to ensure that actual asset allocation weights do not deviate from those used in the asset allocation more than a nominal degree. There is a tradeoff between the degree of drift permitted and the transaction costs associated with rebalancing.

As part of the asset allocation policy, rebalancing tolerances will be established by performing sensitivity tests on the allocation levels to determine the degree of drift which can be accepted while generating approximately target performance. The target performance variances will be compared with rebalancing transactions costs to determine an acceptable tradeoff. These lower and upper target range limits will become part of the asset allocation.

Should any of the target tolerances be exceeded, the total amount of asset value to be transferred shall be determined. That amount is minimum required to bring all asset class weights into policy target ranges.

Transfers shall take place as follows:

1. Asset classes that are most overweighted will be reduced by removing assets from the poorest performing managers, in order of ascending performance based on one-year relative performance.

2. Funds so generated will be transferred to the most under weighted asset classes and provided to the best performing managers, in order of descending performance based on one-year relative performance.

In the event that the CIO determines that changes required are de-minimis and adjustments are not in the best interests of the Fund, the Investment Committee pre-delegates authority to the CIO to not perform the rebalancing operations.

Rationale:

The minimum level of rebalancing required should be completed as all rebalancing generates transactions costs and interferes with the manager's implementation of its strategy.

If rebalancing is required, the asset values should be transferred from the poorest performing managers to the best performing managers.

Procedure:

1. The CIO and Investment Staff, as part of the quarterly asset class review, shall compare actual asset class allocations with target ranges.

2. If the actual allocation is beyond the limits, the policy steps above shall be implemented to rebalance the portfolio.

3. If the CIO determines that rebalancing is not in the best interests of the Fund and elects to use the pre-delegated authority not to rebalance, the CIO shall report that finding to the Investment Committee.

Policy 3.6 - Manager Transition Processes

Revision: 0
Approved: July 27, 1995

Policy:

The transition of assets from one manager to another can generate significant expense for the Fund, both in terms of commissions and in diminished value from market impact of trades. It is therefore desirable to minimize that impact when a transition is required.

As the facts and circumstances of transitions can vary significantly, it is not possible or desirable to prescribe a procedure for all cases. However the Investment Committee desires to minimize the impact of transitions by employing all means available including

1. Providing a list of all securities presently held by terminated managers to all successor managers. Successor managers are free to select securities from this list and have them transferred to their manager accounts at the custodian. The cost maintained for these assets by the custodian shall be the fair market value at the date of transfer. In the event that multiple successor managers select the same securities, they shall be divided equally between such managers.

2. Offering the remaining securities as a package to several brokers and seeking the best package price. The best package price would generally be selected.

3. If there are no bidders for the remaining securities, they shall be distributed to the successor managers who will be given a period at the discretion of the CIO to liquidate the remaining securities and begin to implement their management process.

4. The CIO shall establish the point in time were the evaluation of the new managers performance begins. The CIO shall in making that determination balance the needs of the Fund to begin evaluation quickly and a desire to be fair to new managers by delaying the start of evaluation until substantially all securities from the former managers have been affirmatively selected by the successor managers or have been converted to cash for the initiation of the successor manager's process.

Rationale:

In order to minimize the costs associated with transitioning assets between managers, successor managers should have the opportunity to select assets prior to their sale, either as a package or as individual issues. In the event of sale by successor managers, the evaluation of the successor manager's performance will begin after the conversion of the former manager's securities to cash.

Procedure:

1. In the event of a transition of assets between managers, the CIO will have the responsibility to implement the steps of this Policy.

2. The CIO will make the determination as to the commencement of the evaluation period which will become the inception date of that manager's responsibility for the Fund's assets for future evaluations.

Policy 3.7 - The Independence Fund

Revision: 0
Approved: January 26, 2012

Policy:

It is the policy of the Board that there will be maintained an internal tactical investment fund hereby known as the "Independence Fund." As set forth separately in the Independence Fund Guidelines, approved January 26, 2012, the CIO shall act as the primary manager of the Independence Fund, with the assistance of Investment Staff.

As approved by the Board, the Independence Fund develops its strategies through intensive research by Investment Staff. It focuses globally on both developed and emerging economies. Its strategies seek to exploit identified market inefficiencies that offer long term attractive returns.

The selection process consists primarily of investing in companies and industries that Staff's research has shown to present attractive valuations. The fund employs a strict risk management strategy and focuses on defending capital.

The Independence Fund will be monitored in the manner of an Equity Long/Short Hedge Fund, as defined in the Statement of Investment Policy for Hedge Funds, Revised November 2010 (the "Hedge Fund Guidelines"), according to the "Monitoring Procedures" set forth in Section VII of the Hedge Fund Guidelines, and according to the individual risk control procedures set forth in the Independence Fund Guidelines.

Rationale:

The Independence Fund is designed to provide the Fund tactical flexibility to hedge against and profit from market inefficiencies and dislocations. Because it is an internal fund, managed by the CIO and Investment Staff, the Independence Fund will provide the Fund greater liquidity and accountability to the Board than do typical Hedge Funds.

Section 4 - Investment Philosophy

Policy 4.1 - Passive Versus Active Management

Revision: 0
Approved: June 22, 1995

Policy:

It is the policy of the Investment Committee to pay active management fees only for those manager styles where there is demonstrated value added over passive management, adjusted for the fees involved with both methods.

Rationale:

In order to achieve the long term goals of the Fund, the Fund's capital must be invested in assets which provide a return. The management of those assets entails costs, both in terms of professional fees for external management or salaries and expenses for internal management as well as direct and indirect transactions costs.

As these expenses are a direct charge against the assets of the Plan, it is desirable to minimize them. It is generally true that passive management is available at a lower total cost than active management. Therefore it is desirable to utilize the lowest cost option for obtaining that management except where active management has demonstrated a persistent value added, adjusted for fees, versus passive management.

As this analysis can be applied to both an entire group of managers utilizing a given management style or a single manager who has historically provided the a persistent value added, there are two alternative tests which can be used to determine a preference for active or passive management for a given management style.

In general, it is not desirable to make that assessment based on any single manager whose performance is variable across time, the test is whether the median manager is capable of providing that value.

There are however individual managers whose value added is sufficiently superior on a consistent basis as to indicate that the performance of the median manager does not reflect what is achievable by these superior managers.

Procedure:

1. At the time of the triennial asset allocation process, this procedure will be used to evaluate the effectiveness of active management for every asset class and manager style within asset class that is included in the current asset allocation.

2. While the triennial review is the minimum frequency for this evaluation, the evaluation can be refreshed at any time when in the opinion of the CIO that there has been a material change in circumstances which would make such a review desirable.

3. For purposes of this evaluation, the performance of the median manager in a large universe will be evaluated over a three year, five year, and ten year horizon. The median return and an available passive implementation of that asset class or manager style will be adjusted for the expected level of fees appropriate for the Fund's investment.

4. The management style within an asset class will be considered a candidate for active management:

    a) If the performance of the median manager exceeds the performance of an available passive implementation for at least two of the three measurement periods, and

    b) If the return/risk ratio developed by dividing the annualized return by the annualized standard deviation for the five year period for the median manager is equal to or greater than that for an available passive implementation.

5. If individual managers are identified which have consistently exceeded the tests imposed by procedure steps (3) and (4), these managers may be considered for active management not withstanding the general active/passive decision arrived at by use the median manager's performance.

    As the decision to pay active management fees is based on superior past performance, which does not necessarily provide an indication of future performance, the rationale for using this exception provision shall be well documented at the time the exception is made.

Policy 4.2 - Return/Risk Tradeoff

Revision: 0
Approved: June 22, 1995

Policy:

The Investment Committee recognizes that generally there is a positive correlation between return and risk and accepts that in order to achieve returns above the risk-free rate, risk must be accepted.

The risk level being accepted must not exceed a reasonable absolute level given the public trust involved. Further, the risk level being accepted must be efficient in that it is the minimum level of risk for a given return or alternatively, provides the highest level of return for a given level of risk.

Further, there are asset classes and manager styles which, while providing high expected returns and an attractive return/risk expectation that are nevertheless unacceptably volatile for the Fund.

Rationale:

While the return/risk ratio of a given extremely volatile investment might be attractive, the return/risk ratio does not comprehend the non-linear utility function of those responsible for the investment of public funds.

An element of the mathematics underlying the asset allocation process is evaluating return and risk and these models can recommend efficient strategies that, while totally valid, are inappropriate when the actual utility function is considered.

Therefore, there are potential investments which are inappropriate for the Fund because the absolute level of risk is unacceptable.

Procedure:

1. During the consideration of investments, be they asset classes, manager styles, or a specific manager strategy there must be an evaluation of the absolute level of risk, particularly that which would be generated upon the occurrence of possible but low probability events.

2. As part of the proposal for a new investment and in the periodic review of existing investments, there shall be a specific review and evaluation of the risks of such investment including those due to improbable events and interaction with existing and other contemplated investments.

Policy 4.3 - Risk Tolerance

Revision: 0
Approved: June 22, 1995

Policy:

In view of the public trust of the Fund, the risk tolerance of the Investment Committee is moderately below that which would be appropriate for a typical retirement fund.

While the Fund is prepared to assume the risks inherent in commonly used asset classes, including international equities, such investments and techniques used to manage them should be used in a manner to minimize risk of large losses and at no time should risk be undertaken where the gain potential is less than a reasonably expected loss in adverse circumstances.

Rationale:

In the management of any fund, there must be an assessment of the level of risk which can be assumed. The asset allocation model uses expected volatility of returns around an expected return, combined with the degree of correlation between the asset classes to forecast the range of potential losses and gains for various time periods, expressed as a probability distribution.

There is an implicit assumption in the model's calculation of long period expected returns that the policy will stay in place through and after periods poor performance predicted by the assumptions. Therefore, selection of an asset mix which offers an attractive long-term performance and its subsequent adoption contains the assumption that the mix will remain unchanged if one or another of the asset classes suffers a significant negative result.

The ultimate level of risk tolerance should be that which is bearable in the most adverse of expected short-term periods since results below that risk would result in lowering or eliminating a poor performing asset class and therefore significant impairing the Fund's opportunity to recover.

Procedure:

1. In the process of reviewing potential asset allocations, there should be an explicit review of 'worst-case' scenarios and an understanding of the potential greatest reasonably expected loss in both dollar and percentage terms.

2. Prior to the adoption of an asset allocation or funding a new asset class, strategy, or technique, the Investment Committee should review the worst-case scenarios and be confident that the risks are acceptable and should the scenario occur, they are confident they could maintain the policy until there is a recovery.

Section 5 - Investment Policy Statement

Policy 5.1 - Maintenance of Investment Policy Statement

Revision: 0
Approved: June 22, 1995

Policy:

in order to document and communicate the objectives, restrictions, and guidelines for the Fund's investments, a continuously updated Investment Policy Statement will be maintained. The Investment Policy Statement shall be updated as required and reviewed on an annual basis for completeness and accuracy.

Rationale:

It is necessary to have a document which can be shared with appropriate parties which provides in an authoritative manner a codification of parameters for investment. The objectives, restrictions, and benchmarks for each asset class, manager style, and individual manager should be derived from and consistent with the Investment Policy Statement.

Procedure:

1. Annually, at the time of the asset class review, the Investment Policy Statement should be reviewed to determine if it is current, complete, accurate.

2. Quarterly, as part of the manager reviews, compliance with all relevant requirements, restrictions, and guidelines should be reviewed.

Policy 5.2 - Contents of Investment Policy Statement

Revision: 0
Approved: June 22, 1995

Policy:

The Investment Policy Statement should contain all information, with the exception of manager specific objectives, restrictions, and guidelines, that is required to understand the investment structure employed by the Fund. The information includes but is not limited to a discussion of the purpose of the fund, the source of legal authority for its management, the investment goals and objectives in both a quantitative and qualitative sense, definitions of permitted asset classes and management styles with percentage weight targets with tolerance bands, and authorized and forbidden asset types, management techniques, or prohibited transactions.

Rationale:

The Investment Policy Statement is a document which can be provided to appropriate interested parties which concisely provides an authoritative overview of the Fund's investment strategy.

Procedure:

None Required for Implementation

Policy 5.3 - Incorporation of Relevant Portions of Investment Policy Statement in Manager Contracts

Revision: 0
Approved: June 22, 1995

Policy:

Relevant portions of the Investment Policy Statement shall be incorporated, physically or be referenced in each manager's investment manager contract.

Rationale:

Incorporation of the relevant portions of the Investment Policy Statement into each manager's contract provides an authoritative communication of the guidelines under which their management should function.

Incorporation also insures consistency between the manager contracts and the overall structure and design of the Plan.

Procedure:

1. During the process of preparing new and renewal manager contracts, the appropriate sections of the Investment Policy Statement shall be incorporated.

2. The Fund will strive to have contracts approved and executed within 45 days of Board implementation. This timeliness provision shall apply to all investment related contracts.

Section 6 - Asset Allocation

Policy 6.1 - Authority of Asset Allocation Process

Revision: 0
Approved: June 22, 1995

Policy:

The asset allocation process provides the initial and most significant element in the design of the Fund's investment structure. It expresses the allowed asset classes and manager styles and by virtue of its assumptions is used to derive the current allocation and provides the starting point for the development of expectations and benchmarks for performance and risk for each asset class and manager style. Further, the expectations and benchmarks for performance and risk for each manager shall be consistent of the expectations used for manager styles and asset classes.

The current asset allocation is the authoritative source for the expectations and benchmarks. No benchmark or expectation shall be changed in a manner materially inconsistent with the assumptions for the current asset allocation.

Rationale:

The Investment Committee has adopted a viewpoint that the Fund's investment structure will be constructed, monitored, and modified based on the premise that matching the assumptions in the asset allocation is the goal most likely to lead to achievement of the Fund's long-term objectives.

To ensure that progress is being made toward those objectives, the design and monitoring structure must be consistent with the asset allocation objectives, and deviations from those objectives must be addressed in a timely manner.

Procedure:

1. The expectations and benchmarks developed for each asset class shall be consistent with the assumptions used for performance and standard deviation in the current asset allocation.

2. The expectations and benchmarks developed for each manager style shall be, when weighted to reflect the percentage of the asset class invested in that style, consistent with the aggregate asset class.

3. The expectations and benchmarks developed for each manager shall be, when weighted to reflect the percentage of the management style invested with that manager, consistent with the aggregate management style.

Policy 6.2 - Determination of Asset Classes to be Included

Revision: 0
Approved: June 22, 1995

Policy:

Asset classes included in the asset allocation must meet the following tests:

a) Serve a valid investment purpose.

b) Not be used as a surrogate for another asset class which is available for direct investment.

c) Be reasonably capable of providing a return justifying the risk assumed, including that from low-probability events.

There should be a bias for simplicity in the selection of asset classes. The number of asset classes considered should be the minimum needed to achieve the desired structure and expected results.

Rationale:

The asset classes used in the asset allocation should each continuously contribute to the meeting of fund objectives. That is not to say that each asset class must always provide a positive return or mitigate risk but rather that, across a reasonable time horizon, it provides value as an investment.

Procedure:

1. Prior to consideration for inclusion in the Fund's portfolio, each asset class, manager style, and management technique should be critically reviewed for conformance with the policy.

2. Should an investment be made that does not conform to the policy, there should be contemporaneous documentation for the decision to make the non-conforming investment.

Policy 6.3 - Review and Approval of Assumptions for Asset Allocation

Revision: 0
Approved: June 22, 1995

Policy:

The assumptions used to develop the asset allocation are critical to its validity, and, under the integrated architecture, form the basis of the benchmarks for asset classes, manager styles, and managers. Given their importance a formal review and justification of those assumptions should be provided to the Investment Committee by the experts retained to assist in the process.

That justification to the Investment Committee should be sufficient to permit the Investment Committee to review and accept these assumptions on behalf of the Plan.

Rationale:

Under the integrated architecture used to develop the Plan's investment structure, the assumptions used to develop the asset allocation assume transcendent importance. The key assumption underlying the integrated architecture is to monitor the achievement of assumptions as represented by the various benchmarks and in that manner arrive at the desired cumulative return at the horizon.

Procedure:

1. During the process of preparing the asset allocation, the experts retained should document the rationale and justification for the assumptions utilized.

2. The assumptions should then be reviewed by Staff and the CIO for appropriateness. Upon approval by the CIO, they should be presented to the Investment Committee for acceptance.

3. Acceptance by the Investment Committee provides the authority for the assumptions to be used in the manner provided by the policies and procedures to develop and implement the monitoring, control, and response structure to maintain conformance with those expectations.

Section 7 - Periodic Reviews

Policy 7.1 - Periodic Reviews of Asset Allocation

Revision: 0
Approved: June 22, 1995

Policy:

In light of the critical importance of asset allocation and its role in the integrated architecture the Fund has adopted, the asset allocation process must be performed periodically to adjust for changes in the economic and investment environment. Conversely, the asset allocation should not be reviewed and adjusted so frequently that significant costs are being incurred responding to small changes in the environment.

It is the policy of the Investment Committee to review the asset allocation on a triennial cycle provided that the annual asset class reviews indicate that the assumptions used remain valid.

In the event the annual asset class review pursuant to Policy 7.2 identifies a persistent change in expected returns or standard deviation which is now materially different from the assumptions, an out of cycle asset allocation return will be conducted. This out of cycle review resets the three year cycle clock.

Rationale:

The review and monitoring structure which has been established with the integrated architecture monitors the continuing validity of the assumptions used in the current asset allocation. Provided that validity of the assumptions is monitored, the asset allocation reviews should be done on a long enough cycle to minimize the costs of allocation changes.

The three year frequency is sufficient to adjust for significant secular changes in the economic and investment environment and to provide an opportunity to consider new and innovative investment opportunities.

Procedure:

1. Three years after the last asset allocation review or upon the triggering of an out of cycle review by operation of Policy 7.2, a complete asset allocation review should be undertaken.

2. The asset allocation review should be undertaken pursuant to Section 6 of these policies and procedures.

3. Upon completion of the asset allocation review and implementation of any required changes, the three year cycle clock is reset.

Policy 7.2 - Periodic Reviews of the Validity of Asset Class Assumptions

Revision: 0
Approved: June 22, 1995

Policy:

The success of the concept of the integrated architecture for the investment structure depends on periodic reviews of asset class performance to assure the continuing validity of the asset class and manager style return and standard deviation assumptions.

On a quarterly basis, the validity of the each of the assumptions utilized in the current asset allocation will be tested and the progress toward the targeted expected return evaluated. If during that quarterly review, an assumption is determined not to be valid, an out of cycle asset allocation review should be conducted pursuant to Policy 7.1 to consider options to adjust the assumptions or portfolio structure to provide the maximum assurance that the long-term targets will be met.

Rationale:

It is critical that there is rapid identification and response to circumstances that endanger progress toward the long term financial goals of the Plan. As the assumptions used for the asset allocation are exactly that, assumptions, it is important to identify a situation where the assumptions are not being met.

At the asset class level, the performance being tested is that of a market neutral mixture of manager styles with the median manager's performance versus the assumptions. If the confidence level that the performance will achieve the assumed rate of return is below 50%, that will trigger a review of the assumptions used, and, if required, an out-of-cycle asset allocation.

Procedure:

1. Quarterly, the three year performance of a market neutral mixture of manager styles with the median manager's performance in each of the asset classes represented in the present asset allocation will be reviewed and compared to the assumptions used for the present asset allocation.

   This review will utilize the Confidence Chart methodology and will have as its target the assumed rate of return and the horizon time used for the current asset allocation, generally three years after the date of the current asset allocation.

2. If the confidence level falls below 50%, a review of that asset class assumption must be undertaken. It is expected that this review will trigger an out-of-cycle asset allocation. In addition, if the three year market neutral mixture of manager styles with the median manager's performance in each of the asset classes represented in the present asset allocation has a more than one percent difference in return or more than a three percent difference in standard deviation, serious consideration should be given to an out-of-cycle asset allocation.

3. Independent of tests above, the actual standard deviation will be compared with the expected standard deviation for the asset class. If the actual standard deviation exceeds the expected by 20% or more, a review of that asset class assumption must be undertaken. It is expected that is this review will trigger an out-of-cycle asset allocation.

4. While the triggering of an out-of-cycle asset allocation review is not automatic, if such a review is not performed, the situation must be formally acknowledged, rationale should be documented, and this process repeated at the end of the next quarter.

5. If the three year market neutral mixture of manager styles with the median manager's performance in each of the asset classes represented in the present asset allocation is within acceptable tolerances of the assumptions another asset class review should be performed in twelve months.

Policy 7.3 - Periodic Reviews of Fund's Asset Class Performance

Revision: 0
Approved: June 22, 1995

Policy:

The performance of asset classes is generally the result of the performance of a mix of manager style performance within that asset class and performance of individual managers. On an annual basis, the performance of the Fund's investment in each asset class shall be reviewed. If application of Policy 7.2 indicates that the asset class performance assumptions remain valid but the Fund's asset class performance fails to meet a parallel series of tests, either the manager style weightings within the asset class, the selection of active or passive modes of management, or the actual selection of managers is to be reviewed.

Rationale:

Once the continuing validity of the asset class assumptions using median manager performance has been confirmed, under performance by the Fund must be addressed by reviewing each of the options that comprise asset class performance: the weighting of manager styles, the use of active or passive management or the actual selection of managers.

Application of this process can lead to adjustments to any of those parameters such as adjusting the weighting between the manager styles comprising the asset class. Such adjustments may involve transferring money from a good performing manager in a poor performing styles to other managers in styles which appear to provide superior performance over the planning horizon. Such weighting adjustments should not be understood to be based on market timing of styles but rather strategic adjustments to compensate for long-term differences in performance.

Procedure:

1. Annually, the three year performance of the Fund in each of the asset classes represented in the present asset allocation will be reviewed and compared to the assumptions used for the present asset allocation.

   This review will utilize the Confidence Chart methodology and will have as its target the assumed rate of return and the horizon time used for the current asset allocation, generally three years after the date of the current asset allocation.

2. If, during the annual review, the confidence level falls below 50% for an asset class, a review of the manager style weightings, mode of management, or managers used must be undertaken for that asset class. In addition, if the three year performance of the Fund's investment in each of the asset classes represented in the present asset allocation has a more than one percent difference in return or more than a three percent difference in standard deviation a review of the manager style weightings, mode of management, or managers used must be undertaken for that asset class.

3. Independent of tests above, if the standard deviation of the Fund's investment in any of the asset classes exceeds the expected by 20% or more, review of the manager style weightings, mode of management, or managers used must be undertaken for that asset class.

4. If required, a review of the manager style weightings, mode of management, or managers in an asset class shall be undertaken. Such review should consider whether the present manager style weightings should be revised, if the mode of management, active or passive should be reconsidered for each manager style or whether managers should be replaced.

   The process of considering the termination of a manager should follow the process outlined in Policy 7.4 and Policies 10.6, 10.7, and 10.8.

Policy 7.4 - Periodic Reviews of Manager Performance

Revision: 2
Approved: August 22, 1996

Policy:

It is the policy of the Investment Committee to review each manager's performance versus its benchmark every quarter. These benchmarks consist of both index-based and relative performance measures. Each manager's risk adjusted performance should exceed passive option performance adjusted for fees and each manager should be above the median of an appropriate universe.

As good managers will occasionally have poor performance for several periods, there is some grace period permitted for performance to improve.

Rationale:

As the overall performance of the Fund's assets is ultimately the result of the performance of individual managers, the performance of the managers should be reviewed with sufficient frequency to permit identification of substandard performance as quickly as possible. Conversely, managers with substandard short-term performance should be given sufficient time for improvement and to permit differentiation between chronic poor performers and good managers whose strategy is temporarily out of favor.

Procedure:

1. Each active manager should maintain risk adjusted performance, after fees, in excess of the appropriate index's risk adjusted return, adjusted for the fees associated with passive management of an index fund tracking that index.

   Ideally, for active domestic equity managers, the risk adjusted performance is defined as the actual performance, net of fees, less the risk free return, divided by:

   for one-quarter periods and one-year periods, the quarter-beginning cross-sectional beta relative to the appropriate index,

   for three-year periods, the three-year regression portfolio beta relative to the appropriate index for five-year periods, the five-year regression portfolio beta relative to the appropriate index

If this calculation is not available for active domestic equity managers and for all other managers, an acceptable alternative is to compare the returns, adjusted for fees and further compare the return/risk ratio calculated over the period of engagement or three years, whichever is shorter.

Each manager should provide performance equal to or better than the benchmark for one quarter, one year, three year, and five year cumulative periods. In the event that a manager's engagement with the fund has been for less than five years, that manager's AIMR Level I compliant composite performance for the product or strategy used by the Fund for prior periods shall be linked to the performance for periods of engagement with the fund.

Managers are considered to achieve this objective if their performance exceeds the benchmark for two of the three periods of one-year or longer or any three periods.

2. Each active manager should maintain above median performance of an appropriate peer group for one quarter, one year, three year, and five year cumulative periods.

   Managers are considered to achieve this objective if they rank above the median manager for two of the three periods of one-year or longer and the performance in the third period is not less than the 62nd percentile.

3. Each passive manager should maintain an after-fee performance with a tracking error versus the appropriate benchmark index without adjustments for fees of less than or equal to 25 basis points for 75% of quarterly periods and a tracking error of less than or equal to 50 basis points for all annual periods.

4. If there is a failure to meet any objectives, the following rules should be applied:

   a) A manager's failure to meet either objective for one or two quarters is not a cause for concern.

   b) A manager's failure to meet either objective for three successive quarters merits probationary status.

   c) A manager's failure to meet either objective for four successive quarters should result in termination. Upon a critical review of the manager, the Investment

Committee may grant a further two quarters for improvement to take place upon officially recognizing the substandard performance and explicitly granting an extension of time for improvement. At the time of granting such extraordinary extension, the Investment Committee may delegate to the CIO the authority to direct the manager to immediately suspend all trading except as specifically directed by the CIO.

During the period of any such extraordinary extension, the Investment Staff should monitor the portfolio and transactions of such manager to ensure that excessive risk is not being taken in an attempt to 'catch up'. If in the judgment of the CIO, such manager is managing the portfolio in such a manner that indicates that excessive risk is being taken, the CIO should use the previous delegated authority to terminate or restrict the manager's activities.

Policy 7.5 - Extraordinary Reviews of Managers

Revision: 0
Approved: June 22, 1995

Policy:

It is the policy of the Investment Committee that if an event occurs within a manager's organization or is likely to impact the manager's organization, the CIO shall make a determination whether such event compromises the investment process or in any other manner might negatively impact the management of the Fund's assets.

Such events would include but are not limited to:

a) Loss of any significant investment professional directly involved with the management of Fund assets or of such significance to the manager's overall investment process as to call into question the future efficacy of that process.

b) Sale, offer for sale, or offer to purchase the manager's business to/by another entity.

c) Significant financial difficulty or loss of a sizable portion of the manager's assets under management.

d) Filing or announcement of regulatory action of non-trivial nature, particularly that involving violations of the Investment Advisers Act of 1940, the Securities Act of 1933, or the Securities Exchange Act of 1934, or any state Blue Sky Law to which the manager is subject.

e) Any other event which in the discretion of CIO appears to put the Fund's assets at risk of loss, either actual or opportunity.

As time is sometimes of the essence in these cases, the Investment Committee should consider delegating to the CIO authority, after consultation with appropriate officials of the Board of Pensions and Retirement and the Investment Committee, to take such action as required to protect the assets of the Fund.

Rationale:

There are circumstances which can quickly develop which can adversely affect an investment manager's capability to properly manage the Fund's assets. There needs to be in place a procedure to permit appropriate action to be taken should the Fund's assets appear to be at risk.

Procedure:

1. The CIO and Investment Staff, with the assistance of consultants as required, shall continuously monitor the Fund's investment managers for occurrence of events that involve the circumstances addressed in the policy.

2. Upon the occurrence of any of these events, the CIO shall take such steps as are required to ensure compliance with this Policy and to protect the Fund's assets.

Section 8 - Asset Class Management

Policy 8.1 - Definition and Criteria for Specification of Asset Classes

Revision: 0
Approved: June 22, 1995

Policy:

An asset class used by the Fund should consist of a type of security, financial instrument, or tangible or intangible property which has common characteristics and for which an expected return, standard deviation of that return, and correlation coefficients with returns of other asset classes can be identified. While the assets considered to be within the asset class may have a wide range of issuers and characteristics, an asset class should be relatively homogeneous when viewed by a generally accepted characteristic of type such as non-domestic equity securities, real estate partnership units, or domestic fixed income securities.

Rationale:

As the performance and standard deviation assumptions used for the asset allocation review are a critical input, it is necessary that asset classes be defined with sufficient specificity that a single set of assumption statistics can be considered to be valid for all securities of this class.

Procedure:

1. As part of the asset allocation review, the definition and specifications for identification of assets belonging to that asset class should be reviewed.

2. This definition and specification should then be incorporated into the Investment Policy as defining acceptable investments within that asset class and into the guidelines and restrictions portion of manager contracts to provide guidance to managers as to acceptable investments.

Policy 8.2 - Process for Consideration of New Asset Classes

Revision: 0
Approved: June 22, 1995

Policy:

During the asset allocation review, the Investment Committee may direct the CIO or consultant to consider additional asset classes not presently used for inclusion in the expected return analysis.

Any such asset classes must have a suitable definition and specifications as described in Policy 8.1.

The CIO or Consultant shall then evaluate the impact of the addition of that asset class when used in conjunction with the existing asset classes.

In the event that multiple additional asset classes are to be considered, the CIO or consultant shall evaluate all combinations of new asset classes in conjunction with those presently used.

Rationale:

As the financial markets evolve, additional asset classes, not currently used by the Fund, may present an attractive alternative investment. To ensure that due consideration is given to the inclusion of one or more additional asset classes, a process must be developed to fully explore the impact on expected return and standard deviation of the Fund upon the use of one or more additional asset classes in conjunction with those already in use.

Procedure:

1. Prior to initiation of the asset allocation review, the CIO or consultant shall solicit suggestions for new asset classes to be considered.

2. The CIO or consultant shall develop a precise definition and specifications for the asset class pursuant to Policy 8.1.

3. The CIO or consultant shall develop appropriate assumptions for that asset class pursuant to Policy 6.3.

4. The Investment Committee shall review the results of the asset allocation review and with due consideration to Policy 6.2, consider the merits of the asset class for inclusion in the asset allocation and for funding. During that process, the criteria provided in Policy 8.3 shall be given due consideration.

Policy 8.3 - Criteria for Approval of New Asset Classes

Revision: 0
Approved: June 22, 1995

Policy:

It is the policy of the Investment Committee to approve the use of new asset classes which meet the requirements of Policy 6.2 and further:

a) Are known and understood by the CIO, the Investment Staff, and the Consultant.

b) Have sufficient market liquidity, except in the case of partnerships, private equity, and other securities known to be illiquid, to permit purchase and sale of positions appropriate to an asset pool of the Fund's size in virtually all anticipated market environments.

c) For which the Investment Committee has received a full, impartial, and complete briefing as to the characteristics, risks, and potential liabilities of that asset class. There should be thoughtful consideration by the individual members of the Investment Committee of their level of understanding of a new asset class prior to consideration for implementation.

Rationale:

As the Investment Committee is ultimately responsible for the management of Fund assets, it is incumbent on them to ensure that they understand the characteristics of the proposed investments and to ensure that others, such as the CIO, Investment Staff and Consultant, also fully understand these characteristics.

Procedure:

1. The Investment Committee, CIO, Investment Staff, and Consultant shall ensure that all individuals involved in the decision process understand the implications of investment in a new asset class.

Policy 8.4 - Implementation Process for Elimination of an Asset Class

Revision: 0
Approved: June 22, 1995

Policy:

Asset classes which are found, by operation of these Policies, not to be contributing to the progress of the Fund toward its objectives shall be eliminated. This elimination shall be the result of a review of the median results for managers in general pursuant to Policy 7.2 or a conclusion that an asset class no longer meets the requirements for inclusion in Policy 6.2.

Funds invested in eliminated asset classes shall be disbursed to remaining asset classes as established in the revised asset allocation and pursuant to the rebalancing procedures in Policies 3.5 and 3.6.

Rationale:

Asset classes which are not continuously contributing to the long-term goals and objectives of the Fund should be eliminated and their value redistributed to asset classes which have the prospect of adding an incremental contribution.

Procedure:

1. The implementation of this Policy involves the usage of the policies described above.

2. The CIO shall be responsible to the Investment Committee for implementation of this Policy when required.

Policy 8.5 - Number of Asset Classes and Styles Used for Implementation

Revision: 0
Approved: June 22, 1995

Policy:

The Investment Committee believes a simple investment structure is superior to a complex one unless significant incremental value can be demonstrated. Given this bias for simplicity:

a) The number of asset classes used should be kept to a minimum.

b) With the exception of venture capital, allocations to asset classes below 3% are of limited value as they have limited potential impact and distract attention.

c) Only manager styles which are distinct and differentiable, have objective criteria for identification, and have different performance characteristics which provide diversifying effects should be recognized.

d) Only styles which have proved to add value should be recognized.

Rationale:

While diversification is a critical requirement for management of the Fund and inappropriate concentrations of risk must be avoided, use of an excessive number of asset classes and manager styles should be avoided. Large numbers distract attention, tend toward mediocrity, and generally result in market-like, closet index, performance while active management fees are being paid.

Procedure:

1. During the process of considering asset classes and manager styles for inclusion in the asset allocation, due regard must be given to the investment value and need for the increase in complexity.

2. During the process of considering asset classes and manager styles for inclusion or elimination in the asset allocation, the contribution toward the Fund's goals, resulting from both allocation to the asset class and their inherent contribution potential shall be weighed versus an increase in complexity, the level of understanding required by the

Investment Committee, CIO, and Investment Staff and the implications of the lack of such full understanding.

There should be requirement for a contribution above a minimum level in order to accept the increased complexity.

Policy 8.6 - Style Weighting

Revision: 0
Approved: June 22, 1995

Policy:

In the absence of demonstrated value to adjusting the manager style weights from a market neutral level, the weighting of all recognized manager styles within an asset class shall be maintained at market neutral.

While recognizing the limitations inherent in using mean-variance optimization models to develop and evaluate asset mixes for manager styles within an asset class, these models can be used to investigate the expected returns and standard deviations of manager styles. The results of such optimizations may be considered in making the demonstration required in the first paragraph of this policy and in the implementation of manager style weights developed in that analysis.

Rationale:

Unless it can be shown that a long-term advantage can be gained by not looking like the market, it is preferable to maintain market neutral weightings of the manager styles in order to minimize the degree to which expected returns deviate from assumptions due to style weighting differences.

Procedure:

1. At the time of each asset allocation review, and annual asset class review, there shall be an evaluation of the investment benefit of weightings different from market neutral.

2. Mean-variance optimization models may used to evaluate non-neutral mixes and in the determination of expected returns from these mixes.

3. If there is a demonstrable value, and the non-market neutral weighting is approved, adjustments shall be made pursuant to the rebalancing procedures in Policy 3.5.

Policy 8.7 - Management of Alternative Investments

Revision: 0
Approved: July 27, 1995

Policy:

The Fund may, from time to time, make investments in securities which fall outside the previously defined asset classes. These investments, which can be broadly classified as alternative investments, may consist of relatively large scale pooled investments such as venture capital funds or purchases of small amounts of fixed income securities.

These securities, while relatively minor in terms of the total value of the Fund, are assets of the Fund and the process for their evaluation and review should parallel that for the larger asset classes.

In order to ensure that there is adequate accounting and review of these investments, the CIO shall establish responsibility for accounting, monitoring, and reviewing these assets within the Investment Staff. The CIO is authorized to segregate those assets which are truly incidental and require little more than accounting and presentation at maturity, (Incidental Assets), from those for which Investment Committee review and action may be required (Small Holdings).

For purposes of this policy, the Small Holdings may be treated as a group, and external resources may be used to assist the Investment Staff.

Rationale:

Regardless of the expressed preference for simplicity of structure, a portfolio of the size of the Fund tends to acquire small holdings in assets which are not the responsibility of the managers of the major asset classes and manager styles but nevertheless require monitoring. This policy establishes a basic structure to ensure that a minimum level of oversight is in place for those assets.

Procedure:

1. The CIO will periodically review the assets of the Fund which fall outside the responsibility of the investment managers selected by the asset class and manager style implementation process.

2. The CIO will establish within the Investment Staff responsibility for Small Holdings, and report to the Investment Committee on their status on a quarterly basis.

3. The CIO will establish within the Investment Staff a structure to ensure appropriate accounting and oversight of the Incidental Assets.

Section 9 - Asset Class Style Management

Policy 9.1 - Definition and Criteria for Specification of Asset Class Manager Styles

Revision: 0
Approved: June 22, 1995

Policy:

An asset class manager style used by the Fund should consist of a differentiable technique for managing assets from a single or a defined set of asset classes pursuant to a consistent intellectual process for identifying purchase and sale candidates. In order to be recognized, an asset class manager style should have an expected return, standard deviation of that return, and correlation coefficients with returns of other asset manager styles and asset classes.

Further, there should be objective criteria, derivable from evaluation of the portfolio asset and transactions, which can be used to identify the management style, to compare its values within these criteria with other managers executing the same style, and to identify circumstances where the manager is drifting from the execution of the style for which it was retained.

Rationale:

A significant portion of the portfolio monitoring and control structure for managers involves tracking consistency with style and evaluation of the value-added by a given manager versus that produced by its competitors. In order for this analysis to be valid, there needs to be a consistent and objective definition of each manager style.

Only manager styles which permit a high degree of validity in that classification should be used.

Procedure:

1. As part of the asset allocation review, the definition and specifications for identification of assets belonging to that asset class manager style should be reviewed.

2. This definition and specification should then be incorporated into the Investment Policy as defining acceptable portfolio parameters within that asset class manager style and into the guidelines and restrictions portion of manager contracts to provide guidance to managers as to acceptable investments.

Policy 9.2 - Process for Consideration of New Manager Styles

Revision: 0
Approved: July 27, 1995

Policy:

The Investment Committee desires to utilize the most effective mix of manager styles for each asset class. As the financial markets evolve, new styles of management may evolve and demonstrate their value. Existing styles can also be found to be divisible and evolve into differentiable styles. As effective implementation of these style might be found to add value to the Fund, during the asset allocation review process there shall be a review of techniques used to manage each asset class to see if examination of additional manager styles should be considered.

During the asset allocation review, the Investment Committee may direct the CIO or consultant to consider either new manager styles or the division of an existing style into different sub-styles.

Any such new manager styles must have a suitable definition and specifications as described in Policy 9.1.

The CIO or Consultant shall then evaluate the impact of the addition of that manager style when used in conjunction with the existing manager styles and use appropriate procedures for weighting and subsequent rebalancing of allocations to the various manager styles of each asset class.

In the event that multiple additional manager styles are to be considered, the CIO or consultant shall evaluate all combinations of new manager styles in conjunction with those presently used.

Rationale:

Rationale is contained within the policy.

Procedure:

1. Prior to initiation of the asset allocation review, the CIO or consultant shall solicit suggestions for new manager styles to be considered.

2. The CIO or consultant shall develop a precise definition of and specifications for the asset class pursuant to Policy 9.1.

3. The CIO or consultant shall develop appropriate assumptions for that manager styles to comply with Policy 6.3.

4. The Investment Committee shall review the results of the asset allocation review and with due consideration to Policy 6.2, consider the merits of the manager style for inclusion in the asset allocation and for funding. During that process, the bias for simplicity shall be given due consideration.

Policy 9.3 - Number of Managers Used for Implementation

Revision: 0
Approved: July 27, 1995

Policy:

Except as required to provide access to emerging managers pursuant to Policy 10.2, the usual number of active managers used for each manager style is two. Use of a number of managers beyond two requires a finding by the Investment Committee of a compelling investment case for the value of the use of more managers.

Rationale:

It is the belief of the Investment Committee that diversification comes from multiple asset classes and styles and that the usual result of multiple managers doing the same thing is mediocrity. An excessive number of managers increases costs due to the sliding scale or marginal management fees used by most managers and increases the review and monitoring effort required by the Investment Committee and Investment Staff.

Use of up to two active managers provides a backup in the event that an emergency replacement is required due to execution of Policy 7.5.

Procedure:

1. Should a finding be requested that there is a compelling investment case for increasing the number of managers, except for the use of emerging managers, the CIO with the assistance of the Investment Staff and Consultants shall make a recommendation to the Investment Committee regarding the merits of the investment case.

2. Should the Investment Committee approve waiver of this rule, there shall be a periodic evaluation of the actual value added versus that pro-forma value of conformance with the policy. That evaluation shall be brought to the Investment Committee on at least an annual basis for an on-the-record ratification of the waiver of this Policy.

Policy 9.4 - Manager Weightings

Revision: 0
Approved: June 22, 1995

Policy:

In the absence of a compelling investment case, the managers utilized to manage the Fund's assets in a given asset class manager style shall be funded approximately equally. In the event an additional emerging manager is used pursuant to Policy 10.2, that manager shall be funded subject to the funding provisions of Policy 10.2 or at the discretion of the Investment Committee.

In making the manager weighting decision with respect to an emerging manager, the Investment Committee shall use criteria such as but not limited to the size and maturity of the management organization, the total assets of the management firm and in this manager style, and an assessment by the CIO of the inherent risks involved with the manager style.

Rationale:

If the best possible managers are selected and their ongoing results monitored in the manner provided by these Policies and Procedures, there is no non-arbitrary reason to weight the managers differently.

Procedure:

1. Manager weights shall be periodically rebalanced pursuant to Policy 3.5. The tolerances permitted from the normal weight is within 10% of the normal allocation.

2. If, in the judgment of the CIO, that tolerance is not in the best interests of the Fund in a given market environment, the CIO shall recommend and the Investment Committee consider a proposal to defer the rebalancing until such time as the CIO believes the rebalancing can be accomplished with no material negative impact on the Fund.

Section 10 - Manager Management

Policy 10.1 - Manager Search Requirements

Revision: 1
Approved: January 26, 2006

Policy:

Due to the public trust of the Fund, the management of its assets shall be entrusted to investment managers of appropriate size, expertise, and experience, and who have demonstrated an extremely high level of business integrity.

In general, the following requirements will be applied to all investment managers included in searches, except those granted dispensation as Diversity Managers pursuant to Policy 10.2:

a) SEC registration under the Investment Company Act of 1940 and state Blue Sky Laws as required.

b) A minimum of five years of firm experience in the management of tax-exempt, institutional assets. Three of these years may represent experience by individuals with other firms, <u>provided</u> there is a contractual representation that individuals utilizing experience from other firms are directly involved with the management of the Fund's assets.

c) Experience with and current client mandates with allocation of funds of a size similar to that to be invested on behalf of the Fund. In general, except for managers granted dispensation as Diversity Managers pursuant to Policy 10.2, the Fund does not desire to represent more than 10% of the assets managed by the firm and more than 20% of the assets invested in the particular manager style. These tests shall be applied at the time of engagement and reviewed at each quarterly manager review.

Additional requirements may be imposed for specific mandates or may be required by the Philadelphia Code, the Laws of the Commonwealth of Pennsylvania, or any authoritative Federal legislation. In the event the foregoing is in conflict with any legal requirement, that legal requirement shall have precedence.

Based on the Investment Committee’s desire for the inclusion of more Diversity Managers (as defined in Policy 10.2), the Investment Staff/Consultant will include at least one Diversity Manager in all searches.

Rationale:

The rationale is contained within the policy.

Procedure:

1. The above requirements shall be made a part of the Minimum Qualifications for each manager search and verified by the Investment Staff and/or the Consultant.

2. The Investment Staff/Consultant will include at least one Diversity Manager who meets the minimum criteria of Policy 10.1 in all searches. If no Diversity Manager meets the minimum criteria of Policy 10.1, the Investment Staff/Consultant will seek to include a Diversity Manager who meets the criteria of Policy 10.2.

3. The Investment Staff/Consultant will first review the managers in the Opportunity Fund in order to identify a suitable candidate for inclusion in the search.

4. The Investment Staff/Consultant will include an appendix in all search material which details the reasons those Diversity Managers not included were excluded.

5. At the time of each quarterly manager review, the above requirement shall be reviewed by the Investment Staff and any exceptions brought to the attention of the CIO. The CIO may recommend to the Investment Committee a waiver of any of these requirements for one quarter with respect to a non-emerging manager and four quarters with respect to emerging managers.

6. Should the Investment Committee choose not to waive the requirements or the permitted waiver period has been consumed, the manager shall be terminated pursuant to Policy 3.6.

Policy 10.2 - Provision for Diversity Managers

Revision: 1
Approved: January 26, 2006

Policy:

It is the belief of the Investment Committee that it is desirable to increase participation of minority-, women-, and disabled-owned investment managers (“Diversity Managers”). The Investment Committee acknowledges that an obstacle to access to and participation in the investment management industry is the limited history and relatively small asset size of these firms.

It is the policy of the Investment Committee to facilitate access to the industry for these firms by reducing certain of the initial screening criteria which would disadvantage or preclude participation in the competition for the management of the Fund's assets.

As such, if the Investment Staff/Consultant is unable to identify a qualified Diversity Manager who meets the criteria in Policy 10.1, the Investment Staff/Consultant will seek to include a Diversity Manager who meets the criteria set forth below.

For the purpose of this Policy, a "Diversity Manager" shall mean a corporation, company, partnership, firm, business or other entity in which at least fifty one percent (51%) of the beneficial ownership interests are held by one or more persons who are a woman, a minority person, or a disabled person, or any combination thereof. For purposes hereof, a "minority person" and a "disabled person" shall have the definitions as set forth in the Mayor's Executive Order 2-05, as may be amended from time to time.

The dispensations granted in the provisions of Policy 10.1 to Diversity Managers are:

a) A minimum of **three** years of firm experience in the management of tax-exempt, institutional assets. **Two** of these years may represent experience by individuals with other firms, <u>provided</u> there is a contractual representation that individuals utilizing experience from other firms are directly involved with the management of the Fund's assets.

b) The firm has experience with and current client mandates with allocation of funds of a size similar to the reduced size of that to be invested on behalf of the Fund. The Fund will accept representing up to **25%** of the assets managed by the firm and up to **60%** of the assets invested in the particular manager style. These tests shall be applied at time of engagement and reviewed at each quarterly manager review.

In the event that dispensations are granted pursuant to Policy 10.1 to Diversity Managers, use of such managers is limited as follows:

a) No more than five percent (5%) of Fund assets at time of initial allocation.

b) No more than one such manager can be utilized per manager style.

Rationale:

The rationale is contained within the policy.

Procedure:

1. The Investment Staff/Consultant will include at least one Diversity Manager who meets the minimum criteria of Policy 10.1 in all searches. If no Diversity Manager meets the minimum criteria of Policy 10.1, the Investment Staff/Consultant will seek to include a Diversity Manager who meets the criteria of Policy 10.2

2. The Investment Staff/Consultant will first review the managers in the Opportunity Fund in order to identify a suitable candidate for inclusion in the search.

3. The Investment Staff/Consultant will include an appendix in all search material which details the reason those Diversity Managers not included were excluded.

4. Annually, the CIO and Investment Staff shall review the qualifications under the Diversity Manager status.

Policy 10.3 - Screening Criteria for Consideration as Finalists

Revision: 0
Approved: July 27, 1995

Policy:

In order to ensure that the best investment managers are considered to manage assets for the Fund, it is necessary that the same criteria be considered for new managers that will be used to evaluate existing managers.

In addition to whatever criteria the Investment Committee wishes to consider, the investment performance, both investment return and standard deviation, for the new manager's proposed product shall be sufficient to place it in the unrestricted retention category when Policy 7.4 is applied.

As these judgments will be based entirely on composite performance provided by the manager, there must be a high degree of credibility for that performance such as provided by AIMR compliance certification.

Rationale:

As the performance monitoring standards for all managers are being tightened by application of these procedures, it is logical that managers being considered for selection by the Fund meet the performance standards established by Policy 7.4. To not meet those standards would likely result in the new manager being placed on a probationary status soon after being selected.

Procedure:

1. The CIO shall provide pro forma Forms 7.4 for each manager proposed as a finalist for each manager search. The Investment Staff shall complete the pro forma review and the CIO shall provide their recommendation for each proposed finalist in light of its conformance with the Fund's Policies and Procedures.

Policy 10.4 - Development of Manager Objectives, Guidelines, and Restrictions

Revision: 1
Approved: February 25, 1999

Policy:

It is the policy of the Investment Committee that prior to assumption of investment management responsibility for a portion of the Fund, each manager shall have developed for it a specific set of manager objectives, guidelines, and restrictions. As detailed in Policy 10.5, these objectives, guidelines, and restrictions shall be incorporated into each manager's contract and the manager's conformance with those guidelines will be reviewed by the Investment Staff as part of their ongoing monitoring process.

These manager objectives, guidelines, and restrictions shall be reviewed annually on the anniversary of the manager assuming responsibility for the Fund's assets or at any time deemed appropriate.

The manager's objectives will include specific investment performance targets and benchmarks, both in terms of return as well as standard deviation, derived from and consistent with Policy 6.3.

The investment guidelines will include asset class and manager style definitions derived from and consistent with the Policies 8.1 and 9.1 respectively. In the development of these investment guidelines, multiple asset class or manager styles as defined by Policies 8.1 and 9.1 respectively are permitted.

The definition of an asset class and manager style, which may be multiple with respect to a given manager, defines all permitted investments that may be used at any time by the investment manager. Prior permission from the CIO will be required to deviate from this definition. The CIO will communicate to the Investment Committee all applications of this discretion.

The Investment Committee expects that this discretion will be used sparingly and used primarily to broaden the scope of asset classes, to pursue apparently attractive investment opportunities outside the scope of the manager's mandate, or to mitigate a period where a given manager's asset class or style is out of favor.

In those cases where a manager is limited to a growth or value style, market circumstances occasionally blur the definitions of growth and value styles within the domestic equity asset class. In those cases, the investment guidelines may grant flexibility to permit up to 10% of the equity investments to have Price/Earnings Ratio, Five-Year Earnings per Share Growth Rate, Dividend Yield, or Price/Book Ratio characteristics not defined as being consistent with the manager's style as defined in Policy 9.1 and its associated Statement. There is **no** parallel gray-zone afforded for the large-capitalization and small-capitalization dimension.

The investment restrictions provide limitations on usage or concentrations of securities **within** the permitted set of assets and any other limitations on the manager in its management of the portfolio.

Rationale:

In order to provide information as to the permitted boundaries of its activities, each investment manager must receive specific objectives, guidelines, and restrictions and understand that it is being held to them.

These objectives, guidelines, and restrictions must be consistent with the asset class and manager style assumptions in order for the integrated architecture to yield the desired long-term performance.

As broader definitions of asset classes are now used, it is expected that many managers will have guidelines permitting multiple asset classes and/or manager styles.

Procedure:

1. Prior to inception of responsibility for a manager, the CIO shall cause to be developed manager specific objectives, guidelines, and restrictions. These are incorporated into the manager contracts and retained by the Investment Staff for incorporation in the periodic manager review process.

2. Annually on the anniversary of the inception of responsibility of each manager, the CIO shall review the established objectives, guidelines, and restrictions for appropriateness and make adjustments as required. These adjustments are binding on the manager as a condition for continuing as a manager for the Fund.

Policy 10.5 - Manager Contracts

Revision: 0
Approved: July 27, 1995

Policy:

In order to enforce its rights and to better communicate its expectations, each manager with responsibility for the management of Fund assets shall have a current management contract with the Fund. In addition to standard language required for contracts and by the Philadelphia Code, the following investment specific information shall be included:

1. The manager specific objectives, guidelines, and restrictions developed for that manager pursuant to Policy 10.4.

2. A statement that the objectives, guidelines, and restrictions are fully binding on the manager and investments beyond those guidelines and restrictions including securities not defined as being with the asset class are at the risk of the manager and that the Fund can and will pursue recovery for losses, both actual and opportunity.

Rationale:

The integrated architecture being developed by these Policies and Procedures depends on the investment managers staying with their boundaries and performing as expected. While performance cannot be guaranteed, it is reasonable to expect and require that investment managers stay within the boundaries agreed to.

By incorporating the language to be used for evaluation into the manager contracts, there is clarity as to the seriousness with which the Investment Committee considers the manager's role in the process and the degree of control in place.

Procedure:

1. Prior to inception of management responsibility, a manager specific contract shall be agreed, approved, and processed as required, incorporating the objectives, guidelines, and restrictions appropriate for that manager to assume its role in the management process of the Fund.

2. During the quarterly review of each manager, the Investment Staff will evaluate compliance with the contractual language and incorporate an affirmative statement regarding such compliance in each manager's review.

3. During the quarterly review or at any other time, should any deviation from the contractual language be identified, the CIO shall be notified.

Policy 10.6 - Criteria for Ongoing Manager Monitoring

Revision: 0
Approved: June 22, 1995

Policy:

It is the policy of the Investment Committee that each manager be monitored quarterly for performance in conformance with its benchmarks, performance attribution, events impacting the management organization with a potential for detrimental impact on the Fund's assets, and for conformance with its manager style's expected portfolio attributes.

In the event that concerns about a manager's performance arise, additional analysis may be required.

Rationale:

In order to objectively evaluate managers who add value to the Fund and merit retention, quantitative measurements are required. These measures assess the past performance in meeting the objectives established for that manager and attempt to assess the likelihood that future performance will remain within acceptable tolerances.

Procedure:

1. On a quarterly basis, each manager shall be evaluated objectively by the Investment Staff or Consultant for conformance with benchmarks, performance attribution, and portfolio analytics to assess conformance with style. This review will be performed pursuant to Policy 7.4.

2. On a quarterly basis, each manager shall be evaluated subjectively by the Investment Staff for the expected impact of any changes in the manager's organization and its possible impact on the management of the Fund's assets. This review will be performed using the criteria in Policy 7.5.

3. The Investment or Consultant shall make a recommendation to the CIO for any action and the CIO shall make a recommendation to the Investment Committee for action regarding the manager.

Policy 10.7 - General Criteria for Termination

Revision: 0
Approved: June 22, 1995

Policy:

Managers will be terminated in a manner to minimize the costs to the Fund if in the opinion of the Investment Committee, based on recommendation of the CIO, Investment Staff, or Consultant their retention does not serve the prudent management of the Fund's assets.

This finding can be the result of an extraordinary review of the manager pursuant to Policy 7.5, or ongoing manager monitoring pursuant to Policy 10.6. Examples of circumstances which can generate such a finding include but are not limited to those found in Policy 7.5.

There are no differences in the operation of Policy 7.5 between emerging and non-emerging managers.

The assets of terminated managers are generally transferred to the other manager in the manager style category pending the engagement of a replacement manager.

Rationale:

Managers with problems which can adversely impact the Fund's assets in a material way require rapid while controlled termination. This policy provides examples of the rationale and identification of an interim management process during the search for a new manager.

Procedure:

1. The procedure for implementation is contained within the referenced policies.

Policy 10.8 - Performance Criteria for Termination

Revision: 0
Approved: June 22, 1995

Policy:

The performance criteria qualifying a manager for termination are contained in Policy 7.4. Failure to meet the performance objectives in that policy with the grace periods allowed are cause for termination.

There are no differences in the operation of Policy 7.4 between emerging and non-emerging managers.

The assets of terminated managers are generally transferred to the other manager in the manager style category pending the engagement of a replacement manager.

Rationale:

Poor performance at the manager level generates a significant risk that the goals and objectives of the Fund will not be meet. Rapid termination of managers who are under performing is required after there has been sufficient time to differentiate between a strategy or process being out of favor and a manager whose process or management strategy is significantly flawed.

Procedure:

1. The procedure for implementation is contained within the referenced policies.

Policy 10.9 - Performance Criteria Used for Rebalancing

Revision: 0
Approved: August 24, 1995

Policy:

The rebalancing process which implements Policy 3.5 - Permitted Deviations from Asset Allocation Weights and Rebalancing Procedures, utilizes a metric for performance. This metric is optionally used to impact which managers and for which amounts transfers are made to implement the required rebalancing.

As the methodology used for the rebalancing requires that all performance criteria and evaluations be expressed as a single numerical value, judgment will be required on summarizing all known information and judgments about the performance of each manager.

For purposes of the rebalancing operations, the following Performance Code system shall be used:

1. Should be considered for receiving additional funds
2. Maintain current level of funds
3. Should be considered as a source for funds for reallocation
4. All funds should be reallocated to other managers

As this process involves a subjective integration of all available information, insights, and judgments, the Investment Committee delegates to the CIO the authority to develop and maintain on an ongoing basis the Performance Codes for each manager utilized by the Fund. The CIO shall present to the Investment Committee each initial code and code change for their ratification prior to its use in the Policy 3.5 Rebalancing procedure.

Rationale:

The rebalancing procedure and the algorithm which was developed to determine the transactions required for implementation requires that managers be identified as belonging to four classes: eligible for additional funds, existing funds to be maintained, considered to be a source of funds, and all funds to be reallocated.

This single classification system requires the integration of historical performance, judgments by the CIO, staff, and consultants regarding structure and process, consistency with style and general prospects. As this single score has a dramatic impact on the rebalancing process and therefore the amount of assets managed on behalf of the Fund, the determination of the Performance Code is a critical process in the rebalancing operation.

Procedure:

1. Each quarter, as part of the quarterly review process and preparation for the implementation of Policy 3.5, the CIO shall designate or update the currently maintained Performance Code for each manager.

2. The CIO shall report any initial code or code level changes to the Investment Committee for their ratification.

3. After ratification, the Performance Code shall be used as part of the Policy 3.5 rebalancing procedure.

Section 11 - Summary Statements of Fund Policy Findings

City of Philadelphia
Board of Pensions and Retirement
Investment Division

Approved: 1/12

Statement 5.1 - Investment Policy

The Board has approved this investment policy pursuant to Policy 5.1:

THE MUNICIPAL PENSION FUND

STATEMENT OF INVESTMENT POLICY

I. GENERAL

The principal purpose of the Municipal Pension Fund (Fund) is to assure the availability of resources adequate to provide retirement benefits for its members and their beneficiaries. Investment decisions will be based upon safety of principal and optimal total return in that order.

The members of the Board of Pensions and Retirement shall be the trustees of the fund and shall have exclusive control and management of the fund and full power to invest and preserve the same subject, however, to the exercise of that degree of judgement, skill and care under the circumstances then prevailing which persons of prudence, discretion and intelligence, who are familiar with such matters would use in the conduct of an enterprise of a like character and with like aims.

The Philadelphia Board of Pensions and Retirement shall appoint an Investment Committee comprised of all of its members. The Director of Finance shall serve as Chairman of the Investment Committee. Oversight of investment activities shall be the responsibility of the Investment Committee.

II. **INVESTMENT POLICY**

The overall investment objectives and goals should be achieved by use of a diversified portfolio, with safety of principal a primary emphasis. The portfolio policy should employ flexibility by prudent diversification into various asset classes based upon the relative expected risk-reward relationship of the asset classes and the expected correlation of their returns.

It should be the objective of any manager to minimize losses in declining markets and to avoid speculation in rising markets.

III. **OBJECTIVES AND GOALS**

The Fund seeks an annual total rate of return of not less than 8.15% over a full market cycle with a standard deviation of not greater than 13.43%   It is anticipated that this return standard should enable the Fund to meet its actuarially assumed earnings projections (currently 8.15%) over a market cycle. Accordingly, the Fund's investment program will pursue its aforestated total rate of return by a combination of income and appreciation, relying upon neither exclusively in evaluating a prospective investment for the Fund. Any exceptions, an investment made solely for income with no prospect of appreciation or an investment made solely for appreciation prospects with no income contribution, will be made only upon recommendation of the Fund's Investment Committee and approval by a majority of the Pension Fund Board.

IV. PORTFOLIO COMPOSITION

As of February 25, 1999, the approved target portfolio composition is :

Domestic Equity	**32.50%**	**(+3%, -3%)**
comprised of		
Large Capitalization Growth	6.50%	(+1%, -1%)
Large Capitalization Value	6.50%	(+1%, -1%)
Small Capitalization	3.25%	(+1%, -1%)
Core	16.25%	(+2%, -2%)
International Equity	**20.00%**	**(+0%, -3%)**
comprised of		
Established Markets	18.00%	(+2%, -3%)
Emerging Markets	2.00%	(+0%, -2%)
Global Fixed Income	**32.50%**	**(+2%, -2%)**
Balanced	**10.00%**	**(+2%, -2%)**
comprised of		
Cash Equivalents	0.00%	(+2%, -0%)
Tactical Asset Allocation	10.00%	(+2%, -2%)
Other	**5.00%**	**(+1%, -5%)**
comprised of		
Alternative Investments	5.00%	(+0%, -5%)
Real Estate	0.00%	(+2%, -0%)

V. ABSOLUTE RESTRICTIONS

The following are prohibited, except where Board approval has been received for a specific transaction, or where the Board has approved repetitive, non-speculative uses in a manager contract:

Short Sales

Margin Purchases

Commodities

It is the policy of the Board not to permit transactions which would increase the leverage of the Fund's position above unity or expose the Fund to the potential of extraordinary losses.

Transactions involving short sales or margin purchases of futures and options to rebalance asset classes, adjust duration, and equitize cash may be considered for single transaction or repetitive approval.

VI. ORGANIZATION AND IMPLEMENTATION

The investment structure shall be managed in accordance with the current City of Philadelphia Board of Pensions and Retirement Investment Division Policies and Procedures Manual.

VII. QUALITY STANDARDS

It will be the responsibility of the Investment Committee to develop quality standards in quantitative terms and to formally convey such standards and requirements to portfolio managers.

Approved: 1/12

Statement 6.2 - Asset Classes Approved for Use

The Board has approved for investment the following asset classes as defined pursuant to Policy 8.1:

1. Cash
2. Domestic Equity
3. International Equity
4. Specialist Emerging Markets
5. Fixed Income
6. Private Equity
7. Real Estate
8. Tactical Asset Allocation
9. Hedge Funds
10. Liquidity Pool

City of Philadelphia
Board of Pensions and Retirement
Investment Division

Approved: 2/99

Statement 6.3 - Asset Class Assumptions

Inflation Assumption: 3.00%

Domestic Equity

Expected Return: 10.10%

Expected Standard Deviation: 19.90%

Expected Correlation Matrix:

1.00	Domestic Equity
0.50	International Equity
0.25	Specialist Emerging Market
0.50	Fixed Income
0.70	Private Equity
0.60	Real Estate
0.86	Tactical Asset Allocation
0.65	Liquidity Pool

International Equity

Expected Return: 10.00%

Expected Standard Deviation: 23.50%

Expected Correlation Matrix:

0.50	Domestic Equity
1.00	International Equity
0.30	Specialist Emerging Market
0.25	Fixed Income
0.25	Private Equity
0.20	Real Estate
0.42	Tactical Asset Allocation
0.32	Liquidity Pool

Specialist Emerging Market

Expected Return: 11.40%

Expected Standard Deviation: 28.00%

Expected Correlation Matrix:

0.25	Domestic Equity
0.30	International Equity
1.00	Specialist Emerging Market
0.00	Fixed Income
0.00	Private Equity
0.00	Real Estate
0.38	Tactical Asset Allocation
0.29	Liquidity Pool

Fixed Income

Expected Return: 6.30%

Expected Standard Deviation: 9.60%

Expected Correlation Matrix:

0.50	Domestic Equity
0.25	International Equity
0.00	Specialist Emerging Market
1.00	Fixed Income
0.20	Private Equity
0.30	Real Estate
0.60	Tactical Asset Allocation
0.40	Liquidity Pool

Private Equity

Expected Return: 13.40%

Expected Standard Deviation: 35.00%

Expected Correlation Matrix:

0.70	Domestic Equity
0.25	International Equity

0.00 Specialist Emerging Market
0.20 Fixed Income
1.00 Private Equity
0.50 Real Estate
0.60 Tactical Asset Allocation
0.50 Liquidity Pool

Real Estate

Expected Return: 7.70%

Expected Standard Deviation: 13.00%

Expected Correlation Matrix:

0.60 Domestic Equity
0.20 International Equity
0.00 Specialist Emerging Market
0.30 Fixed Income
0.50 Private Equity
1.00 Real Estate
0.40 Tactical Asset Allocation 0.40 Liquidity Pool

Tactical Asset Allocation

Expected Return: 8.60%

Expected Standard Deviation: 15.10%

Expected Correlation Matrix:

0.86 Domestic Equity
0.42 International Equity
0.38 Specialist Emerging Market
0.60 Fixed Income
0.60 Private Equity
0.40 Real Estate
1.00 Tactical Asset Allocation

0.90 Liquidity Pool

Liquidity Pool

Expected Return: 8.30%

Expected Standard Deviation: 14.40%

Expected Correlation Matrix:

0.65	Domestic Equity
0.32	International Equity
0.29	Specialist Emerging Market
0.40	Fixed Income
0.50	Private Equity
0.40	Real Estate
0.90	Tactical Asset Allocation
1.00	Liquidity Pool

Approved: 1/2012

Statement 8.1 - Asset Class Definitions

Domestic Equity

Domestic Equity securities include common and preferred stocks of U.S. corporations or investment company shares (closed-end or open-end) holding by investment policy only or nearly only common and preferred stocks of U.S. corporations and cash equivalent securities.

Domestic equity specifically excludes American Depository Receipts (ADRs) and other U.S. traded instruments whose prices are derived directly or indirectly from the prices or price changes of non-U.S. common stocks except:

a) For managers which have a designated benchmark containing ADRs, ADRs are permitted up to the percentage represented in the benchmark, and

b) If ADRs are permitted by (a) above, such usage of ADRs is limited strictly to those issues which have characteristics similar to the type of securities that would normally occur in the portfolio given the managers stated management style.

Also specifically excluded are market-basket securities such as index futures, index options, or options on index futures.

The domestic equity asset class contains stocks of all capitalization ranges and style-based selection parameters. Only issues which are fully registered and tradable are permitted.

International Equity

International Equity securities include common and preferred stocks of non-U.S. corporations or investment company shares (closed-end or open-end) holding by investment policy only or nearly only common and preferred stocks of non-U.S. corporations and cash equivalent securities.

International Equity can include American Depository Receipts (ADRs), Global Depository Receipts (GDRs), or direct ownership of non-U.S. shares. Specifically excluded are market-basket securities such as index futures, index options, or options on index futures.

As these securities are priced in and pay dividends in foreign currencies, there is a decision required as to whether or not or to what degree to hedge the foreign currency exchange risk.

Specialist Emerging Markets

Emerging Market securities include common and preferred stocks of non-U.S. corporations domiciled in countries not considered established markets or investment company shares (closed-end or open-end) holding by investment policy only or nearly only common and preferred stocks of non-U.S. corporations domiciled in countries not considered established markets, and cash equivalent securities.

Emerging Market securities can include American Depository Receipts (ADRs), Global Depository Receipts (GDRs), or direct ownership of non-U.S. shares. Specifically excluded are market-basket securities such as index futures, index options, or options on index futures.

As these securities are priced in and pay dividends in foreign currencies, there is a decision required as to whether or not or to what degree to hedge the foreign currency exchange risk.

Fixed Income

Fixed income includes debt-based fixed income securities. Included in fixed income securities are mortgage-backed, asset-backed, and other pass-through securities. All fixed income securities have a time to maturity of at least one year at time of purchase.

Fixed income includes domestic government and corporate debt securities and further includes bonds and other interest-paying debt securities issued by entities domiciled outside the United States. These entities can include states (sovereign debt), political subdivisions of states such as provinces or municipalities, public authorities, and various corporate-like entities whether private sector, quasi-private, or public.

Private Equity

Private Equity consists of assets which do not fit into other, more standard classifications and do not trade on public markets. They include venture capital, tangible assets, and other non-traditional investments.

Real Estate

Real Estate consists of collective funds, partnerships, and investment companies invested entirely in domestic real estate as well as separate account domestic real estate interests. These investments may from time to time also hold substantial cash positions awaiting property acquisitions, property improvements, and distributions to holders.

This asset class includes all types of improved real estate generally used by institutional investors including office, commercial, industrial, and multi-family residential. Raw land held as a long term speculative investment is specifically excluded from the definition of new real estate. Land held as part of a planned improvement program is permitted.

It is expected that substantially all new real estate investments will represent equity interests or in be in some manner tied to the intrinsic performance of property and not represent primarily a return for funds lent to financial equity interests of others.

Tactical Asset Allocation

Tactical Asset Allocation is less of an asset class than a management technique. TAA products use an expected return model to weight investments in other asset classes, generally domestic equity, domestic fixed income, and short term investments. The TAA model will direct transfers between the asset classes based on its expectation of 6-12 month future returns.

Generally, the assets used are index funds representing the asset classes or a derivative security which tracks the performance of the underlying asset class. Those products using index funds are funded and represent a portion of the total assets. Those products using derivatives do not require funding beyond initial and maintenance margin requirements and operate on an overlay basis.

As TAA products are strategies rather than actual asset classes, the net exposure to domestic equities, domestic fixed income, and cash equivalents can be added to other assets of that type already held by the Fund.

Hedge Funds

Hedge fund strategies generate returns by exploiting mis-pricings and inefficiencies in global capital markets, while reducing exposure to primary market factors/risks (e.g. equity and credit), through various hedging techniques. These strategies have historically delivered returns that are less correlated to equity and fixed income markets than traditional investment strategies. The addition of hedge funds presents an opportunity for the Fund to enhance returns and reduce portfolio volatility.

The long-term objectives of the hedge fund Program are as follows:

a. Enhance the Fund’s long-term risk-adjusted returns;
b. Preserve capital and lower the Fund’s overall volatility;
c. Provide diversification benefits to the Fund.

Hedge Funds may employ leverage, and enter into long, short and/or derivative positions, with the goal of performing well, providing positive absolute returns, in all market conditions.

Hedge Funds are subject to fewer governmental regulations than traditional equity and debt managers. Their investment strategies are generally proprietary and non-public. They also afford their limited partner investors less liquidity than do traditional equity managers, due to so-called "lock-up" provisions within partnership agreements, which typically require the limited partner investor to provide the general partner several months advance notice before cashing out or "redeeming" its investment.

The **Independence Fund** shall have the asset make-up, investment properties and strategic latitude of a Hedge Fund, but without the liquidity encumbrances typical of a Hedge Fund.

(*see* Statement of Investment Policy for Hedge Funds, November 2010)

Liquidity Fund

The Liquidity Fund is a composite investment intended to minimize the cash drag and rebalancing impact of the portfolio's contributions and benefit payments. The Liquidity Fund is invested in commingled vehicles in approximately the same proportions as the strategic asset allocation for Domestic Equity, International Equity, and Fixed Income.

Approved: 2/99

Statement 9.1 - Manager Style Definitions

Deleted 2/99

Section 12 - Forms Used for Policies and Procedures

City of Philadelphia
Board of Pensions and Retirement
Investment Division

Revised: 7/95

Form 7.2/7.3 - Review of Asset Class Assumptions/Performance

Review Date:

Asset Class Name:

Asset Class Definition:

Assumptions Used
(Three Year Horizon)

Inflation Assumption:

Expected Return:

Expected Standard Deviation:

Expected Correlation Matrix:

Actual Performance
(Three Year Horizon)

Actual Return:

Actual Standard Deviation:

Actual Correlation Matrix:

Investment Staff Comments/Recommendations:

Investment Staff:

CIO Approval:

Board Action: Date:

City of Philadelphia
Board of Pensions and Retirement
Investment Division

Revised: 8/96

Form 7.4a - Active Domestic Equity Manager Review

Review Date:

Manager Name:
Manager Style:
Date Retained:
Dollars Managed:
Average Fee (bp):

Current Cross-Sectional Beta:

Three Year Portfolio Beta:
Five Year Portfolio Beta:

Returns	Gross	Net of Fees	Risk Adjusted	Benchmark
1 Quarter				
4 Quarters				
12 Quarters				
20 Quarters				

Risk	Standard Deviation	Net of Fees	Return/ Risk	Benchmark
12 Quarter				
20 Quarters				

Relative Performance	Gross	Median	Rank
1 Quarter			
4 Quarters			
12 Quarters			
20 Quarters			

Review Date:

Manager Name:
Manager Style:

Evaluation

1. **Risk Adjusted Returns, Net of Fees > Benchmark for Two of Three Periods One-Year or Longer or for any Three Periods**

	YES	NO
1 Quarter	/ /	/ /
4 Quarters	/ /	/ /
12 Quarters	/ /	/ /
20 Quarters	/ /	/ /
* Meets 2 of 3 Periods Requirement	/ /	/ /
* Meets 3 Periods Requirement	/ /	/ /

2. **Return/Risk > Benchmark**

	YES	NO
* 12 Quarters	/ /	/ /

3. **(1) Relative Performance > Median for Two of the Three Periods One-Year or Longer and**
(2) Relative Performance > 62nd Percentile for the Third

	>MEDIAN	>62nd P'TILE
1 Quarter	/ /	/ /
4 Quarters	/ /	/ /
12 Quarters	/ /	/ /
20 Quarters	/ /	/ /
* Meets Relative Performance Requirements	/ /	/ /

Review Date:

Manager Name:
Manager Style:

Investment Staff Comments

a) Style Consistency

b) Organizational Changes

c) Other

Present Status **Recommended Status**

Satisfactory - 0
Watch - 1 | 2
Probation - 3 | 4
Extraordinary - 5 | 6
Terminate - 7
Consider for Additional Allocation - 8

Explanation

Investment Staff:

CIO Approval:

Board Action: Date:

City of Philadelphia
Board of Pensions and Retirement
Investment Division

Revised: 8/96

Form 7.4b - Manager Review

Use For Active Managers Other Than Domestic Equity

Review Date:

Manager Name:
Manager Style:
Date Retained:
Dollars Managed:
Average Fee (bp):

Returns	Gross	Net of Fees	Benchmark
1 Quarter			
4 Quarters			
12 Quarters			
20 Quarters			

Risk	Standard Deviation	Net of Fees	Return/ Risk	Benchmark
12 Quarter				
20 Quarters				

Relative Performance	Gross	Median	Rank
1 Quarter			
4 Quarters			
12 Quarters			
20 Quarters			

Review Date:

Manager Name:
Manager Style:

Evaluation

1. **Risk Adjusted Returns, Net of Fees > Benchmark for Two Periods of Three One-Year or Longer or for any Three Periods**

	YES	NO
1 Quarter	/ /	/ /
4 Quarters	/ /	/ /
12 Quarters	/ /	/ /
20 Quarters	/ /	/ /
* Meets 2 of 3 Periods Requirement	/ /	/ /
* Meets 3 Periods Requirement	/ /	/ /

2. **Return/Risk > Benchmark**

	YES	NO
* 12 Quarters	/ /	/ /

3. **(1) Relative Performance > Median for Two Periods of Three One-Year or Longer and**
(2) Relative Performance > 62nd Percentile for the Third

	>MEDIAN	>62nd P'TILE
1 Quarter	/ /	/ /
4 Quarters	/ /	/ /
12 Quarters	/ /	/ /
20 Quarters	/ /	/ /
* Meets Relative Performance Requirements	/ /	/ /

Review Date:

Manager Name:
Manager Style:

Investment Staff Comments

a) Style Consistency

b) Organizational Changes

c) Other

Present Status **Recommended Status**

Satisfactory - 0
Watch - 1 | 2
Probation - 3 | 4
Extraordinary - 5 | 6
Terminate - 7
Consider for Additional Allocation - 8

Explanation

Investment Staff:

CIO Approval:

Board Action: Date:

City of Philadelphia
Board of Pensions and Retirement
Investment Division

Revised: 8/96

Form 7.4c - Passive Manager Review

Review Date:

Manager Name:
Benchmark Index:
Date Retained:
Dollars Managed:
Average Fee (bp):

Returns	Gross	Net of Fees	Benchmark	Tracking Error
Quarters Ending:				

Number of Quarters: ______________

Years Ending:

Manager Name:
Benchmark Index:

Evaluation

1. **Tracking Error of Less Than or Equal to 25 Basis Points for 75% of Quarterly Periods**

	YES	NO
Meets Requirement	/ /	/ /

2. **Tracking Error of Less Than or Equal to 50 Basis Points for All Annual Periods**

	YES	NO
Meets Requirement	/ /	/ /

Investment Staff Comments

a) Organizational Changes

b) Other

Manager Name:
Benchmark Index:

Present Status **Recommended Status**

Satisfactory - 0
Watch - 1 | 2
Probation - 3 | 4
Extraordinary - 5 | 6
Terminate - 7
Consider for Additional Allocation - 8

Explanation

Investment Staff:

CIO Approval:

Board Action: Date:

City of Philadelphia
Board of Pensions and Retirement
Investment Division

Revised: 7/95

Form 8.2 - Consideration of New Asset Class

Review Date:

Asset Class Name:

Asset Class Definition:

Actual Performance
(Three Year Horizon)

Inflation Assumption:

Actual Return:

Actual Standard Deviation:

Actual Correlation Matrix:

Investment Staff Comments/Recommendations:

Review Date:

Asset Class Name:

Investment Staff:

CIO Approval:

Board Action: Date:

City of Philadelphia
Board of Pensions and Retirement
Investment Division

Revised: 8/95

Form 10.9 - Determination of Rebalancing Performance Code

Review Date:

Manager Name:

Asset Class/Style:

1 Should be considered for receiving additional funds
2 Maintain current level of funds
3 Should be considered as a source for funds for reallocation
4 All funds should be reallocated to other managers

Current Performance Code:

Recommended Performance Code

CIO/Investment Staff Comments/Recommendations:

Investment Staff:

CIO Approval:

Board Action: Date: