

APPENDIX - C -

INVESTMENT MANAGER MONITORING AND RETENTION POLICY

I. POLICY OBJECTIVES AND PRINCIPLES

Investment manager retention and termination decisions have high costs, whether it be the decision to retain unskilled managers for too long, or the decision to terminate a skilled manager prematurely. Not only are the costs of redeploying assets considerable, but the variability of most manager returns complicates straightforward evaluations of manager skill. Without reliable assessments of manager skill, IPERS has little assurance that a new manager will perform better than a previously terminated manager.

This manager monitoring and retention policy provides a systematic, consistent, and rational framework for manager retention and termination decisions, thereby avoiding untimely and haphazard actions that may adversely impact Fund returns. In addition, the policy is intended to:

- Foster a long-term approach to manager evaluations.
- Provide a logical and statistically valid framework to evaluate manager skill.
- Improve client/manager communication by apprising each manager of the quantitative and qualitative standards by which they will be judged, and the near-term and long-term consequences of failing to meet these standards.
- Promote timely and appropriate responses to actual and potential performance issues.
- Provide flexibility to allow application across all asset classes, management styles, and market environments.

This policy shall apply to all of IPERS' external managers, except where otherwise noted.

Although quantitative assessments of manager success are useful in judging whether managers have been successful in the past, they can be poor predictors of future success. Since IPERS' goal is to determine the likelihood of future success, it is critical that the ultimate retention/termination decision focus on the qualitative aspects of each manager relationship, as well as quantitative assessments of past performance.

Staff will utilize quantitative tools such as cumulative and rolling excess return¹ analysis to identify performance shortfalls, while qualitative assessments of organization, personnel, and investment approach will be used to diagnose the source of the shortfall. Regular qualitative assessments are also valuable in flagging potential problems by drawing attention to developments that might lead to future poor performance.

In addition to identifying existing and potential problems, an important purpose of the manager monitoring and retention policy is to outline how and when IPERS addresses specific issues and events. Depending on the significance of the issue or event, staff will select one of four possible courses of actions: do nothing and continue to monitor the situation, place the manager on IPERS' Watch List, initiate a Comprehensive Review, or, under extraordinary circumstances, terminate the manager immediately without a Comprehensive Review.

Inevitably, each retention/termination decision will be unique. Accordingly, it is intended that this manager monitoring and retention policy be flexible enough to account for specific manager, asset class, and market-related factors, but it is also intended that exceptions to this policy be rare.

II. MANAGER MONITORING

A. Manager Meeting Frequency and Content

Staff will meet with each investment manager not less than once every twelve months, and staff shall meet with each manager at the manager's place of business whenever staff believes it is necessary. Each meeting will include a review of the manager's near-term and long-term performance, the manager's current investment strategy and capital market outlook, and any other pertinent issues related to the manager's organization, personnel, or investment process. Each manager shall make periodic presentations to the IPERS Investment Board. The frequency, content, and timing of specific manager presentations will be subject to staff and the Board's discretion.

B. Qualitative Assessments

The qualitative aspects of each manager relationship will be monitored through frequent oral and written contacts by staff with each manager and IPERS' consultants, and, when appropriate, through quarterly evaluations utilizing attribution, style, and peer universe analyses. Qualitative assessments will focus on organizational and staff stability, adherence to investment philosophy and process, asset/client turnover, and the quality of client service.

A significant and potentially adverse event related to, but not limited to, any of the following qualitative issues or events will generally cause staff either to place the firm on the Watch List or to initiate a Comprehensive Review, depending on the impact of the event or issue:

- A significant change in firm ownership and/or structure
- The loss of one or several key personnel

- A significant loss of clients and/or assets under management
- A profound shift in the firm's philosophy or process evidenced by style drift², increases or decreases in tracking error³, or value-added coming from an unexpected source
- A significant and persistent lack of responsiveness to client requests
- A change in IPERS' capital market beliefs which eliminates the need for a particular manager's investment style or strategy
- A significant decrease in the quality or volume of deal flow and/or a marked change in the investment types or deal terms negotiated by the manager
- Consistent failure to meet investment allocation targets
- Chronic violations of IPERS' investment guidelines

C. Quantitative Assessments

In order to evaluate manager skill, cumulative or rolling assessments of excess return will be calculated for each external manager. Public market managers will be evaluated quarterly using skill analysis graphs. The illiquid and longer-term nature of private market investments necessitates a different quantitative assessment methodology from that utilized in the public markets. The sections below describe in detail the methodologies employed in public and private market manager performance evaluations.

Judgments as to whether a manager has achieved IPERS' investment objectives, and judgments as to whether a manager will achieve IPERS' investment objectives in the future, ultimately rest with IPERS' staff and Board. Accordingly, IPERS' staff and the Board reserve the right under this policy to pursue, at any time, any course of action in response to absolute, relative, historic, or perceived future investment performance. Notwithstanding the foregoing, the following decision rules will generally apply to quantitative assessments of manager performance.

1. Public Market Managers - Because of the large degree of variability in manager returns, it is often very difficult to assess whether a manager's over/under performance is the product of randomness or true investment skill. IPERS' quantitative skill analysis considers the variability of a manager's excess return, in addition to the absolute magnitude of the excess return, when making judgments about manager skill.

Skilled managers often have periods of underperformance, just as unskilled managers often experience periods of outperformance. Over long time periods, however, skilled managers will produce a larger average excess return more frequently than their unskilled peers. The use

of confidence bands⁴ in the cumulative and rolling skill analysis graphs explicitly embrace these principles.

- a. Active Managers - Depending on the availability and appropriateness of each manager's historic excess return series, IPERS will utilize either a cumulative or a rolling five-year skill analysis graph with 80 percent confidence bands to evaluate manager skill on a quarterly basis. IPERS will not construct a cumulative or rolling five-year skill analysis graph until two years after the inception date of the account. At that time, IPERS will combine its actual two years of excess returns with the manager's previous five-year, net-of-base-fee, quarterly excess returns to produce a rolling five-year skill analysis graph. If the previous five years of excess returns are unavailable or are inappropriate, staff can elect to use a shorter historical time series if available. In this case, a cumulative skill analysis graph will be used to assess quarterly performance. Once seven years of combined historic and actual excess returns are available, IPERS will convert from the cumulative to the rolling five-year skill analysis graph. If a manager does not have a return history that is appropriate or available as of the manager's date of hire, IPERS will postpone drawing the cumulative skill graph until three years of actual, excess return history is available.

The cumulative and rolling skill analysis graphs will be utilized as follows:

- i. If the manager's cumulative or rolling five-year excess return plots below the benchmark for four consecutive quarters, the manager shall be placed on the Watch List.
 - ii. If the manager's cumulative or rolling five-year excess return plots below the lower confidence band for two consecutive quarters, a Comprehensive Review will be initiated. The Watch List is bypassed in this case because breaching the lower confidence band indicates a serious performance problem which should be addressed in an in-depth manner as soon as possible.
- b. Passive Managers - The skill analysis methodology applied to IPERS' active management strategies is inappropriate for passive management strategies because of the low variability of manager returns and a zero alpha⁵ expectation. Therefore, IPERS shall utilize

the annual performance ranges outlined in each manager's investment contract to monitor passive manager performance. Enhanced passive strategies with explicit alpha expectations will be considered active management strategies for the purposes of monitoring performance. As such, enhanced passive strategies will be subject to the "Active Manager" performance guidelines outlined above.

Beginning one year after the inception date, staff will monitor the manager's four-quarter rolling returns. If the manager's trailing four-quarter annual return exceeds the range set forth in the manager's investment management contract for two consecutive quarters, staff shall place the manager on IPERS' Watch List.

2. Private Market Managers - Annually after each calendar year end, staff will evaluate each private market manager's performance relative to its performance objective and, when appropriate, to an asset class benchmark. Managers who fail to achieve their performance objective and, when appropriate, fail to outperform their asset class benchmark, on a rolling basis for three consecutive years shall be placed on the Watch List. In general, staff will utilize a rolling ten-year evaluation period for IPERS' private equity managers and private market real estate managers.

D. Reporting

On a quarterly basis, staff shall prepare the skill analysis graphs for each of IPERS' active, public market managers. Where appropriate and available, staff shall also prepare reports to support the qualitative assessments including style measurement reports, attribution analysis, tracking error reports, and peer universe comparisons.

III. COURSES OF ACTION

A. Watch List

A manager will be placed on the Watch List as a result of a significant and potentially adverse development involving the manager as described above. Being placed on the Watch List communicates to the manager IPERS' concern about a particular situation. A manager will be placed on the Watch List for a specified length of time, normally twelve months. Staff will meet with the manager within 90 days of their being placed on the Watch List to discuss the situation and the steps needed to be taken to resolve the issue to IPERS' satisfaction. A manager will generally remain on the Watch List until the

specified time period expires, or until the issue is resolved to IPERS' satisfaction. If the issue has not been resolved by the expiration of the specified time period, a Comprehensive Review may be initiated. Also, a manager may be removed from the Watch List and a Comprehensive Review initiated at any time if a situation deteriorates.

B. Comprehensive Review

A Comprehensive Review of a manager will be undertaken as a result of serious underperformance of a manager relative to its benchmark or as the result of a significant and adverse change to the manager's organization, personnel, or investment process. These categories of events cause staff to seriously question the firm's ability to achieve IPERS' investment objectives in the future. A Comprehensive Review is a thorough, in-depth, due-diligence effort, similar in scope to IPERS' manager selection process. A Comprehensive Review explores all elements of a manager's organization, personnel, and investment philosophy and process. Comprehensive Reviews will be completed within 90 days of initiation.

In undertaking a Comprehensive Review, staff is ultimately deciding whether the firm should be rehired today given the current events and prevailing circumstances. Thus, the outcome of a Comprehensive Review is a decision to retain or terminate the manager.

The nature of certain private-market investment vehicles may severely restrict or prohibit the immediate withdrawal of funds and/or the transfer of assets to another manager. In such cases, the decision to terminate a manager is infeasible and, therefore, IPERS' actions may be limited to filing a withdrawal request with the manager and waiting until the investments can be liquidated in a prudent manner, or seeking other disposition strategies.

The Comprehensive Review will focus on whether the firm currently embodies enough of the following characteristics to provide reasonable assurance that IPERS' investment objectives in the future will be achieved. The list below represents characteristics that IPERS believes are important to the success of a manager's investment program.

Organization:

- Stable ownership structure
- Experienced, dynamic leadership
- Clearly delineated lines of authority and responsibility
- Sound financial condition
- Planned growth
- Strong compliance and internal control systems

Personnel:

- Experienced and competent investment staff
- Low turnover in key positions
- Employees highly motivated to meet client objectives
- Sufficient backup and ongoing training

Investment Process and Philosophy:

- Well-articulated philosophy as to how value is added in a particular market
- Investment process is systematic, focused, and consistent
- Investment process exploits a perceived competitive advantage
- Investment process has been successfully applied in different market environments
- High-quality research base
- Investment process/style can be benchmarked
- Strong trading capabilities
- High-quality deal flow and investment opportunities

The Comprehensive Review shall also address whether the problem can be resolved within the scope of the existing relationship, and if not, how and to whom the assets should be redeployed. A decision to rehire a manager may also be subject to the manager's satisfying specified conditions and may include a probationary period.

IV. OTHER TERMINATION CONDITIONS

This policy depicts circumstances where IPERS may elect to terminate a manager for cause. However, all of IPERS' investment management contracts permit IPERS to terminate the manager, with or without cause, after 30 days' written notice. The investment management contracts also permit IPERS to terminate a manager immediately upon learning of a breach of duty or confidentiality. IPERS also has the right under its investment management contracts to terminate a manager after 30 days' written notice in the event of the nonavailability or nonappropriation of funds.

¹ Difference between the manager's return and the benchmark return

² Changes in a portfolio's predominant style characteristics over time (i.e. shifts from growth to value or large cap to small cap)

³ Standard deviation of excess return

⁴ The range the manager's excess return is anticipated to fall a specified percentage of the time based on the past variability of excess returns

⁵ Risk-adjusted excess return