



Investment Office

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AGENDA ITEM 4g

TO: MEMBERS OF THE INVESTMENT COMMITTEE

- I. SUBJECT:** Proposed Asset Liability Management (ALM) Process and Timeline for 2010
- II. PROGRAM:** Asset Allocation and Risk Management
- III. RECOMMENDATION:** Information
- IV. ANALYSIS:**

The tri-annual Asset Liability Management (ALM) review is due to be conducted in 2010. The purpose of this item is to inform the Committee about the process and plan that staff has developed to conduct the ALM review.

The recent market crisis produced significantly large negative returns for risky assets along with an unexpectedly high level of volatility causing the total fund value and funded status to fall by more than what was expected in the long-term projections. These developments are common to most U.S. public pension funds and have raised a number of concerns including liability hedging, liquidity management and risk reduction strategies that require more focus and consideration in the asset allocation decision. Hence, staff plans to conduct a complete review of the existing ALM process and methodology; then recommend changes and improvements as warranted.

The ALM review will be conducted in three phases:

1. Role of asset classes in the strategic asset allocation
2. Capital market assumptions and inputs for the optimization
3. ALM process and methodology

A series of discussions will be conducted with staff and the Investment Committee (IC) in 2010 to seek consensus on the approach and assumptions with the objective of seeking a decision from the IC at the ALM Workshop scheduled in November 2010. Details of the three phases outlined by “Tasks, Key Dates/Deliverables, and Teams,” are described below:

1. Role of Asset Classes in the Strategic Asset Allocation

Tasks

- Consider the macro risks that pension liabilities and various asset classes are exposed to (example: liability risks, inflation risks, liquidity risk, interest rate risks, or other measures of macro risks) and develop alternative ways of classifying assets as warranted.
- Review fundamental characteristics of each asset class and their risk, return and correlation analysis using actual CalPERS data.
- Based on the analysis, define more clearly the roles of Public Equities, Private Equity, Fixed Income, Real Estate, Inflation-linked assets and RMARS in the portfolio based on their characteristics, and determine the benchmarks for each asset class.
- Generate a set of investment beliefs about asset classes based upon the analysis.
- Present a set of asset classes and benchmarks that should be included in the CalPERS portfolio for the ALM analysis.

Key Dates/Deliverables

- Review and achieve consensus at the February 2010 staff seminar on the role of asset classifications and proposed benchmarks.
- Present final report at the March 2010 IC meeting and obtain concurrence on the recommended role of asset classes, asset classifications and benchmarks.

Team

Ray Venner, Lead (AA &RM), Lorne Johnson (AA&RM), Jay Jeong (AA&RM), Terri Kennedy (AA&RM), Dennis Knueven (AIM), Craig Dandurand (GE), Ben Meng (GFI), John Kowalik (ILAC), Christine Gogan (RE), David Lamoureux (ACTO), Wilshire Consulting, PCA

2. Capital Market Assumptions and Inputs for the Optimization

Tasks

- Develop capital market assumptions for all asset classes identified in the role of asset classes project over the forecast period, as well as under various economic scenarios.
- Determine appropriate equity risk premium assumptions and illiquidity premium for private assets (Private Equity, Real Estate, etc.).
- Determine appropriate forecast period to be used in the ALM analysis.
- Develop risk, return and correlation assumptions to be used as inputs in the ALM analysis for all selected asset classes.

Key Dates/Deliverables

- Review and achieve consensus at the April 2010 staff seminar on the return, risk and correlation assumptions for all asset classes.
- Present final report to the IC in May 2010 and obtain concurrence on the input assumptions for ALM analysis.

Team

Lorne Johnson, Lead (AA&RM), John Greenwood (AIM), Carl Guidi (GE), Bashar Zakaria (GFI), Angela Lyons (ILAC), Jamie Lasher (RE), Rick Santos (ACTO), Wilshire Consulting, PCA

3. ALM Process and Methodology

Tasks

- Develop process for determining asset mix scenarios under alternative approaches and methods.
 - Current decision factor approach
 - Liability-aware (hedging) policy portfolio with return seeking implementation (multi-tier or hybrid approach)
 - Other alternative approaches
- Develop more accurate liability factors for incorporation in the ALM analysis (return, risk and correlation of liabilities relative to assets).
- Analyze and discuss actuarial assumption rate in light of forecast returns.
- Research mean variance optimization issues and present solutions.

- Consider tail risk issues for the strategic and active asset allocation.
- Develop active risk budgets for asset class implementation.
- Recommend an ALM process and asset mix solution for the adoption of a strategic asset allocation policy by the IC.

Key Dates/Deliverables

- Discuss recommended ALM process and methods at a staff seminar in June 2010.
- Conduct an ALM process session at the July 2010 Board Offsite for information, education and concurrence.
- Conduct ALM Workshop with the IC in November 2010.
- Present final recommendations on strategic asset allocation to the IC in December 2010.

Team

Rick Roth, Lead (AA&RM), Ray Venner (AA&RM), Jay Jeong (AA&RM), Ho Ho (GE), Arthur Han (GFI), David Lamoureux (ACTO), Rick Santos (ACTO), Wilshire Consulting, PCA.

Staff recognizes that the process outlined presents a number of challenges. The current process is dependent on actuarial methodologies set by the Actuarial Office (ACTO). Alternative approaches to liability assumptions would require consensus with ACTO and the IC. The current decision factor process may require change. The mean variance optimization process requires inputs based on forecasts. The return assumptions in particular are subject to a significant level of forecast error in any given period. Input forecasts would need to be more responsive to evolving market conditions rather than long-term equilibrium assumptions. The new process may have a multi-dimensional approach and will require education and greater participation by the IC. Numerous IC sessions are planned to address these issues. Asset allocation should not be viewed as a purely quantitative exercise in a deterministic framework, but as a mix of science and art that requires good judgment.

V. STRATEGIC PLAN:

Goal VIII. Manage the risk and volatility of assets and liabilities to ensure sufficient funds are available, first to pay benefits and second, to minimize and stabilize contributions.

VI. RESULTS/COSTS:

There are no additional costs associated with this agenda item.

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