CalPERS

Board of Administration
Agenda Item 1

November 13, 2017

Item Name: Asset Liability Management (ALM) Workshop

Program: Asset Liability Management

Item Type: Information

Executive Summary
The Asset Liability Management (ALM) workshop presents information on possible asset allocation alternatives for the Public Employees' Retirement Fund (PERF) investment portfolio. In addition, actuarial-based information is presented to reflect the implications of the various alternatives on parameters such as the employer contribution rate. The combination of investment and actuarial information is distilled into estimated probabilities associated with three decision factors intended to assist the CalPERS Board of Administration (Board) in assessing the tradeoffs between expected investment return, risk associated with that return and the implications for employer contributions.

Reflecting feedback from the Board during the ALM workshop, INVO staff plans to present an Action agenda item during the December 2017 meeting.

Strategic Plan
The ALM Workshop supports CalPERS Strategic Plan goal to strengthen the long-term sustainability of the pension fund. The CalPERS ALM process culminates in the selection of a Policy Portfolio which guides and defines the strategic asset allocation across the PERF for the next four years, with the ultimate goal of ensuring that CalPERS is able to effectively manage assets to meet the benefit promises made to the System's participants.

Background
Governed by CalPERS Statement of Policy for Asset Liability Management, the ALM workshop is a culmination of a significant stream of information that has been presented to the Investment Committee (IC), Finance and Administration Committee (FAC) and Board over the past year and a-half. The entire body of work attached to the ALM decision process is generated by a collaborative data collection and analysis effort from the Actuarial Office (ACTO), Finance Office (FINO) and Investment Office (INVO). The information developed in this process is utilized by the CalPERS outreach areas operating under the banner of Communications & Stakeholder Relations (CSR), to elicit feedback from the wide array of stakeholders impacted by CalPERS activities.

The ALM decision process is implemented on a rolling four-year cycle with a mid-point review. This periodic review is the primary process by which the PERF investment portfolio and actuarial assumptions evolve to reflect the market opportunity set, demographic assumptions and experience, and plan status. The review cycle is believed to be an appropriate tradeoff between the uncertainties and imprecision associated with making market forecasts versus, becoming too short-term focused and reactive.

The ALM decision frequency is also buttressed by ACTO's annual actuarial valuation process that determines subsequent employer and employee contribution levels. This process establishes an amortization of each fiscal year's actual experience versus the assumptions underlying the ALM decisions, thus correcting annually for forecast and estimation uncertainty.

Analysis

Investment Related

A summary of the underlying analytic data and structure is contained in Attachment 1. This material reflects the distillation of estimates associated with the investment markets and actuarial parameters to propose alternative asset allocation structures which are considered to be prudent by INVO from an intermediate-term perspective.

The Candidate Portfolios being presented represent blended (short and long term combined) expected return levels ranging between 6.50% and 7.25% in 0.25% increments. The portions of the asset allocation where real variation is demonstrated are the Global Equity and Global Fixed Income asset classes. The private asset classes have sufficiently attractive characteristics that they are constrained at their respective maximum proportions in all instances so as to maintain pricing discipline.

Of particular note, the Inflation asset class has a lower bound constraint of 0% and the characteristics of the asset class result in a target allocation to this class of 0%. Consistent with past information presented to the Board, this asset class represents an area where further research is required to more accurately determine the effect of inflation on the liabilities, the degree of inflation protection conveyed by other asset classes and a determination of how best to mitigate the remaining inflation risk. This work is ongoing and is expected to generate results that will be brought to the IC over the next year and may impact the mid-point review.

The changing and improving cash flow projection for the PERF has enabled a reduction in the lower bound constraint applied to the Liquidity asset class as reflected in all the Candidate Portfolios.

Actuarial Related

The investment related information has been developed with the collaboration of ACTO which then estimates the potential impact of asset allocation alternatives on the discount rate and the decision factors. The decision factors include:

1. Funded Status – The market value of assets divided by the accrued liabilities. What is the probability that this ratio falls below 50% in any given year over the next 30 years?
2. Employer Contribution Rate – The payment rate made to the fund by employers. What is the probability that this rate exceeds 35% for Miscellaneous plans or 55% for Safety plans in any given year over the next 30 years?
3. Employer Contribution Rate Volatility– The annual change of the payment rate made to the fund by the employers. What is the probability that this change exceeds 5% for Miscellaneous plans or 7% for Safety plans in any given year over the next 30 years?

To help in the understanding of the decision factor probabilities, ACTO shall present information on the analytic framework underlying the probability calculation.

Next Steps

Next steps are:

- December 2017 – IC and FAC Action Items to support the Committees recommended action to the Board.
- February 2018 – IC Closed session information item on implementation plan.

Budget and Fiscal Impacts

There is no anticipated budgetary impact perceived to be derived from the ALM process or decision. Any fiscal impact would be dependent on the asset allocation decision and corresponding actuarial impact. An additional fiscal consideration could be the degree of asset turnover expense derived from capital movement between the asset classes.

Benefits and Risks

The benefits of the ALM process and decision are:

1. Reflect evolving investment market expectations for return and risk.
2. Reflect evolving actuarial experience and assumptions.
3. Reflect the PERF status.

The risks of the ALM process and decision are associated with significant changes to the target asset class allocations:

1. Market valuation risk where it is possible that undervalued assets could be sold to purchase overvalued assets.
2. Significant amounts of turnover could cause material trade execution costs.

Attachments

Attachment 1 – 2017 Asset Liability Management Workshop

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