Agenda Item 11a

February 18, 2014

ITEM NAME: Strategic Asset Allocation Alternatives

PROGRAM: Asset Allocation and Risk Management

ITEM TYPE: Asset Allocation, Performance & Risk – Action

RECOMMENDATION

Select Portfolio A which maintains the existing 7.5% discount rate while reducing expected volatility and the "growth" related risk concentration.

EXECUTIVE SUMMARY

Throughout 2013, the Investment Committee (IC) has provided feedback and direction on an array of parameters associated with the Asset Liability Management (ALM) process. This agenda item presents three possible strategic asset allocations (Table 1) resulting from the cumulative input and perspective of the IC. These three alternatives all represent a choice capable of maintaining the 7.5% discount rate, while having nuanced differences in expected return and risk levels. Staff believes that all of the alternatives constitute reasonable and implementable choices. Across the alternatives, the expected compound returns range from 7.15% to 7.35%, while the expected volatility of return varies from 11.76% to 12.52%. For reference, the existing strategic asset allocation reflects an expected compound return of 7.25% with an expected volatility of 12.45% using the current ALM capital market assumptions. The placement of these alternatives along the modeled efficient frontier, demonstrates an increase in expected volatility of about 4 basis points for each 1 basis point increase to expected return. The ALM process has reflected the sensitivity of the actuarial risk considerations (funded level, contribution level and contribution volatility) to the expected volatility of investment returns. In addition to expected compound return volatility, Investment Office (INVO) is also sensitive to the relative concentration of investment risk on "growth". The staff recommendation supports a reduction of this risk concentration to the extent possible.

STRATEGIC PLAN

This agenda item supports the CalPERS Strategic Plan goal of improving long-term pension and health benefit sustainability.

BACKGROUND

In a variety of venues, including the November 2013 ALM workshop, the IC has provided feedback and direction regarding their preferences on a number of parameters underlying the construction of possible strategic asset allocation mixes. These parameters include:

- Market segments to be included
- Capital market assumptions used in the modeling process
- Constraints applied to several of the included market segments to account for capacity or minimum diversification concerns
- Expected return and risk profile of potential asset allocation mixes
- Actuarial risk considerations which are sensitive to the asset allocation.

Significant discussion has taken place on the topics of Liquidity, Absolute Return Strategies (ARS), Global Equity market segments and currency. The conclusions derived from these discussions and embedded in the alternative asset allocations are:

1. Liquidity – A 2% constraint. This level of allocation to Liquidity is consistent with the recommendation from the Finance Office and INVO staff, as well as being consistent with the current state of evolution in Treasury management.

2. ARS – Continue to include ARS as an "active" program as it has been in the past with no target allocation at this time. The assessment of ARS relative to its program role (diversification of equity risk), shall continue with further information being presented to the IC over the next year.

3. Global Equity – Global Equity shall continue to be benchmarked to a global, market capitalization weighted benchmark without the inclusion of alternate benchmark definitions such as low volatility. The efficacy of a redefinition of the public equity benchmark is a topic that will be examined in greater depth as a component of a broader benchmark exploration beginning late in 2014.

4. Currency – The return and risk estimates used in the modeling process represent unhedged characteristics. This modeling structure is consistent with many years of ALM practice. As presented at the September 2013 IC Workshop, the INVO staff recommendation is to remove the passive currency hedge, thus bringing the implemented strategic asset allocation into alignment with the modeling process. Currency management would then move into an "active" program with INVO staff being accountable for determining an expectation regarding the potential movement of the U.S. dollar relative to foreign currencies. Unless directed otherwise, staff shall interpret the selection of the strategic asset allocation to include removal of the passive currency hedge.

ANALYSIS

Table 1 displays alternative strategic asset allocation combinations (Candidate Portfolios A, B and C) alongside the current policy portfolio which has been in place since the 2010 ALM process. The expected compound return and volatility characteristics of the current policy portfolio have been derived from the capital markets assumptions underlying the 2013 ALM process. The expected compound return of the candidate portfolios range between 7.15% and 7.35%. Expected volatility of the candidates range between 11.76% and 12.52%. The area occupied by the candidate portfolios within the modeled efficient frontier demonstrates a tradeoff between return and risk where a 1 basis point increase to expected return, results in nearly a 4 basis point increase to expected risk.

Table 1 - Strategic Asset Allocation Alternatives

Candidate Portfolios				Current Policy Portfolio
Asset Class Component	Portfolio A	Portfolio B	Portfolio C	
Global Equity	47%	50%	52%	50%
Global Fixed Income	19%	17%	16%	17%
Inflation Sensitive	6%	5%	4%	4%
Private Equity	12%	12%	12%	14%
Real Estate	11%	11%	11%	9%
Infrastructure and Forestland	3%	3%	3%	2%
Liquidity	2%	2%	2%	4%
Expected Compound Return (1-10 yrs.) :	7.15%	7.27%	7.35%	7.25%
Blended Return (1-60 yrs.)[1] :	7.56%	7.66%	7.72%	7.63%
Expected Volatility :	11.76%	12.22%	12.52%	12.45%
Potential Discount Rate:	7.50%	7.50%	7.50%	7.50%

The various alternative asset allocations have had the segment weightings rounded to the nearest whole percentage. Assigning target weights using fractional percentages is believed to convey more precision than is warranted by the modeling process. The expected return and risk characteristics have been calculated from the resulting rounded weights.
Within the modeling process, the weights to some of the asset classes have been fixed due to capacity or diversification considerations. Table 2 reflects the asset

classes where binding constraints have been used consistent with feedback from the November 2013 ALM workshop.

Table 2 - Binding Constraints

Asset Class	Binding	Constraint
Inflation Sensitive	Maximum	6%
Private Equity	Maximum	12%
Real Estate	Maximum	11%
Infrastructure & Forestland	Maximum	3%
Liquidity	Minimum	2%

The asset classes of Global Equity, Global Fixed Income and Inflation Assets have been allowed to vary in the modeling process. The analysis has been centered on maintaining an expected compound rate of return adequate to sustain the existing 7.5% discount rate used within the actuarial work. These expected return levels derive from the capital market assumptions which assume a 10 year horizon. The ability of these expected compound return levels to support the 7.5% discount rate derives from the long term blended return where the Actuarial Office extrapolates the market expectations for an additional 50 years.

BUDGET AND FISCAL IMPACTS
Not Applicable

BENEFITS/RISKS
The spectrum of expected compound return represented by the alternatives represents the breadth of choice that facilitates the retention of the existing discount rate for actuarial purposes, without the provision of a margin for adverse deviation. The maintenance of the discount rate is considered a benefit. The staff recommendation (Portfolio A) attempts to reduce expected volatility and "growth" related risk concentration to the extent possible while maintaining the existing discount rate.

A risk associated with this recommendation is that the actual long term market return eventually experienced may fall below the capital market expectations used in the modeling process. The blended expected compound return of Portfolio A from the capital market assumptions and actuarial extrapolation is 7.56%. This number provides a small margin for error.

ATTACHMENTS
Attachment 1 – Pension Consulting Alliance Inc. Opinion Letter
Attachment 2 – Wilshire Consulting Opinion Letter

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