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AGENDA ITEM 5a

TO: MEMBERS OF THE INVESTMENT COMMITTEE

- I. SUBJECT:** Capital Market Assumptions
- II. PROGRAM:** Asset Allocation/Risk Management
- III. RECOMMENDATION:** Information
- IV. ANALYSIS:**

Summary

The purpose of this item is to discuss capital market assumptions to be used in the strategic asset allocation process with the Investment Committee (IC). Staff has outlined a three step process for the 2010 Asset Liability Management (ALM) review:

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

Step one of the ALM process was presented to the IC in March 2010. Stage three will be discussed with the IC in a subsequent meeting.

To inform the capital market assumptions portion of the ALM review, a cross asset class staff team was established that included the participation of Board consultants Wilshire and PCA to generate assumptions for the existing asset classes, as well as the broadened asset class grouping presented to the IC in March.

Investment Committee Workshop

The work of the staff capital market assumptions team, along with the assumptions of Wilshire and PCA were presented at an IC workshop on May 17, 2010. The workshop also included perspectives from investment firms First Quadrant and GMO. The consensus capital market assumptions in Attachment 1 are the product of the insights provided from the work of the staff team, consultants, outside presenters and discussion and questions generated at the May 17 workshop. The consensus assumptions were generated by the Asset Allocation staff, consultants and senior team inclusive of the Chief Investment Officer.

Initial Conditions and Ten Year Expected Return Assumptions

Economic Backdrop

As the global economy emerges from the most severe global downturn since the great depression, growth in developed economies is anticipated to be somewhat below the historical average given the substantial amount of private and government debt that needs to be serviced and in light of demographic challenges in the form of aging populations that will require tough choices about entitlements. Growth in emerging markets is expected to remain strong and is anticipated to exceed that in developed economies by several percentage points.

Inflation is currently at 40 year lows as a result of excess capacity, high unemployment and credit constraints in the economy, and is expected to remain subdued for at least the next couple of years. Going out farther, inflation is anticipated to drift higher, as economic conditions normalize and the effects of the monetary stimulus take hold. The consensus anticipated annualized inflation rate for the next 10 years is 3% and is slightly higher than the 2.5% assumed in 2009.

Global Equities

The ALM review for 2010 follows a period of ten years for which equities have underperformed bonds relative to assumed premium in prior forecasts. Much of this in retrospect can be attributed to a starting point in 2000 in which price to earnings ratios of equities were very high by historical standards. The adjustment to more average historical valuations necessitated a large adjustment downward in stock prices and therefore poor returns relative to prior periods.

Looking forward from the time of this writing in 2010, real U.S. equity valuations¹ are only slightly above long run averages and dividend yields are near historical lows. A significant portion of forward equity returns will likely depend on company exposure to global economic growth which is anticipated to be robust in emerging economies and somewhat more subdued in the developed economies. Hence it is reasonable to expect equities to have a return premium over bonds going forward. The resultant ten year consensus annualized forecast for nominal global equity returns is 7.75% which is lower than the 8.6% assumed in 2009. This lower expectation reflects the significant increase in equity valuations over this period and lower projected GDP growth. Staff is exploring the possibility of constructing a global equity benchmark that better captures global growth and return opportunities to replace the current market capitalization index. This may be presented to the IC as a separate item.

AIM

The AIM return assumption is 9.00%, modestly higher than 2009 and represents a 1.25% premium over public equities. The size of the CalPERS AIM portfolio and the significant commitments in the 2006-2008 period are likely to pose challenges. Tight credit and higher debt cost are likely to lower private equity returns. But, as recent valuation adjustments normalize, this could provide an offset.

Fixed Income

Fixed income returns are projected to be lower than the 2009 assumptions as treasury yields are expected to rise from current historic lows as federal debt and inflation risks increase. The return expectation is 4.5%, down from 5.25% in 2009.

Real Estate

Real Estate return assumptions are unchanged from 2009 at 7.0% and assume a 50/50 split between core and non-core strategies. Real Estate returns have an upside potential as current under-valuation reverts to fair pricing over the forecast period.

Inflation Linked Asset Class (ILAC)

The ILAC return assumption is unchanged at 6.0% from 2009.

¹ As measured by current real price divided by 10 year real earnings on the S&P 500

Standard Deviation and Correlation Assumptions

The mean variance optimization process (MVO) for asset allocation requires two input assumptions for each asset (return and standard deviation) and the correlation of each asset with every other asset. Consensus standard deviation and correlation assumptions for the existing and alternative asset classifications can be found on page two of the attachment.

Alternative Asset Classification

Stage one of the ALM process focused on the role of asset classes in the strategic portfolio. An alternative classification (page three of attachment) based on building blocks was proposed to better identify exposure to macro risks in the total portfolio that may be masked by the current asset class structure. The alternative specification should provide a way to better focus on liability and interest rate hedging in the portfolio as well as provide a means to more dynamically allocate the portfolio within risk limits. The assumptions for the broad asset classes in Table 1 are consistent with the return assumptions developed for the building blocks. Staff expects to have a discussion at the July Board Offsite on how asset classes may be used in the optimization process.

Portfolio Return Assumptions at Current Weightings

Applying the staff consensus capital market assumptions and using current CalPERS target allocations, the assumed annual nominal geometric return for the consensus portfolio is 7.54%. This compares to an assumed annual nominal geometric return of 8.3% for the 2009 Interim Workshop portfolio. The reduction is primarily due to lower forecast return for global equity which represents more than 50% of the portfolio and lower assumed fixed income return. A comparison of return assumptions from the 2009 Workshop and the current consensus assumptions is presented in Table 1 below.

Table 1
 10 Year Annual Geometric Return Assumptions
 using Current CalPERS Target Allocations

	Current Target Allocation	2009 Interim Workshop Assumptions	2010 Consensus Assumptions
Fixed Income	20%	5.25%	4.50%
Public Equities	49%	8.60%	7.75%
Private Equity (AIM)*	14%	8.75%	9.00%
Real Estate	10%	7.00%	7.00%
ILAC	5%	6.00%	6.00%
Cash	2%	3.75%	3.25%
Inflation	-	2.50%	3.00%
Expected Nominal Geometric Return		8.30%	7.54%
Expected Real Geometric Return		5.80%	4.54%

*In arithmetic returns the premium for AIM is around 300 bp, consistent with prior period assumptions. The spread appears wider in 2010 due to the standard deviation being lower (26%) compared to 30% in 2009.

PCA and Wilshire opinion letters are included as Attachments 2 and 3 respectively.

V. STRATEGIC PLAN:

This item addresses Strategic Plan Goals 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; and IX, achieve long-term, sustainable, risk adjusted returns.

VI. RESULTS/COSTS:

This item is for information only.

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