Item Name: Selection of Strategic Asset Allocation for the Public Employees’ Retirement Fund

Program: Trust Level Portfolio Management

Item Type: Action

Recommendation
Select Candidate Portfolio C for the Strategic Asset Allocation to recommend to the full CalPERS Board for Asset Liability Management adoption. Candidate Portfolio C maintains the existing 7% discount rate plan and minimizes turnover relative to the other alternatives.

Executive Summary
Throughout 2017, 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 four possible strategic asset allocations (Table 1) representing blended return levels from 6.50% to 7.25% in 0.25% increments. The expected annual volatility of the alternatives ranges from 9.1% to 12.8% respectively. While all alternative portfolios are believed to be prudent, the Investment Office (INVO) believes Candidate Portfolio C represents the best balance between the market opportunity set and conditions of the plan.

Consultant opinion letters from Wilshire Associates, Pension Consulting Alliance, and Meketa Investment Group are provided as Attachments 1, 2, and 3, respectively.

Strategic Plan
This agenda item 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 Public Employees’ Retirement Fund (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.

Investment Beliefs
This agenda item supports the following CalPERS Investment Beliefs:

- Investment Belief 2, that a long term investment horizon is a responsibility and an advantage.
- Investment Belief 3, that CalPERS investment decisions may reflect wider stakeholder views, provided that they are consistent with its fiduciary duty to members and beneficiaries.
- Investment Belief 6, that strategic asset allocation is the dominant determinant of portfolio risk and return.
• Investment Belief 8, that costs matter and need to be effectively managed.

Background
Governed by CalPERS Statement of Policy for Asset Liability Management, the ALM analysis is conducted by a collaborative data collection and assessment effort from the Actuarial Office (ACTO), Finance Office (FINO), and Investment Office (INVO). This analysis provides an integrated view of the assets and liabilities that includes reviews of demographic, actuarial, and economic assumptions. ALM related material has been presented to the Board, IC, and Finance and Administration Committee (FAC) over the past two years; and, more recently during the November 2017 ALM Workshop.

ALM information has been utilized by the Communications & Stakeholder Relations (CSR) to elicit feedback from the wide array of stakeholders impacted by this decision. Over the last year, CSR has orchestrated nearly two dozen meetings with associations, public agencies, and city councils. In addition, there was substantial feedback and comments provided by a number of stakeholders at the 2017 ALM Workshop in November.

Analysis
Table 1 illustrates alternative strategic asset allocation combinations as discussed at the ALM Workshop (Candidate Portfolios A, B, C and D). These alternatives represent blended (short and long term combined) expected return levels ranging from 6.50% to 7.25% in 0.25% increments. Staff believes that all of the alternatives constitute reasonable and implementable choices. The placement of these alternatives along the modeled efficient frontier, demonstrates an increase in expected volatility of more than 4 basis points for each 1 basis point increase to expected return. Table 1 also shows the current interim policy as established in September 2016, and an additional relevant piece of information which shows the actual Global Equity weight of approximately 50% as of the November 2017 workshop.

INVO staff recommends Candidate Portfolio C because it maintains the existing 7.0% discount rate target and plan from the December 2016 Board decision. It is also the most similar to our current allocation and therefore allows for reduced transactional activity and costs to implement.

At the November workshop, information was presented regarding the market valuation status as reflected in information from Pension Consulting Alliance (PCA). The PCA metrics reflected the categories of US Equity, Private Equity and Private Real Estate as being in the top decile (unfavorable) of their historic range. Non-US Equity and Corporate Debt were viewed as a bit more favorably valued. The Candidate Portfolio C recommendation is believed to be a reasonable balance given CalPERS Global Equity benchmark which includes significant exposure to non-US equity.
Table 1 – Strategic Asset Allocation Alternatives

<table>
<thead>
<tr>
<th>Asset Class Component</th>
<th>Portfolio A</th>
<th>Portfolio B</th>
<th>Portfolio C</th>
<th>Portfolio D</th>
<th>Interim Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Global Equity</strong></td>
<td>34%</td>
<td>42%</td>
<td>50%</td>
<td>59%</td>
<td>46%</td>
</tr>
<tr>
<td><strong>Private Equity</strong></td>
<td>8%</td>
<td>8%</td>
<td>8%</td>
<td>8%</td>
<td>8%</td>
</tr>
<tr>
<td><strong>Fixed Income</strong></td>
<td>44%</td>
<td>36%</td>
<td>28%</td>
<td>19%</td>
<td>20%</td>
</tr>
<tr>
<td><strong>Real Assets</strong></td>
<td>13%</td>
<td>13%</td>
<td>13%</td>
<td>13%</td>
<td>13%</td>
</tr>
<tr>
<td><strong>Inflation Assets</strong></td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>9%</td>
</tr>
<tr>
<td><strong>Liquidity</strong></td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>4%</td>
</tr>
<tr>
<td><strong>Expected Compound Return (1-10 yrs.)</strong></td>
<td>5.6%</td>
<td>5.8%</td>
<td>6.1%</td>
<td>6.4%</td>
<td>5.9%</td>
</tr>
<tr>
<td><strong>Long Term Expected Return (11-60 yrs.)</strong></td>
<td>7.8%</td>
<td>8.0%</td>
<td>8.3%</td>
<td>8.5%</td>
<td>8.0%</td>
</tr>
<tr>
<td><strong>Blended Return (1-60 yrs.)</strong></td>
<td>6.50%</td>
<td>6.75%</td>
<td>7.00%</td>
<td>7.25%</td>
<td>6.77%</td>
</tr>
<tr>
<td><strong>Expected Volatility</strong></td>
<td>9.1%</td>
<td>10.2%</td>
<td>11.4%</td>
<td>12.8%</td>
<td>11.0%</td>
</tr>
<tr>
<td><strong>Cash Yield:</strong></td>
<td>3.1%</td>
<td>3.0%</td>
<td>2.9%</td>
<td>2.7%</td>
<td>2.9%</td>
</tr>
</tbody>
</table>

**Budget and Fiscal Impacts**
Any fiscal impact is dependent on the outcome of the asset allocation decision and the resulting degree of asset turnover expense derived from capital movement between the asset classes. Relative to the other Candidate Portfolio options, the recommended Candidate Portfolio C represents the lowest transactional activity and costs to implement.

**Benefits and Risks**
A summary of the pros and cons associated with each alternative was provided at the November workshop and is repeated in Table 2.
### Table 2 – Pros/Cons Relative to Current Interim Policy

<table>
<thead>
<tr>
<th>Portfolio</th>
<th>+/-</th>
<th>Context</th>
</tr>
</thead>
</table>
| A and B   | +   | • Shift to less speculative sources of return  
|           |     | • Diversification of equity risk  
|           |     | • Reduced volatility  
|           |     | • Increased cash flow  
|           | -   | • Exposure to interest rate risk  
|           |     | • Reduced overall expected blended return  
|           |     | • Discount rate reduction  
|           |     | • Material transition activity required  
| C         | +   | • Maintain discount rate at the target 7% from December 2016 Board decision  
|           |     | • Does not increase exposure to interest rate risk  
|           |     | • Reduces transition activity  
|           | -   | • Retains current concentration of equity risk  
|           |     | • Maintains current expected volatility and potential for contribution changes  
| D         | +   | • Increased expected blended return  
|           |     | • Supports increase in discount rate or maintain at 7% (December 2016 Board decision) with a margin for adverse deviation  
|           | -   | • More equity risk concentration  
|           |     | • Subject to more drawdown in an equity sell-off  
|           |     | • Material transition activity required  

**Attachments**
Attachment 1 – Wilshire Associates Opinion Letter  
Attachment 2 – Pension Consulting Alliance Opinion Letter  
Attachment 3 – Meketa Investment Group Opinion Letter

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**Eric Baggesen**  
Managing Investment Director  
Trust Level Portfolio Management

**Theodore Eliopoulos**  
Chief Investment Officer

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CalPERS