Investment Committee

California Public Employees' Retirement System

Agenda Item 5a

April 14, 2014

ITEM NAME: Strategic Asset Allocation Interim Targets and Proposed Policy Revision

PROGRAM: Asset Allocation and Risk Management

ITEM TYPE: Asset Allocation, Performance & Risk – Information

EXECUTIVE SUMMARY
Implementation of the strategic asset allocation adopted in February 2014 requires the derivation of a plan to transition the asset class exposures from their existing levels to the new targets (Policy Portfolio). The beginning of the transition plan is an assessment of any needed interim steps for particular asset segments, to reflect market conditions and liquidity.

Staff seeks Investment Committee (IC) feedback and guidance on the following:

- Analysis on the upcoming allocation changes and the asset classes where interim targets may be warranted
- A redlined version of the Statement of Investment Policy for Asset Allocation Strategy (Policy)

It is anticipated that an action item seeking IC adoption of the modified Policy shall be presented at the May 2014 meeting.

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

BACKGROUND
At the March 17, 2014 IC meeting, Agenda Item 9a presented a preview of elements underlying the implementation of the strategic asset allocation adopted in February 2014. The newly adopted and current asset class targets are shown in Table 1 on the following page.

Table 1 – Strategic Asset Allocation Weights

Asset Class	New Policy Portfolio	Current Target	Change
Global Equity	47%	50%	-3%
Private Equity	12%	14%	-2%
Global Fixed Income	19%	17%	+2%
Real Estate	11%	9%	+2%
Infrastructure & Forestland	3%	2%	+1%
Inflation Sensitive	6%	4%	+2%
Liquidity	2%	4%	-2%

The capital movements implied by the shift in asset class targets are not that significant outside the three private asset class segments of Private Equity, Real Estate and Infrastructure & Forestland.

ANALYSIS

Interim Targets - Information missing in Table 1, when considering the topic of interim weights, is the actual current exposure to the various asset classes. Table 2 below recasts the newly adopted targets relative to the actual exposures as of March 25, 2014.

Table 2 – Adopted Target Weights versus Actual

Asset Class	New Policy Portfolio	Current Actual	Change
Global Equity	47%	53.7%	- 6.7%
Private Equity	12%	10.9%	+1.1%
Global Fixed Income	19%	15.3%	+3.7%
Real Estate	11%	8.5%	+2.5%
Infrastructure & Forestland	3%	1.3%	+1.7%
Inflation Sensitive	6%	3.3%	+2.7%
Liquidity	2%	4.7%	-2.7%
ARS	0%	2.2%	N/A

As shown in Table 2, the magnitude of the weight shifts for Real Estate and Infrastructure & Forestland have increased. For Private Equity, the actual direction of movement has changed from a reduction, to an increase, as the current allocation is more than 3% less than the current target of 14%.

Another component impacting a decision on interim weights is the current market conditions related to pricing and liquidity (activity). Within all three of the private asset class segments, current price levels are high relative to a long-term average, thus making major, immediate, capital deployment unattractive. Indicative pricing information is reflected in Table 3 on the following page.

Table 3 – Indicative Private Asset Transaction Pricing

Asset Class	Current	Long-Term Average	Type
Private Equity	9.5 X	8.1 X	EBITDA Multiple
Real Estate	5.7	6.7	Capitalization Rate
Infrastructure	8-10%	10-12%	Est. Ranges for Levered Equity IRR Targets
Forestland	$2495	$1881	Price/Acre

The asset class where market conditions are of the greatest concern to staff is Private Equity. Within this segment a number of aspects combine to make staff very cautious about attempting to deploy too much capital. Some anecdotal market observations are:

- Year-end 2013 “dry powder” (undrawn committed capital) was $903 billion
- 2013 capital commitments totaled $342 billion, the largest since 2008
- 2013 leveraged loan and high yield debt issuance at “all time” high levels
- Public equity market conditions are incenting private exits and capital return

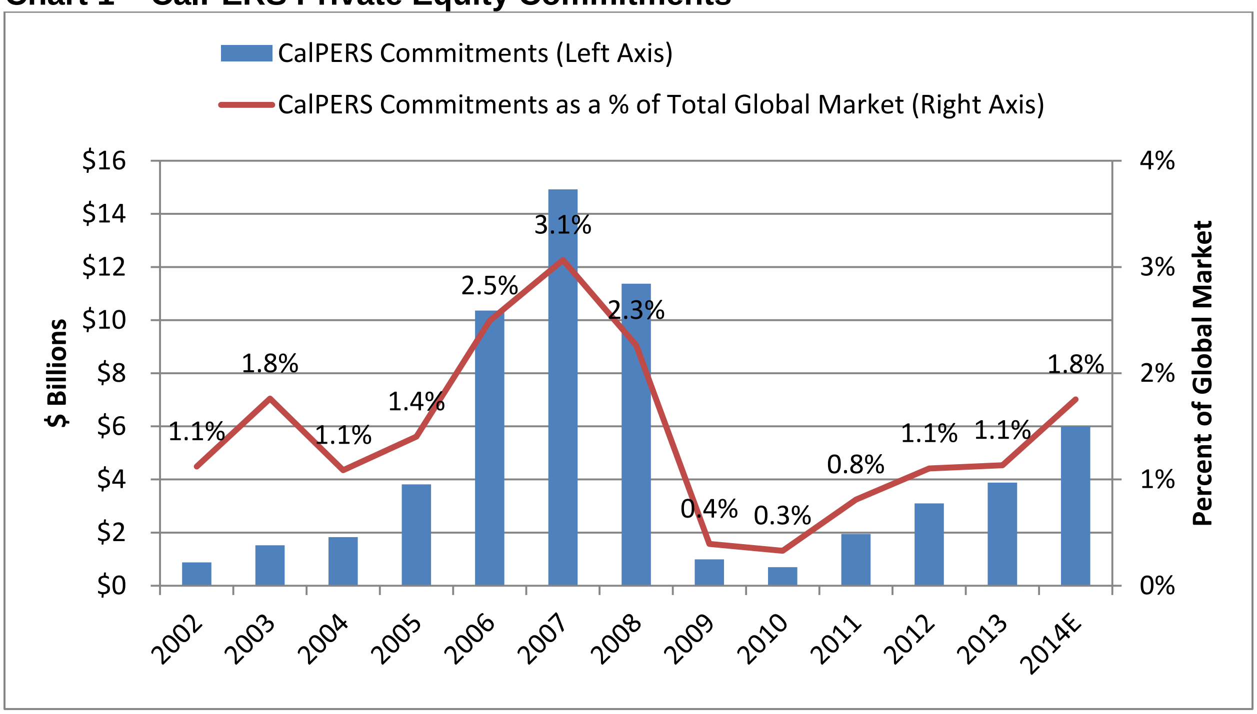
Attachment 1 reflects Private Equity pacing model information. Pages 2 and 3 were presented at the November 2013 Asset Liability Management (ALM) workshop. The Private Equity team recently updated the pacing model with new information which is shown on pages 4 and 5. Comments on the implications of the pacing model iterations are:

1. The information presented at the November 2013 ALM workshop supported shifting the target allocation for Private Equity to 12% from the 14% current level. This support came from an anticipated level of annual capital commitments of $6 billion, a level believed achievable by staff.
    a. Maintaining a 14% allocation was estimated to require capital commitments in the $8.7 billion range for a couple of years, followed by a decline to about the $7 billion level for six years and then an increase to $9 billion. Making capital commitments at these levels was believed to be difficult while trying to maintain the discipline of concentrating allocations with managers expected to be top performing.

2. The current update to the pacing model reflects several aspects that have changed the estimates shown in November 2013.
    a. The net 2013 cash flow was + $7.0 billion (return of capital) versus the original estimate of + $3.1 billion. This results in a lower than expected ending allocation.
    b. The overall Public Employees' Retirement Fund (PERF) market value is approximately $21 billion higher than originally anticipated, resulting in a "denominator effect" that reduces the relative size of the Private Equity asset class.
    c. Extrapolating a $6 billion commitment level forward results in an estimated 10% allocation to Private Equity at calendar year end 2014.
    d. Driving capital allocations to push the exposure level to 12% by 2016 is expected to require increasing the commitment level to approximately $10.5 billion over the next three years.

A final data point related to Private Equity is the proportion of the overall market that CalPERS activity represents. The vertical bars in Chart 1 below represent the value of capital commitments made by CalPERS during vintage years from 2002 onward (left axis). The line on the chart reflects the approximate proportion of CalPERS activity within the overall market, measured as percent (right axis).

Chart 1 – CalPERS Private Equity Commitments



As evidenced by the data, CalPERS commitment activity is a significant part of the overall market. For comparison, CalPERS ownership of publicly traded equity represents about 0.37% of the overall float adjusted market capitalization of the FTSE All World, All Capitalization benchmark. If CalPERS capital commitments to Private Equity make up 2% of the overall market, this represents a relative presence about six times as large as that of the public equity exposure. If CalPERS Private Equity commitments were to grow to $10.5 billion, it would represent an estimated 3% of the overall market, similar to the market share held by CalPERS in 2007.

In the Real Estate and Infrastructure & Forestland asset classes, progress on increasing asset exposure has been slow. These segments have been impacted by the denominator effect where the overall PERF market value has been increased by buoyant public equity markets. Additionally, Real Estate has been undergoing a transition of the "legacy" segment which has been reduced. It is expected that the Real Estate market value at fiscal year-end shall experience a significant increase as appraisals are completed. This increase should moderate the Real Estate underweight. Within Infrastructure & Forestland, staff is researching alternatives to increase the pace of asset acquisition while maintaining reasonable pricing discipline.

With consideration of all elements impacting the transition to the new asset allocation, staff recommends utilizing the interim targets reflected in Table 4 below.

Table 4 – Recommended Immediate Interim Targets

Asset Class	New Policy Portfolio	Interim Target (July 1,2014)	Variance
Global Equity	47%	51%	+ 4%
Private Equity	12%	10%	- 2%
Global Fixed Income	19%	19%	-
Real Estate	11%	10%	- 1%
Infrastructure & Forestland	3%	2%	- 1%
Inflation Sensitive	6%	6%	-
Liquidity	2%	2%	-

Utilizing the recommended interim asset class weights impacts the expected risk and return characteristics as shown in Table 5 on the following page.

Table 5 – Recommended Interim Target Effect

Asset Class Component	July 1, 2014 Interim Portfolio	July 1, 2015 Interim Portfolio	July 1, 2016 Reach New Policy Portfolio	Current Policy Portfolio
Global Equity	51%	48%	47%	50%
Private Equity	10%	11%	12%	14%
Fixed Income	19%	19%	19%	17%
Real Estate	10%	11%	11%	9%
Infrastructure & Forestland	2%	3%	3%	2%
Inflation Sensitive	6%	6%	6%	4%
Liquidity	2%	2%	2%	4%
Expected Compound Return (1-10 yrs.) :	7.10%	7.13%	7.15%	7.25%
Blended Return (1-60 yrs.)[1] :	7.52%	7.54%	7.56%	7.63%
Expected Volatility :	11.91%	11.72%	11.76%	12.45%

[1] Blended return is the combination of the short-term (1-10 year from capital market assumptions and the long-term (11-60 year from Actuarial Office expected returns after deducting administrative fees).

The recommendation is to utilize the interim weights for a period of one year (ending FY 2014-15) and then increase the targets for the private asset class segments by 1% each with a corresponding decrease to the Global Equity target. Private Equity would be reassessed at that time with the expectation of moving to the 12% target at the end of FY 2015-16. Achieving the target weight to assets possessing the capital market assumptions (CMAs) of Private Equity, may require utilizing some alternatives. Staff is currently assessing this possibility and shall bring information to the IC upon completion of the feasibility analysis.

Policy Modification - The second part of the analysis is reflected in Attachment 2 which is a redlined version of the Policy. The aspects of the Policy needing updating are:

1. Section V.C.1 – The Policy modification recommended by staff is to insert language solidifying the linkage between the work of the Investment Office and Actuarial Office in the ALM process. The review of actuarial methods and assumptions currently takes place on a four year cycle and staff recommends using this timing for the ALM work. Staff is also recommending the insertion of language related to a valuation-driven analysis be brought to the IC at the midpoint between the ALM processes.

2. Section V.A – Asset Class Policy Targets and Ranges – The primary edits to this section are contained within Table 1 of Attachment 2, which specifies the specific targets and the ranges by which exposure may vary from the targets without further input from the IC. Staffs' recommended interim targets are also included in the redlined version. An additional change to Table 1 within Attachment 2 is the separation of the "Real Assets" segment into separate "Real Estate" and "Infrastructure & Forestland" lines. The previous structure of the table was inconsistent with the actual asset class specification used in the ALM process. Staffs' suggestion is to treat this segment in a manner consistent with that used for the "Growth" asset classes of "Global Equity" and the renamed "Private Equity" (previously titled "Alternative Investment Management").

   A review of the various asset class ranges has been undertaken along with an assessment of the tracking error implications deriving from the ranges. Table 6 contains a summary of the information:

Table 6 – Range and Tracking Error Assessment

Asset Class	Adopted Strategic Asset Allocation	Asset Allocation Range		
		Current Range	Range for Tracking Error to be closer to 75bps	Recommendation
Global Equity	47%	±7%	±5%	±7%
Private Equity	12%	±4%	±4%	±4%
Fixed Income	19%	±5%	±4%	±5%
Real Estate	11%	±5%	±4%	±5%
Infra. & Forest	3%	±2%	±1%	±2%
Inflation Assets	6%	±3%	±2%	±3%
Liquidity	2%	±3%	±1%	$\boxed{\pm 1\%}$
Maximum Tracking Error	Estimated by BarraOne	121 bps	67-86 bps	
	Estimated with CMAs	176 bps	111-133 bps	

In Table 6, tracking error estimation has been completed using both the CalPERS Risk Management System (BarraOne) and by calculation from the capital market assumptions (CMAs) developed during the ALM process. The variance between the two estimations derives from different underlying asset volatility and correlation information. From a Policy compliance perspective, the BarraOne system is the platform capable of ongoing estimation of tracking error and is the basis specified in Policy language. In Agenda Item 9a presented at the March 2014 IC meeting, it was hypothesized that the tracking error limits specified in Section VI.F of the Policy, or the asset class ranges may need to be changed. Upon further analysis by staff, reflected in Table 6, it appears that no changes to the tracking error limit specifications are warranted at this time, subject to the comments below:

- If the full asset class ranges were used to create the most extreme tracking error possible, the current market conditions indicate the resulting tracking error would be about 46 basis points higher than the policy limit (121 basis points versus 75 basis points limit). In this scenario, the tracking error limit of 75 basis points would constrain the use of the full ranges.

- The range for liquidity warrants modification from the current +/-3% to +/- 1% given the reduction in overall target from 4% to 2%. This is the only material change to the new strategic asset allocation policy ranges (relative to targets).

- The balance of the current ranges seem appropriate to allow for a combination of drift due to valuation differences and intentional positioning to take advantage of the valuation variance.

- The analysis outcome is linked to the current market volatility and correlation conditions utilized in the BarraOne calculations. Should market conditions change where volatility or correlation increase, this conclusion may need to be revisited.

BUDGET AND FISCAL IMPACTS
Not Applicable

BENEFITS/RISKS
Interim Targets – Adoption of the proposed, new interim targets to closer align the PERF with the new Policy Portfolio reflects the implementation of IC feedback regarding key risks and benefits discussed throughout the ALM process. The proposed step-wise interim asset allocation targets allow staff to make adjustments based on the current market conditions in order to prudently deploy capital while preserving pricing discipline and minimizing the transaction costs of implementation. As illustrated in Table 5, the primary risk associated with adoption of the interim

targets is that the resulting interim portfolios are expected to generate a slightly lower return and higher volatility than the Policy Portfolio selected by the IC, and adopted by the Board of Administration, in February 2014. Staff expects that the step-wise interim portfolios will support the 7.5% discount rate.

Policy Modification – The proposed revisions memorialize the key risks and benefits considered with the IC throughout the ALM process and clarify the implementation by documenting all of the adopted changes. Maintaining accurate policy documentation is an important mitigation effort for managing operational and reputational risks. The proposed policy modifications are not anticipated to pose any additional risks.

ATTACHMENTS
Attachment 1 – Private Equity Pacing Model
Attachment 2 – Revised Asset Allocation Strategy Policy
Attachment 3 – Wilshire Associates Opinion Letter
Attachment 4 – Pension Consulting Alliance Opinion Letter

ERIC BAGGESEN
Senior Investment Officer
Asset Allocation and Risk Management

THEODORE ELIOPOULOS
Interim Chief Investment Officer