Agenda Item 5a

May 19, 2014

ITEM NAME: Revision of the Asset Allocation Strategy Policy

PROGRAM: Asset Allocation

ITEM TYPE: Policy & Delegation – Action

RECOMMENDATION

Approve the revised Statement of Investment Policy for Asset Allocation Strategy (Policy), including the use of interim allocation targets, as shown in Attachment 1 under Section V.A., Table 1 of the Policy. Consultant opinion letters from Wilshire Associates and Pension Consulting Alliance Inc. (PCA) are provided as Attachments 2 and 3 respectively.

EXECUTIVE SUMMARY

At the April 14, 2014 Investment Committee (IC) meeting, Agenda Item 5a presented information supporting revisions to the Policy which guides the overall strategic asset allocation implementation. Discussion between staff and the Board's Investment Consultants, Wilshire Associates and PCA, has continued and appears to have led to consensus, including:

- Agreement on the proposed interim asset class targets, originally presented in Agenda Item 5a (April 2014 IC) and shown in Table A on page three of this agenda item.
- Replacing the pre-defined schedule of adjustment to the interim targets with an annual review of the interim targets and market conditions which may underlie recommended future adjustments (Section V.A of the Policy).
- Insertion of language requiring a market valuation based analysis at the midpoint of the Asset Allocation Strategy cycle, or as needed due to changing market conditions or changes to the capital market assumptions (CMAs) (Section V.C.1 of the Policy).
- Initiating an IC exploration of benchmarks, their uses and implications, with the expectation of completion before the next review of the interim targets.

Staff seeks approval of the revised Policy to codify the strategic asset allocation selected by the Board in February 2014, as well as the use of interim targets for the Private Equity, Real Estate, and Infrastructure & Forestland asset class segments. Changes made to the Policy in follow up to the initial review in April, are denoted with yellow highlighting within Attachment 1.

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

INVESTMENT BELIEFS
This item supports CalPERS Investment Belief 6, that strategic asset allocation is the dominant determinant of portfolio risk and return.

BACKGROUND
Agenda Item 5a (April 2014 IC) provided information regarding the characteristics of the private asset classes (Private Equity, Real Estate and Infrastructure & Forestland). The preponderance of the information concerned Private Equity and included pacing model information from the November 2013 Asset Liability Management (ALM) workshop with updates as of March 2014. Based on asset pricing characteristics and capacity considerations in the private asset classes, staff proposed the use of interim allocation targets. Additionally, Agenda Item 5a proposed a schedule for the gradual adjustment of the interim targets.

The information presented in April resulted in a thorough discussion on the importance of pricing discipline, responsiveness to market conditions, and the implications of policy targets and benchmarks by staff, the IC, and the Board's Investment Consultants. Additional discussion centered on comments from Wilshire Associates which raised the potential use of two benchmarks, a long-term policy benchmark (effectively the allocation targets adopted by the Board in February 2014), and another dynamic benchmark which would adjust to the actual weights for each of the illiquid asset classes with the liquid asset classes. This idea of dual benchmarks was proposed as an option to increase transparency regarding the returns associated with the timing of any variances between the two benchmarks.

ANALYSIS
Reflecting feedback from the IC and the Board's Investment Consultants, this item recommends:

1. Changes to the Policy, including the use of interim allocation targets.

2. Establishment of the timing expectations regarding a review of benchmarks.

Updated Proposed Revisions to the Policy
The following are the proposed revisions to the Policy:

1. Section V.A – Asset Class Policy Targets and Ranges – The first edit to this section is the insertion of language establishing an annual review of any interim targets. Should conditions warrant, such as material changes to the

CMAs or market segment valuation, staff shall bring the review forward as needed.

The next edits to this section are contained within Table 1 of the Policy (Table A below), which specifies both the policy and interim targets along with the ranges by which exposure may vary from the targets without further input from the IC. The interim reduction in target weight for Private Equity, Real Estate and Infrastructure & Forestland is offset by an increase to the Interim weight of Global Equity. An additional change to Table 1 within the Policy is the separation of the "Real Assets" segment into separate "Real Estate" and "Infrastructure & Forestland" lines.

Table A – Asset Allocation Strategy Policy Targets

Asset Class	Approved Policy Target	Interim Target	Policy Range Relative to Target
Growth			
Global Equity	47%	51%	+/- 7%
Private Equity	12%	10%	+/- 4%
Total Growth	*59%*	*61%*	*+/- 7%*
Income – Global Fixed Income	19%	19%	+/- 5%
Real Assets			
Real Estate	11%	10%	+/- 5%
Infrastructure & Forestland	3%	2%	+/- 2%
Total Real Assets	*14%*	*12%*	*+/- 5%*
Inflation	6%	6%	+/- 3%
Liquidity	2%	2%	+/- 1%
Total Fund	100%	100%	N/A

As noted in Agenda Item 5a (April 2014 IC), staff are working on additional tools to aid the achievement of the policy target weights resulting from the ALM process. It is currently anticipated that staff shall bring information to the IC before calendar year-end 2014 and recommend a developmental trial of an alternative investment possessing characteristics equivalent to the CMAs for Private Equity.

Table B on the following page reflects the impact on expected return and risk resulting from the use of interim targets (Interim Portfolio). While the expectations for the Interim Portfolio are less optimal than the new policy weights (Policy Portfolio) selected in February 2014, they are consistent with the overall direction of reducing expected risk while continuing to support the 7.5% discount rate.

Table B – Recommended Interim Portfolio Target Effect

Asset Class Component	New Policy Portfolio	Interim Portfolio (7/1/2014)	Prior Policy Portfolio
Global Equity	47%	51%	50%
Private Equity	12%	10%	14%
Fixed Income	19%	19%	17%
Real Estate	11%	10%	9%
Infrastructure & Forestland	3%	2%	2%
Inflation Sensitive	6%	6%	4%
Liquidity	2%	2%	4%
Expected Compound Return (1-10 yrs.) :	7.15%	7.10%	7.25%
Blended Return (1-60 yrs.)[1] :	7.56%	7.52%	7.63%
Expected Volatility :	11.76%	11.91%	12.45%

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

2. 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 schedule for the ALM work. Staff is also recommending the insertion of language requiring a valuation-based analysis, to be brought to the IC at the midpoint of the ALM cycle or as warranted by changes in market conditions.

<u>Continued Exploration of ALM Issues</u>
Throughout the ALM process, discussions between staff, the IC, and the Board's Investment Consultants have highlighted the importance of a thorough review and discussion of CalPERS benchmarks. Staff is committed to beginning an exploration of benchmarks by calendar year-end 2014. The current expectation is for this effort to be completed prior to the next review of interim targets. The ability to meet this expectation is dependent on the breadth and depth of issues and work that arise during the benchmark exploration.

BUDGET AND FISCAL IMPACTS
Not Applicable

BENEFITS/RISKS
The proposed interim targets, included in the revised Policy, will more closely align the Public Employees' Retirement Fund with the new Policy Portfolio while being consistent with market conditions and feedback received from the IC throughout the ALM process.

Re-evaluating interim asset allocation targets on a yearly basis, or sooner if conditions warrant, is expected to provide an evolutionary path to the strategic asset allocation adopted in February 2014. This will facilitate the prudent deployment of capital while preserving pricing discipline and minimizing the transaction costs of implementation. Retaining sensitivity to current market conditions is the primary benefit of the interim targets.

As discussed at the April 2014 IC meeting, the primary risk associated with adoption of the interim targets is that the Interim Portfolio is expected to generate a slightly lower return and higher volatility than the Policy Portfolio adopted in February 2014. Staff expects that the Interim Portfolio will support the 7.5% discount rate.

Maintaining accurate policy documentation is an important mitigation effort for managing operational and reputational risks. The other proposed revisions to the Policy serve to memorialize the integration of the asset allocation/investment analysis with the actuarial analysis within the ALM process. The revisions also clarify the implementation process for the new strategic asset allocation targets.

ATTACHMENTS
Attachment 1 – Revised Statement of Investment Policy for Asset Allocation Strategy
Attachment 2 – Wilshire Associates Opinion Letter
Attachment 3 – PCA Opinion Letter

ERIC BAGGESEN
Senior Investment Officer
Asset Allocation and Risk Management

THEODORE ELIOPOULOS
Interim Chief Investment Officer

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM
STATEMENT OF INVESTMENT POLICY

FOR
ASSET ALLOCATION STRATEGY

~~December 2, 2013~~ May 19, 2014

This policy is effective immediately upon adoption and supersedes all previous Asset Allocation Strategy policies.

I. PURPOSE

The California Public Employees' Retirement System ("CalPERS") Investment Beliefs Policy and Total Fund Statement of Investment Policy, adopted by the CalPERS Investment Committee ("Committee"), set forth CalPERS overarching investment purposes and objectives with respect to all its investment programs.

This document sets forth the investment policy ("Policy") for the Asset Allocation Strategy ("Program"). The design of this policy ensures that investors, managers, consultants, and other participants selected by the CalPERS take prudent and careful action while managing the Program. Additionally, use of this policy assures sufficient flexibility in managing investment risks and returns associated with this Program.

The Program involves establishing asset class allocation policy targets and ranges, and managing asset class allocations within their policy ranges. CalPERS recognizes that over 90% of the variation in investment returns of a large well-diversified pool of assets can typically be attributed to asset allocation decisions.

II. STRATEGIC OBJECTIVE

The Program shall be managed to accomplish the following:

A. Recommend an asset allocation mix with targets and ranges based on a periodic asset liability management ("ALM") review;

B. Achieve the highest rate of total return reasonably possible within prudent levels of risk and liquidity;

C. Maintain sufficient diversification to avoid large losses and preserve capital;

D. Ensure that the asset class policy ranges approved by the Committee are adhered to, and that any rebalancing is performed efficiently and prudently;

E. Maintain adequate liquidity to meet cash needs; and,

F. Generate positive returns through any active asset allocation decisions subject to policy ranges and risk limits.

III. RESPONSIBILITIES

A. In addition to the Committee's responsibilities outlined in the Total Fund Statement of Investment Policy, the Committee is also responsible for approving asset classes for investment and approving a policy target allocation, permissible range, and benchmark for each asset class.

B. CalPERS Investment Staff ("Staff") is responsible for the following:

1. All aspects of Program portfolio management including monitoring, analyzing, and evaluating performance relative to the appropriate benchmark.

2. Managing CalPERS asset class allocations within policy ranges approved by the Committee, in accordance with Policy guidelines.

3. Reporting to the Committee monthly on asset class allocations relative to their targets and ranges.

4. Reporting to the Committee annually and more frequently if needed about Program allocations, returns, risks, and activity.

5. Monitoring the implementation of, and compliance with, the Policy. Staff shall report concerns, problems, material changes, and all violations of Guidelines and Policies at the next Committee meeting. All events deemed materially important will be reported to the Board immediately. These reports shall include explanations of the violations and appropriate recommendations for corrective action.

6. Providing recommendations to the Committee concerning the identification of asset classes and selection of asset class benchmarks, policy targets and ranges.

7. Determining adjustments in asset class allocations, and directing rebalancing account activity and fund transfers across asset classes.

C. The General Pension Consultant ("Consultant") is responsible for monitoring, evaluating, and reporting periodically, to the Committee, on the performance of the Program relative to the benchmark and Policy.

IV. PERFORMANCE OBJECTIVE AND BENCHMARK

The Fund benchmark is specified in the Benchmarks Policy.

The goal is to establish asset class policy targets and ranges that meet the objectives described in Section II above.

The performance objective is to achieve positive active asset allocation returns over rolling five-year periods.

V. INVESTMENT APPROACHES AND PARAMETERS – STRATEGIC

A. Asset Class Policy Targets and Ranges

Policy asset class targets ~~and ranges~~ listed in Table 1 below were approved in ~~December 2010~~February 2014 by the Committee and Board. These policy targets are expected to be implemented over a period of ~~one to two~~several years beginning ~~July 1, 2011~~July 1, 2014. During this transition period, interim policy targets will be used to calculate the Policy Index return with the concurrence of the Consultant. The interim targets will be evaluated on an annual basis, or sooner as warranted by market conditions. The permissible ranges listed in Table 1 are effective ~~July 1, 2011~~July 1, 2014.

Table 1

~~Asset Class~~	~~Policy Target~~	~~Policy Range Relative to Target~~
~~Growth~~		
~~Global Equity~~	~~49%~~	~~+/- 7%~~
~~Alternative Investment Management (AIM)~~	~~14%~~	~~+/- 4%~~
~~Total Growth~~	~~63%~~	~~+/- 7%~~
~~Income - Global Fixed Income (GFI)~~	~~16%~~	~~+/- 5%~~
~~Real Assets~~	~~13%~~	~~+/- 5%~~
~~Inflation~~	~~4%~~	~~+/- 3%~~
~~Liquidity~~	~~4%~~	~~+/- 3%~~
~~Total Fund~~	~~100%~~	~~N/A~~

Asset Class	Policy Target	Interim Target	Policy Range Relative to Target
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B. Asset Class Benchmarks

Each asset class and related components shall have a benchmark specified in the Benchmarks Policy and approved by the Committee.

C. Strategic Asset Allocation Process

1. A comprehensive Asset Allocation Strategy analysis shall be ~~completed at least once every three years~~coincident with the review of actuarial methods and assumptions, currently on a four-year cycle. ~~and~~ The Asset Allocation Strategy analysis will be presented to the Committee for review and approval of Policy target asset class allocations and ranges.

   Staff shall present a market valuation-based analysis at the midpoint of the four year review cycle, or as needed in response to market conditions or changes impacting the capital market assumptions
   ~~Staff may recommend a more frequent analysis of asset class allocations and ranges if expected returns, risks or liability values have substantially changed since the prior analysis. Additionally, the Program shall be reviewed by Staff at least annually to ensure that all assumptions used in establishing the Program continue to be reasonable.~~

   Staff may also recommend to the Committee changes in the policy targets and ranges.

2. The Program shall reflect analyses that consider the current and expected financial condition of CalPERS including projected CalPERS liabilities. Analyses shall also encompass the expected long-term capital markets outlook, expected inflation, and CalPERS risk tolerance.

   a. Analyses shall identify suitable asset classes in accordance with Section V.D, and consider asset class expected returns, volatilities, and correlations.

   b. Analyses shall consider relevant and timely decision factors. These decision factors shall be incorporated into the comprehensive Asset Allocation Strategy analysis to permit Committee members to establish investment priorities. Decision factors may include the following:

      (1) Measures of projected funded status;

      (2) Measures of the likelihood of deterioration in funded status;

      (3) Measures of projected cost; and

      (4) Measures of the likelihood of unacceptably high costs.

c. Analyses of alternative asset mixes shall measure the estimated effect on expected risk and return, and diversification.

d. The Committee shall approve policy asset allocation targets and ranges expressed as a percentage of total assets. The Committee shall set policy ranges sufficiently wide to permit efficient and flexible implementation, yet sufficiently narrow to maintain the basic risk and return relationship established by the allocation targets.

D. Asset Class Criteria

A financial or real asset type shall be considered as an asset class if it has a risk, return, and correlation profile sufficiently different from existing CalPERS asset classes, and if its inclusion or exclusion materially affects the expected risk and return of CalPERS total return.

1. Criteria for consideration when evaluating an asset class shall include the following:

a. Strategic role of the asset class in the ALM framework based on fundamental characteristics and risk and return drivers.

b. Sufficient size, liquidity, and cost efficiency to permit CalPERS to invest meaningful amounts in that asset class, and have a material effect on CalPERS return.

c. Availability of sufficient internal or external investment and technical expertise to ensure prudent implementation of an investment in that asset class.

d. Presence of diversification, return enhancement, liquidity provision, or some other readily identifiable attribute sufficiently different from other asset classes and which enhances CalPERS ability to achieve the strategic objectives outlined in Section II.

e. Acceptance by other large pension plan sponsors as a feasible and meaningful asset class, or in the absence of such acceptance, academic support for its inclusion.

f. Availability of sufficient data, history, or expertise to assess the feasibility and benefit of the asset class to CalPERS, by means of a measurable investment outcome. Further, the asset class must have a basis for developing expected investment returns, risks, and correlations for the purposes of the financial study.

2. An asset class may be approved for investment provided it meets the above criteria, and the Committee has had the opportunity for sufficient education to enable it to fulfill its fiduciary responsibility in making such an approval.

3. Once CalPERS approves an asset class for investment, as part of the Program, the investment may only be made in accordance with a policy reviewed and approved by the Committee for that asset class. Such a policy shall specify the investment guidelines and provide for the monitoring of that asset class.

VI. INVESTMENT APPROACHES AND PARAMETERS – IMPLEMENTATION

A. Adherence to the asset class policy ranges shall be monitored and reported to the Committee as part of the Monthly CIO Report. This report shall display a comparison between the portfolio asset class allocations and the policy targets and ranges. The report shall also compare the investment performance results of each asset class and the benchmark returns.

B. Asset class allocations shall be managed to be within policy ranges. Allocations may temporarily deviate from policy ranges due to extreme market volatility. If an asset class allocation exceeds the policy range, Staff shall return the asset allocation to within its policy range in a timely manner, with the exact time period primarily dependent on transaction costs and liquidity.

   Staff decisions concerning asset class active weights shall be determined in consideration of capital market views, relevant asset class characteristics, transaction costs, liquidity, and risks subject to this Policy and all other applicable policies.

   For Global Equity and Global Fixed Income, the cumulative adjustment of the asset class weighting by Staff shall not exceed 50% of the policy range of the asset class within any quarter without advance Committee consent.

   Changes in asset class allocations may be achieved by the movement of capital between asset classes through the trading of securities or through the use of derivatives. The intent is for asset class allocations to be actively managed rather than being allowed to passively drift with recent relative asset class returns.

C. Accounts may be established and used to adjust asset class allocations within policy ranges, or to return asset allocations that have exceeded a policy range to within the policy range.

CalPERS cash may remain as cash or be converted to equity or bond exposure subject to active asset allocation decisions and policy ranges.

D. Managers may be retained for Program implementation subject to policy asset allocation ranges.

E. The active asset allocation return will be measured and included in the Total Fund return and reported to the Committee at least quarterly.

F. Target Tracking Error

The Program will be managed within a target forecast annual tracking error of 0.75% using the CalPERS Risk Management System. This implies that over any one-year period, there will be a less than 5% probability that the active asset allocation return will be less than negative 1.2%.

The CalPERS total fund shall be managed with a target forecast annual tracking error of 1.5%, inclusive of active asset allocation and other active management decisions, using the CalPERS Risk Management System.
For both types of tracking errors, Staff will evaluate forecast values against subsequent realized values over rolling three-year periods.

G. External Manager Investment Guidelines

1. Manager Selection

a. Managers retained in the Program shall have recognized expertise in active asset allocation.

b. The selected managers shall be registered, or appropriately exempt from registration, with the Securities and Exchange Commission ("SEC").

c. Managers shall be selected in accordance with the applicable California laws and regulations, and CalPERS policy.

2. Investment Manager Guidelines

Program Managers shall operate under guidelines that describe their investment philosophies and approaches, representative portfolio characteristics, permissible and restricted securities and procedures, benchmark and performance objectives.

Implementation of this Program shall comply at all times with manager-specific investment management guidelines in addition to all applicable CalPERS investment policies.

VII. DERIVATIVES AND LEVERAGE

A. Strategies

Financial futures contracts, forward contracts, swaps, options, combinations of these derivatives, exchange traded funds, and structured notes may be used in the Program for the following purposes:

1. Adjust asset class allocations, within approved policy ranges.
2. Minimize the investment effect of average cash balances held in cash equivalents accounts by overlaying asset class derivatives.

B. Justification

Derivatives have several advantages in adjusting asset class allocations, including:

1. Minimizing transaction costs;
2. Increasing the speed of transactions, and thus the ability to respond quickly to volatile capital markets; and
3. Minimizing disruption of CalPERS portfolios.

C. Risks

Any use of derivatives to adjust asset class allocations shall comply with this Policy and all other applicable CalPERS policies including the Global Derivatives and Counterparty Risk Policy. Key derivative risks are described below:

1. Valuation ~~Pricing~~ risk;
2. Liquidity risk; and
3. Counterparty risk.

Counterparty risk shall be managed in accordance with the Global Derivatives and Counterparty Risk Policy.

D. Leverage

The Program shall be in compliance with the Leverage Policy.

1. Exposure Limit

Derivative exposure used in the Program is limited to amounts that maintain all asset class allocations within their approved ranges.

2. Collateral

Collateral for all derivatives used in the Program shall consist of Investment Grade fixed income securities.

3. Prohibited Uses

This Policy authorizes only activity expressly designed to either overlay cash with exposure to another asset class or adjust portfolio asset class allocations within policy ranges. It does not authorize any other derivative trading purpose nor does it alter derivatives activity authorization given under other approved Policy documents.

VIII. CALCULATIONS AND COMPUTATIONS

Investors, managers, consultants, and other participants selected by CalPERS shall make all calculations and computations on a market value basis as recorded by CalPERS Custodian.

IX. GLOSSARY OF TERMS

Key words used in the policy are defined in CalPERS Master Glossary of Terms.

Approved by the Policy Subcommittee	August 12, 1998
Adopted by the Investment Committee	August 14, 1998
Revised by the Policy Subcommittee	December 13, 2002
Approved by the Investment Committee	February 18, 2003
Revised by the Policy Subcommittee	December 10, 2004
Approved by the Investment Committee	February 14, 2005
Revised by the Policy Subcommittee	June 10, 2005
Approved by the Investment Committee	August 15, 2005
Revised by the Policy Subcommittee	August 11, 2006
Approved by the Investment Committee	September 11, 2006

Revised by the Policy Subcommittee Approved by the Investment Committee	August 10, 2007 September 10, 2007
Revised by the Policy Subcommittee Approved by the Investment Committee	April 21, 2008 May 12, 2008
Revised by the Policy Subcommittee Approved by the Investment Committee	December 15, 2008 (Allocation ranges) February 17, 2009
Approved by the Investment Committee	March 16, 2009
Revised by the Policy Subcommittee Approved by the Investment Committee	August 17, 2009 September 14, 2009
Admin change due to Benchmark Policy	September 28, 2009
Revised by the Policy Subcommittee Approved by the Investment Committee	November 16, 2009 December 14, 2009
Revised by the Policy Subcommittee Approved by the Investment Committee Policy Effective	April 11, 2011 May 16, 2011 July 1, 2011
Admin changes to update template format and to align this policy with the Global Derivatives and Counterparty Risk Policy	December 2, 2013
Revised by the Investment Committee	May 19, 2014

Asset Allocation Strategy Policy Glossary

Active Asset Allocation Return
The portfolio return attributable to deviations between actual and policy asset allocations. Returns can be attributed to two sources: the active asset allocation return and the benchmark-relative return of each asset class. The CalPERS asset allocation return is calculated by the Custodian.

Asset Class Allocation
The net long market value of all non-derivative securities plus the net long futures-equivalent notional value of all derivatives.

Counterparty Risk
The risk that CalPERS will have difficulty enforcing the provisions of a contract (Also known as “legal” risk).

Decision Factors
A measure or characteristic used for relating strategic goals to a specific asset allocation decision.

Exchange Traded Fund
An exchange-traded fund (ETF) is an investment company that is legally classified as an open-end company or a Unit Investment Trusts. An ETF is not classified as a mutual fund by the Securities and Exchange Commission because of limited redeemability. A typical ETF is similar to an index fund, and will invest in either all of the securities of a selected index or a representative sample of the securities included in the index.

Forward Contract (Forwards)
An instrument that allows the purchase or sale of a specific quantity of a commodity, government security, foreign currency, or other financial instrument at the current price, with delivery and settlement at a specified future date.

Fund Benchmark
The average return of the asset class benchmark indices, weighted by asset class benchmark allocations. The fund benchmark return is the return attributable to the target asset class allocations. Staff employs active strategies in an effort to achieve a fund portfolio return that exceeds the fund benchmark return.

General Pension Consultant
An individual or organization that provides specialized professional assistance to the Investment Committee in determining the pension fund's asset allocation model or optimal combination of investments in order to maximize risk-adjusted investment returns in a manner consistent with the State's long-term pension liabilities.

Investment Grade
A minimum credit rating of Baa3 by Moody's Investor Service or BBB- for Standard & Poor's Corporation, and BBB- by Fitch. Investment grade ratings apply to issuers whose financial risk is relatively low and the probability of future payment relatively high.

Leverage
A condition where a portfolio's market obligation may exceed the market-value-adjusted capital commitment by the amount of borrowed capital (debt).

Liquidity Risk
The inability to trade a position at a price approximating fair value.

Option
Contracts that give the purchaser the right, but not the obligation, to buy or sell an underlying instrument at a certain price (the exercise or strike price) on or before an agreed date (the exercise period). For this right, the purchaser pays a premium to the seller. The seller (writer) of an option has a duty to buy or sell at the strike price, should the purchaser exercise his right.

Policy Range
The permissible allocations of an asset class set by the Investment Committee.

~~Pricing~~ Valuation Risk
The risk that the fair value of an asset cannot be established.

Rebalancing
The movement of portfolio asset class exposures closer to policy target weightings, generally resulting in a reduction in active (benchmark-relative) risk.

SEC
The Securities and Exchange Commission. This is the federal agency created by the Securities Exchange Act of 1933 to administer that act and the Securities Act of 1933, formerly carried out by the Federal Trade Commission.

Swap
Private agreement between two companies to exchange cash flows in the future according to a prearranged formula.

Tracking Error
The annualized standard deviation of the difference between the total return of the portfolio and the total return of the benchmark. The term tracking error is frequently used to describe return deviation, the total return of a portfolio, minus the total return of a benchmark index.

Michael C. Schlachter, CFA
Managing Director & Principal

April 29, 2014

Mr. Henry Jones
Chairman of the Investment Committee
California Public Employees' Retirement System
400 P Street, Suite 3492
Sacramento, CA 95814

Re: Statement of Investment Policy for Asset Allocation Strategy

Dear Mr. Jones:

We have reviewed the agenda item, recommendation, and revisions to the Statement of Investment Policy for Asset Allocation Strategy as presented by Staff. Our recommendation regarding this item is below, as well as further discussion.

Recommendation

We have reviewed the documents delineated above and recommend approval of the interim targets and the policy revisions.

Discussion

At the April 2014 Investment Committee meeting, we expressed our view that given the illiquidity of the Private Equity portfolio, we were opposed to a pre-programmed set of interim targets that could require overly aggressive commitments to new private equity funds over the next few years. In our opinion, if Staff's pacing models indicated that it would be virtually impossible to reach the asset allocation targets selected by the Investment Committee in February without a significant decrease in selectivity, then it made sense to simply adjust the asset allocation target for this asset class to a more realistic and achievable level, as was the case with the Real Estate allocation following the 2010 ALM process.

The agenda item and proposed policy revisions are in line with our recommendation at that time, setting an interim target of 10% with a mechanism to review the target annually but no requirement that the target automatically increase each year. Given that this is what we recommended at the February 2014 Investment Committee meeting, we are in agreement with this new approach and recommend approval of these policy revisions.

We note that the other significant change to the policy increases the time between asset allocation reviews from the current 3 year cycle to 4 years. We commonly recommend that clients review their asset allocation ***about*** every three years, but we do not consider that time frame immovable. Given that the other factors in a holistic approach to asset allocation decision making (including rate setting and demographic calculations) occur for CalPERS on a four year cycle, we believe that it is entirely appropriate to shift the ALM process and decision to every four years.

Staff has separately proposed reviewing the asset allocation targets formally every two years in an asset-only framework to reaffirm the asset allocation at the midpoint of the lengthened ALM cycle and we believe that this helps to mitigate the chance that major market movements or revisions of expectations will be overlooked due to an expansion of the cycle from 3 to 4 years.

If you have any comments or questions, please let us know.

Sincerely,

PCA | PENSION CONSULTING ALLIANCE
CELEBRATING 25 YEARS

May 5, 2014

Mr. Henry Jones, Chairman
Investment Committee
California Public Employees' Retirement System
Sacramento, California 95814

Re: Implementation Recommendations for Recently-Approved Long-Term Policy

Dear Mr. Jones,

The purpose of this letter is to provide the Investment Committee with Pension Consulting Alliance's (PCA's) opinion regarding revisions of the asset allocation strategy policy. In summary, PCA supports staff's recommendations:

1. To utilize an interim strategic allocation framework in pursuit of the long-term policy target approved earlier by the Investment Committee. Under this framework, the Investment Committee should approve the first interim target as described in staff's memo (see Table A). The interim target will be reviewed on at least an annual basis or when changes to market conditions and/or capital market assumptions warrant such a review. Shifting CalPERS' sizable actual portfolio to the long-term policy should take place in a deliberate and prudent manner. In this context, PCA believes the interim-target approach laid out in staff's memo and codified in the proposed policy revisions allows the implementation process to meet these objectives.

2. Begin a formal review of strategic benchmarks utilized by the Investment Committee, staff, and the Investment Committee's consultants. The objective of this review is to ensure that existing and possibly new benchmarks help align implementation activities with long-term policy intentions.

PCA believes these recommendations are reasonable and prudent and help to solidify and memorialize the Investment Committee's selection of the policy portfolio approved during the most recent ALM process.

As we have stated in prior opinions, viewed through a macroeconomic risk factor allocation prism, we note that both the approved policy portfolio and interim target portfolio exhibit biases toward economic growth. In other words, the success of these portfolios will be dictated largely by global economic growth trends – if economic growth is generally favorable, the portfolios will likely perform well over time; if economic growth falters, the portfolios may underperform expectations, possibly by a material amount.

Over the last year or so, CalPERS' staff and consultants have engaged in a rigorous process to assist the Investment Committee in the consideration of a new/alternative strategic investment

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CELEBRATING 25 YEARS

policy. The ALM process has covered a wide array of topics, from risk allocation to liquidity management to sustainable investing and benchmarking. PCA supports this final outcome of the ALM process and believes the staff should be commended for their work and efforts during this complex project.

We look forward to addressing any questions or clarifications on this matter at the Investment Committee meeting.

Respectfully,

Allan Emkin