Agenda Item 6a

April 13, 2015

ITEM NAME: Strategic Asset Allocation Interim Targets Review

PROGRAM: Asset Allocation and Risk Management

ITEM TYPE: Asset Allocation, Performance & Risk – Information

EXECUTIVE SUMMARY

This item provides analysis, for the purpose of soliciting Investment Committee (Committee) feedback and guidance, on the following proposals:

1. The ongoing use of the interim strategic asset allocation targets for the Global Equity, Private Equity, and Real Assets programs.

2. Proposed establishment of an interim allocation target for the Liquidity asset class, with a reduction from 2% to 1%, the revision of the Liquidity policy range relative to target, and a revision to the Liquidity benchmark.

3. Deployment of the outstanding 1% to the Global Fixed Income allocation.

Pending feedback from the Committee, staff will return with proposed policy revisions as appropriate (e.g., Total Fund Policy, Liquidity Policy, etc.), to codify any changes at a subsequent Committee meeting.

STRATEGIC PLAN

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

BACKGROUND

CalPERS' policy portfolio has far reaching implications for CalPERS as an enterprise, and for the health and sustainability of the System. The issues outlined in this item span several governance groups, and long-term projects and initiatives. Table 1 on the following page highlights the key engagements on these inter-related topics.

Table 1: Summary Timeline of Key Engagements

Timeline	Item
2013	✓ Investment benchmark roles, uses, and implications for use identified as a topic for additional follow up in the course of the 2013-14 Asset Liability Management (ALM) process
February 2014	✓ Board of Administration adopted a new Policy Portfolio and Actuarial Assumptions ✓ Finance & Administration Committee charge Financial Office with development of a Treasury Management Program
May 2014	✓ Investment Committee approved revision of Asset Allocation Strategy Policy to: o Codify the strategic asset allocation targets and establish the use of interim asset allocation targets o Sync CalPERS ALM process with core Actuarial work on a four-year cycle o Establish a mid-cycle ALM review
December 2014	✓ Investment Committee reviewed proposed scope and timeline for a series of engagements to explore the roles, uses, and implications of CalPERS' policy benchmarks ✓ Portfolio Priorities concept introduced
January 2015	✓ Board of Administration received presentations the roles, uses, and implications of investment benchmarks. Including an overview of issues and opportunities with CalPERS' current policy-level benchmarks ✓ Board of Administration received presentation on CalPERS' Treasury Management Principles, informing the development of the Treasury Management Policy and the critical dependencies for achieving lower liquidity levels
February-March 2015	✓ Finance & Administration Committee reviewed proposed Treasury Management Policy ✓ Treasury Management Policy adopted by the Board of Administration in March 2015

1. Background: Interim Asset Allocation Target Use

The Strategic Asset Allocation targets developed in 2013 and approved in 2014 were based on long-term capital market assumptions that reflected a return to a more normal interest rate environment with interest rates in the 3% to 4% range. The Fed monetary policy that has been in place since the 2008-2009 Financial Crisis has resulted in an extended period of low short and long-term interest rates which had a number of implications for across the CalPERS asset classes, including:

- Inexpensive financing led to high valuations in private and public equity markets
- High public market valuations allowed the exit of private equity deals, resulting in distributions to CalPERS
- A large amount of unfunded private equity commitments led to competitive pricing of private assets (high valuations)
- Inexpensive financing led to high demand for real assets, resulting in high valuations for these assets
- The high valuations in private equity and real assets compromises CalPERS' ability to deploy capital consistent with the 2013 ALM capital market assumptions.

The end result of the market forces described above was a decrease in the actual weights of Private Equity and Real Assets in the Public Employees' Retirement Fund (PERF) portfolio. Two courses of action were possible at that point:

- Aggressively purchase private equity and real assets at diminished expected returns
- Reduce the allocations to Private Equity and Real Assets until the market conditions become more favorable. Create interim target weights.

In May of 2014 the Committee approved the use of interim asset allocation targets as part of the implementation of the policy portfolio selected through the 2013-14 Asset Liability Management (ALM) process. The interim allocations to Private Equity and Real Assets were reduced below the strategic asset allocations. Table 2 on the following page outlines the interim targets as approved by the Committee. Table 2 also includes the current portfolio weights as of February 28, 2015.

Table 2 – Asset Allocation Strategy Policy Targets and Current Weights

Asset Class	Approved Policy Target	Current Interim Target	Policy Range Rel. to Target	Current Portfolio Weight*
Growth				
Global Equity	47%	51%	+/- 7%	54.2%
Private Equity (PE)	12%	10%	+/- 4%	9.8%
Total Growth	*59%*	*61%*		*64.0%*
Income – Global Fixed Income	19%	N/A	+/- 5%	18.2%
Real Assets				
Real Estate	11%	10%	+/- 5%	8.4%
Infrastructure & Forestland	3%	2%	+/- 2%	1.4%
Total Real Assets	*14%*	*12%*		*9.9%*
Inflation	6%	N/A	+/- 3%	4.9%
Liquidity	2%	N/A	+/- 1%	1.9%

** As of February 28, 2015*

2. Background: CalPERS' Liquidity Allocation and Implications

Liquidity Target Allocation

Since May 2009, CalPERS has maintained an allocation to Liquidity. This allocation was recommended following the market turmoil in 2008-2009 to ensure sufficient liquidity to take advantage of opportunities, meet liabilities, and maintain an exposure to U.S. Government bonds that provided diversification during the market dislocation. The 2010 ALM concluded with a weight of 4% to Liquidity. During the 2013 ALM there was a reduced level of uncertainty in the markets and there was some discussion around eliminating the Liquidity allocation, but it was retained due to the following conditions:

- Uncertainty remained around the timing and magnitude of cash flows into and out of the private asset classes.
- The net cash flows for CalPERS were in the process of swinging from positive to negative and a robust treasury management program was not yet in place.

A strategic allocation to Liquidity of 2% was recommended in the 2013 ALM work and approved as part of the Policy Portfolio in February 2014. Significant progress continues to be made on both issues described above, including:

- Ongoing development of technological solutions:
  - The Automated Real Estate Investment System (AREIS) database for Real Assets, established in 2009, continues to be refined to enhance reporting and forecasting capabilities.
  - The Private Equity Accounting and Reporting Solution (PEARS) system is in the process of being implemented in Private Equity and is expected to enhance private equity data transparency.
- CalPERS' Treasury Management Program is being developed. Several key outcomes of the Treasury Management Policy approved by the Board in March 2015 are:
  - Integrated process for the oversight and management of enterprise cash and liquidity.
  - Standardized use of cash reserves to serve as a funding source for payment of CalPERS' obligations during stressed or crisis events.
  - Planned redefinition of the Liquidity Program Policy and its strategic objectives.
  - Segregation of cash accounts. Operating cash will eventually be removed from the strategic Liquidity allocation.

Liquidity and Implications for CalPERS
When liquidity is required a fund typically has two options:

1) Liquidate (sell) existing portfolio assets, and/or
2) Borrow (for CalPERS, this would be "borrowed liquidity" through the use of leverage).

A challenge associated with option 1) above, is that in times of market stress, the relative liquidity and price of portfolio assets can be compromised. Having an effective framework to allow the use of option 2) above, a borrowed liquidity approach, offers an additional resource, and buys valuable time, for an organization to navigate times of market stress. Staff proposes the integration of a borrowed liquidity approach, through the use of leverage via an expanded policy range for the Liquidity allocation, into our liquidity management and policy framework. Additional information is provided in the sections below.

ANALYSIS
1. Ongoing Interim Asset Allocation Target Use
The market conditions for Private Equity and Real Assets have not changed significantly since the interim policy targets were set in May 2014.

- Private Equity continues to experience a slow pace for deployment of committed capital.
- Similar deployment challenges are also in place in Real Assets as those assets continue to be richly valued.

Given this market environment, staff's review indicates that maintaining the interim targets for Private Equity and Real Assets would be appropriate until the next review in 2016.

<u>2. Proposed Establishment of Interim Target for Liquidity Allocation, Revision of Range Relative to Target and Revision to the Benchmark</u>
Should an interim target be established for Liquidity, reducing the allocation from 2% to 1%, an expansion of the policy range relative to the target and a revision of the policy benchmark should also be undertaken. Additional information is available in the sections below.

Establishment of Interim Target and Reduction of Allocation
Staff recommends that an interim target be established for the strategic Liquidity allocation with a reduction in the target from 2% to 1%.

- As mentioned in the background section, significant progress has been made over the past year that has enhanced CalPERS' ability to forecast cash requirements. There is still work to be done, so staff does not recommend reducing the Liquidity allocation to 0 at this time. However, staff believes that a 1% interim allocation to liquidity is now warranted. If an interim allocation to Liquidity is approved, the allocation will be reviewed again in 2016.

- As noted above, with the now approved Treasury Management policy, CalPERS expects to establish a cash reserve within the Liquidity allocation as a sort of "insurance policy" to cover benefit payments and operating expenses for some period of time during stressed market conditions and crisis events. The amount of this cash reserve will be determined on an ongoing basis by the Treasury Management Program, but is expected initially to be in the range of 0.50-0.60%.

- The establishment of the cash reserve and the reduction of the Liquidity allocation target to 1% imply that investment funding activity will be conducted within the remaining 0.50-0.40% of the Liquidity allocation. This effectively reduces the cash available to address timing differences between the sale and purchase of assets in the various investment programs from the current 2% to 0.5% in this proposal. While representing a significant improvement in the overall efficiency of cash usage, this is a significant reduction in the cash available to support investment operations, particularly given the uncertain timing of certain private asset class cash flows (e.g. real estate closing activities). To address the reduction in cash available for investment funding activities, staff recommends increasing the allowable range for the Liquidity allocation, as discussed below.

Revision of Range Relative to Liquidity Allocation Target
Staff proposes the allowable range be increased to +/-3% around the target. The expanded range will provide CalPERS with increased flexibility to respond to a range of market conditions, and effectively address timing differences between the sale and purchase of assets across the various programs. If the +/-3% range is adopted the proposed expanded range allows for an actual allocation to Liquidity of below 0%.

It is important to note that, should the actual allocation to Liquidity fall below 0%, that CalPERS' cash reserves would not be negative, and that actually, the flexibility offered by the increased Liquidity range would help ensure that sufficient cash reserves are on hand by allowing for use of the "borrowed liquidity approach" during times of market stress.

- It is not anticipated that the borrowed liquidity will t be utilized during normal market conditions. If borrowed liquidity is utilized it is anticipated that it would only be for a short time period. The flexibility to reduce the Liquidity allocation to -2% (3% below a 1% target) will enable CalPERS to mitigate the potential for inopportune asset sales during a market crisis.

  Staff expects to return to the Committee with the relevant risk management policies outlining the rules and reporting associated with any decision to use the borrowed liquidity approach.

- Use of the borrowed liquidity approach, through the use of the expanded range for the Liquidity allocation, implies leverage. If fund-level leverage is employed it will likely be employed through notional leverage. Notional leverage is taking on market exposure in excess of net assets, usually undertaken through the use of exchange traded futures contracts. CalPERS' Leverage Policy states that "the use of notional leverage shall include risk management guidelines and a limit on the amount of notional leverage." If an expanded range is approved a risk management guideline will be prepared for this application.

- The cash reserves, as defined by the Treasury Management Policy and part of the Liquidity allocation, will be segregated and managed in such a way that the cash reserves are intended to remain available during periods when the borrowed liquidity approach is in use.

- Staff expects to engage the Committee in a comprehensive discussion of leverage as the relevant Statements of Investment Policy are brought back for review over the next several months.

Revision of Liquidity Benchmark

CalPERS' investment benchmarks are key tools used to guide, manage, and measure investment decisions and performance. Selection and use of the most appropriate benchmark, for both the intended use and asset class, helps facilitate the effective management of an investment program. The current Liquidity benchmark consists of two components:

- 75% of the benchmark is Barclays 2-10 year Treasury Bond Index
- 25% of the benchmark is the 1 month T-bill

This benchmark was originally established when the allocation to Liquidity was 4% and there was a desire to generate additional yield and diversification in the Liquidity asset class. With a decrease in the Liquidity allocation to 1% in the 2014 ALM, staff believes that removing the 2-10 year bond component will simplify the management of the Liquidity allocation and reduce the number of trades that are required on an ongoing basis within Liquidity.

Additionally, a feature of the 2-10 year component is that, compared to a cash benchmark, the 2-10 year component of the portfolio is subject to more interest rate risk than a cash benchmark, so losses will likely occur in the 2-10 year component in a rising interest rate environment.

Staff anticipates there will be a de minimis effect on yield if a cash-only benchmark is adopted (reduced by less than 2 basis points).

<u>3. Proposed Allocation of Remaining 1% to Global Fixed Income</u>

If 1% is taken from the Liquidity allocation staff recommends that it be incorporated into the Global Fixed Income (GFI) allocation. Table 3 outlines the expected volatility and expected return profiles of the PERF (based on the 2013 capital market assumptions) for three cases, maintaining the existing interim allocations, and

a. Removing 1% from the Liquidity allocation and apply to GFI,
b. Removing 1% from the Liquidity allocation and apply to Global Equity (GE).

Moving the 1% from Liquidity to Global Equity (GE) offers the highest expected return, but also the highest risk. Moving the 1% from Liquidity to GFI also increases the portfolio return compared to the current allocation, but with less impact to portfolio risk. Staff is open to implementing either Case (a) or Case (b) above.

Table 3: Potential Target Change Effects

Asset Class Component	Case A 1% Increase to GFI from Liquidity	Current Interim Policy Portfolio	Case B 1% Increase to GE from Liquidity
Global Equity*	51%	51%	52%
Private Equity*	10%	10%	10%
Fixed Income	20%	19%	19%
Real Estate*	10%	10%	10%
Infrastructure & Forestland *	2%	2%	2%
Inflation Sensitive	6%	6%	6%
Liquidity	1%	2%	1%
Expected Compound Return (1-10 yrs.) :	7.12%	7.10%	7.16%
Blended Return (1-60 yrs.)** :	7.54%	7.52%	7.57%
Expected Volatility :	11.93%	11.91%	12.08%
Expected Yield :	2.46%	2.44%	2.45%

* Affected by interim targets adopted May 2014
**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

BUDGET AND FISCAL IMPACTS
Not Applicable

BENEFITS/RISKS
1. Ongoing Interim Asset Allocation Interim Target Use
Since the market conditions that drove the use of interim targets in 2014 remain materially unchanged, staff believes it is prudent to maintain those targets for the Global Equity, Real Assets and Private Equity allocations.

2. Proposed Establishment of Interim Target for Liquidity Allocation, Revision of Range Relative to Target and Revision to the Benchmark
Establishing a lower interim Liquidity allocation will result in a higher expected return for the PERF, but will increase the expected portfolio volatility. The increase in expected volatility would be mitigated by moving the 1% to GFI instead of GE.

A policy range around the Liquidity allocation of +/-3% will facilitate CalPERS' navigation of markets during a crisis. This range will provide staff with the flexibility to increase or decrease the weight to Liquidity as warranted by market conditions. Staff anticipates the use of a risk management guideline will mitigate potential operational risks associated with the proposed range expansion. The decision to take on leverage at the fund-level, even at the modest 2% level being proposed here, requires careful consideration and discussion by the Committee, with a thorough discussion and understanding of the risks and benefits.

The revision of the Liquidity benchmark is expected to provide the benefit of more value stability within the Liquidity allocation and simplify the management of the allocation.

<u>3. Proposed Allocation of Remaining 1% to Global Fixed Income</u>
Should the lower interim target for Liquidity be adopted, staff believes the allocation to GFI will result in a preferable risk and return profile for the PERF. The expected volatility, should the 1% be deployed to GFI, is 15 basis points (bps) lower than if the 1% were deployed to GE. Table 4 below summarizes the differences between the potential allocation to GE or GFI.

Table 4: Summary of Potential Allocation Differences

Characteristics	1% Allocation to GFI:	Compared to a 1% allocation to GE, the GFI allocation presents:
Expected Compound Return (1-10 yrs.) :	7.12%	Less estimated compound return (4 bps)
Blended Return (1-60 yrs.):	7.54%	Less long-term estimated blended return (3 bps)
Expected Volatility :	11.93%	Lower volatility (15 bps)
Expected Yield :	2.46%	Higher yield

And, compared to the current portfolio, outlined in Table 3 in the previous section, the 1% allocation to GFI is expected to:

- Increase expected compound return by 2 bps
- Increase blended return by 2 bps
- Increase yield by 2 bps.

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

ERIC BAGGESEN
Senior Investment Officer
Asset Allocation and Risk Management

THEODORE ELIOPOULOS
Chief Investment Officer