CalPERS

Investment Committee

California Public Employees' Retirement System

Agenda Item 7c

August 18, 2014

ITEM NAME: Proposed Revision of Affiliate Funds Asset Allocations

PROGRAM: Affiliate Funds

ITEM TYPE: Asset Allocation, Performance & Risk – Information

EXECUTIVE SUMMARY

CalPERS' Board of Administration (Board) is responsible for the administration and investment of several trust plans independent of the Public Employees' Retirement Fund (PERF), referred to collectively as "Affiliate Funds."

This item includes the outcomes and recommendations of the recent strategic asset allocation analysis for the following Affiliate Funds:

- California Employers' Retiree Benefit Trust (CERBT) Fund
- Judges' Retirement System (JRS) Fund
- Judges' Retirement System II (JRS II) Fund
- Legislators' Retirement System (LRS) Fund

The strategic asset allocation process has considered the unique characteristics of each plan and, where appropriate, has incorporated actuarial risk considerations such as the funded rate, contribution rate and contribution rate volatility into the asset allocation analysis. To a significant degree, the recommendations have been guided by an attempt to reduce the expected volatility of returns where possible. The degree to which this expected outcome is achievable is impacted by the anticipated effect of any changes on the potential discount rate used to value liabilities.

In the case of CERBT, staff has attempted to maintain similar risk profile choices for public employers utilizing CERBT to prefund retiree health benefit and other post-employment benefit costs.

An overview of the key inputs and risk considerations for the Affiliate Funds strategic asset allocation analysis is provided in Attachment 1. Consultant opinion letters from Wilshire Associates and Pension Consulting Alliance Inc. (PCA) are provided as Attachments 2 and 3, respectively.

Staff seeks feedback from the Investment Committee (IC) on the proposed asset allocation changes.

Table 1 below outlines key activities for the Affiliate Funds' strategic asset allocation reviews involving the IC and other CalPERS Committees. The starting point of these activities is the adoption of the new strategic asset allocation plan for the PERF and the completion of the actuarial valuation work where appropriate.

Table 1 – Key Activities for the Affiliate Funds' Strategic Asset Allocation Reviews

Timeline	Item
August 2014	• IC will review proposed strategic asset allocation analysis and recommendations for four Affiliate Funds (CERBT, JRS, JRS II, LRS).
September 2014 (scheduled)	• IC will consider recommended asset allocations for action and conduct an initial review of proposed policy modifications for applicable funds.
October 2014 (scheduled)	• IC will consider formal action on proposed plan and policy modifications for applicable funds in follow up to September 2014 initial review.
Fall/ Winter 2014	• IC will receive an update on the portfolio review and rebalance for the Terminated Agency Pool (TAP)[1]. • Pension and Health Benefits Committee will review blended rate net of fees for CERBT.
Spring 2015	• IC will review strategic asset allocation analysis and recommendations for additional Affiliate Funds (Health Care Fund, Long-Term Care Fund). • Finance and Administration Committee will review recommended discount rates for JRS, JRS II, and LRS.
2016	• IC will review strategic asset allocation analysis and recommendations for remaining Affiliate Funds (Supplemental Income Plans).

STRATEGIC PLAN

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

[1] The TAP is not a separate trust from the PERF and therefore is not an Affiliate Fund.

BACKGROUND
Periodic review and analysis of strategic asset allocation is required by the Affiliate Funds' respective Statements of Investment Policy. These activities were last conducted in 2011.

California Employers' Retiree Benefit Trust (CERBT) Fund

The CERBT is a State trust fund established by the Public Employees' Medical and Hospital Care Act, Chapter 1, Article 11, Sections 22940-22944.3. It is an Internal Revenue Code (IRC) Section 115 Trust that began operations in 2007. The CERBT allows all IRC Section 115 eligible California public employers to prefund future retiree health and Other Post Employment Benefit (OPEB) costs. As of June 30, 2013, the CERBT Fund had 373 participating public employers, covering 227,050 total participants of which 149,343 were active and 77,707 were retired.

The CERBT Fund offers three asset allocation strategies (CERBT 1, CERBT 2 and CERBT 3) to accommodate the diversity of program characteristics and risk tolerances of the participating agencies. CERBT 1, with the highest expected return and volatility among the three options, has $3.17 billion assets under management (AUM) as of June 30, 2014. CERBT 2, with a moderate expected return and volatility profile, has $565 million AUM as of June 30, 2014. CERBT 3, with the lowest expected return and volatility profile, has $78 million AUM as of June 30, 2014.

The CERBT Fund's total AUM is $3.8 billion. Over the last year, the CERBT Fund has grown by $1.1 billion in AUM with 54 net new employers and approximately 140,000 new participants. The CERBT Fund's combined annual cash inflows, defined as contributions plus current investment cash income minus disbursements for retiree OPEB payments and expenses, equal approximately $700 million. This cash flow is expected to grow to approximately $730 million over the next five years.

Judges' Retirement System (JRS) Fund

The JRS Fund, established in 1937, provides retirement and ancillary benefits to Supreme and Appellate Court justices, Superior Court judges, and Municipal Court judges appointed or elected prior to November 9, 1994. The employer and employee contribution rate for the JRS plan is set by State statute and equals 8% of payroll. The State currently funds the JRS plan using a pay-as-you-go approach. This approach establishes annual contribution levels sufficient to pay current benefits but not to pre-fund future liabilities. Accordingly, the current JRS Fund AUM is not adequate to meet current, or expected, benefit payouts.

As of the June 30, 2013 actuarial valuation report, the JRS Fund had 2,251 participants of which 328 were active, 34 were inactive, and 1,889 were retired. Currently, the JRS Fund has $54 million AUM allocated to cash equivalent securities which serve as a reserve account for the benefit payments in the event of a delay in the annual State budget approval process. The need for a reserve account is derived from the inability of the State Controller's Office to transfer any State General Fund amounts until the State budget is approved. Therefore, an understanding between CalPERS and the Department of Finance is to maintain three months of benefit roll and Extended Service Incentive Program[2] (ESIP) funds in a reserve account to cover cash needs related to budget impasses as well as higher than anticipated ESIP payments.

Judges' Retirement System II (JRS II) Fund

The JRS II Fund provides retirement and ancillary benefits to Supreme and Appellate Court justices, Superior Court judges, and Municipal Court judges appointed or elected on or after November 9, 1994. The JRS II Fund offers a unique combination of two basic types of retirement benefits: a defined benefit plan or a monetary credit plan. The defined benefit plan provides a lifetime monthly benefit of up to 75% of final annual salary. The monetary credit plan allows for a refund of member contributions, a portion of the employer contributions, and interest. Lifetime benefits are not provided under the monetary credit plan.

As of the June 30, 2013 actuarial valuation report, the JRS II Fund had 1,407 total participants of which 1,352 were active, 3 were inactive, and 52 were retired. The JRS II Fund had a funded ratio of 95.1% as of June 30, 2013 and $1 billion in AUM as of June 30, 2014. JRS II AUM and the number of participants have grown respectively from $41 million and 367 since 2000. The JRS II number of active participants in relation to retired participants, known as the Active-to-Retired Ratio, was 26 as of June 30, 2013, implying that it is a young pension plan. The JRS II Fund has a relatively low Asset-to-Payroll Ratio (3.1 as of June 30, 2013), implying that its contribution rates are less sensitive to investment performance. The JRS II Fund's cash inflow is expected to peak at over $90 million in 2015 and then slowly decline.

As outlined on page 13 of Attachment 1, the JRS II program characteristics (Asset-to-Payroll Ratio, cash flows, fund maturity, and funded ration) are supportive of a moderately aggressive portfolio, albeit one with a reduced risk profile and a marginally higher cash flow yield given the expected decline in the cash flows beginning in 2015.

Legislators' Retirement System (LRS) Fund

The LRS Fund was established in 1947 and covers members of the Legislature serving prior to November 7, 1990, and elected Constitutional Officers and Legislative Statutory Officers elected prior to December 31, 2012. The LRS Fund offers a

[2] ESIP provides an incentive to judges who are eligible to receive the maximum retirement benefit to remain in public service by providing a lump sum payment in addition to their normal retirement allowance.

defined benefit plan and provides retirement and ancillary benefits. Effective January 1, 2013, the LRS is closed to new members.

As of the June 30, 2013 actuarial valuation report, the LRS Fund had 279 total participants of which 11 were active, 18 were inactive and 250 were retired. The LRS Fund had a funded ratio of 105.5% as of June 30, 2013, and an AUM of $130 million as of June 30, 2014. The AUM and number of participants have declined respectively from $146 million and 361 since 2000. With an Active-to-Retired Ratio of 0.04 as of June 30, 2013, LRS Fund is very mature. The LRS Fund has an Asset-to-Payroll Ratio of 86 as of June 30, 2013, implying that its contribution rates are highly sensitive to investment performance. LRS has annual cash outflows of approximately $4 million per year that are financed by selling assets.

As outlined on page 13 of Attachment 1, the LRS program characteristics are supportive of a conservative portfolio.

ANALYSIS

Where appropriate, and depending on the characteristics of each Affiliate Fund, the process used to develop the policy portfolios for the Affiliate Funds mirrors the 2013-14 Asset Liability Management (ALM) Process. This process was not applied to the JRS Fund as staff determined that the fund should continue to be allocated entirely to Liquidity (i.e., cash equivalent securities) as it serves as a reserve account. Additional information is available in the *JRS Recommendation* section on page eight.

A strategic Liquidity allocation and benchmark was considered but not recommended for any of the other Affiliate Funds because the primary drivers of unanticipated demands for cash that exist for the PERF do not exist for the other Affiliate Funds. Specifically, these Affiliate Funds are not invested in private asset classes that are subject to capital calls, nor do any of the Affiliate Funds represent a sufficient size in AUM whereby the trading activity associated with rebalancing these portfolios would be expected to impact any of the underlying Affiliate Funds' asset class markets (i.e., Global Public Equities, Fixed Income, Treasury Inflation-Protected Securities (TIPS), Commodities, and Real Estate Investment Trusts (REITs)). The role of the Liquidity allocation for the PERF is to ensure that the PERF is able to pay liabilities (i.e., benefit payments and administrative/investment related expenses) when they come due. Staff does not recommend an allocation to Liquidity for LRS, JRS II, and CERBT because the combination of the asset portfolio structures and the internal staff trading capabilities provide a degree of liquidity believed sufficient to manage any reasonably foreseeable demands.

As noted throughout the 2013-14 ALM process, capital market assumptions (CMAs) are essential inputs into the strategic asset allocation analysis. CMAs have a direct impact on the composition of potential policy portfolios and therefore directly affect the risk and return profile of each Affiliate Fund.

Staff worked collaboratively with the Board's Investment Consultants, Wilshire Associates and PCA, and CalPERS' Actuarial Office (ACTO) to develop the CMAs supporting the strategic asset allocation analysis for the Affiliate Funds. Where appropriate, CMAs developed for the 2013-14 ALM process have been utilized for the Affiliate Funds analysis. However, updated estimates were made for Fixed Income and TIPS in order to reflect recent interest rate increases which raised the yield-to-maturity components of these benchmarks. Finally, global REITs are assumed to have similar long-term returns as private Real Estate but with higher volatility given the higher leverage.

Additionally, within the optimization process, the weights to some of the asset classes have been fixed to ensure that portfolios have minimum exposures to TIPS, commodities, and REITs. As staff reviewed with the IC during the 2013-14 ALM process, volatility is the only risk considered in the mean-variance optimization process. However, volatility is too simple a measure of risk in that it ignores specific dimensions that may be critical to consider in the portfolio construction process such as the inflation-sensitive liabilities of the Affiliate Funds. Thus, constraints have been established to address this issue. Table 2 outlines the CMAs and constraints that were used to obtain the candidate portfolios. "Commodities" has been abbreviated to "CMDTY" in Table 2.

Table 2 - 2014 Capital Market Assumptions and Optimization Constraints

2014 CMAs	Compound Return	Volatility	Average Return	Cash Yield	Correlation						Constraint	
					Global Equity	Fixed Income	TIPS	CMDTY	REITs	Cash	Floor	Cap
Global Equity	7.75%	17.40%	9.15%	2.73%	1.00	0.21	0.00	0.13	0.70	0.00	0%	100%
Fixed Income	4.29%	7.00%	4.52%	3.70%	0.21	1.00	0.33	0.00	0.19	0.50	0%	100%
TIPS	3.50%	6.50%	3.70%	2.00%	0.00	0.33	1.00	0.20	0.10	0.20	5%	100%
CMDTY	2.84%	17.92%	4.39%	0.00%	0.13	0.00	0.20	1.00	0.30	-0.05	3%	100%
REITs	5.75%	19.50%	7.53%	3.35%	0.70	0.19	0.10	0.30	1.00	-0.03	8%	100%

Table 3 outlines the nine potential candidate portfolios prepared by staff, where at any given volatility level, the chosen candidate portfolio would generate the highest expected return. Staff analyzed three alternatives for each applicable Affiliate Fund to identify a recommendation for each fund. Individual fund recommendations are summarized in the sections below.

The expected volatility of the candidate portfolios exhibits a range between 6.64% and 12.25%. The expected blended returns, net of administrative fees, of the candidate portfolios range between 5.59% and 7.38%.

Table 3 - Affiliate Funds Candidate Portfolios

Asset Allocation of Candidate Portfolios										
Asset Class Component		P1	P2	P3	P4	P5	P6	P7	P8	P9
Global Equity		19%	24%	29%	34%	40%	45%	50%	57%	61%
Fixed Income		39%	39%	39%	39%	39%	39%	34%	27%	24%
TIPS		30%	26%	21%	16%	11%	6%	5%	5%	5%
Commodities		3%	3%	3%	3%	3%	3%	3%	3%	3%
REITs		8%	8%	8%	8%	8%	8%	8%	8%	8%
Expected Compound Return (1-10 yrs.) :		5.20%	5.40%	5.66%	5.88%	6.10%	6.30%	6.49%	6.71%	6.82%
Expected Volatility :		6.64%	7.10%	7.81%	8.50%	9.24%	10.00%	10.75%	11.74%	12.25%
Expected Cash Yield :		2.85%	2.88%	2.92%	2.96%	2.99%	3.03%	2.99%	2.92%	2.89%
Expected Blended Return Net of Fees (1-60 yrs.) :	CERBT:	5.93%	6.10%	6.33%	6.53%	6.71%	6.89%	7.07%	7.28%	7.38%
	LRS:	5.59%	5.76%	6.00%	6.20%	6.39%	6.58%	6.75%	6.97%	7.07%
	JRS II:	5.90%	6.07%	6.31%	6.51%	6.69%	6.88%	7.05%	7.27%	7.37%

The recommended candidate portfolios were selected because they represent the most effective risk and return profile in consideration of the unique needs and characteristics of the respective Affiliate Funds. Similar to the recommendations presented for the PERF as part of the 2013-14 ALM process, the proposed changes for these Affiliate Funds seek to reduce volatility while maintaining current discount rates for JRS II and LRS. In the case of CERBT, each participating employer is responsible for determining the most appropriate actuarial assumptions and the resulting contribution and discount rates.

In accordance with CalPERS' Investment Belief 9, that risk is multifaceted, staff's recommendations support reductions in:

- Drawdown risk (i.e., the measure of the highest peak-to-trough decline in value expressed as a percentage of the peak value during a period),
- Concentration risk, and
- Risk of entering the warning track for funded ratio, contribution level, and contribution volatility for JRS II.[3]

[3] These forecasted risks were only analyzed for JRS II, since this fund is most similar to the PERF in that it is an open fund. Staff did not analyze the forecasted risks for LRS and CERBT as LRS is a closed fund and the CERBT actuarial assumptions are not determined by CalPERS.

These reductions are demonstrated overall by reductions in the allocations to Global Public Equity and increases in the allocations to Fixed Income and/or TIPS, respectively.

The expected blended return, net of fees, is the combination of the short-term (1 to 10 years from the CMAs) and the long-term (11-60 years from ACTO's analysis) expected returns after deducting administrative fees. The expected blended rate of return also reflects an expected long-term inflation rate of 2.75%. The ability of these expected compound return levels to support their respective discount rates, as applicable, derives from the long-term blended return where ACTO extrapolates the market expectations for an additional 50 years.

<u>JRS Recommendation</u>
Staff has evaluated the JRS Program and determined that the current strategic allocation, 100% in cash equivalent securities, should be maintained due to the following considerations:

- The State currently funds JRS through a pay-as-you-go approach since current asset levels are not adequate to meet JRS' current, or expected, benefit payouts. A pay-as-you-go approach establishes contribution levels sufficient to pay benefits payments only and not to pre-fund future liabilities.
- JRS is a closed system with a funded ratio of 1.6% and an average remaining service for current active employees of 1.9 years.
- Assets under management of $54 million as of June 30, 2014 provide liquidity necessary to make benefit payments in the event of a delay in the annual State budget approval process.

<u>LRS Recommendation</u>
A conservative portfolio is recommended for LRS because the plan has a high funded ratio, its cash flows are negative, and its population consists predominately of retired participants. The recommended portfolio exhibits lower potential drawdown risk, reduced concentration risk, increases its inflation protection, and could allow for the current funded status and employer contribution rate to remain unchanged.

<u>CERBT Recommendation</u>
For CERBT, staff recommends maintaining three investment choices to allow employers the ability to select a portfolio that matches their particular risk/return profile based on their risk preferences and actuarial valuation. Therefore, staff recommends three portfolios (conservative, moderate, aggressive) with similar levels of risk as those selected in the last strategic asset allocation review process. In addition, the recommended portfolios exhibit lower drawdown risk and reduced exposure to "growth" and "volatility" factors.

<u>JRS II Recommendation</u>

A moderately aggressive portfolio is recommended for JRS II given that the majority of its members are active, cash flow is substantially positive, and it has a low Asset-to-Payroll Ratio, indicating that the plan is less sensitive to investment performance. Nevertheless, following the abnormally high returns of the last couple of years[4] and the expected decline in the cash flows for JRS II beginning in 2015, staff recommends slightly reducing the risk profile of this plan. The recommended portfolio exhibits reduced drawdown risk, lower exposure to “growth” and “volatility” factors, and marginally reduced risk of entering the warning track for funded ratio, contribution level, and contribution volatility. The recommended portfolio also improves the cash flow yield of the portfolio which will partially assist in offsetting the predicted decline in cash flows beginning in 2015 (see page 11 in Attachment 1 for additional information). Finally, with the 35 bps reduction in administrative fees[5], the recommended portfolio could allow the current funded status and employer contribution rate of JRS II to remain unchanged.

BUDGET AND FISCAL IMPACTS

Not Applicable

BENEFITS/RISKS

Staff’s recommendations for the CERBT, JRS II, and LRS funds are believed to reflect the preferences expressed by the IC throughout the 2013-14 ALM process. The recommended portfolios attempt to maintain similar choices for CERBT employers, and reduce drawdown risk and concentration risk to the extent possible while minimizing negative impacts to the existing discount rates for JRS II and LRS.

Specific benefits associated with the recommendations are:

- Reduction in the overall level of expected volatility;
- Maintenance of the existing discount rates for programs where CalPERS establishes the applicable discount rates;
- Broader diversification over the included asset classes; and
- Improvement in the actuarial risk considerations where applicable.

Specific risks associated with the recommendations are:

- Material divergence in the actual asset class market return, risk, and correlation outcomes versus the CMAs; and
- Inflation rates significantly different from expectations.

[4] JRS II had an 18.54% return on assets for FY 2013-14 and 12.09% return on assets for FY 2012-13.

[5] Fee reduced because AUM has grown and allowed for fees to be spread over a larger AUM. Administrative fees for JRS II are 15 bps in 2014, down from a total of 50bps in 2011.

The above risks are mitigated by the Statement of Investment Policy for Asset Allocation Strategy (Policy) which requires CalPERS' Investment Office staff to review, at least annually, that the expected returns, risks, or liability values have not substantially changed since the last strategic asset allocation review. Furthermore, the Policy requires a market valuation driven analysis be conducted at the midpoint of the four-year review cycle, and a comprehensive asset allocation strategic review be conducted coincident with the review of the actuarial methods and assumptions every four years.

ATTACHMENTS

Attachment 1 – Strategic Asset Allocation Analysis Overview – Affiliate Funds
Attachment 2 – Wilshire Associates Opinion Letter
Attachment 3 – PCA Opinion Letter

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