Wilshire

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April 10, 2018

Mr. Henry Jones
Chair of the Investment Committee
California Public Employees' Retirement System
400 Q Street
Sacramento, CA 95814

Re: Affiliate Trust Asset Allocation Review

Dear Mr. Jones:

You requested Wilshire's opinion as it relates to Staff's recommended asset allocation for the Affiliate Funds. As of fiscal 2017, the CalPERS' Affiliate Funds had approximately $8.3B in assets across LRS ($117m), JRS ($48m), JRS II ($1.35B), and the three CERBT strategies ($6.8B). The last asset allocation study for these Affiliate Funds was conducted in 2014 and the current study reflects adherence to the regular four year asset allocation cycle.

The Process

Wilshire believes that the methods, inputs and data used to perform the asset allocation study are appropriate and reasonable. The asset class assumptions used in the process were consistent with those approved and utilized within the PERF's recent ALM review with the modifications that Fixed Income and TIPS assumptions reflect only domestic issues and REITs provide real estate exposure due to liquidity requirements. Minimum constraints were included for TIPS, Commodities, and REITs to force a certain level of diversification into the alternative portfolios that might be underappreciated in a pure optimized framework. Wilshire is comfortable with these constraints given the instability of the underlying optimization assumptions, particularly as they relate to the inherent limitations of correlation estimates. This viewpoint also is consistent with Investment

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Belief 9 (i.e. Risk to CalPERS is multi-faceted and not fully captured through measures such as volatility or tracking error).

In evaluating the alternative target policy portfolios, Staff primarily focused on achieving a median expected rate of return consistent with the discount rate utilized by the Funds (in the case of JRS II and LRS) or providing portfolios with varying levels of expected risk (in the case of CERBT). JRS is a special case in that it is funded as a pay-as-you-go system and therefore invests entirely in a Liquidity portfolio of short-term fixed income securities.

In addition, Staff took into consideration demographic and fund characteristics in the decision making process, where available. The factors included participant growth trajectories, the ratio of active-to-retired participants, forecasted cash flows, and contribution rate sensitivity. These factors have important implications for the ultimate risk profile of the adopted portfolios, which are laid out in Staff's materials. The importance of liability information in the analysis is consistent with Investment Belief 1 (i.e. liabilities must influence the asset structure).

Selection of Asset Allocation Target Portfolios

Wilshire believes that the recommended asset allocations are appropriately specified for each Fund and take into account relevant decision factors. As can be seen on slide 16 of Staff's presentation deck (attachment 1 of this agenda item), the expected return and risk for the proposed target asset allocations align with established discount rates (slides 22 and 23) and provide asset allocations with varying levels of expected risks and returns (slides 24-26). In addition, Staff lays out the other decision factors, specifically fund maturity and cash flow characteristics, which support the selection of the recommended portfolios for each fund. Lastly, the rebalancing ranges provided on slide 19 are reasonable and consistent across the Funds.

Should you require anything further or have any questions, please do not hesitate to contact us.

Best regards,

Steven J. Foresti　　　　Thomas Toth

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