CalPERS

Investment Committee

Agenda Item 8a

June 17, 2019

Item Name: Affiliate Trust Asset Allocation Review for the California Employers' Pension Prefunding Trust

Program: Trust Level Portfolio Management & Affiliate Investment Programs

Item Type: Action

Recommendation

Approve the proposed Strategic Asset Allocation, Benchmarks, Ranges, and Investment Policy for the California Employers' Pension Prefunding Trust.

Executive Summary

The California Employers' Pension Prefunding Trust (CEPPT) is a new trust fund in the State Treasury that allows California public employers that provide a defined benefit pension plan to their employees to prefund their required pension contributions. The trust was established January 1, 2019 by Senate Bill No. 1413 and is intended to meet the requirements of Section 115 of the Internal Revenue Code (IRC).

To establish the investment program for the CEPPT, staff conducted a strategic asset allocation review and recommends two asset allocation portfolios with associated benchmarks, asset class targets and ranges, and a new investment policy. If approved, staff will implement CEPPT Strategy 1 and CEPPT Strategy 2.

The supporting analysis is provided in Attachment 1, the investment policy is Attachment 2, and an opinion letter from Wilshire Associates, Inc. follows as Attachment 3.

Strategic Plan

This agenda item supports CalPERS Strategic Plan goal to strengthen the long-term sustainability of the pension fund. Establishment of the CEPPT provides diversified investment options for employers to prefund their future required payments.

Investment Beliefs

This agenda item is consistent with the following CalPERS Investment Beliefs:

- Investment Belief 1: Liabilities must influence the asset structure. For CEPPT, in lieu of liabilities, plan characteristics are determinants of the recommended portfolios for the CEPPT.

- Investment Belief 7: CalPERS will take risk only where we have a strong belief we will be rewarded for it. Staff has developed two portfolios so that employers can choose their preferred risk level.

- Investment Belief 9: Risk to CalPERS is multi-faceted and not fully captured through measures such as volatility or tracking error. When developing the proposed portfolios, Staff included plan characteristics, such as the voluntary nature of contributions and distributions, the projected investor pool, and the anticipated investment time horizon.

Background

Periodic review and analysis of strategic asset allocation is required by the Affiliate Funds' respective investment policies. CEPPT is a new program and this is the initial asset allocation recommendation and investment policy.

The CEPPT legislation specifies for the CalPERS Board to offer cost-effective, diversified investment options that do not exceed the risk and return profiles of the investment options available for the California Employers' Retiree Benefit Trust (CERBT). It also authorizes the Board to adopt emergency regulations necessary for implementation and makes an appropriation of $695,140 to fund CalPERS development and implementation of the CEPPT.

The two recommended portfolios for the CEPPT accommodate differences in time horizons and risk tolerance among the potential participating employers. CEPPT Strategy 1 is intended to be a medium time horizon and moderate risk portfolio while CEPPT Strategy 2 is intended to be for shorter time horizons and lower risk. The CEPPT portfolios are diversified, have a low investment cost, and the risk and return profiles do not exceed the options available to the CERBT.

Analysis

<u>Program Characteristics</u>
As CEPPT is a new program, historical data is not available to determine program characteristics; however, based on the trust purpose of pension prefunding and information gathered from employers, certain characteristics can be derived.

Contributions are voluntary, and size and timing will be determined by the participating employers. Asset growth in the first year could range from $100 million up to a few billion, depending on if the State of California participates in the next fiscal year. Distributions are limited to paying pension contributions or to terminate and transfer to another trust with the same prefunding purpose. In the first few years, contributions are expected to exceed distributions, as employers build up their prefunding balances to offset future required pension contribution increases.

The investment time horizon for employers in the CEPPT is estimated to be short-term to medium-term, as employers plan for increasing required pension contributions in future years. The risk tolerance among employers is estimated to be low to medium. Employers currently have options for 1) investing in very low risk, short term options, either through their general fund investments or through an investment fund offered by the State and 2) contributing directly to the PERF as a higher risk, long-term investment. This program will accommodate investment time horizons and risk tolerances of low to medium and offer employers a choice that aligns with their investment goals.

Program characteristics influence the selection of portfolios, illustrated in the table:

Characteristic	Description	If it is…	…Implication
Contributions / Distributions	Voluntary and variable	Uncertain cash in/out, at uncertain times	Requires liquid & less risky portfolios
Investor Time Horizon	Employers may have differing time horizons	Shorter time horizon	Low risk portfolios
		Medium time horizon	Medium risk portfolios
Investor Risk Tolerance	Employers may have differing risk tolerance	Low tolerance	Low risk portfolios
		Medium tolerance	Medium risk portfolios

<u>Strategic Asset Allocation</u>

The strategic asset allocation process has considered the unique characteristics of the CEPPT program and has included goals such as smoothing employer pension contributions, providing higher expected returns than general short-term reserve funds, and optimizing against extreme losses. The benchmarks, ranges, and investment policy have been modeled from, and align with, other trusts in the Affiliate Investment Program.

The process to obtain candidate portfolios for an Affiliate Fund mirrors, to the extent possible, the process utilized in the PERF Asset Liability Management (ALM) workshop. For the CEPPT, the liabilities of the potential participants are unknown; therefore, staff conducted the analysis with a series of asset-only optimizations.

The first step in the process is to establish the Capital Market Assumptions (CMAs), which determine the risk and return profiles of each asset class and have an impact on the composition of potential portfolio options. CMAs for the CEPPT have been developed for 2019 and utilize the 2017 PERF ALM process with the following exceptions:

- Fixed Income and Treasury Inflation-Protected Securities (TIPS) reflect U.S. domestic securities only
- Fixed Income is U.S. Aggregate Index, unlike that for the PERF which is customized to have a longer duration
- Global Real Estate Investment Trusts (REITs) are estimated using a Dividend-Discount-model

The table shows the CEPPT CMAs, Asset Class Correlations, and Constraints.

2019 Capital Market Assumptions[1]				Correlation				Constraints (%)	
Asset Class	Arithmetic Return	Geometric Return	Volatility (Std. Dev)	Global Equity	Fixed Income	TIPS	REITs	Floor	Cap
Global Equity	8.03%	6.70%	16.90%	1.00	-0.13	0.12	0.78	0%	100%
Fixed Income	3.46%	3.35%	4.75%	-0.13	1.00	0.75	0.15	0%	100%
TIPS[2]	3.17%	3.00%	6.00%	0.12	0.75	1.00	0.30	5%	100%
REITs[3]	7.20%	5.50%	19.00%	0.78	0.15	0.30	1.00	8%	100%
U.S. Inflation Assumption:	2.10%								

Refer to Attachment 1, page 8 for footnotes.

The second step in the process is to utilize mean variance optimization (MVO) techniques to build the efficient frontier (i.e. construct candidate portfolios). The three components of MVO optimization are 1) expected annual returns for each asset class, 2) expected volatility of returns, as measured by the annualized standard deviation of returns and 3) expected correlations among asset classes. This optimization was constrained to include only asset classes in which CalPERS currently invests for other Affiliate Funds (which excludes private real estate and private equity). Additionally, the asset classes of TIPS, and REITs have minimum exposure constraints to increase diversification in the final candidate portfolio options.

The following table displays five candidate portfolios as generated by the MVO process. On the efficient frontier, each candidate portfolio would earn the highest expected return at the specified volatility level.

	Asset Class Component	Asset Allocation of Candidate Portfolios				
		P1	P2	P3	P4	P5
Components	Global Equity	3%	14%	26%	40%	56%
	Fixed Income	84%	73%	61%	47%	31%
	TIPS	5%	5%	5%	5%	5%
	REITs	8%	8%	8%	8%	8%
Statistics	Expected Volatility (Standard Deviation)	4.8%	5.2%	6.4%	8.2%	10.7%
	Expected Compound Return (1-10 Years) [1]	3.5%	4.0%	4.5%	5.0%	5.5%
	Expected Tail Risk - Monte Carlo VaR [2]	4.0%	5.3%	7.7%	11.0%	15.3%
Strategy	Recommendation for Plans		CEPPT Strategy 2		CEPPT Strategy 1	

Refer to Attachment 1, page 10 for footnotes.

The third step in the process, evaluation of the candidate portfolios to recommend Policy Portfolios, results in a selection by staff of the following:

- o A conservative portfolio is recommended for CEPPT Strategy 2 to accommodate a shorter time horizon and lower risk tolerance of participating employers. Staff proposes P2, which has a 4.0% expected return and 5.2% expected volatility. It is preferred to P1, which has very low expected returns, similar to a bond reserve portfolio.

- o A moderate portfolio is recommended for CEPPT Strategy 1 to accommodate a longer time horizon and a medium risk tolerance of participating employers. Staff proposes P4, which has a 5.0% expected return and 8.2% expected volatility. It is preferred to P3, which doesn't provide as much of a difference from P2. It is also preferred to P5, which has higher volatility, which is not advisable for trusts with unpredictable cash flows, low to medium investment horizons and low to medium risk tolerance.

<u>Asset Class Benchmarks and Ranges:</u>
The recommended benchmarks and ranges for each asset class are shown in Attachment 1, pages 11 and 12, respectively. The benchmarks are diversified, appropriate for each asset class, and are in use by other Affiliate Funds. The asset class ranges are intended to allow flexibility for cashflows and minimize the costs of frequent rebalancing due to changing market conditions. If approved, the benchmarks will be updated to the Total Fund Policy through the administrative change process and the ranges will be reflected in the new CEPPT investment policy.

<u>Investment Policy</u>:
The investment policy for the CEPPT is included as Attachment 2. The policy has been modeled from the CERBT investment policy with the only changes being that the CEPPT has two strategies versus three for the CERBT and the asset allocation target percentages reflect the CEPPT asset allocation.

Budget and Fiscal Impacts

Senate Bill 1413 provided for an appropriation of $695,140 to fund CalPERS development and implementation of the CEPPT in 2019. The CalPERS Financial Office will work with the Department of Finance on receiving and applying this appropriation. Ongoing costs will be borne by the trust and will be offset by an initial annual fee of .25% (25 basis points) charged to program participants. The fee will be reviewed on an ongoing basis and may be modified in the future, based on actual costs experienced and assets under management.

Benefits and Risks

The benefits of approving the recommended Policy Portfolios include:

1. Providing investment options for employers to meet their future pension obligations.
2. Providing a buffer against contribution rate volatility for employers.
3. Diversifying employer investment options beyond low yielding general fund pools.

The risks of approving the proposed Policy Portfolios include:

1. Actual portfolio returns may deviate from model projections.
2. Employers may sub optimally 'trade' between CEPPT portfolios, worsening results versus a base case where only one portfolio was available.
3. Other risk factors, not captured in our modeling, dominate future outcomes.

Attachments

Attachment 1 – Affiliate Trust Asset Allocation Review: CEPPT
Attachment 2 – Investment Policy: CEPPT
Attachment 3 – Board Investment Consultant Opinion Letter: Wilshire Associates

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