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July 26, 2019

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

Re: Opportunistic Strategies Program Annual Review

Dear Mr. Feckner:

Wilshire conducted its annual on-site due diligence review of the Opportunistic Strategies (OS) program. This is the first fully detailed annual review of the program since its launch in 2017. The review process included discussions with Staff on each segment within the OS Program. Review topics included Program investment process, personnel and resource management, as well as risk management processes.

Summary

Though still in its early stages, Wilshire views the build out of the OS program positively. The program has made meaningful progress particularly with respect to streamlining Investment Office (INVO)-wide execution, liquidity and leverage management functions. The OS team has managed its resources well in coordinating closely with the Trust Level Portfolio Management (TLPM) team to set up a working structure that will increase the overall implementation efficiency to add value across the Total Fund. The program still needs time to expand the scope of its investments in truly opportunistic strategies, but the existing strategies have been managed measuredly and prudently. The team has been relatively stable and adequately resourced for current opportunities.

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Scoring

Wilshire rates the OS Program highly, ranking the overall Program in the fourth decile (equivalent to a B letter grade). The Programs' ability to gather information, process and constructed a tightly risk-controlled portfolio is a significant positive, as is the high quality and experience of the team. There are some uncertainties as to how the OS Program will expand and scale its strategies given the changes in the overall INVO-wide initiatives. As new initiatives are implemented, we will look to ascertain the effectiveness of the OS Program from a Total Fund performance enhancement perspective.

As noted in other asset class program reviews, the broad organization score is lower due to the lack of equity ownership and compensation relative to the private sector. However, the Firm score is higher this year relative to the previous reviews, as some key senior positions have been filled, most notably with the hiring of the new CIO. We believe this is a very positive step for CalPERS and have noted multiple initiatives focused on improving the efficiency on the Total Fund level.

CalPERS Opportunistic Strategies		Tier	Letter
TOTAL QUALITATIVE SCORE		4th	B
	Wt.	Tier	Letter
ORGANIZATION	20%	4th	B
Firm	50%	6th	C
Quality and Stability of Senior Management			
Quality of Organization			
Ownership/Incentives			
Team	50%	2nd	A
Stability of Investment Professionals			
Quality of Team			
Commitment to Improvement			
INFORMATION GATHERING	20%	3rd	B
Information Resources			
Depth of Information			
Breadth of Information			

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FORECASTING	20%	3rd	B
Clear & Intuitive Forecasting Approach			
Repeatable Process			
Strength, Clarity, and Intuitiveness of Valuation Methodology			
Forecasting Success			
Unique Forecasting Approach			
PORTFOLIO CONSTRUCTION	20%	3rd	B
Risk Budgeting/Control			
Defined Buy/Sell Discipline			
Consistency of Portfolio Characteristics			
IMPLEMENTATION	10%	2nd	A
Resources			
Liquidity			
Compliance/Trading/Monitoring			
Attribution	10%	4th	B
Depth of Attribution			
Integration of Attribution			

Organization – Firm

In evaluating the quality of a manager's organization, Wilshire assesses factors contributing to the stability of the organization and the alignment of incentives between the team and the organization's long-term objectives. The score reflects the recent hiring of the new CIO (positive), as well the departure of the COIO (negative). The COIO position has been assumed on interim basis by the MID of Global Equities. We believe that the new CIO has brought a fresh perspective to improving the fund performance, and have seen early evidence of breaking down the silos to focus on Total Fund performance. We view this as a constructive step and will focus on the effectiveness of this Total Fund mind-set across the asset class teams in future reviews.

CalPERS still faces some unique organizational risks that for-profit enterprises have greater flexibility in managing, such as inability to provide employees direct ownership opportunities. Ensuring that CalPERS as an organization has the tools necessary to recruit and retain qualified, diverse candidates should be a strong focus in line with

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Investment Belief #10 - Resources and Process. In addition, given that there are some changes that are taking place across the organization according to the new initiatives of the CIO, the impact from potential changes in the structure of the investment teams and the resulting compensations is still largely uncertain. We will note that the organization has made strides to adjust pay scales to be more competitive in the marketplace, as well as aligning incentive compensation with the Total Fund performance objectives.

Organization – Team

The OS team is comprised of 23 staff members, under the direction of a dedicated Managing Investment Director (MID). The team is planning to add four additional staff members. While the MID oversees all three functions of the OS program, the team has dedicated responsibilities between the ESS and Enhanced Beta / Opportunistic portfolios. The team has been relatively stable particularly on the leadership level for each strategy. As of now, one Investment Director (ID), three IMs (Investment Manager) and seven IOs (Investment Officers) are responsible for the ESS portfolio. The ESS function has been successfully transitioned from the Global Equity program to the OS program last year, with little turnover and achieving multiple transition processes across the Total Fund. The organization has recognized the contribution of the team and promoted one of the IMs to an ID position. We view the effectiveness of the ESS team and the promotion as positive steps. However, given that the team will be instrumental in the Total Fund liquidity and leverage management, it remains to be seen as to whether additional resources may be required to expand the ESS team.

The Enhanced Beta / Opportunistic team has been very stable and continues to manage the Enhanced Beta strategies successfully. As the organization transitions into a more centralized research and active risk allocation model, it will be important to assess how this team integrates into that model to generate and implement other opportunistic strategies.

Investment Approach: Information Gathering, Forecasting, Portfolio Construction, Implementation and Attribution

The goal of the OS program is to invest in strategies that may not fit into one specific asset class / type, but potentially possess characteristics that present relative value opportunities to enhance Total Fund performance. The program continues to focus on three business lines:

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Execution Services & Strategy (ESS) - Centralized hub for efficient execution of CalPERS' trading operations across equity securities, derivatives, lending and currency markets. The goal is to reduce operational risk by centralizing transactions across the asset class silos. The team also manages the securities lending practice, as well as providing support for the liquidity and leverage management of the Total Fund.

Enhanced Beta – LIBOR / futures based strategies that can generate enhanced returns through structuring and the use of synthetic securities. These include highly rated collateralized loan obligations (CLOs) and short-term rate-based credit instruments. This portfolio is expected to be scalable and focused on opportunities where the potential for capital loss is very low. The Enhanced Beta portfolio currently has investments in select strategies, with the goal of scaling up to 2-3x the current size.

Opportunistic – Pursue truly opportunistic investments resulting from shorter-term market valuation or structural anomalies. These investments may be outside of the defined asset classes and, therefore, unsuitable as strategic allocations, but present additional return potential for the Total Fund. The program will work closely with TLPM in terms of funding potential strategies, in order to allocate active risk efficiently across the total fund.

The program is still in its ramp-up phase. With the initiatives being implemented by the new CIO, the OS program's role in integrating multiple asset classes both in the investment idea generation and overall risk management is evolving. The team has focused on the following three initiatives in the past year:

1. **Total Fund Asset Allocation Transition:** the bulk of the work for the ESS team in the past year has been related to the asset allocation transition. This has stretched the team's resources at times, but has also been an opportunity for the team to increase its capabilities working across all asset classes. The team has also managed the transition to a multi-asset execution platform and worked across the GE/GFI programs to help establish a Total Fund approach for trade execution. The team has worked location silos to have proximity between the ESS team and the GE / GFI teams. Overall, while a significant part of the OS program staff are dedicated to the ESS function, Wilshire views a smooth integration to the multi-asset trading system and adequate staff as an important factor to ensure the ongoing success of the ESS team.

2. Total Fund Liquidity and Leverage Management Initiative: the ESS team has also been instrumental in working with the TLPM group to establish a Total Fund level liquidity and leverage management roadmap. This initiative entails working with each asset class program to centrally monitor and manage leverage and other active risk usage. The ESS team will continue to work closely with multiple groups on this initiative from cash management and other implementation planning perspectives.
3. Framework for funding Enhanced Beta / Opportunistic portfolios: the current portfolio strategies continue to be focused on the Enhanced Beta investments, composed of largely high quality CLOs and other structured finance strategies. The team has managed the existing portfolio successfully and has explored multiple strategies to expand the portfolio.

The Opportunistic portion of the program is still ramping up. Issues such as idea generation, funding source, and relative value determination, as well as impact at the Total Fund level are the key to the success of this portion of the OS Program. As the CalPERS portfolio moves more to a Total Fund perspective, the MID of the OS program has been working closely with the CIO and the TLPM team to develop a framework for this process. With the establishment of the centralized Research and Strategy Group (RSG), which will look to generate ideas across asset classes and evaluate the relative value opportunity, the process for funding the Opportunistic portfolio is expected to take a more systematic and collaborative approach. We expect that the implementation and governance of the RSG will not be trivial and that there may be a learning curve, particularly with respect to attribution and evaluation of the success of the OS program. However, we believe this is a positive direction and in consistent with the overall direction of shifting to a Total Fund focus versus asset class silos.

Conclusion

The OS Program has successfully implemented the integration of the ESS team and managed the lower risk portion of the Program prudently. Utilizing our standard manager research scoring framework, Wilshire rates the OS program in the fourth decile (B rating). There are uncertainties associated with the INVO-wide changes being

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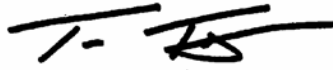
implemented across asset classes and the OS Program will be impacted on multiple levels, from ESS team's involvement in the Total Fund liquidity / leverage management, to implementing a solid framework to evaluate and fund additional opportunistic strategies. Overall, we believe that the CIO's initiatives and focus on the Total Fund will be positive for the OS program, through cross-asset class collaboration and a consistent investment framework. Wilshire's future reviews will focus on the successful implementation of these initiatives and how effective this Program is in translating them to performance.

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

Best regards,



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