August 14, 2024

Mr. David Miller
Chair of the Investment Committee
California Public Employees' Retirement System
400 P Street
Sacramento, CA 95814

Re: Consultant Global Equity Program Review

Wilshire's review of CalPERS' investment programs included regular conference calls with the Managing Investment Directors (MIDs) and key investment personnel throughout the year to discuss team structure, portfolio construction, positioning, and performance. This opinion letter starts with a focus on the Global Equity program and concludes with an appendix of the Wilshire's scores, consistent with past annual reviews.

Global Equity

The Global Equity (GE) Program's mandate is to efficiently capture the equity risk premium, with total returns coming from security price appreciation and cash yields. The program added over $800 million in DVA (Dollar Value Added) over the last 12 months and close to $2 billion over the last 5 years. The Program has not used a significant amount of active risk over the recent half decade, however that trend is reversing and detailed within our review. The move from passive to active will have the potential to affect scoring over several components within our model, however our goal is to reflect changes that are impactful over the long term rather than respond to short term results. Our review covers each of the individual scoring subcomponents before we summarize the total score.

Portfolio Construction

From a design perspective the GE composite consists of two segments:

1. Cap Weighted – Exposure to growth and source of liquidity
2. Factor Weighted – Exposure to growth with reduced overall volatility. As of 7/1/24 the factor weighted segment now has 10% targeted to climate transition focused strategies and considerable effort went into the exploration and design of an index to benchmark that sleeve of the portfolio

Of the $211 billion across both segments, $157 billion is now invested in index-oriented accounts which equates to 74% of the portfolio. This is a decrease of 10% from last year, and 18% when factoring in the last two years (all within the cap weighted segment). Most of the shift (6.6%) into active risk-taking strategies was a result of additional funding into the existing enhanced index strategy as well as the introduction of a new global (developed and emerging) enhanced strategy that is also managed internally. In addition, 2.2% of assets were moved to traditional active strategies including the addition of two new active emerging market investments. Lastly, just over

1% of the composite was shifted from index oriented to a global multi-factor product managed by the internal team. These shifts serve as a continuation of the move towards expanding the use of active risk within the overall GE program.

The overall makeup of the GE portfolio can be seen below:

As of June 2024

Managed	Index Oriented	Active			Total
		Enhanced Index	Traditional	Multi-Factor	
Internally	74%	14%	0%	3%	92%
Externally	0%	0%	8%	0%	8%
Total	74%	14%	9%	3%	100%

June 2024 vs. June 2023

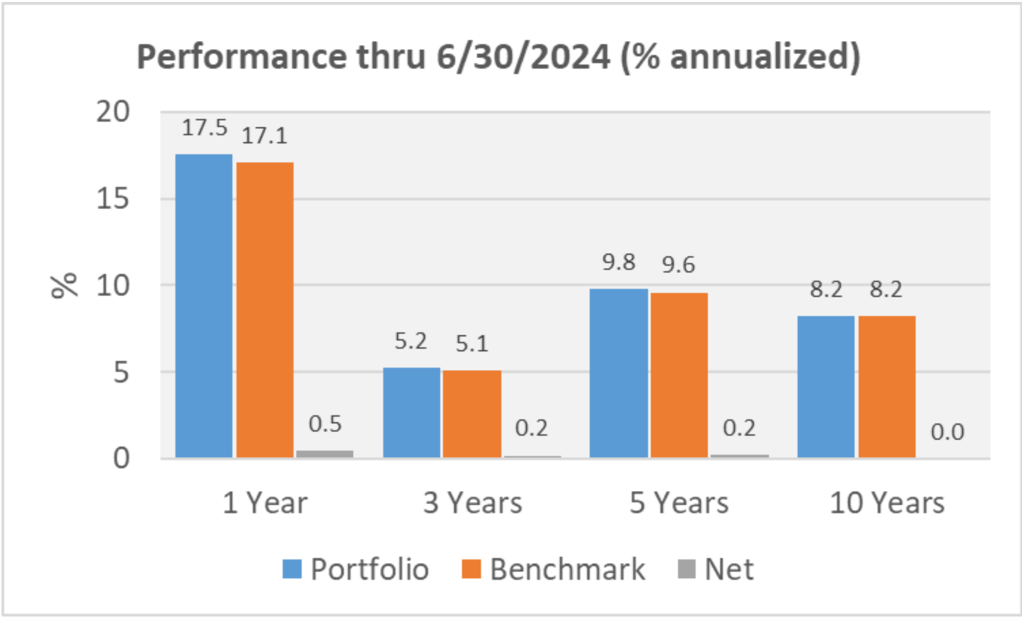
Managed	Index Oriented	Active			Total
		Enhanced Index	Traditional	Multi-Factor	
Internally	-9.9%	6.6%	0.3%	1.1%	-1.9%
Externally	0.0%	0.0%	1.9%	0.0%	1.9%
Total	-9.9%	6.6%	2.2%	1.1%	0.0%

In addition to the introduction of the new Climate index and increased use of active management, Staff also introduced a new process for continuously evaluating active strategies across the Global Equity asset class. The Manager Universe Continuous Search (MUCS) process was introduced over the last fiscal year to assist in identifying and evaluating potential new managers on an ongoing basis. The result should speed up the manager research process and ability to deploy capital to strategies that Staff feels will generate incremental value. The Portfolio Construction score has consistently been rated highly and with the progress this year we have slightly increased the overall score.

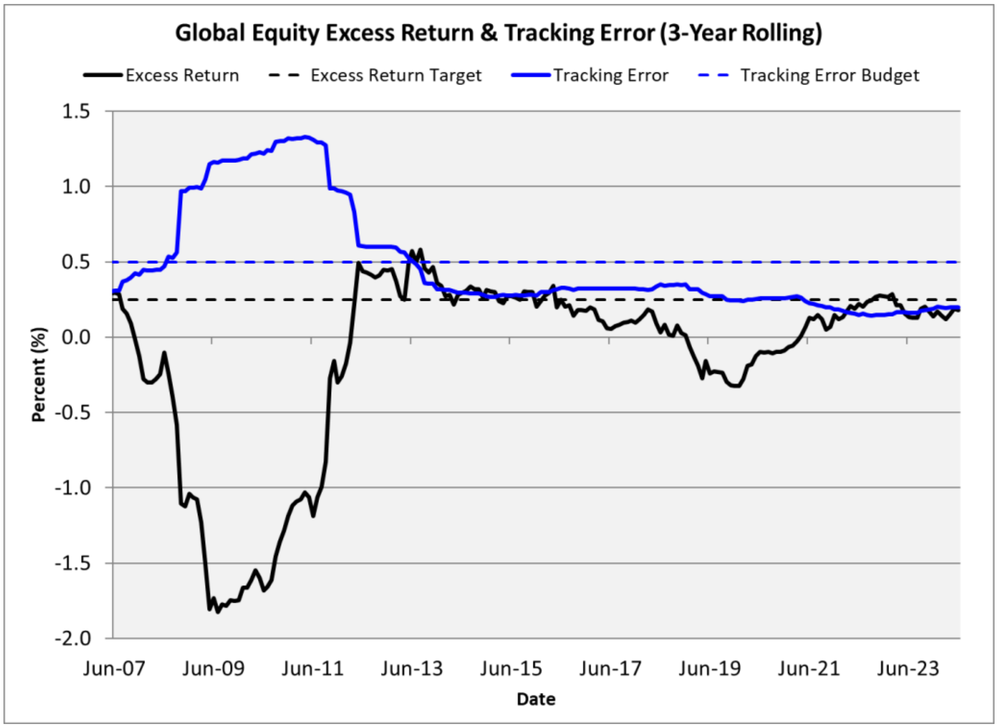
Performance (Forecasting Score)

Equity returns (17.5% absolute return) for the latest fiscal year reflected a continuation of the rally from the previous year as equity markets continued to be propelled by the tailwinds of artificial intelligence (AI) momentum and increasing confidence that policy makers were close to realizing their goals of a soft landing after several years battling inflation. Over the longer term, the portfolio has also contributed very strong absolute returns over the ten-year period (8.2% annualized). Factoring in the global pandemic and the selloff experienced in 2022, this return remains remarkably robust, and consistent with the long-term goals of the portfolio.

The portfolio has been managed within a narrow tracking error (TE) budget of 0.50% and long-term excess performance is constrained due to most of the allocation deployed to index oriented and enhanced index strategies. However, the last year has seen Staff starting to roll out changes to the portfolio (see Portfolio Construction section) to add more active management via new strategies which should lead to greater use of the TE budget. Over the last year the overall program outperformed the benchmark by 50 basis points, which was a positive reversal from the previous fiscal year (down 7 basis points). This is in line with the longer-term incremental outperformance that the composite has experienced.



In the below chart, we compare the amount of realized active risk vs realized excess return over 3 years. The blue solid line highlights the lower level of TE that has been realized starting around 2019 (relative to the 50-basis point target – blue dashed line). However, when zoomed in the TE is slowly increasing and should continue this trend as Staff builds out the active risk framework. Rolling excess returns have also steadily increased from 2019 and are close to the expected target (25 basis points – black dashed line).



We will continue to evaluate the efficacy of more active risk in the GE Program over the long term and certainly can see a scenario where the forecasting success component improves as more value is added over the long term. We have incrementally increased the forecasting score to reflect improvement to the repeatability of the process with the introduction of the MUCS process.

Team Resources

The GE team currently stands at 26 FTE with 3 open positions. The team continues to grow and has experienced no losses over the last fiscal year. This now represents two consecutive years with no turnover and resulted in a higher score for our Team Stability scoring component. We also increased our Quality of Team scoring component because of the 4 additional FTE's added. In our letter last year we noted that the increase in use of active risk in the portfolio should also coincide with an increase in the size of the team to adequately manage that deployment. We are pleased to see that momentum from last year continue this year.

Along with the changes in personnel, the structure of the group has been modified with the creation of two teams:

1. Active Equity Strategies – This was folded out of the legacy portfolio structuring & strategy development team and is tasked with identifying and managing the active strategies in the GE book
2. Equity Portfolio Design and Analytics – This new team will be led by a still to be hired ID and will be tasked with leading equity portfolio design, applied equity research, and portfolio risk management / attribution efforts

The restructuring of this group is aligned with the goals of more active risk deployment and Wilshire's scoring for the Team could continue to increase with the hiring of the Investment Director (ID) for the new team and continued build out of the remaining opening positions. The overall Team score did increase and remains highly rated. In addition, we did increase the overall scoring for the Information Gathering component in our model to reflect the dedicated research Investment Manager (IM), as well as the creation of the Design and Analytics team.

Implementation

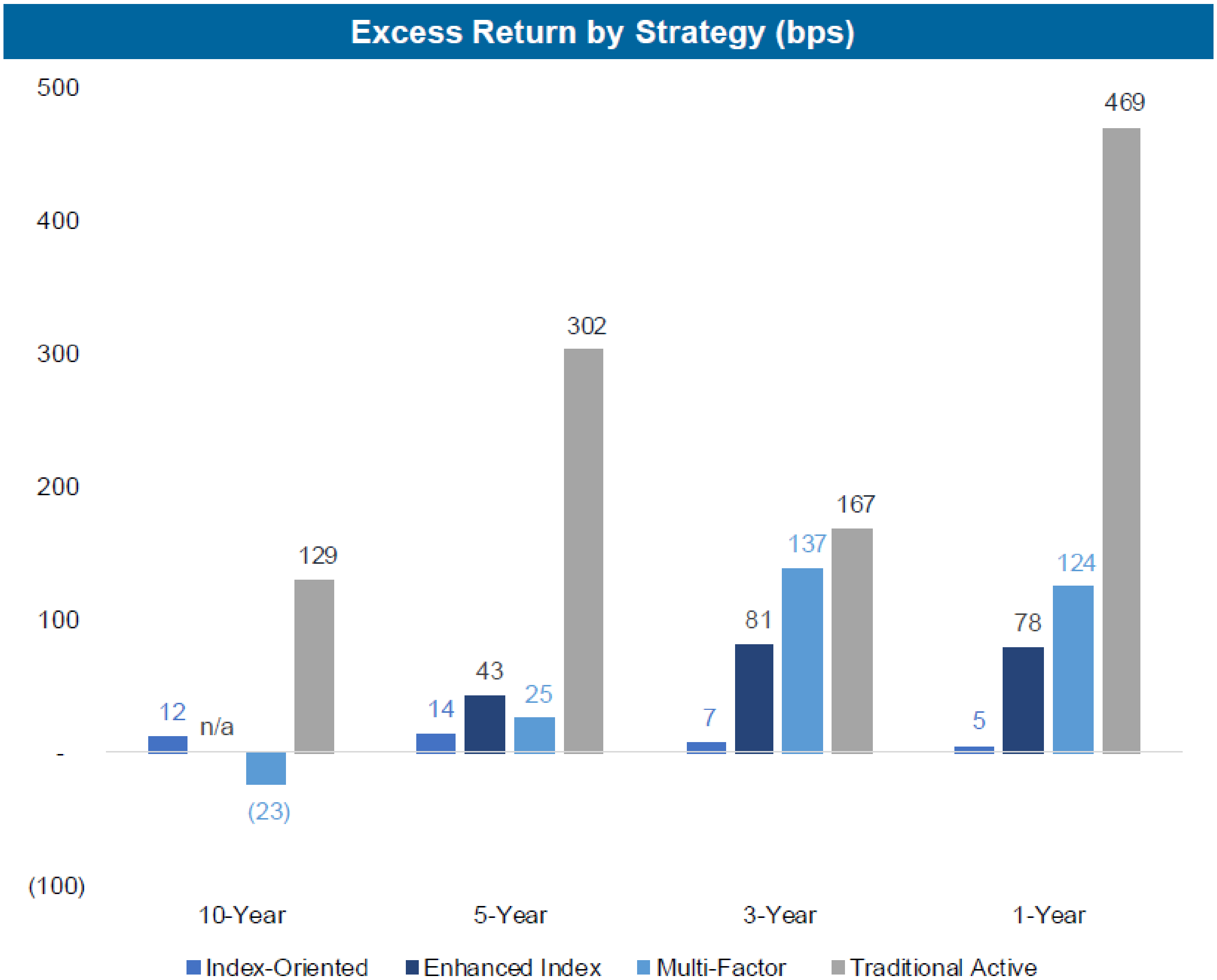
The overall team that manages Construction\Trading is supported by 10 FTE, which remains consistent with last year's number. That team collaborated on many of the initiatives already listed in this review along with additional work aiding in Total Fund rebalancing and mid-cycle Strategic Asset Allocation adjustments (approx. $32 billion in assets).

In addition to that team, the Corporate Governance group within the Program was aided by the hire of the ID last year. That group is focused on the integration of strong Governance and Sustainability across 4 pillars (Proxy Voting, Engagement, Partnerships, and Research).

The Implementation score is currently highly rated and continues unchanged this year.

Attribution

The table below summarizes excess performance by the four sleeves within the Cap-Weighted segment over multiple time horizons. As noted earlier, the composite has benefitted from outperformance within this segment. Beneath the Cap-Weighted segment the chart below shows consistent contribution to outperformance across all sleeves of the portfolio over the last 1,3, and 5 years. Unsurprisingly the Traditional Active sleeve leads the way, which is to be expected given the higher tracking error of the strategies within it.



From a historical attribution standpoint, the passive nature of this portfolio has not required a significant amount of decomposition given the low TE. However, we would expect more use of risk and attribution tools to aid in managing the portfolio on a go-forward basis. The aforementioned Portfolio Design and Analytics team will play an important role in supporting the Program. In our discussions with Staff, they have highlighted how the addition of a dedicated research individual is already adding value to the process. The Attribution score has potential for further increases as we evaluate the continued build-out of the team and its use to complement active risk deployment, however it remains the same this year at an already high level.

GE Program Total Scoring

Utilizing Wilshire's traditional manager research scoring framework, our qualitative assessment of the Program places it in the 3rd decile. This is similar to last year when the Program was ranked 3rd decile. There were incremental increases to the Team, Information Gathering, Forecasting, and Portfolio Construction subcomponents. Wilshire will continue to evaluate the value added from more active risk deployment, with long term value an area that could increase score. Overall, the total score continues to reflect a very strong team that is stable and growing, and has the potential to have more impact on a relative basis for the total PERF.

CalPERS Global Equity		**Tier**	**Letter**
Total Qualitative Score		**3rd**	**B**
	Weight	**Tier**	**Letter**
Organization	**20%**	**4th**	**B**
FIRM	***50%***	**7th**	**D**
Quality and Stability of Senior Management			
Quality of Organization			
Ownership/Incentives			
TEAM	***50%***	**1st**	**A**
Stability of Investment Professionals			
Quality of Team			
Commitment to Improvement			
Information Gathering	**20%**	**3rd**	**B**
Information Resources			
Depth of Information			
Breadth of Information			
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%**	**1st**	**A**
Risk Budgeting/Control			
Defined Buy/Sell Discipline			
Consistency of Portfolio Characteristics			
Implementation	**10%**	**2nd**	**A**
Resources			
Liquidity			
Compliance/Trading/Monitoring			
Attribution	**10%**	**1st**	**A**
Depth of Attribution			
Integration of Attribution			

