August 31, 2023

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

Re: Consultant Global Fixed Income Program Review

Wilshire's review of CalPERS' investment programs included virtual on-sites with both video conference and teleconference discussions with senior team members. These formal discussions have been supplemented with 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 focus on the Global Fixed Income program and concludes with an appendix of the Wilshire's scores, consistent with past annual reviews.

Global Fixed Income

The CalPERS Global Fixed Income (GFI) Program is designed to diversify equity risk for the total fund and provide current income and liquidity. The review process included discussions with senior Staff members of each fixed income segment within the GFI Program. Review topics included Program investment process, personnel and resource management, as well as investment and risk management procedures.

The Program is actively managed with 77.9% of the $122.1 billion in assets managed internally by Staff, and the remaining 22.1% outsourced to external managers. During FY23, the team successfully managed the portfolio towards the adopted asset allocation targets. The primary shifts within the GFI portfolio were as follows:

- Reduce Treasury from 10% to 5%
- Reduce Mortgages from 8% to 5%
- Increase Investment Grade Corporates from 6% to 10%
- Increase High Yield from 4% to 5%
- Increase Emerging Market Sovereigns from 1% to 5%

On balance, the portions of GFI that were reduced underperformed relative to those that were increased. Treasuries were the worst performing segment over the last fiscal year with a return of -5.6%, followed by Mortgages which declined by -1.3%. In contrast, Investment Grade Corporates were up 0.9% and High Yield was up 9.1%. EM Sovereigns were also up 3.1% since inception.

FY23 saw a significant shift to external management with the retirement of a senior portfolio manager in the high yield segment, and growth in the size of the emerging market sovereign bond area. This was a prudent decision given available resources and the active return opportunities in the high yield market. It is worth noting the cost of the external management is higher but will also be targeting higher active risk levels to generate attractive net-of-fee returns.

Team

We believe the Global Fixed Income Program is managed in an effective and risk-conscious manner, leveraging the deep expertise of the senior management team. The size of the internal GFI team does remain a risk factor to ensuring continuity of the demonstrated investment success of the portfolio. With the retirement of the ID overseeing high yield, there is one Investment Director, 2 Investment Manager, and 2 Assistant Investment Manager positions open, though this is likely to shift given the timing of approvals for new positions. The engagement of Staff in cross-functional initiatives yields valuable perspectives and underscores their commitment to the Total Fund’s success. This increased demand on the Staff's time further emphasizes the importance of effective resource management, especially in terms of recruiting and retaining talent within the organization.

The MID – Global Fixed Income recognizes this situation and is actively bolstering the team resources through requests for new positions within GFI and recruiting to fill current open positions. However, the existing tight labor market and the lengthy recruitment process continue to challenge efforts to attract skilled investment professionals. It is worth noting that more recently there has been an observable increase in the available talent pool, although this growth is gradual. Senior fixed income Staff (those at the level of AIM and above) have substantial experience, which offers a measure of reassurance that the successful execution of the global fixed income program will persist.

Portfolio

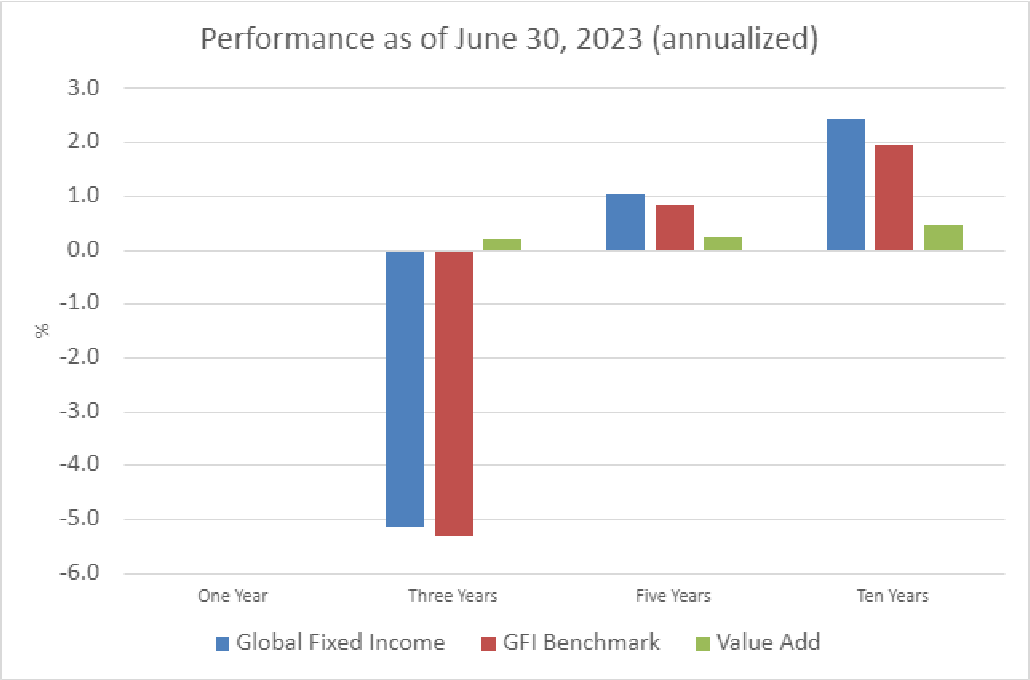
The Global Fixed Income portfolio consists of five component segments: 1) Treasuries, 2) Mortgages, 3) Investment Grade Corporates, 4) Sovereign Emerging Market Debt, and 5) High Yield. The roles and characteristics of each segment are sufficiently distinct that separating them during the asset allocation optimization process allowed for more efficient portfolio construction.

Treasuries offer very high levels of liquidity and have offered solid protection against equity drawdowns but experience direct sensitivity to interest rate changes. Mortgages are similarly very liquid and together with Treasuries can offer a funding source for the leverage that is now incorporated into the asset allocation targets. Investment grade corporate bonds balance interest rate sensitivity with higher quality credit risk for additional income. Sovereign EMD, as a dedicated asset class, offer enhanced yields as well as diversification across difference economies globally. High yield bonds behave more like equities in bear markets but offer a significant pickup in yield versus other instruments and some diversification in more typical markets. This granularity allows for a higher level of flexibility in the asset allocation process to help achieve CalPERS’ investment objectives. Additionally, a tactical Total Fund Fixed Income mandate is available and has been used to take advantage of market dislocations. The team has in place tactical triggers based on credit spreads in both investment grade and high yield markets to enter into these higher-level portfolio tilts.

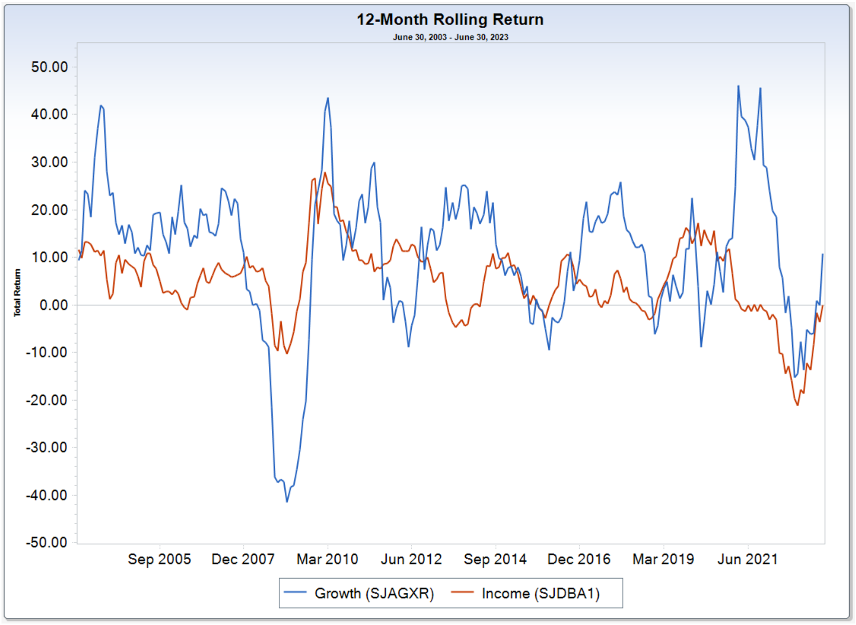
Performance

Fiscal year 2023 continued to be a challenging time for fixed income assets, particularly higher quality duration sensitive segments of the market. The chart below shows the Program's historical performance relative to its benchmark. Global Fixed Income was buffeted by a historically difficult period for interest rate markets in both fiscal years 2021 and 2022, which somewhat abated in FY23 when performance was effectively flat on both an absolute and relative basis. The impact of 2022 continues to mute longer term absolute performance. Performance across the most interest rate sectors – Treasuries and Mortgages – were negative on an absolute basis, while Investment Grade Corporates, High Yield and EM Sovereign Bonds were positive.

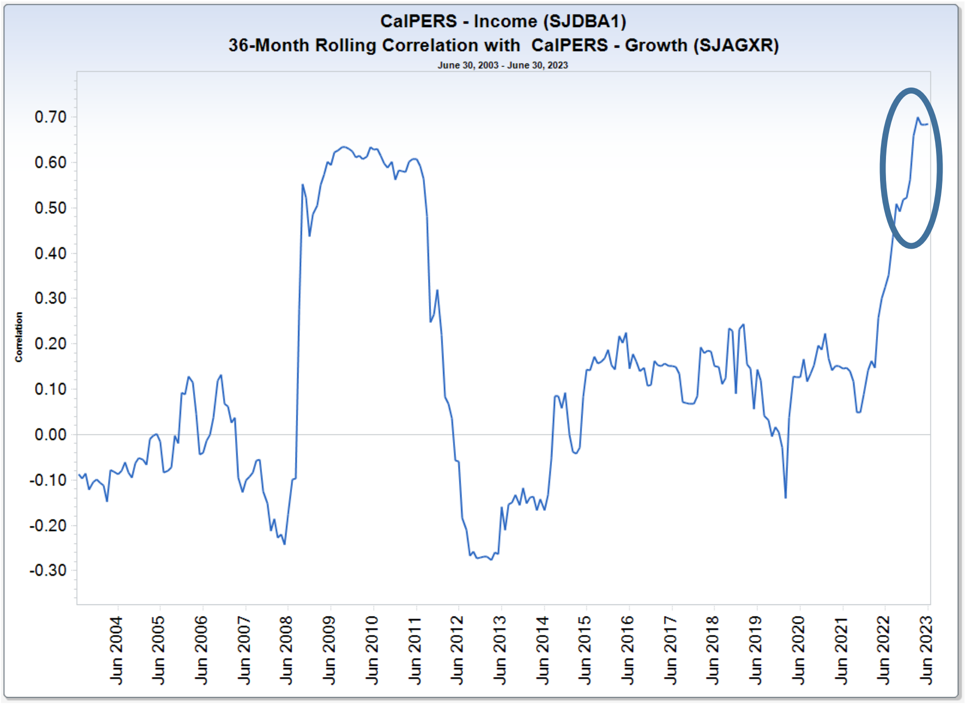
Relative returns remain positive over all periods greater than 1 year.



The 12-month rolling returns and 3-year rolling correlation with Global Equity are shown in the following charts. Together, these demonstrate the strategic role the GFI portfolio plays in diversifying equity returns over different market cycles throughout the past 20+ years. This relationship has been tested over the past two fiscal years, however.

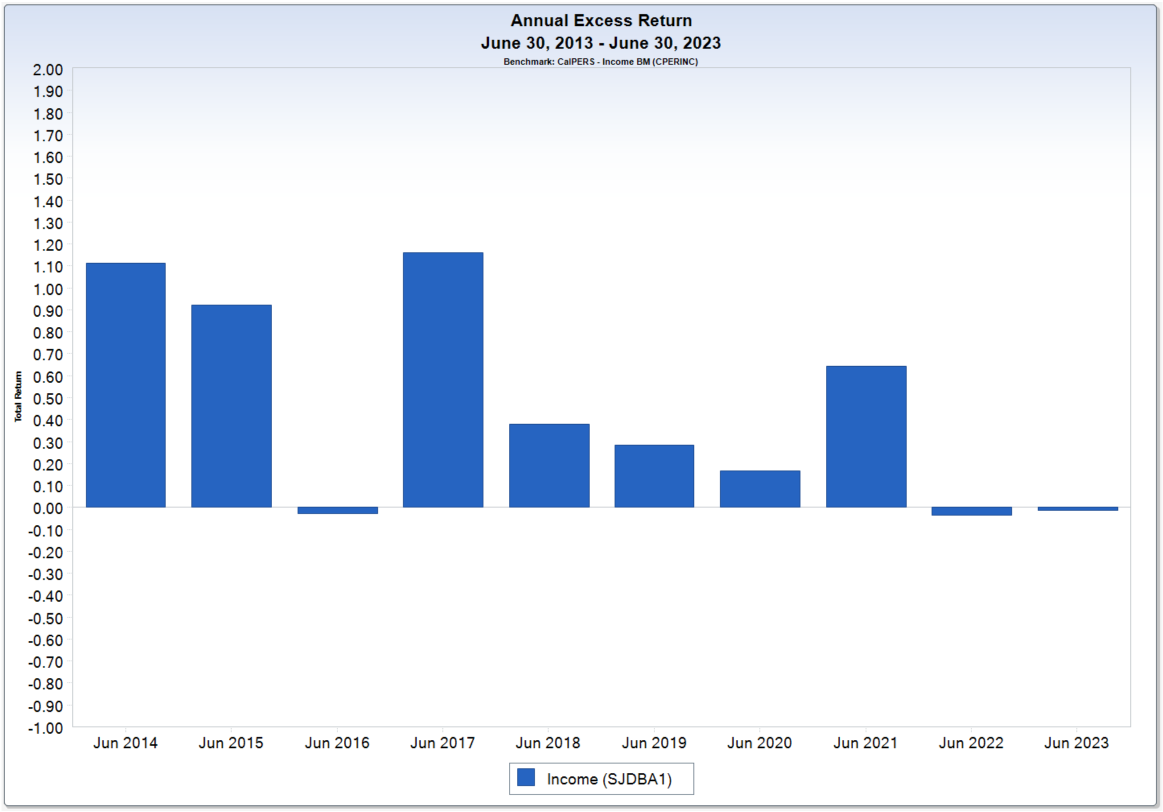


The Board will note that the most recent correlations are above the levels during the Global Financial Crisis and its aftermath. This highlights a risk Wilshire communicated in previous discussion - when starting with low interest rates, the return from fixed income has diminished upside potential and lower diversification benefits. As inflation accelerated and expectations for Federal Reserve rate increases climbed in 2022, both public equity and fixed income were negatively impacted at the same time. That dynamic has continued to impact fixed income performance even as rate increases have tapered off and expectations for easing by the Federal Reserve vacillate with new economic data. Strategically, Wilshire expects this elevated correlation to moderate and improve the portfolio diversification benefits of fixed income assets.

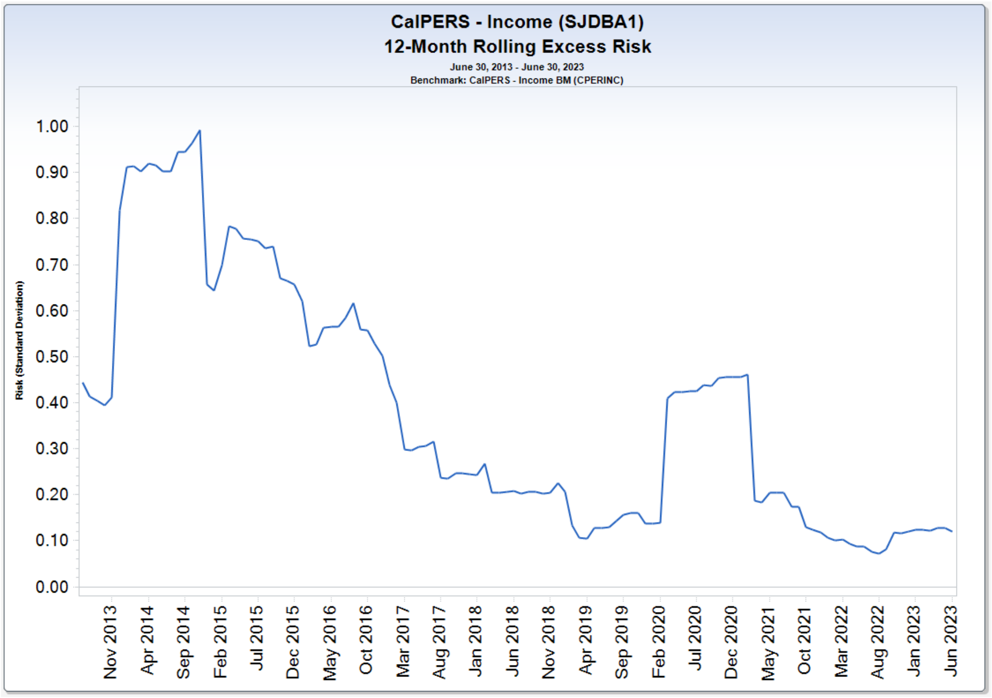


From an active return perspective, the CalPERS GFI program managed to match the benchmark during the most recent one-year period. Over longer-term periods, the Global Fixed Income portfolio has been a consistent source of value-add for the portfolio. In the last fiscal year, Treasury, Mortgages, and High Yield outperformed their relevant indexes, while Investment Grade Credit unperformed. The Emerging Market Sovereign portfolio does not have a full fiscal year of performance but has started strong even as the size of the portfolio has increased meaningfully to $23.5 billion. EM Sovereign implementation has been done in a cost-effective manner, and ahead of the initial transition schedule. Over long term 5 and 10-year periods, the underlying active strategies in the fixed income portfolio have matched or exceeded benchmark performance.

The GFI portfolio has consistently demonstrated a level of forecasting success as evidenced by the positive relative returns for the portfolio as a whole over longer term time periods. Wilshire has modestly reduced the score in FY23 given the flat active performance over the last two fiscal years. That said, the score remains high given consistency on average over the last 10 years.



The portfolio construction approach remains well aligned with Investment Beliefs #1 – Liabilities, #2 – Long-Term Horizon, and #7 – Risk vs. Reward. The high portfolio construction score is in recognition that active risk positioning has been dynamic but has not resulted in wholesale increases in tracking error for the GFI portfolio in aggregate. This is a sign of a well-defined risk budgeting process. For example, for much of the last fiscal year, the team took a cautious approach in both investment grade and high yield markets as the potential for spread widening outweighed the available yield advantage. More recently, the portfolio has been adjusted as economic data suggests a higher probability of a softer landing.



The investment approach of the total GFI program remains consistent with its key strategic objective of providing income, stability, and equity risk diversification within the Total Fund. At the same time, GFI has outperformed its benchmark over longer time frames through both sub-sector relative value decisions and tactical positioning. GFI portfolios have taken advantage of alpha generating opportunities in different markets, while maintaining relatively tight active risk positioning over time. The team has continued to improve portfolio implementation with increased use of portfolio trades, improved counter party relationships, and remaining active in the new issue market.

Utilizing our standard manager research scoring framework, Wilshire's qualitative assessment of the Program places it in the 3rd decile. The score reflects a reduction in information gathering resources and a modest decrease in forecasting. The program continues to exhibit strong portfolio construction and implementation scores. Overall, the score reflects the experienced team in place and success at managing the portfolio in a risk-controlled manner over longer time horizons.

Appendix - Evaluation Scores for Global Fixed Income Program

CalPERS Global Fixed Income		Tier	Letter
Total Qualitative Score		**3rd**	**B**

	Weight	Tier	Letter
Organization	**20%**	**5th**	**C**
FIRM	***50%***	**6th**	**C**
Quality and Stability of Senior Management			
Quality of Organization			
Ownership/Incentives			
TEAM	***50%***	**4th**	**B**
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%**	**2nd**	**A**
Clear & Intuitive Forecasting Approach			
Repeatable Process			
Strength, Clarity, and Intuitiveness of Valuation Methodology			
Forecasting Success			
Unique Forecasting Approach			
Portfolio Construction	**20%**	**2nd**	**A**
Risk Budgeting/Control			
Defined Buy/Sell Discipline			
Consistency of Portfolio Characteristics			
Implementation	**10%**	**2nd**	**A**
Resources			
Liquidity			
Compliance/Trading/Monitoring			
Attribution	**10%**	**2nd**	**A**
Depth of Attribution			
Integration of Attribution			

