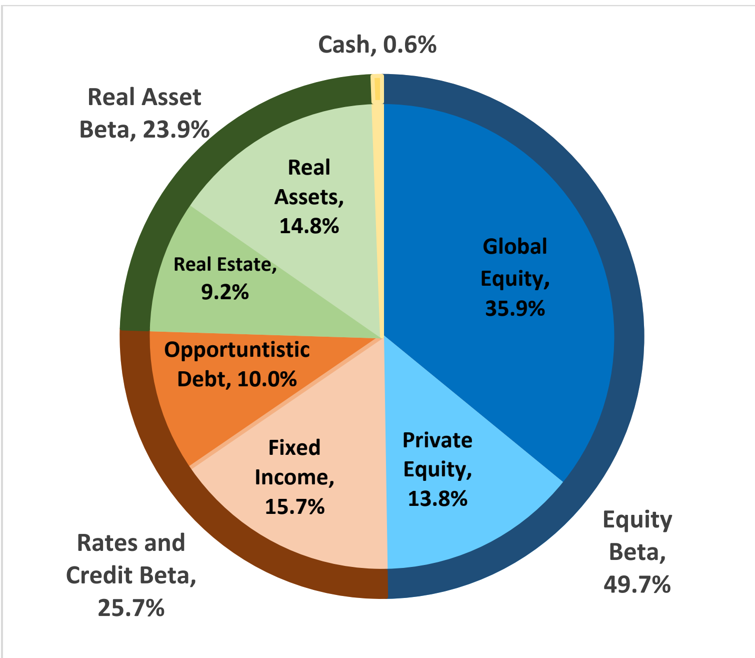
CIO INVESTMENT REPORT
~ by Larry Krummen, CFA ~
Chief Investment Officer
MPERS Board Meeting – February 17, 2023

Investment Performance Report

NEPC will present MPERS' calendar year 2022 investment performance report. A high-level summary of the report is provided below.

MPERS' Asset Allocation
December 31, 2022
Market Value $3,099,195,920



1-Year Return:	-1.97%
Benchmark Return:	-10.62%
Excess:	8.65%
3-Year Return:	9.63%
Benchmark Return:	4.62%
Excess:	5.01%
5-Year Return:	8.73%
Benchmark Return:	5.97%
Excess:	2.76%
10-Year Return:	9.21%
Benchmark Return:	7.25%
Excess:	1.96%

- Global equities rallied 9.7% during the 4th quarter of 2022, rebounding from the poor performance in the previous quarter. MPERS' overall portfolio was up 3.8% for the quarter; in line with the policy benchmark, which returned 3.83%.

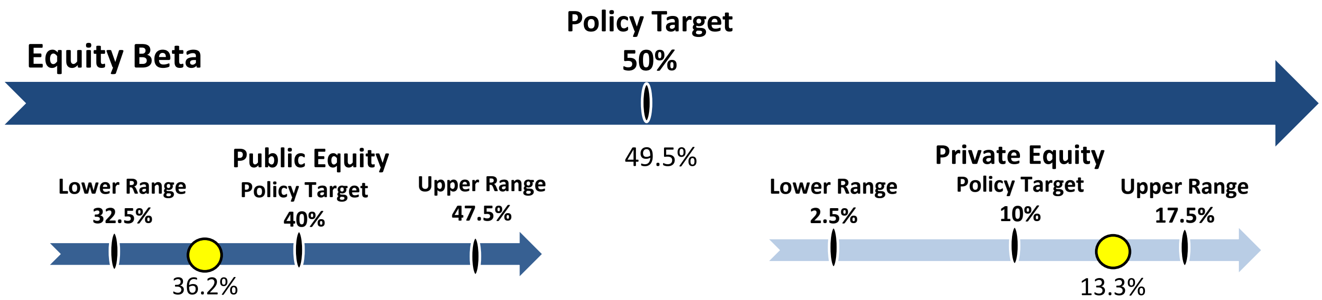
- Calendar year 2022 was a challenging year for the financial markets as inflationary pressures and higher interest rates brought fears of a future economic recession. Global equities lost over 18% in value over the year while traditional fixed income (normally a diversifier for equities) also lost over 13% in value (a traditional 60/40 mix was down 16.4% for the year). MPERS' portfolio performed extremely well considering the environment, limiting losses to under 2% for the year and outperforming the policy benchmark by 8.65%.

- **MPERS' overall return profile continues to rank in the top 1% of the peer universe across all measurement periods.** Bottom line: the portfolio has been successful at limiting losses in down markets while keeping up with markets during the good times. That's a good combination for success.

- The recent strength in the equity markets has pushed MPERS' portfolio up to an estimated 6.7% thus far in fiscal year 2023 (July 1st – February 7th).

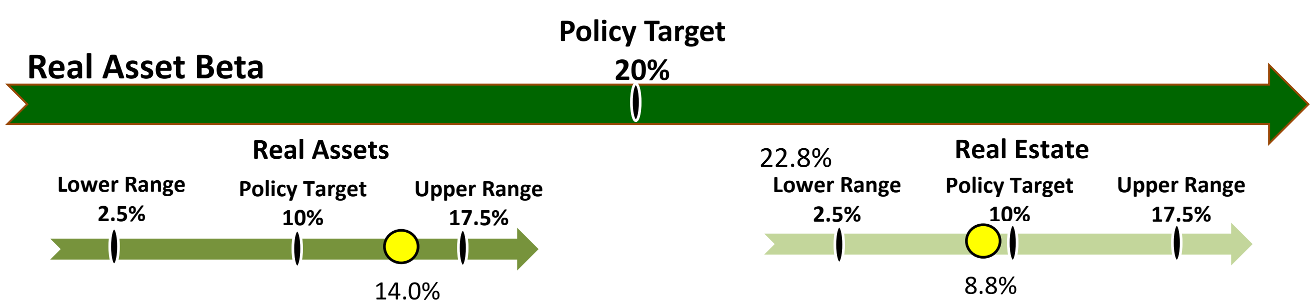
Current Asset Allocation and Positioning Relative to Targets

Global equities are up 7.5% to start calendar year 2023, on top of the strong performance in the 4th quarter of 2022. The current allocation relative to policy targets, along with additional comments on the positioning of the portfolio, is provided below. As of February 7, 2023, each of the respective allocations are within the permissible ranges established in MPERS' Investment Policy. The total fund leverage authority is being utilized moderately, with total leverage standing at 7.8% of assets.



The allocation to public equities has creeped closer to targets with the recent market rally, offsetting a gradual decline to the private equity allocation. We continue to see a steady flow of distributions (sales of underlying portfolio companies) with the private market portfolio, with most sales coming at premiums to current valuations. This has enabled the overall performance in private equity to hold steady, as the gains are offsetting modest write-downs elsewhere in the portfolio. Private equity performance was essentially flat for the calendar year, versus public equities that were down over 18%. Audited year end financials from the private equity managers will start to arrive shortly, but at this point we don't expect any meaningful valuation changes in either direction.

Bond yields have dropped back down over the past two months, as inflationary pressures have started to subside. Investors are expecting the Federal Reserve to increase Fed Funds by another 50-75 basis points (1/2 – 3/4 of a percent) over the coming months, followed by a possible cut by the end of 2023. Staff took advantage of the temporary spike in yields to increase the traditional fixed income allocation but has subsequently slowed down the pace of investment given the recent drop in yields. We expect to allocate additional capital to fixed income should yields make another move higher.



The real assets portfolio continues to provide diversification to the falling equity and fixed income markets, generating a 20% return in calendar year 2022. The timber portfolio was especially strong, delivering a 65% return for the year driven by realized land sales in Tennessee and Montana. On the real estate side, staff continues to review several opportunities which could potentially increase that allocation closer to targets.