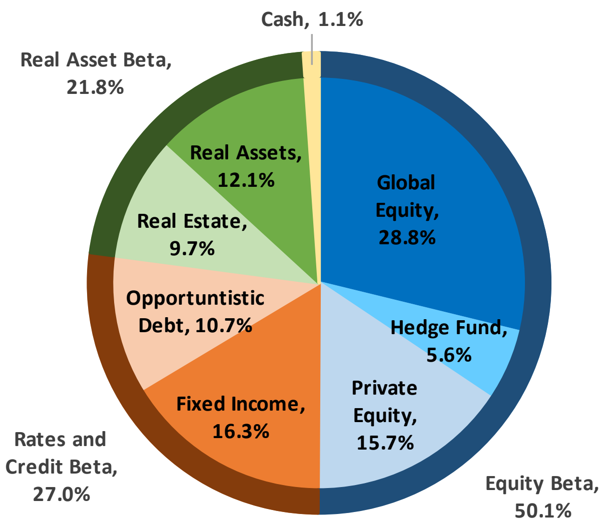
**CIO INVESTMENT REPORT**
*~ by Larry Krummen, CFA ~*
Chief Investment Officer
MPERS Board Meeting – February 28, 2020

## Investment Performance Report

NEPC will present MPERS' 4th Quarter 2019 investment performance report. A high level summary of the report is provided below.

**MPERS' Asset Allocation**
**December 31, 2019**
**Market Value $2,520,037,741**

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|---|---|
| 1-Year Return: | 12.56% |
| Benchmark Return: | 15.88% |
| Excess: | (3.32%) |
| 3-Year Return: | 9.29% |
| Benchmark Return: | 9.84% |
| Excess: | (0.55%) |
| 5-Year Return: | 7.56% |
| Benchmark Return: | 7.71% |
| Excess: | (0.15%) |
| 10-Year Return: | 9.42% |
| Benchmark Return: | 8.35% |
| Excess: | 1.07% |

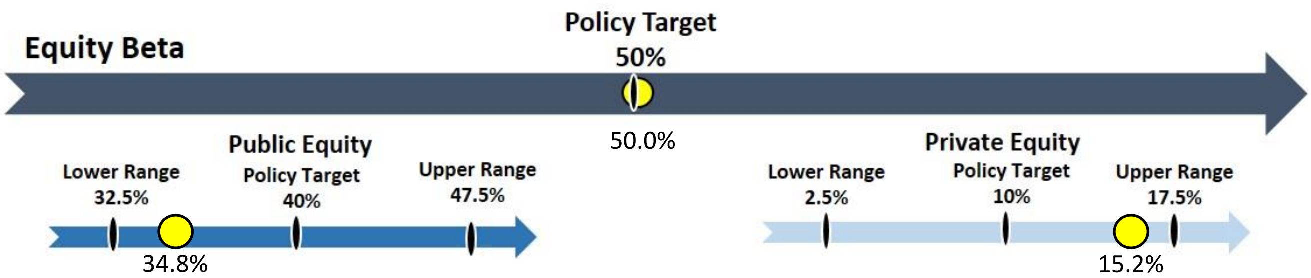
- Calendar Year 2019 investment performance was 12.56%. While double digit absolute returns are always welcome, the results are bittersweet in that we meaningfully underperformed the policy index return of 15.88% and ranked in the bottom 1% of the peer universe for the calendar year. As a reminder, MPERS' policy index is the return you would expect to earn if you could invest passively across the approved asset allocation over the entire measurement period. This year there was a significant asset allocation change that went into effect on January 1, 2019 that increased the target to public equities from 30% to 40%. With the benefit of hindsight, making a significant asset allocation change directly in between the broad market selloff in the fourth quarter of calendar year 2018 and the subsequent rebound in calendar year 2019 had a meaningful impact on MPERS' policy benchmark return. The key takeaway here is that until the portfolio has time to transition to the new policy targets, you should expect to see more significant differences between actual fund performance and the performance of policy benchmarks.

- Longer term, MPERS' returns remain excellent. MPERS' five and ten year returns rank in the top 18% and 6% of the public fund universe, with a ten year risk profile (as measured by volatility of returns) in the bottom 1% of the peer universe. That combination has produced a 10-year Sharpe ratio (a measure of return per unit of risk) in the top 1% of our peers.

- NEPC has completed MPERS' asset liability study and incorporated their updated capital market assumptions into their projections. The ten year expected return of the current portfolio is 6.29%.

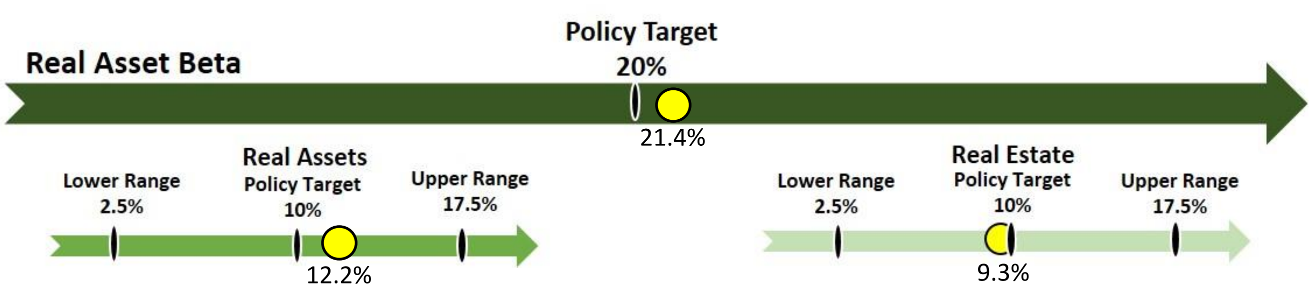
**Current Asset Allocation and Positioning Relative to Targets**

MPERS' breaks down all investment strategies into three broad beta groups (equities, interest rates and credit, and real assets). As of February 12, 2020, each of the respective allocations are within the permissible ranges established in MPERS' investment policy. The current allocation relative to the new policy targets, along with additional comments on the positioning of the portfolio, is provided below. MPERS' current cash balance stands at $88.6 million (or 2.3% of assets).




Public equity markets continue to trade at or near all time highs, despite recent concerns over the impact the Coronavirus will have on corporate profits. While the overall exposure to equity beta is neutral to policy targets, we continue to maintain an underweight position to public equities in favor of private equity structures that are less sensitive to global macro trends. Given the late stages of the economic cycle, we expect to maintain this positioning for the foreseeable future.


Uncertainty surrounding the Coronavirus has also sent interest rates to the lower end of their recent ranges, as investors reduce their expectations on economic growth for the near term. The 10-year Treasury now yields 1.56%, down from 1.87% at the November 2019 meeting, while the 30-year Treasury now yields 2.01% (down from 2.37%). The drop in risk free rates is a key component to the pricing of other risk-based assets, and the primary reason NEPC's asset/liability study is projecting a lower return for the overall investment portfolio. Given this return environment for traditional fixed income, we continue to overweight opportunistic debt strategies, and expect that positioning to remain in place over the intermediate time frame. Overall, we remain slightly underweight the rates and credit beta group, in favor of cash and other real asset strategies.




We continue to review several niche opportunities in both the real estate and timber sectors that could increase the current allocation. Real estate continues to perform very well driven by the strong job market and low rate environment. Lower interest rates are also helping the timber sector, which is suddenly gaining appeal given the prospects for increased housing demand.