CIO INVESTMENT REPORT
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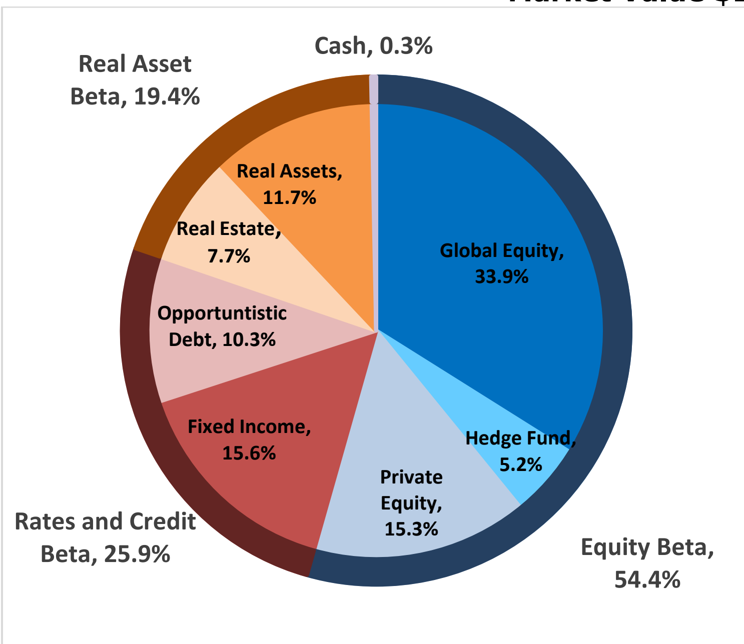
Chief Investment Officer
MPERS Board Meeting – February 26, 2021

Investment Performance Report

NEPC will present MPERS' calendar year 2020 investment performance report. A high level summary of the report is provided below.

MPERS' Asset Allocation
December 31, 2020
Market Value $2,676,016,616



1-Year Return:	9.26%
Benchmark Return:	12.46%
Excess:	(3.20%)
3-Year Return:	8.01%
Benchmark Return:	9.50%
Excess:	(1.49%)
5-Year Return:	8.76%
Benchmark Return:	9.93%
Excess:	(1.17%)
10-Year Return:	8.94%
Benchmark Return:	8.61%
Excess:	0.33%

- Calendar year 2020, despite being dominated by the COVID-19 pandemic and political uncertainty, turned out to be a good year for MPERS' investment portfolio. MPERS' investment portfolio delivered a 9.26% return for the year, led by a rebound in the equity markets. MPERS' underperformed the policy index return of 12.46% for the year, due primarily to relative underperformance of equity managers, losses in the real assets portfolio (specifically the energy-based strategies), and underperformance in the opportunistic debt portfolio.

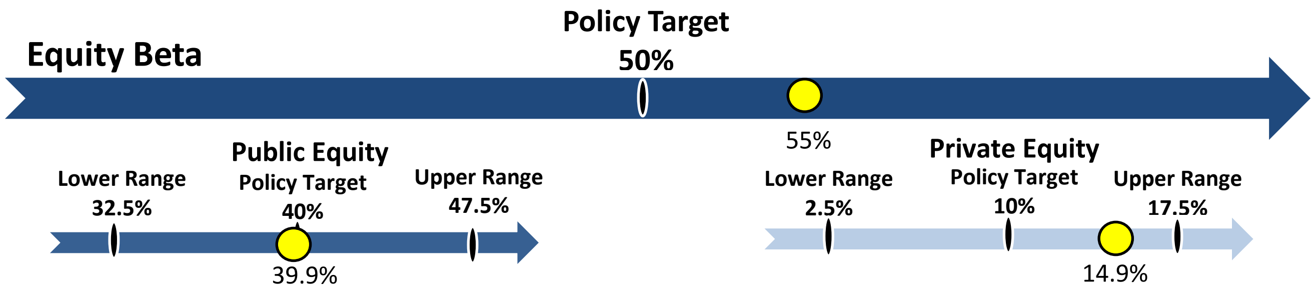
- MPERS' long-term return remains excellent across all performance metrics. MPERS' ten-year returns rank in the top 22% of the public fund universe, with a ten-year risk profile (as measured by volatility of returns) in the bottom 1% of the peer universe. That combination has produced a 10-year Sharpe ratio (a measure of return per unit of risk) in the top 1% of our peers.

- NEPC has completed its annual capital market assumptions. Given the lower yield environment and current valuation of the equity markets, the ten-year expected return of MPERS' portfolio dropped from 6.3% to 5.8% (on an unlevered basis). The use of 20% leverage is expected to generate a 6.6% return (0.8% improvement).

- The current positioning of the portfolio is detailed on the following page.

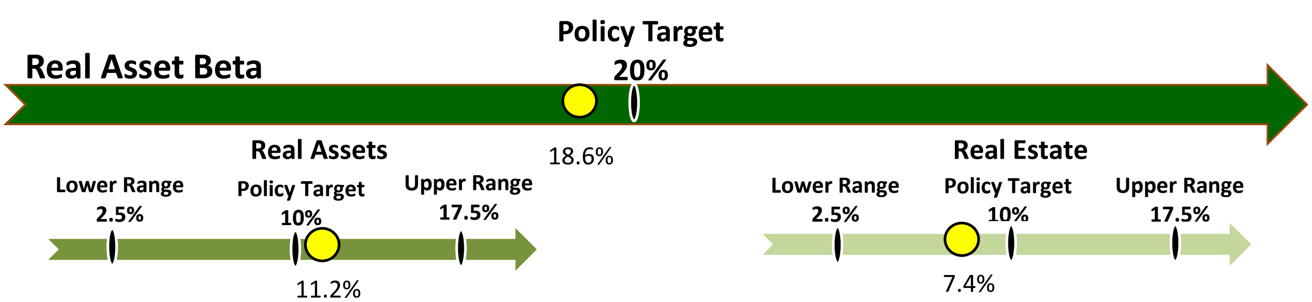
Current Asset Allocation and Positioning Relative to Targets

The current allocation relative to policy targets, along with additional comments on the positioning of the portfolio, is provided below. As of February 12, 2021, each of the respective allocations are within the permissible ranges established in MPERS' Investment Policy. The strong performance in the equity markets has brought the portfolio back to a neutral position relative to policy targets. Given equity market valuations trading at all time highs and the relatively low interest rate environment, staff has been harvesting gains and building a cash balance for use when the opportunity set improves. The total fund leverage authority is not being utilized and MPERS' cash balance stands at $35.3 million (or 1.3% of assets).



The relative performance of the equity portfolio has improved of late. Since July 1, the equity portfolio is up 36.5% relative to the ACWI benchmark which is up 31.1%. The strong surge in the equity markets has stretched valuations to levels not seen since the financial crisis, so we will likely continue to harvest gains until we are more comfortable with valuations. MPERS obtained 65% of the public equity exposure (26% of assets) through the use of derivative and/or portable alpha (hedge fund) strategies.

The optimism surrounding a COVID-19 vaccine and an additional government stimulus package continues to push interest rates higher and bond prices lower. The 10-year Treasury now yields 1.24% (up from 0.67% in September), while the 30-year Treasury now yields 2.03% (up from 1.41% in September). The underweight position relative to policy targets has served MPERS well during this recent spike in yields, and we intend to maintain this positioning for the foreseeable future.



The real assets portfolio has performed better as of late, led by gains in the timber portfolio. The recent surge in oil prices to $60 per barrel should also provide relief for MPERS' energy-based strategies over the coming months. We remain underweight the real estate allocation target, but are optimistic that several recent commitments are well positioned to take advantage of any dislocations that may occur as the sector adjusts to long-term supply and demand changes brought about by COVID-19.