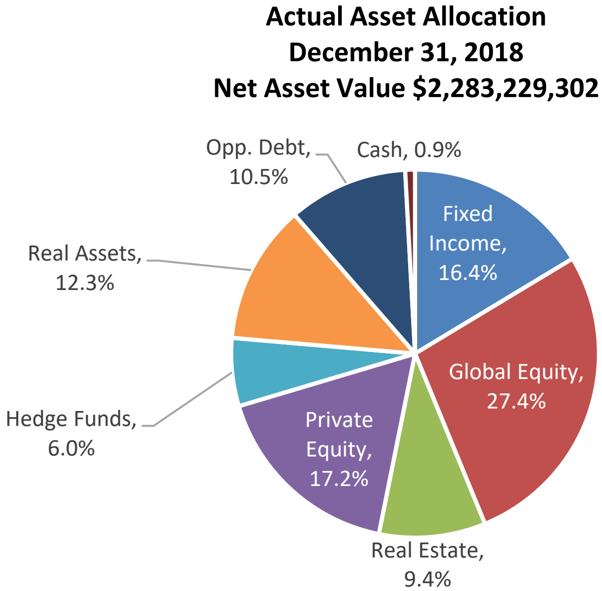
CIO INVESTMENT REPORT
~ by Larry Krummen, CFA ~
Chief Investment Officer
MPERS Board Meeting – February 21, 2019

Calendar Year 2018 Investment Performance Report

NEPC will present MPERS' Calendar Year 2018 investment performance report. A high level summary of the report is provided below.



1-year Return:	2.49%
Benchmark:	0.74%
Excess Return:	1.75%
3-year Return:	7.37%
Benchmark:	7.14%
Excess Return:	0.23%
5-year Return:	7.21%
Benchmark:	6.16%
Excess Return:	1.05%
10-year Return:	9.58%
Benchmark:	8.32%
Excess Return:	1.26%

- The highlight of this report is MPERS' performance relative to our peer universe. As of December 31, 2018, MPERS' performance ranks in the top 3% of the universe across all measurement periods out to 10 years, with a risk profile (measured by standard deviation of returns) in the bottom 3% of the universe. That combination has produced the single best Sharpe ratio (a measure of risk vs. reward) across the entire peer universe. These statistics highlight the rationale behind MPERS' restructuring of the investment portfolio that started over 15 years ago.

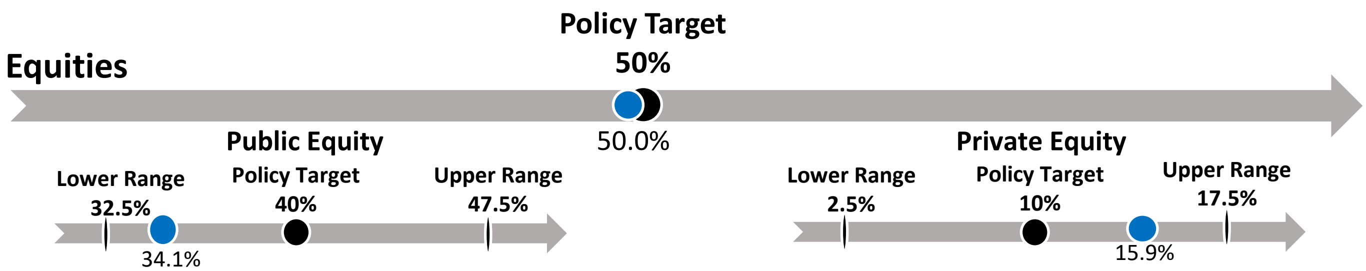
- Calendar year 2018 closed on a sobering note, as fears over U.S./China trade negotations, potential rates hikes by the Federal Reserve, and concerns over falling growth sent equity markets down 12.75% in the 4th quarter. The yield on the 10-year U.S. Treasury bond fell from 3.06% to 2.80% during the quarter as investors fled to the safety of high quality fixed income portfolios. The volatile quarter left global equity markets down 9.4% in 2018. Despite the challenging equity markets, MPERS' portfolio was able to limit losses to 2.8% in the quarter, and grind out a positive 2.49% return in 2018. The alternatives portfolio was the primary driver of performance throughout the year, collectively generating an 11.8% return versus traditional stocks and bonds which lost 7.5% of value.

- Federal Reserve Chairman Powell eased market concerns by stating the Fed will be very cautious with future interest rate hikes and that any further moves would be dependant on strong economic data. Fixed income markets have rallied further on that outlook and are not forecasting any additional rate increases in 2019 (whereas in December they were expecting two or three additional hikes in 2019). Equity markets have also embraced the comments and together with strong earnings are up roughly 8.5% to start 2019. Our focus over the coming months will turn to Fiscal Year 2019 performance where MPERS' portfolio remains up an estimated 2.4% (through February 12th).

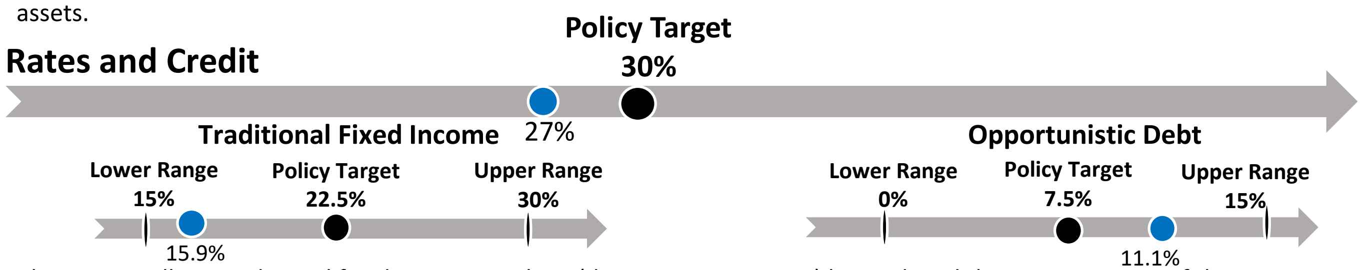
Current Asset Allocation and Positioning Relative to Targets

The asset allocation changes approved in November went into effect January 1, 2019. We are working with Northern Trust to incorporate the new asset allocation targets along with the beta grouping structure into MPERS' performance and asset allocation reports. Once finalized, all underlying investments will be broken down into three broad risk (beta) categories: equities, rates and credit, and real assets. The charts below represent our initial attempt to incorporate the beta grouping into the board meeting material.

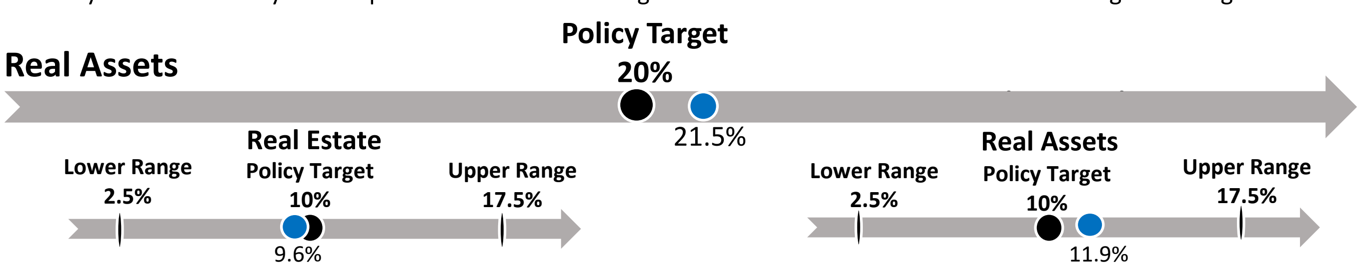
As of February 13, 2019, each of the respective allocations are within the permissible ranges. The current allocation relative to the new policy targets, along with additional comments on the positioning of the portfolio, is provided below. MPERS' current cash balance stands at $34.6 million (or 1.5% of assets) and we are not utilizing any portfolio leverage at this time.



The underweight to public equities is essentially offset by the overweight to private equity. We expect private equity will be overweight the new target of 10% for several years, and it will gradually move lower as underlying portfolio companies implement their business plan and position for sale. Hedged equity falls within public equity and respresents 5% of total assets.



The recent rally in traditional fixed income markets (drop in interest rates) has reduced the attractiveness of that sector relative to more growth-oriented strategies. The U.S. economy remains very solid, which is inconsistent with a 2.7% yield on the 10-year U.S. Treasury. We expect to remain underweight traditional fixed income until economic growth begins to slow.



With the 30% drop in oil prices in the 4th quarter of 2018, we fully expect to see some losses flow through in the year-end valuations of energy-related investments. Real estate continues to perform well, and we have several potential sales in the timber portfolio which should offset some of the expected negative performance within the energy sector.