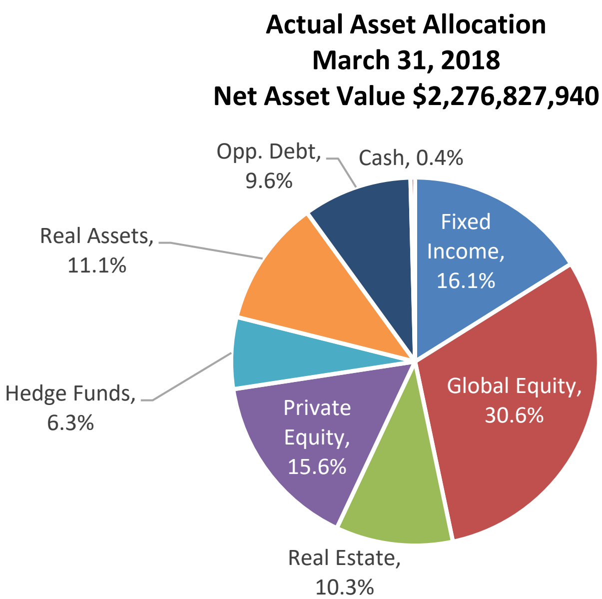
**CIO INVESTMENT REPORT**
*~ by Larry Krummen, CFA ~*
Chief Investment Officer
MPERS Board Meeting – June 21, 2018

## 1st Quarter 2018 Investment Performance Report

NEPC will present MPERS' 1st quarter 2018 performance report. A high level summary of the report is provided below.

Big Picture Perspective on Investment Performance:

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|---|---|
| 1-year Return: | 10.30% |
| Benchmark: | 10.59% |
| Excess Return: | (0.29%) |
| 3-year Return: | 7.14% |
| Benchmark: | 6.81% |
| Excess Return: | 0.33% |
| 5-year Return: | 8.90% |
| Benchmark: | 8.15% |
| Excess Return: | 0.75% |
| 10-year Return: | 6.19% |
| Benchmark: | 6.09% |
| Excess Return: | 0.10% |

- MPERS' portfolio generated a 0.6% return in the 1st quarter of 2018, despite losses in both the equity and fixed income portfolios. The alternatives portfolio provided nice diversification in the quarter, offsetting losses in the traditional stock and bond markets. Opportunistic debt produced a 3.6% return, real estate returned 3.0%, and real assets provided a 2.6% return.

- It's important to note that audited 2017 year end financials were not available for many of MPERS' private market investments at the time of this report. Those updates will be incorporated into the 2nd quarter 2018 performance report.

- Longer term performance remains solid relative to policy benchmarks and the peer universe, as MPERS' three, five, and ten year returns rank in the 12th, 3rd, and 38th percentile of the public fund peer universe. MPERS' risk profile remains in the bottom 21% of the peer universe over the past ten year period (our risk is lower than 79% of our peers).

- More recently, the equity markets have settled down from the volatile 1st quarter and are once again approaching the all-time highs set in January. The fixed income portfolio continues to struggle as yields have increased with the improved economic outlook (sending bond prices lower), but the rest of portfolio is performing well. With only a few weeks remaining in the fiscal year, MPERS' fiscal year 2018 estimated performance stands at 9.5% (July 1st to June 13th).

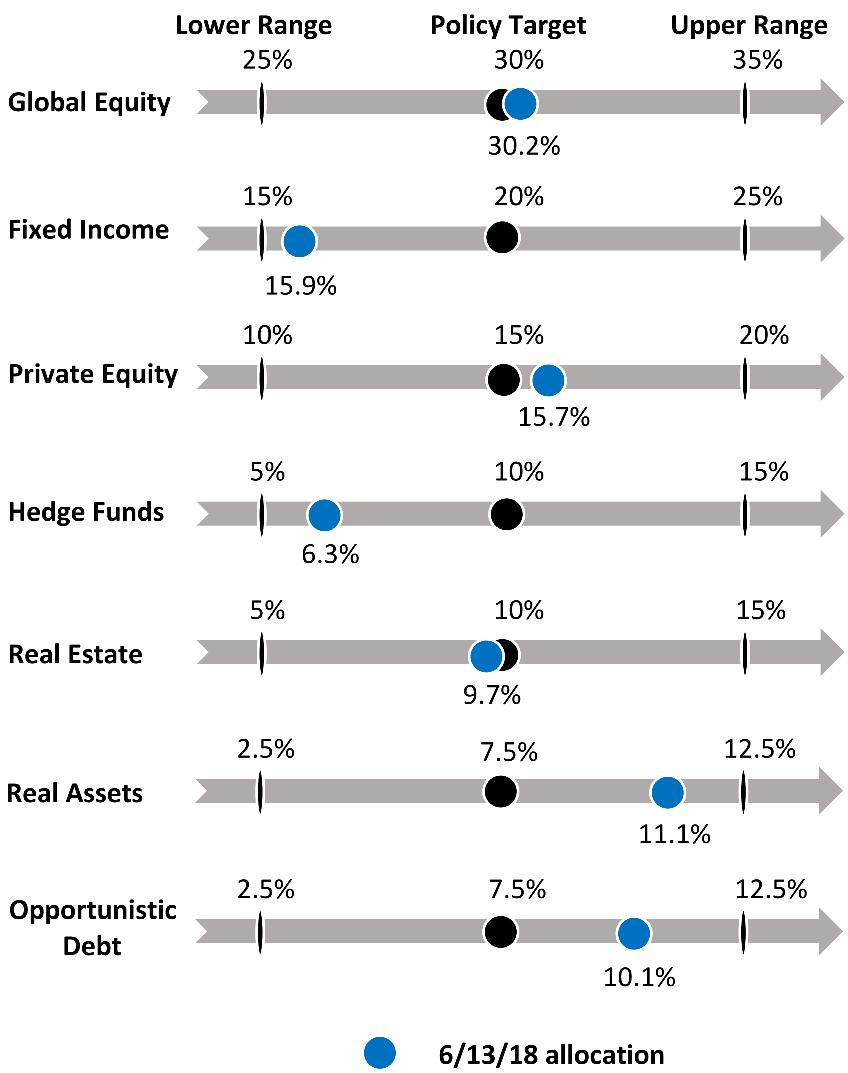
- The current positioning of the portfolio is detailed on the following page.

## Current Asset Allocation Overview / Positioning Relative to Targets

As the current economic expansion approaches its ten-year anniversary, it's becoming harder and harder to find relative value opportunities across the portfolio. We've spent a lot of time reviewing the positioning of MPERS' asset allocation recently, and despite the difficulty of sourcing new "ideas" we continue to have strong conviction with the positioning of the portfolio. We remain underweight the fixed income markets as yields increase with inflationary pressures, but expect to allocate additional funds to the sector if rates move materially higher than current levels. This underweight position (together with a relatively short duration mix of assets) has helped to limit our losses from fixed income during this period of rising rates.

We are finally seeing some good performance from Master Limited Partnerships (MLPs) within the equity portfolio, as the combination of attractive yields and rising oil prices have lured investors back to the asset class. MLP prices are up roughly 15% in the second quarter alone, a welcome reversal relative to what we've seen over the past few years. We remain bullish for MLPs longer term, given the portfolio's yield of 6.5% and their limited exposure to the underlying commodity price risk.

As of June 13, 2018, each of the respective asset class allocations are within the permissible ranges. The current allocation relative to policy targets, along with additional comments on the positioning of the portfolio, is provided below. MPERS' cash balance stands at $26.8 million, or 1.2% of assets.




**Notes on Allocation & Positioning**

- Global Equity: Recently reduced the allocation to a neutral position vs. policy given valuations and increased market volatility.
- Fixed Income: Gradually increasing allocation as interest rates rise. Certain long-term Government agency bonds are now yielding over 4%.
- Private Equity: Sector remains best performing asset class on an absolute return basis, but continues to struggle meeting S&P 500 + 3% hurdle.
- Hedge Funds: Remain underweight in favor of real asset and opportunistic debt strategies. Expect allocation to drift towards 5% minimum.
- Real Estate: Portfolio is performing well but increasing interest rates might put pressure on pricing of the core real estate portfolio.
- Real Assets: Energy funds performing better with oil maintaining $60/barrel prices. Timber allocation is now 3.7% of total portfolio.
- Opportunistic Debt: Remains an attractive asset class and one of the strongest performing sectors over the past cycle.