MoDOT & Patrol Employees' Retirement System

TO:	MPERS' Board of Trustees
FROM:	Scott Simon, Executive Director
DATE:	June 11, 2020
SUBJECT:	Asset Allocation Proposals Under Consideration MPERS' Board Meeting – June 18, 2020

Background:

MPERS' Investment Policy requires an asset/liability study be performed at least every five years to ensure the current asset allocation is appropriate for the current market and goals of the System. The last study was completed in November of 2014, and MPERS' staff has been working with the investment consultant and actuary since mid-2019 on the current study. The study offers four asset allocation proposals for the Board to consider, and staff has prepared the following summary to help guide discussion at the June board meeting. Included in this memo is a summary of actions taken to date, an overview of the asset allocation options and some key characteristics of each option, along with a formal recommendation from MPERS' executive staff and general consultant. We have also included an FAQ (frequently asked questions) document and other supporting material in the appendix of this memo for additional background.

Relevant Policies Governing the Decision

The section of MPERS' Investment Policy that requires the asset/liability study is shown below:

> **Section X – Asset/Liability Study**[1]
>
> The CIO, with the assistance of the General Consultant and actuary, shall perform an asset/liability study at least every five (5) years and report the results of the study to the Board of Trustees. Modeling an investment portfolio against the system's liability structure enables the Board to see how various asset allocations impact the system's ability to meet its projected cash flow needs. The study will establish expected growth rates for each asset class based on the expected return and standard deviation of the asset class. The various asset mixes (and resulting cash flows) are then compared against the expected growth rate of the system's liabilities, using projected interest and inflation rates. The product of an asset/liability study is the identification of investment portfolios that are most likely to meet the System's expected future spending needs while minimizing the risk that those needs will not be met.

Work/Progress Made to Date

NEPC (MPERS' general consultant), with input from GRS (MPERS' actuary) commenced work on an updated asset/liability study during the summer of 2019, with the goal of presenting the recommendations to the Board at the November 2019 board workshop and meeting. The following is a timeline of discussions that have taken place to date regarding the asset/liability study:

[1] Revised September 26, 2013.

- November 2019 board workshop: NEPC presented background material on the asset/liability study and an update on the financial markets. Given the strong performance of the equity markets during calendar year 2019, the formal recommendation from the study was tabled until February of 2020 to allow time for NEPC to complete its 2020 capital market assumptions to reflect the changing market climate.
- February 2020 board meeting: NEPC presented the updated findings of the asset/liability study which included a recommendation for the Board to maintain the current investment policy targets. In addition, allowing the potential use of leverage as a tool to enhance the return profile of the fund was suggested. After discussion of the legal authority for utilizing leverage in the portfolio, the decision was tabled.
- April 2020 board meeting (via webinar): NEPC presented an updated asset/liability study that incorporated its updated 2020 capital market assumptions due to the market movements resulting from the COVID-19 pandemic. NEPC continued to recommend the Board maintain the current asset allocation policy targets, along with the potential leverage authority previously discussed. A formal vote was tabled for the June 2020 board meeting.

Asset Allocation Proposals Under Consideration

Shown below is a chart of the various proposals under consideration along with commentary from MPERS' staff on the advantages and disadvantages of each scenario.

2020 MPERS' MIXES (RISK & RETURN)

	Policy	20% Leverage	60/35/5	Enhanced Real Assets
Global Equity	40.0%*	48.0%*	57.5%	35.0%
Private Equity	10.0%	12.0%	2.5%	12.5%
Total Equity	**50%**	**60%**	**60%**	**47.50%**
TIPS	5.0%	6.0%	7.2%	5.0%
Core Bonds	10.0%	12.0%	14.4%	10.0%
Long Govt/Credit	7.5%	9.0%	10.9%	7.5%
Private Debt	7.5%	9.0%	2.5%	7.5%
Total Fixed Income	**30%**	**36%**	**35%**	**30%**
Private Real Assets	10.0%	12.0%	2.5%	12.5%
Core Real Estate	10.0%	12.0%	2.5%	10.0%
Total Real Assets	**20%**	**24%**	**5%**	**22.5%**
US Leverage Cost	0%	-20%	0%	0%
Total Cash	**0%**	**-20%**	**0%**	**0%**

Expected Return 10 yrs	**6.29%**	**6.99%**	**5.52%**	**6.36%**
Expected Return 30 yrs	**7.31%**	**8.11%**	**6.67%**	**7.41%**
Projected Risk	**11.53%**	**13.82%**	**11.73%**	**11.59%**
Sharpe Ratio (10 years)	**0.39**	**0.38**	**0.32**	**0.39**
Sharpe Ratio (30 years)	**0.43**	**0.41**	**0.37**	**0.43**

<u>Current Policy</u>:

Advantages:

- Represents existing policy targets that has served MPERS' well
- Strong risk-adjusted performance (high Sharpe ratio)

Disadvantages:

- Higher fees relative to 60/35/5 portfolio due to the increased use of alternatives
- 6.3% expected return fails to meet actuarial return target of 7%

<u>Current Policy with 20% Leverage Authority</u>:

Advantages:

- Adds incremental return to existing policy through the use of leverage (estimated at 0.7% annually which lowers projected contributions by $277 million over a 15-year period)
- Improves overall liquidity profile of the fund due to increased flexibility to access "borrowed" funds in lieu of liquidating assets to raise cash
- Meets or exceeds actuarial return hurdle of 7%

Disadvantages:

- Increases the volatility (risk) of the portfolio commensurate with the amount of leverage utilized by the plan
- Could put additional upward pressure on management fees
- Adds another layer of complexity and reliance on investment staff for implementation

<u>60/35/5 Portfolio (as proposed at the May 2019 Investment Committee)</u>:

Advantages:

- Improved liquidity (amount of assets available for immediate sale)
- Lower management fees relative to other asset allocation proposals

Disadvantages:

- Expected return of 5.5% is 0.77% lower than current policy which pushes System even further from actuarial return target of 7%
- Results in estimated $284 million of additional contributions (over a 15-year period) relative to current policy and $561 million relative to current policy with leverage authority

<u>Enhanced Real Assets Portfolio (as requested by Rep. Sara Walsh)</u>:

Advantages:

- Increased reliance on real assets which should perform well in current market environment
- Modest return enhancements and reductions to expected contribution rates relative to current policy targets
- More closely resembles the current allocation of portfolio versus policy targets, which effectively eliminates any transition costs

Disadvantages:

- More closely resembles the previous asset allocation targets in place prior to January 2019, effectively reversing the prior decisions of the Board
- Modestly higher expected fee structures versus current policy

Recommendation from Executive Staff and NEPC

Given the wide range of expected outcomes of the proposals under consideration, MPERS' staff would recommend the Board break the decision down into two distinct issues:

1. the appropriate asset allocation policy, and
2. whether or not to allow the use of leverage in the portfolio.

The first and primary recommendation of MPERS' executive director, CIO, and general investment consultant (NEPC) is to maintain the current policy allocation. Secondarily, we are also recommending the Board grant the authority to utilize leverage within the portfolio, subject to a maximum of 20% of assets.

It is important to note that the use of leverage could enhance the expected return of the portfolio regardless of which asset allocation policy is adopted. The current proposal is consistent with the recommended language submitted to the Board at prior meetings and a copy of those changes is shown in the Appendix.

Potential Discussion Items/Key Issues for Board to Consider

1. Balancing Risk Versus Return

   The four proposals under consideration all have unique risk and return characteristics. At the heart of every asset/liability study is the decision on how to properly strike a balance between the financial goals (expected return) of the System relative to the incremental risks associated with increasing investment returns. Risk is often defined differently by individual board members, and staff would encourage the Board to consider and define the risks of the System first (no matter how you define those risks), and then look for an asset allocation that fits into the collective risk tolerance of the Board.

2. Balancing Contributions Relative to Investment Income

   The four proposals under consideration result in a wide range of projected investment incomes and contribution amounts for the upcoming 15-year period. The study highlights the actuarial equation frequently referenced throughout the annual valuation process:

   $$\text{Contributions} + \text{Investment Income} = \text{Benefits} + \text{Expenses}$$
   $$(C + I = B + E)$$

   Staff would encourage the Board to address how the current economic environment will impact the plan sponsor's ability to meet the necessary funding requirements, and subsequently consider how much emphasis the Board wants to put on the investment portfolio to help in offsetting employer contributions.

3. The Legal Authority Related to The Use of Leverage in The Portfolio

   The legal authority for the use of leverage in the investment portfolio has been discussed on multiple occasions during the course of the asset/liability study. The majority of the discussions have focused on the implied versus express authority the Board would have in authorizing the use of leverage in the portfolio. While the Board would need to be comfortable with the implied authority to utilize leverage (which is consistent with the authority we have to invest across most of the structures utilized in the portfolio), staff believes the use of leverage would be consistent with statutes based on the express authority to invest granted under Section 104.150.3, RSMo, in conjunction with the express authority under Section 104.210.2, RSMo for the Board to adopt rules and regulations to administer the System. The use of leverage is ultimately another risk to consider within the broader risk versus return discussion referenced above.

4. Expected Return of Portfolio Versus Actuarial Return Assumption

   The only asset allocation option that has an expected return that meets MPERS' actuarial return target of 7% is the current policy with 20% leverage authority. Should the Board adopt any of the other three asset allocation proposals, staff would encourage the Board to inquire of MPERS' actuary regarding whether a subsequent change to the actuarial return assumption would be necessary.