

To: Board of Trustees for the MoDOT & Patrol Employee's Retirement System

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Subject: Investment Policy Benchmarks & Indices

Background

The investment policy for the MoDOT & Patrol Employees' Retirement System (MPERS) states that the consultant shall confirm the appropriateness of investment policy benchmarks/indices on a regular basis. This memo is written to meet this requirement for 2021.

Recommendation

The chart below reflects the current investment policy percentages by asset class/sub-asset class, the allowable ranges for each asset class/ sub-asset class, and the assigned benchmark and indices for each asset class/sub-asset class.

Beta Groups and Sub-Asset Classes	Sub-Asset Class Ranges	Policy Benchmark Weight	Policy Benchmark Index
EQUITIES		50%	
Public Equity	32.5% - 47.5%	40%	MSCI ACWI Index
Private Equity	2.5% - 17.5%	10%	S&P 500 + 3%
RATES & CREDIT		30%	
Traditional Fixed Income	15% - 30%	22.5%	Bloomberg U.S. Govt./Credit Bond Index
Opportunistic Debt	0% - 15%	7.5%	Bloomberg U.S. Corp. High Yield Bond Index
REAL ASSETS		20%	
Real Estate	2.5% - 17.5%	10%	NFI-ODCE
Real Assets	2.5% - 17.5%	10%	CPI + 4%

Benchmarks/Indices are viewed as a standard against which the performance of a portfolio can be measured. A benchmark/index should reflect what the expectation is for each asset class in terms of investment style, expected return, and expected risk. In some <u>cases_cases</u>, a benchmark/index can also be viewed as a foregone opportunity <u>i.e.i.e.</u>, an opportunity cost.

NEPC has reviewed each of the investment policy benchmarks/indices currently employed by MPERS and we confirm that these benchmarks are appropriate and meet the standard for the portfolios in which they are utilized. NEPC is recommending no changes.

Benchmark Descriptions

The MSCI ACWI Index captures large and mid-cap representation across 23 Developed Markets (DM) and 27 Emerging Markets (EM) countries. With over 2,900 constituents, the index covers approximately 85% of the global investable equity opportunity set. DM countries include: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the UK and the U.S. EM countries include: Argentina, Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Kuwait, Malaysia, Mexico, Pakistan, Peru, Philippines, Poland, Russia, Qatar, Saudi Arabia, South Africa, Taiwan, Thailand, Turkey and United Arab Emirates.

The Standard & Poor's 500 Index (S&P 500) is an index of 500 stocks seen as a leading indicator of U.S. equities and a reflection of the performance of the large cap universe, made up of companies selected by economists. The S&P 500 is a market value weighted index and one of the common benchmarks for the U.S. stock market.

The Bloomberg U.S. Government/Credit Bond Index is a broad-based flagship benchmark that measures the non-securitized component of the U.S. Aggregate Index. It includes investment grade, U.S. dollar-denominated, fixed-rate Treasuries, government-related and corporate securities.

The Bloomberg U.S. Corporate High Yield Bond Index measures the U.S.D-denominated, high yield, fixed-rate corporate bond market. Securities are classified as high yield if the middle rating of Moody's, Fitch and S&P is Ba1/BB+/BB+ or below. Bonds from issuers with an emerging markets country of risk, based on Barclays' EM country definition, are excluded.

The NFI-ODCE (NCREIF Fund Index - Open End Diversified Core Equity) is a gross-of-fee, timeweighted return index made up of open-end core real estate funds. The index has an inception date of December 31, 1977 that is, by default, weighted by each fund's total capitalization, though the index used by MPERS is equal-weighted. NCREIF is a non-profit association that collects and validates returns and other metrics from institutional owners of real estate in the United States, including all of the open-end core funds, on a quarterly basis.

