



MONTANA LEGISLATIVE BRANCH

Legislative Fiscal Division

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Director
AMY CARLSON

DATE: December 3, 2018
TO: Legislative Finance Committee
FROM: Sam Schaefer
RE: Pension Stress Testing Recommendations

With the newly enacted provisions in ASOP 51, pension plan sponsors can request additional evaluations that further educate plan sponsors (the legislature) on the overall health of a pension plan. The LFD recommends that multiple stress tests be included in future actuarial valuations. Specific stress tests recommended by The Pew Charitable Trusts are as follows:

1. **Baseline Projections:** These are already provided in the actuarial valuations and include information such as assets, unfunded liabilities, employee/employer contributions, funded ratio, amortization period, etc.
2. **Low Returns Scenario:** New projections of the items in (1) and the additional ARC (annual required contribution) if the investment returns are two percentage points below the assumed rate or if returns are fixed at 5%.
3. **Recession, Followed by Slow Growth:** Projections of the items in (1) and the additional ARC if there is a significant loss of assets (one-year loss to assets of 20 percentage points), followed by a period of where investment returns are two percentage points below plan assumptions for a period of 20 years.
4. **Simulation Analysis:** Projections of the items in (1) and the additional ARC based on an analysis assuming expected returns at both the 25th and 75th percentile as determined by the [Board of Investments' Monte Carlo Study](#) and any future revisions that may be incorporated. .
5. **Sensitivity Analysis:** Pension liabilities and service cost for each tier, for the most recent year available, calculated at both the assume rate of return and using a discount rate based on the state's average long-term borrowing cost.
6. **Past 20 Years' Experience Simulation:** Use the last 20 years of Montana's pension funds return on investments to simulate the next 20 years. Calculate the projections from item (1) at the end of the 20 years.

Multiple states have recently adopted some form of stress testing, with the most recent five states having done so through legislation. The LFD recommends that the LFC request the stress testing options presented above from the pension boards, requesting a response by March 1, 2019. The new information would be used by the LFD to create a lay person's understanding of the risks moving forward, as well as to provide any additional resources requested by SAVA or the LFC.