



TO: Members of the Legislative Commission on Pensions and Retirement
FROM: Susan Lenczewski, Executive Director
RE: Motion LCPR17-M1: Actuarial Assumption Changes
DATE: February 14, 2017
ATTACHMENTS: – Motion LCPR17-M1
– Letters from MSRS (2), PERA, TRA and SPTRFA
– Chart entitled "2017 Proposed Actuarial Assumption Changes"
– Report: "Combined Service Annuity and coverage by More Than One Retirement System Provisions Study as of July 1, 2015" by Deloitte Consulting LLP

Introduction

Motion LCPR17-M1 approves actuarial assumption changes requested by the Minnesota State Retirement System (MSRS), the Public Employees Retirement Association (PERA), the Teachers Retirement Association (TRA), and the St. Paul Teachers Retirement Fund Association (SPTRFA). Commission approval would allow all changes to take effect for the actuarial valuations for fiscal years beginning July 1, 2017, except that the change requested by PERA-General, which updates its mortality improvement scale from MP-2015 to MP-2016, will take effect only if a statutory change included in PERA's administrative bill is approved and eventually enacted.

Actuarial valuations are based on assumptions

Minn. Stat. § 356.215 requires the State's public pension plans to retain an actuary to do annual actuarial valuations and, for MSRS, PERA and TRA, quadrennial experience studies. The statute requires the use of certain actuarial assumptions by the plan's actuary in performing the valuations. Subdivision 8 of section 356.215 specifies the assumptions to be used for each of the following:

- Interest rate (sometimes referred to as the investment rate of return or discount rate)
- Post-retirement adjustments (sometimes referred to as COLAs)
- Salary increase
- Payroll growth

The valuations must apply many other assumptions, and these are not specified in the statute. Subdivision 9 states that these assumptions must be consistent with those determined in the most recent experience study, if the plan is required to have one, or the assumptions must be representative of the best estimate of future experience, if an experience study is not required. These assumptions are for the following:

- Inflation
- Retiree mortality
- Disabled member mortality
- Active member mortality
- Retirement (for normal, Rule of 90 and early retirements)
- Withdrawal or termination of employment
- Disability
- Marital status
- Form of payment (optional annuity forms)

Experience studies test the assumptions and result in adjustments

Experience studies determine the extent to which assumptions match actual experience and suggest changes to the assumptions intended to make them more accurate. MSRS General, PERA General and TRA completed experience studies last year for the period July 1, 2008, through July 30, 2014. In 2016, the Commission approved changes to actuarial assumptions to these plans as a result of the experience studies.

CSA experience study. With the agreement and cooperation of all the pension systems, the Commission's actuary, Deloitte Consulting LLP, performed an experience study to test the assumptions used in determining liabilities related to the use of the combined service annuities (CSAs) and annuities that reflect coverage by more than one fund, as of July 1, 2015. The last time an experience study was conducted with regard to these assumptions was 2001. The results of that study are set forth in the attached report entitled "Combined Service Annuity and Coverage by More Than One Retirement System Provisions Study as of July 1, 2015." The adjustments to these assumptions affect all the pension plans.

Experience studies for pension plans covering smaller groups. The pension systems also recently completed experience studies with regard to their public safety and other plans for smaller groups. These plans are the following:

- MSRS Correctional Plan
- MSRS State Patrol Plan
- Judges Plan
- PERA Police and Fire Plan
- PERA Local Government Correctional Plan

MSRS did not have an experience study completed for the Legislators Plan because the plan covers too small a group to provide guidance on setting assumptions. MSRS' actuary recommended using the same assumptions as were approved last session for MSRS General.

Effective date for the assumption changes

The governing board for each plan approved the recommended assumption changes. The plans are seeking the Commission's approval of the changes so that the changes can take effect as of July 1, 2017. In the absence of Commission approval, the new assumption will automatically take effect one year after notice of the changes is received by the Commission.

Commission approval will allow the plans to immediately use the new assumptions in the next actuarial valuations, for the fiscal year beginning July 1, 2017. Minn. Stat. § 356.215, Subd. 8, Para. (e), addresses the discrepancy that will exist between the assumptions dictated by the statutes for use in the actuarial valuations and the assumptions that will actually be used in preparing the valuations. Subdivision 8, Paragraph (e), states that the assumptions for salary increase and payroll growth, as set forth in the statute, will continue to apply unless a different assumption has been proposed by the plans' governing board, is accompanied by the plan actuary's concurrence and is approved or deemed approved (after a one year wait) by the Commission.

PERA General and MP-2016

Under Minn. Stat. § 356.215, Subd. 9, PERA is not permitted to use actuarial assumptions that are not consistent with those determined in its most recent quadrennial experience study. PERA's most recent quadrennial experience study was for the period July 1, 2008, through June 30, 2014, and based on that study and the actuary's recommendation, PERA adopted the MP-2015 scale, which was approved by the Commission last session.

PERA's board of trustees approved a change to the mortality improvement scale from MP-2015 to MP-2016, which is the most recent scale published by the Society of Actuaries. The new scale is based on better data and is considered a more accurate prediction of mortality improvement than the MP-2015. Because MP-2016 indicates less improvement in mortality than MP-2015, it results in reduced actuarial liability and cost savings to PERA General.

PERA has included a change to Minn. Stat. § 356.215, Subd. 9, in its administrative bill which will allow the plans to adopt future mortality improvement scales without needing to have the change based on an experience study. If the Commission wishes to approve PERA's request to change the mortality improvement scale to MP-2016, it may do so, but its approval and the assumption change will take effect only if the statutory change to subdivision 9 is approved and eventually enacted.

Impact of the new assumptions on actuarial liability

Changing the actuarial assumptions will have an impact on the contribution sufficiency/deficiency and funding status of the plans. The chart on the next page provides the financial impact of the assumption changes.

Cost Impact of the Proposed Actuarial Assumptions

Combined Service Annuity (CSA) Load Factors

Impact of changing the assumptions for use of the Combined Service Annuity:

Plan	Combined Service Annuity Load Factors						Actuarial Accrued Liability (AAL)		
	Active		Vested Term.		Non-Vested Term.		2015 [‡]	Estimated AAL	
	Current	Prop.	Current	Prop.	Current	Prop.	AAL	with Revised Factors	Change
MSRS-General	1.2%	0.0%	40%	4%	40%	5%	\$13,092.7M	\$12,693.6M	-\$399.1M
MSRS-Correctional	--	0.0%	30%	17%	30%	6%	\$1,239.3M	\$1,227.6M	-\$11.7M
MSRS State Patrol	--	0.0%	30%	13%	30%	--	\$833.0M	\$831.8M	-\$1.2M
MSRS Judges	--	--	--	--	--	--	\$315.7M	\$315.6M	--
MSRS Legislators ⁺	--	0.0%	30%	--	30%	--	\$230.2M	\$216.7M	-\$13.5M
PERA-General	0.8%	0.0%	60%	15%	60%	3%	\$23,561.0M	\$22,761.9M	-\$799.0M
PERA-Correctional	--	0.0%	30%	35%	30%	1%	\$498.0M	\$501.0M	+\$3.0M
PERA-P&F	--	0.0%	30%	33%	30%	2%	\$8,460.5M	\$8,467.3M	+\$6.8M
TRA	1.4%	0.0%	4%	7%	4%	9%	\$25,562.2M	\$25,465.2M	-\$97.0M
SPTRFA	7% pre-89 2% post-89	0.0%	30%	20%	30%	9%	\$1,596.8M	\$1,573.3M	-\$23.5M

⁺ Pay as you go, no impact on funding

[‡] The calculations in the CSA study report used July 1, 2015, data (the most recent data available at the time)

Demographic Assumption Changes

Impact of changing various demographic assumptions, using 7/1/2016 actuarial valuations and market value of assets:

Plan	Assumption Changes	Funded Status		Contribution Deficiency	
		As of 7/1/2016	After Changes	As of 7/1/2016	After Changes
MSRS-Correctional	Merit and seniority, retirement, termination, disability, mortality, percent married, age difference, form of payment	71.1%	69.4%	-5.9%	-7.3%
MSRS Judges	Retirement, disability for males, mortality	52.8%	51.2%	0.1%	-2.0%
MSRS State Patrol	Merit and seniority, retirement, disability, mortality, form of payment	78.2%	76.3%	-3.0%	-5.7%
PERA-Correctional	Mortality	91.68%	88.8%	-0.89%	
PERA-P&F	Experience study changes	84.32%	83.56%	-0.91%	-0.57%
SPTRFA	Mortality	60.3%	58.1%	-1.76%*	-3.25%

* Includes 0.25% employer contribution increase already in statute for 7/1/2017.