TO:	Members of the Legislative Commission on Pensions and Retirement
FROM:	Susan Lenczewski, Executive Director
RE:	Bill Draft LCPR16-021; Motion LCPR16-M1: Actuarial Assumption Changes for MSRS-General, PERA-General, and TRA
DATE:	February 2, 2016 *(revised 2/3)*
ATTACHMENTS:	Chart entitled "2015-2016 Proposed Actuarial Assumption Changes" Motion LCPR16-M1 and six letters from the retirement systems, described at the end of this memo Bill Draft LCPR16-021

Request for Approval

The Commission is being asked to approve the following:

1. Bill numbered LCPR16-021, and
2. Motion numbered LCPR16-M1

The bill and motion are attached for your consideration.

Reason for the Legislation and Motion

Draft legislation LCPR16-021 revises Minnesota Statutes § 356.215, subdivision 8. Subdivision 8 requires actuarial valuations for Minnesota's public pension plans to use certain specified assumptions for the following:

– Interest rate *(paragraph (a))*
– Post-retirement adjustments *(paragraph (b))*
– Salary increase *(paragraph (c))*
– Payroll growth *(paragraph (d))*

The bill revises the interest rate assumption for the Teachers Retirement Association (TRA) only, from 8.5% to 8%. This change brings TRA in line with MSRS and PERA, which changed their interest rate assumption from 8.5% to 8% last session, effective July 1, 2015. This change was recommended by TRA's actuary, Cavanaugh Macdonald Consulting, LLC, and the Commission's actuary, Deloitte Consulting LLP.

Solely to bring the statutory language into conformity with the changes made by Motion LCPR16-M1, the bill also revises the salary increase assumptions for all three plans and the payroll growth assumption for TRA, from 3.75% to 3.5%, bringing TRA in line with MSRS and PERA, which changed their payroll growth assumption last session. The salary increase and payroll growth assumption changes were recommended by the plans' actuaries and Deloitte, in order to align the assumptions more closely with the experience studies completed last summer. Finally, the bill revises other language to bring it up-to-date with all current assumptions, including removing the reference to the local government correctional service retirement plan in the salary increase assumption language and deleting other obsolete references.

Motion LCPR16-M1 changes all the actuarial assumptions upon which the plans' valuations are based, other than the interest rate assumption, by approving the changes proposed by each plan's governing board. These actuarial assumptions include the following:

- Price inflation
- Payroll growth
- Salary increases
- Retiree mortality
- Disabilitant mortality
- Active member mortality
- Retirement rates *(for normal, Rule of 90 and early retirements)*
- Withdrawal rates following termination of employment
- Disability rates
- Marital status
- Form of payment *(optional annuity forms)*

Pursuant to Minn. Stat. § 356.215, subd. 18, para. (a), Commission approval is needed to change these assumptions; approval by the legislature is not needed. Legislative approval is needed only to change the interest rate assumption. The new actuarial assumptions will take effect upon approval by the Commission or, 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 valuation, which will be done as of July 1, 2016. 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, para. (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.

Bill draft LCPR16-021 is needed to change the interest rate assumption and revise other language in subdivision 8 to bring it up-to-date with all current assumptions, including removing the reference to the local government correctional service retirement plan in the salary increase assumption language and deleting other obsolete references. Since legislation is needed anyway, we are taking this opportunity to revise the statute to incorporate the new assumptions for salary increase and payroll growth, assuming the Commission approves them by adopting the motion. While the changes to paragraphs (c) and (d) of subdivision 8 are not required in order to allow the plans to use the new assumptions, making these changes in the bill will bring the statute into conformity with actual practice and reduce confusion in an otherwise confusing and complicated set of statutory provisions.

In view of the likelihood that different assumptions, other than the interest rate assumption, will be proposed by the plans and approved by the Commission in the future, thereby making it likely that the statutory assumptions will soon be out of date and contrary to the assumptions actually being used by the actuary, the Commission might give consideration to approving legislation that repeals the statutory provisions dictating certain salary increase and payroll growth assumptions be used.

Background

As a result of the six-year experience studies concluded last summer on the General State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-General), the General Employee Retirement Plan of the Public Employees Retirement Association (PERA-General), and the Teachers Retirement Association (TRA), the actuaries recommended that the actuarial assumptions used by each of the plans be revised and updated to more closely reflect actual experience and incorporate national mortality tables. Minnesota Statutes § 356.215, subdivision 9, states that actuarial valuations must use assumptions for other relevant factors, including mortality, disability and retirement and that these assumptions must be set at levels consistent with those determined in the most recent experience study. Now that the studies have been completed on the three plans, it is appropriate to revise the assumptions at this time, in accordance with § 356.215, subd. 9.

The governing board for each plan approved the recommended assumption changes, including use of mortality table RP-2014 and mortality improvement scale MP-2015. The plans are seeking the Commission's approval of the changes so that the changes can take effect as of July 1, 2016.

The Commission considered this topic at its meeting on November 3, 2015, but deferred taking any action at that time, presumably because the members needed more time to review the proposed changes and each of the governing boards for the plans had not yet approved use of the MP-2015 assumptions. The governing boards have now all approved use of the MP-2015 scale.

In November, Commission members questioned why the new proposed assumptions did not exactly match the results of the six-year experience study. In its report that reviews the experience studies, Deloitte provided ratios for the demographic assumptions, such as rates of retirement, withdrawal, disability, and mortality, that indicated the extent to which actual experience matched with the proposed new assumptions. This actual to expected ratio was seldom 100%, although the ratio was almost always closer to 100% than the ratio that represented actual experience as compared to the assumptions currently in use.

In response to the question of why the actual experience (as reported in the experience studies) does not more closely match the proposed new assumptions, Deloitte provided the following response:

> *In response to your question, I think it is important to note that demographic assumptions should take into consideration more than just the experience of the period under review. Therefore, it is common for a proposed assumption not to match the experience at exactly 100%.*
>
> *Actuarial Standards of Practice 35 states the following:*
>
> > *3.3.4 Select the Specific Assumptions—The actuary should select each demographic assumption from the appropriate assumption universe. In all cases, the actuary should determine the significance of each assumption selected, which may include the consequences of experience deviating significantly from the selected assumption. The actuary should take into account factors specific to the measurement when selecting assumptions. Examples of such factors are as follows:*

a. the purpose and nature of the measurement. For example, a cash flow projection may require more refined assumptions than a liability measure;

b. any features of the plan design or change in the plan design that may influence the assumption. For example, the introduction of an early retirement subsidy could influence the plan's incidence of retirement; under these circumstances, in order to measure the incremental cost associated with this change, the retirement assumption for the proposed plan provision may differ from the retirement assumption for the current provision;

c. appropriate experience from the specific plan and other relevant sources; and

d. relevant factors known to the actuary that may affect future experience, such as the economic conditions of the area or industry, availability of alternative employment, or the human resources policy or practices of the employer.

Specific experience of the covered group or other groups with similar characteristics may be useful in forming a judgment about future expectations. However, the actuary should not give undue weight to past experience or to experience that is not sufficiently credible. For example, if recent rates of termination and retirement were largely attributable to a one-time workforce reduction, it may be unreasonable to assume that such rates will continue over the measurement period.

Even if the actuary is basing the assumption primarily on the experience, there are other reasons that the proposed assumption wouldn't tie out to 100%. Some reasons include:

- *Some weight may be given to the prior assumption. When the experience is different than expected, it is reasonable to recommend a new assumption that falls between the prior one and the actual experience to give some weight to the preceding experience study.*

- *Some assumptions may not have sufficient data to be fully credible. For example, disabled mortality was based on a small number of sample lives. For this reason, consistency with the relationship between the plan's healthy mortality experience and published standard healthy mortality experience was considered when adjusting the published standard disabled mortality rates.*

- *Some smoothing between rates may be applied. Even if there is enough data to be credible in total for an assumption, there may not be sufficient data at each age or years of service to provide an exact rate at each point; therefore, some smoothing may be applied to create a reasonable decrement pattern.*

- *Experience that is liability-weighted or more heavily weighted at certain ages, may result in an assumption that doesn't create a 100% ratio on a headcount basis. For example, the PERA healthy mortality tables were selected as an adjustment to published standard tables with a focus on the fit at ages 60 to 89.*

Changing the actuarial assumptions will have an impact on the contribution sufficiency/deficiency and funding status of the plans. The plans will be reporting on the cost impact of the actuarial changes in their presentations to the Commission at the meeting. The increase in liability due to the changes in actuarial assumptions is the primary reason for the plans' funding improvement proposals that are also being presented to the Commission for approval.

Commission Staff Recommendation

We recommend that the Commission approve both the bill and the motion. Our recommendation is based on the report by Deloitte on the experience studies and proposed new assumptions. As stated by Deloitte:

> *It is our opinion that the assumption changes recommended in the studies are reasonable and can be relied upon for purposes of measuring plan obligations and determining recommended contributions in the annual valuations.*

It is Commission staff's opinion that the more accurate the calculation of the plans' contribution deficiency and funding status, the better the decision-making with regard to benefit improvements or contractions and levels of employer and employee contributions. Use of more accurate assumptions will improve the accuracy of pension liability calculations.

Attachments

Attached for the Commission's consideration are the following:

- **Chart** entitled "2015-2016 Proposed Actuarial Assumption Changes" setting forth each plan's current and proposed actuarial assumptions, if changed. This is the same chart presented to the Commission at its meeting in November, but it has been revised to include the interest rate assumption change and to delete the explanation relating to the MP-2015 mortality improvement scale, which had not at that time been approved by each of the plans. The chart may be helpful to the Commission in that it provides both the current and proposed assumptions for each plan, side by side, for easier comparison.
- **LCPR16-M1 (the motion)** with six letters from the retirement systems attached:
    1) Letter dated September 3, 2015, from the MSRS Executive Director reporting that the MSRS Board of Directors had approved certain actuarial assumption changes upon the recommendation of MSRS' actuary in connection with the completion of an experience study for the period July 1, 2008, through June 30, 2014, and requesting the Commission's approval of the changes.
    2) Letter dated December 28, 2015, from the MSRS Executive Director reporting that the MSRS Board of Directors had approved the use of the MP-2015 mortality improvement tables upon the recommendation of the MSRS actuary, and requesting the Commission's approval of the use of these tables by MSRS.
    3) Letter dated October 9, 2015, from the PERA Interim Executive Director reporting that the PERA Board of Trustees had approved certain actuarial assumption changes upon the recommendation of the PERA actuary in connection with the completion of an experience study for the period July 1, 2008, through June 30, 2014, and requesting the Commission's approval of the changes.
    4) Letter dated December 16, 2015, from the PERA Executive Director reporting that the PERA Board of Trustees had approved the use of the MP-2015 mortality improvement scale upon the recommendation of the PERA actuary, and requesting the Commission's approval of the use of this scale by PERA.
    5) Letter dated September 2, 2015, from the TRA Executive Director reporting that the TRA Board of Trustees had approved certain actuarial assumption changes upon the recommendation of the TRA actuary in connection with the completion of an experience study for the period July 1, 2008, through June 30, 2014, and requesting the Commission's approval of the changes.

6) Letter dated November 19, 2015, from the TRA Executive Director reporting that the TRA Board of Trustees had approved the use of the MP-2015 mortality improvement scale upon the recommendation of the TRA actuary, and requesting the Commission's approval of the use of this scale by TRA.

- **LCPR16-021 (the bill)**