North Carolina
Total Retirement Plans

STATE TREASURER OF NORTH CAROLINA
DALE R. FOLWELL, CPA

RETIREMENT SYSTEMS DIVISION

STEVEN C. TOOLE
EXECUTIVE DIRECTOR

MEMORANDUM

TO:	Teachers' and State Employees' Retirement System and Local Governmental Employees' Retirement System Boards of Trustees
FROM:	Steven C. Toole, Executive Director
DATE:	April 20, 2018
SUBJECT:	Recommended Reduction in Discount Rate Assumption for December 31, 2017, Valuations

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As discussed in the accompanying presentation to the Boards of Trustees, RSD staff is proposing that the investment return assumption for the December 31, 2017, actuarial valuations of most of the North Carolina Retirement Systems be reduced from 7.20 percent to 7.00 percent, with the associated employer contribution rate increases being phased in over three years. Cavanaugh Macdonald Consulting, the Boards' consulting actuary, agrees that the proposed assumption is reasonable. *This change would require a vote of each Board.*

Suggested wording for a TSERS Board motion
"Move to decrease the investment return assumption of 7.20 percent to 7.00 percent as of the December 31, 2017, actuarial valuations for the Retirement Systems and to use direct rate smoothing to phase in associated employer contribution rates over the next three years for the:

- Teachers' and State Employees' Retirement Systems of North Carolina (TSERS);
- Consolidated Judicial Retirement System of North Carolina (CJRS);
- Legislative Retirement System of North Carolina (LRS); and
- North Carolina National Guard Pension Fund."

Suggested wording for a LGERS Board motion
"Move to decrease the investment return assumption of 7.20 percent to 7.00 percent as of the December 31, 2017, actuarial valuations for the Retirement Systems and to use direct rate smoothing to phase in associated employer contribution rates over the next three years for the:

- North Carolina Local Governmental Employees' Retirement System (LGERS); and
- North Carolina Firefighters' and Rescue Squad Workers' Pension Fund."

Projections provided in January 2018
Projections of employer contribution rates and funded status were presented at the January 2018 Board meeting. The January 2018 projections reflected:

- December 31, 2016, valuation results
- December 31, 2016, valuation assumptions and methods to project future valuation results, including

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- a discount rate of 7.20 percent
- estimated asset returns of 13.25 percent during calendar year 2017
- an estimate of the employer contribution rate using direct rate smoothing to a 7.00 percent discount rate applied over a four-year period. (Note: the proposal before you at this meeting uses a three-year period.)

Additional details on the basis of these projections are outlined in the January 2018 Board Presentations ("Teachers' and State Employees' Retirement System of North Carolina: Actuarially Determined Employer Contribution (ADEC) Projections for the State System" and "Local Governmental Employees' Retirement Systems of North Carolina: Actuarially Determined Employer Contribution (ADEC) Projections for the Local System").

Impact on TSERS

The January 2018 projections based on the current funding policy resulted in the following projected valuation results:

- Projected employer contribution rate for fiscal year ending 2019 of 11.98 percent, and
- Projected funded ratio of TSERS as of December 31, 2017, of 90.7 percent.

Lowering the discount rate from 7.20 percent to 7.00 percent would change these projected results as follows:

- Projected employer contribution rate for fiscal year ending 2019 of 11.98 percent, and
- Projected funded ratio of TSERS as of December 31, 2017, of 88.7 percent.

By the end of the three-year, phase-in period, we would expect the ADEC rates to be greater by two to 2.5 percent of pay. For TSERS, where the covered payroll is currently a little over $15 billion, this would translate to additional annual ADEC amounts of $300 to $500 million by the end of the three years. These changes would be gradually recognized beginning in the FY 2020 contribution rates and fully recognized by FY 2022.

However, it is worth noting that the TSERS ECRSP that is already in place and may require some of these additional contributions to occur, whether or not the assumption is reduced, because the ECRSP already requires contributions that exceed the actuarially-determined (or ADEC) rate in some scenarios.

Impact on LGERS

The January 2018 projections based on the current funding policy resulted in the following projected valuation results:

- Projected employer contribution rate for general employees for fiscal year ending 2019 of 7.75 percent for general employees and firefighters and 8.50 percent for law enforcement officers, and
- Projected funded ratio of LGERS as of December 31, 2017, of 95.3 percent.

Lowering the discount rate from 7.20 percent to 7.00 percent would change these projected results as follows:

- Projected employer contribution rate for general employees for fiscal year ending 2019 of 7.75 percent for general employees and firefighters and 8.50 percent for law enforcement officers, and
- Projected funded ratio of LGERS as of December 31, 2017, of 93.1 percent.

By the end of the three-year, phase-in period, we would expect the ADEC rates to be greater by two to 2.5 percent of pay. For LGERS, where covered payroll is more than $6 billion, it would translate to additional ADEC amounts of $100 to $200 million by the end of the three years. These changes would be gradually recognized beginning in the FY 2020 contribution rates and fully recognized by FY 2022.

The ECRSP for LGERS specifies increases of 0.25 percent in the employer contribution rate each year, unless a specific threshold is exceeded. Decreasing the discount rate from 7.20 percent to 7.00 percent as of December 31, 2017, does not result in increases in the underlying actuarially determined employer contribution (ADEC) that would exceed the threshold. As a result, the projected employer contribution rates reflecting the ECRSP policy of 7.75 percent and 8.50 percent for December 31, 2017, are unaffected by a decrease in the discount rate from 7.20 percent to 7.00 percent. The projected funded ratio of LGERS as of December 31, 2017, would decrease from 95.3 percent to about 93.1 percent.

Additional Background on Recent Board Actions on this Topic

In the October 2015 Board meeting, Buck Consultants (now Conduent) presented Experience Review results for NCRS. The experience review summarized Buck's (now Conduent's) recommendations for assumptions to be used for valuations beginning with December 31, 2015. As part of the review, Buck (now Conduent) discussed the investment return assumption. As per normal consideration of this topic, there is no singular assumption that should be considered solely appropriate but any point within a range of assumptions would be considered reasonable. Buck (now Conduent) explicitly presented alternatives of 7.25 percent and 7.00 percent, but other returns were be considered that ranged from 6.75 percent to 7.75 percent. Based on the information provided, in January 2016, the Boards selected 7.25 percent, which was subsequently used in the 2016 valuation. In April 2017, the Boards selected 7.20 percent, which was used for the 2017 valuation.