Teachers' and State Employees' Retirement System of North Carolina

Local Governmental Employees' Retirement System of North Carolina

Primer for COLA Discussions

TSERS and LGERS Boards of Trustees Meeting

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November 5, 2026



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Agenda

I. Benefit Improvements – Statutes and Policies

II. Benefit Improvements – Basis for Support

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IV. AVA Gains and Losses – Prospective View

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Benefit Improvements – Statutes and Policies

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Benefit Improvements – Statutes and Policies

TSERS

- Benefit improvements can occur in TSERS subject to applicable statutory provisions and legislative action
- Per the ECRSP adopted April 30, 2026, the Board may consider recommending a benefit improvement if recommendation is "supported" by gains on the actuarial value of assets
  - "Support" means that such gains are greater than or equal to the immediate increase in unfunded actuarial accrued liabilities arising from the contemplated benefit improvement

The TSERS Board can recommend benefit improvements to the General Assembly.

The Board does not have the authority to grant benefit improvements.

Per ECRSP, investment gains on an actuarial value basis needed to support COLA

Note: Gallagher cannot provide legal advice. Neither this slide, nor any other slide, should be interpreted as legal advice as to the Board's ability to provide a benefit improvement to retirees or recommend a benefit improvement to the legislature

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Benefit Improvements – Statutes and Policies

LGERS

- The LGERS Board has limited, delegated authority to approve benefit improvements under G.S. 128-27(k) and G.S. 128-27(k1), subject to:
  - Limit on COLAs under (k) and one-time supplements under (k1) to the lesser of 4% or annual increase in CPI-U
  - Board conclusion that the fund provides "sufficient investment gains to cover the additional actuarial liabilities on account of such increase" **as informed by the actuarial valuation**
  - One-time supplement under (k1) may only occur when a permanent COLA is not being paid during the same fiscal year
  - Board consideration of inflation and the record of investment gains or losses during the preceding three-year period
- Per the ECRSP adopted April 30, 2026, the Board may consider authorizing a benefit improvement if decision is "supported" by gains on the actuarial value of assets
  - "Support" means that such gains are greater than or equal to the immediate increase in unfunded actuarial accrued liabilities arising from the contemplated benefit improvement

The LGERS Board can authorize benefit improvements under certain conditions.

Per ECRSP, investment gains on an actuarial value basis needed to support authorization of COLA or supplement

Limited to lesser of 4% or prior year's inflation

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Benefit Improvements – Basis for Support

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Benefit Improvements – Basis for Support

- Per both the TSERS and LGERS ECRSPs, “support” for benefit improvement recommendations or authorizations are anchored to gains on the actuarial value of assets
- What is the actuarial value of assets (AVA)?
  - Think of AVA as a "smoothed" version of the Systems’ investments, gradually recognizing investment performance over or under the expected return over time.
- A Simple Analogy
  - Imagine you are budgeting for your household and receive a large bonus one year. However, you are very uncertain about what your income will be in the next few years. Rather than spend the entire bonus immediately, you spread its impact over several years when planning your budget.
  - AVA works in a similar way:
    - Market Value of Assets (MVA) = what the investments are worth today.
    - Actuarial Value of Assets (AVA) = a version of those assets that spreads investment gains and losses over time.

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Benefit Improvements – Basis for Support

- Both TSERS and LGERS use a five-year smoothing method to calculate their AVA for funding purposes, which include:
  - Measurements of funded ratio, or the percentage of liability covered by the assets
  - Calculations of actuarially determined employer contribution rates
- Why anchor the "support" for benefit improvement recommendations or authorizations to gains on the actuarial value of assets?
  - Since AVA is used for funding purposes, AVA gains are more directly tied to the "health" of the Systems than other "gain" measurements
  - Gains on the actuarial value of assets may be used to support benefit increases, while subsequent losses do not reduce previously granted benefits
    - The AVA smoothing mechanism helps mitigate this asymmetry by limiting volatility and reducing the effect of short-term market fluctuations

A gain on the AVA is directly tied to an improvement in the funded ratio and (likely) decrease in actuarially determined employer contributions.

This may not be true for a gain on the MVA, particularly if it follows previous years of losses (or lower than expected returns) on the MVA.

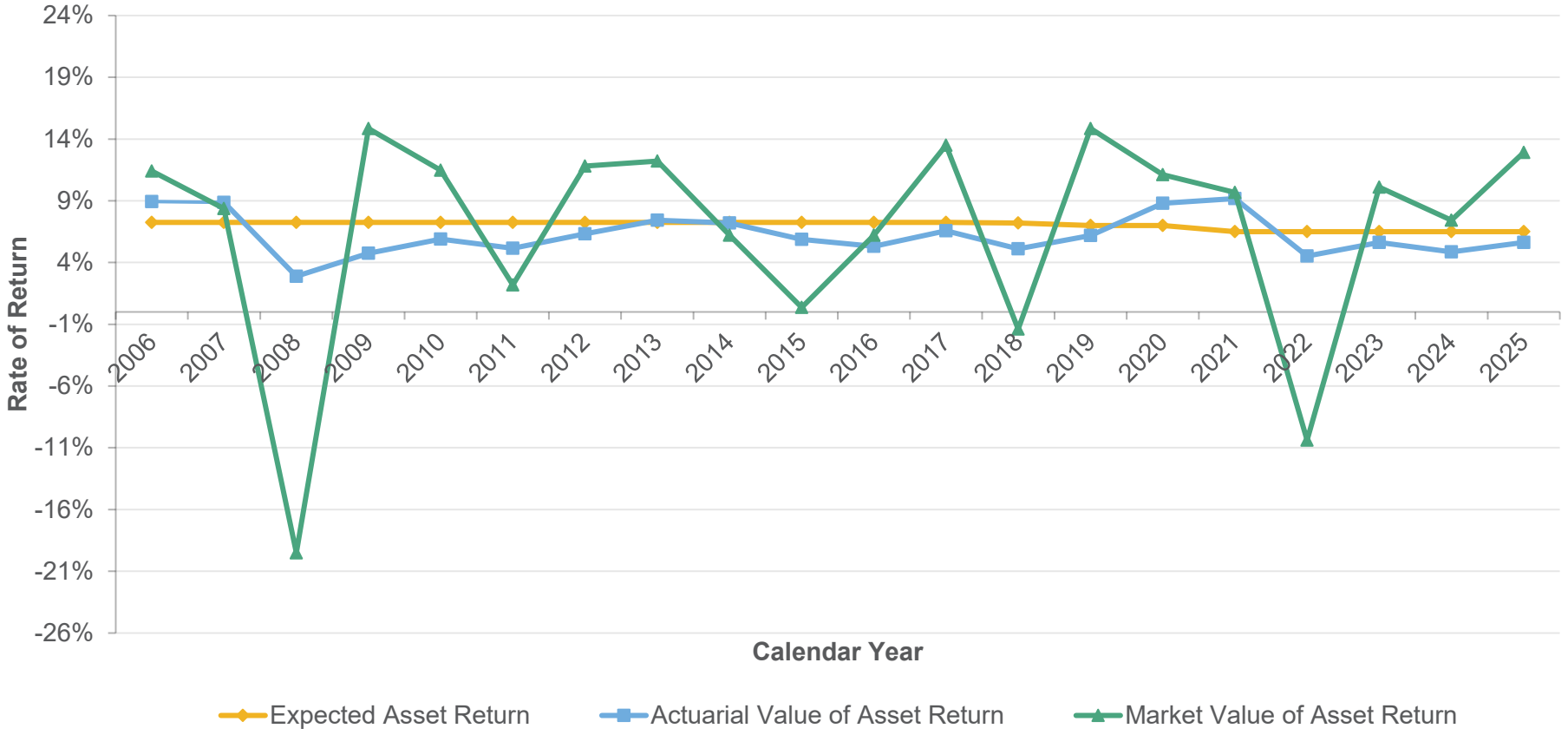
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AVA Gains and Losses – Historical View

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AVA Gains and Losses – Historical View

TSERS



Through 2025, the average actuarial return over the past 20 years of 6.24% compares with an average market return of 6.29%.

The range of returns is markedly more volatile in the market value of assets at 34.35% versus 6.29% for actuarial value.

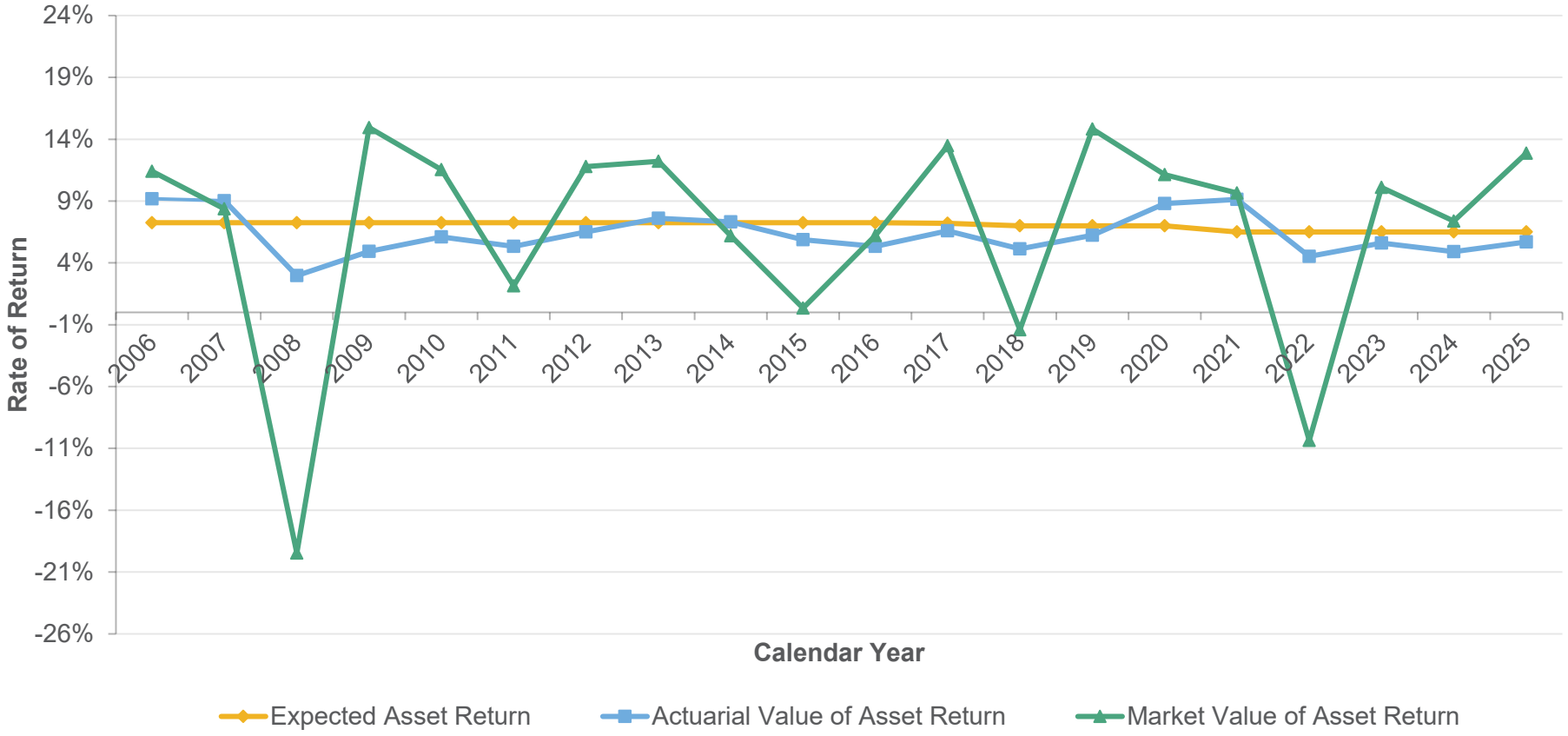
AVA gains occur when the actuarial value of asset return exceeds the expected asset return (most recently in 2020 and 2021).

AVA losses occur when the actuarial value of asset return is lower than the expected asset return (15 of the last 20 years).

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AVA Gains and Losses – Historical View

LGERS



Through 2025, the average actuarial return over the past 20 years of 6.33% compares with an average market return of 6.29%.

The range of returns is markedly more volatile in the market value of assets at 34.41% versus 6.22% for actuarial value.

AVA gains occur when the actuarial value of asset return exceeds the expected asset return (most recently in 2020 and 2021).

AVA losses occur when the actuarial value of asset return is lower than the expected asset return (14 of the last 20 years).

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AVA Gains and Losses – Historical View

- In TSERS, MVA returns have exceeded the expected return 13 of the last 20 years, while AVA returns have exceeded the expected return only 5 of the last 20 years
- In LGERS, MVA returns have exceeded the expected return 13 of the last 20 years, while AVA returns have exceeded the expected return only 6 of the last 20 years
- Why?
  - Investment performance for any given year affects AVA returns for 5 years, instead of only 1 year
    - A single large market loss creates deferred losses recognized over multiple future years.
  - Asymmetrical returns around the expected return
    - In last 20 years, largest negative difference between the MVA return and the expected return for TSERS was 26.75% (26.72% for LGERS)
    - In last 20 years, largest positive difference between the MVA return and the expected return for TSERS was only 7.85% (7.83% for LGERS)

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AVA Gains and Losses – Historical View (TSERS)

- AVA provides relief against short-term market volatility.
  - A single large market loss creates deferred losses recognized over multiple future years.
  - In 2022, for example, market conditions led to the market value of assets for TSERS being $14.7 billion lower than expected as of the end of the year
  - This $14.7 billion, if not smoothed and holding all else constant, would have increased the actuarially determined employer contribution* by more than **10% of pay in a single year** – about $2 billion, or well over $1 billion from the General Fund
  - Instead, the five-year smoothing of this $14.7 billion increased the actuarially determined employer contribution* by slightly more than **2% of pay**

* For fiscal year 2025, prior to application of the Employer Contribution Rate Stabilization Policy

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AVA Gains and Losses – Historical View (LGERS)

- AVA provides relief against short-term market volatility.
  - A single large market loss creates deferred losses recognized over multiple future years.
  - In 2022, for example, market conditions led to the market value of assets for LGERS being $5.6 billion lower than expected as of the end of the year
  - This $5.6 billion, if not smoothed and holding all else constant, would have increased the actuarially determined employer contribution* by more than **8% of pay in a single year** -- about $0.7 billion
  - Instead, the five-year smoothing of this $5.6 billion increased the actuarially determined employer contribution* by less than **2% of pay**

* For fiscal year 2025, prior to application of the Employer Contribution Rate Stabilization Policy

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AVA Gains and Losses – Prospective View

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AVA Gains and Losses – Prospective View

TSERS and LGERS

- The December 31, 2025, valuations indicate a loss on the actuarial value of assets was incurred during 2025, and there are no investment gains available from that year to support a recommendation (TSERS) or authorization (LGERS) of benefit improvements
- ECRSP policies adopted April 30, 2026, provide flexibility to Boards regarding what year of AVA gains can be used to support a recommendation/authorization of benefit improvements
  - Notably, Boards may use estimate of AVA gains in a particular year to support recommendation/authorization of benefit improvements for the following year
  - This flexibility provides the opportunity for the Boards to act based on more recent market return information – six (6) months prior to the beginning of the fiscal year of a benefit improvement rather than 18 months

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AVA Gains and Losses – Prospective View

TSERS and LGERS

- For TSERS, if calendar year 2026 market value returns exceed 11.17% (or about $10.9B), the plan is estimated to have an actuarial investment gain (rather than a loss) for 2026 and a benefit improvement would be estimated to provide support under the ECRSP for consideration of a benefit improvement
  - Returns exceeding 14.24% estimated to produce a gain that would support recommendation of a 1.00% COLA effective July 1, 2027
  - Returns exceeding 11.47% estimated to produce a gain that would support recommendation of a 1.00% one-time supplement payable in July 2027
- For LGERS, if calendar year 2026 market value returns exceed 10.64% (or about $4.2B), the plan is estimated to have an actuarial investment gain (rather than a loss) for 2026 and a benefit improvement would be estimated to provide support under the ECRSP for consideration of a benefit improvement
  - Returns exceeding 13.56% estimated to produce a gain that would support authorization of a 1.00% COLA effective July 1, 2027
  - Returns exceeding 10.92% estimated to produce a gain that would support authorization of a 1.00% one-time supplement payable in July 2027
- If the investments earn the expected 6.50% per year in calendar year 2026 and each year in the future, the following schedule of gains and losses would occur:
  - An AVA loss would be recognized in 2026 (no support for benefit improvement)
  - An AVA gain would be recognized in 2027, 2028, and 2029 (positive support for benefit improvements each year)
  - Market value and actuarial value of assets would be in equilibrium thereafter (no gains or losses, and therefore no support for benefit improvements)

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Questions?

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Certification

Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions or applicable law. Because of limited scope, Gallagher performed no analysis of the potential range of such future differences, except for some limited analysis in financial projections or required disclosure information.

The purpose of this presentation is to provide preliminary discussion points related to potential future benefit improvements in TSERS and LGERS to the Boards at the November 5, 2026 meeting attended by the actuaries. Use of this presentation for any other purposes may not be appropriate and may result in mistaken conclusions because of failure to understand applicable assumptions, methods, or inapplicability of this presentation for that purpose. Because of the risk of misinterpretation of actuarial results, you should ask Gallagher Benefit Services, Inc. (hereinafter “Gallagher”) to review any statement you wish to make on the results contained in this presentation. Gallagher will not accept any liability for any such statement made without prior review.

Please see the December 31, 2025, actuarial valuation reports of TSERS and LGERS for full descriptions of data, actuarial assumptions and methods, plan provisions, and other applicable disclosures. Ad hoc COLAs may modestly increase risk by using a portion of investment gains to support permanent benefit increases. However, the use of actuarial value of assets smoothing and the requirement that sufficient gains be available before a COLA is granted are expected to mitigate much of this risk.

This report was prepared under our supervision and in accordance with all applicable Actuarial Standards of Practice. We are Fellows of the Society of Actuaries, Enrolled Actuaries, Members of the American Academy of Actuaries, and Fellows of the Conference of Consulting Actuaries. We meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. We are available to discuss this report with you at your convenience.

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Thank You!



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