

Quadrennial Actuarial Audit of June 30, 2025 Actuarial Valuations for Virginia Retirement System

Performed at the request of the Joint Legislative
Audit and Review Commission (JLARC)

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Purpose

Purpose: Independent actuarial audit of the June 30, 2025 actuarial valuations and experience study for VRS to provide an opinion regarding the reasonableness and accuracy of the actuarial assumptions, actuarial cost methods, valuation results, and contribution rates

Valuations Included:

- VRS State Pension Plans: State Employees, Teachers, State Police (SPORS), Judges (JRS) and Virginia Law Officers (VaLORS)
- Selected Political Subdivisions (six selected)
- Group Life Insurance Program (GLI)
- Health Insurance Credit Program (HIC)
- Line of Duty Act Program (LODA)
- Virginia Sickness and Disability Program (VSDP)
- Virginia Local Disability Program (VLDP)



Limited Scope Actuarial Audit



- Comparison of raw demographic data (provided by VRS) to valuation data (provided by GRS, the VRS retained actuary)
- Replication of results for selected samples from GRS's valuation system
- Evaluation of actuarial asset method and calculation
- Determination of the accuracy of funding computations
- Overall review of the funding policy
- Peer review of actuarial economic and demographic assumptions
- Assessment of compliance with actuarial standards of practice
- Benchmarking VRS to peer statewide retirement systems



Actuarial Audit Conclusion



Overall Actuarial Audit Findings:

- ✓ Based on the requested scope, we found the valuation results to be reasonable
- ✓ We found the individual member data used in the valuation to be reasonable, appropriate and complete
- ✓ All sample valuation calculations reviewed were reasonable based on data, assumptions and methodology
 - ❖ Our replication was within 0.5% of the VRS pension liability calculations, covering 107 samples based on GRS methodology, data and assumptions
- ✓ We found the methodology used by GRS in developing proposed assumptions in the experience study to be reasonable, including the investment return assumption
- ✓ All reports, calculations and recommendations were consistent with actuarial standards of practice

Actuarial audit resulted in a favorable conclusion. We have included some recommendations and potential enhancements for consideration.



Cost-of-Living-Adjustments (COLAs)

VRS provides inflation-based increases to benefits paid in retirement beginning at specific dates subject to caps that vary by plan

One-Year COLA Delay

Reflect timing delay for the fact that the COLA is delayed until July 1st following one full calendar year after unreduced retirement

Potential Impact: Would *reduce* plan liabilities and contribution rates

Potentially have a notable impact

COLA Delay for Early Retirements

Reflect timing delay for the fact that the COLA is delayed until member reaches unreduced retirement age

Potential Impact: Would *reduce* plan liabilities and contribution rates

Anticipated to have a minor impact

COLA Assumption

Analyze the assumption to account for instances when the COLA rate would not equal the rate of inflation

Potential Impact: Would *reduce* plan liabilities and contribution rates

Anticipated to have a minor impact





Mortality Assumption

Used to estimate life expectancy of plan members. The actuarial assumption comprised of 1) current rates of mortality that vary by member type and status and 2) how those rates will change in the future (mortality improvement)

Mortality Improvement

Society of Actuaries publishes mortality improvement scales. Most recent table is MP-2021 (prior to COVID experience)

VRS actuary uses 75% of this scale. Increasing to 100%, would *increase* plan liabilities and contribution rates

Potentially have a notable impact

Contingent Survivor Mortality

For beneficiaries, apply the contingent survivor mortality table only after the death of the retiree and use the healthy postretirement mortality table prior to death

Consistent with SOA's intended application of the tables

Potential Impact: Would *increase* plan liabilities and contribution rates

Anticipated to have a minor impact



Funding Parameters

Actual contribution rates are developed as part of the actuarial valuations



Contribution Timing Lag

Reflect 12-month timing lag between valuation date and the contribution effective date

Reduce the expected size of the new amortization bases established each year

Anticipated to have a minor impact

Even-Year Amortization Bases

Adjust amortization bases established in even-year valuations (informational valuations) that first year payment will not be reflected until the following odd-year rate setting valuations

Reduce the expected size of the new amortization bases established each year

Anticipated to have a minor impact



Funding Parameters

Actuarial valuation reports are an important tool for communicating the current health of the plans



Amortization Period

Adopt a formal definition of the amortization period shown in valuation reports to reflect the time until the unfunded liability is anticipated to be eliminated

No financial impact

Actuarial Gain / Loss

Calculate the actuarial gain or loss to include differences in actual contribution dollars versus those received such that the calculated amount equals the gain or loss amortization base

No financial impact



Disability Plans

Plans where the benefits cease at retirement



Incurred-but-not-Reported (IBNR)

Incorporate an additional liability for IBNR disability claims

Potentially have a notable impact

Funding Mechanisms

Alternate funding mechanisms exist that incorporate the unique features of disability plans

Potentially modify pattern of contributions

- Reviewed by Milliman actuary specializing in disability plans
- Based on GRS methodology, all sample valuation calculations reviewed were reasonable based on data, assumptions and methodology
 - Sample replication was within 1% of the VSDP/VLDP liability calculations



Caveats and Disclosures

The findings presented in these materials detail our limited-scope audit review of the June 30, 2025 actuarial valuations performed by Gabriel, Roeder, Smith & Company (“GRS”) for the Virginia Retirement System (“VRS”).

All calculations and determinations are based on VRS’s actuarial valuation assumptions and methods as approved for use by the VRS Board and benefit provisions as specified by VRS. The plan provisions, assumptions and methods used in this presentation are the same as those disclosed in GRS’s June 30, 2025 valuation reports.

In preparing this presentation, we relied, without audit, on information (some oral and some in writing) supplied by VRS staff. This information includes, but is not limited to, benefit provisions, employee data, and financial information. In our examination of the data provided by VRS, we found it to be reasonably consistent and comparable with data used for June 30, 2025 actuarial valuations as provided to us by GRS. Since these audit results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is inaccurate or incomplete, our results may need to be revised.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, our findings are complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Actuarial Standards of Practice promulgated by the Actuarial Standards Board and the applicable Code of Professional Conduct, amplifying Opinions, and supporting Recommendations of the American Academy of Actuaries.

Milliman’s work product was prepared exclusively for JLARC for a specific and limited purpose. It is a complex, technical analysis that assumes a high level of knowledge concerning VRS operations, and uses VRS data, which Milliman has not audited. It is not for the use or benefit of any third party for any purpose. Any third party recipient of Milliman’s work product who desires professional guidance should not rely upon Milliman’s work product but should engage qualified professionals for advice appropriate to its own specific needs.

The consultants who worked on this assignment are actuaries. Milliman’s advice is not intended to be a substitute for qualified legal or accounting counsel. The actuaries who prepared this presentation are independent of JLARC and VRS, and we are not aware of any relationship that would impair the objectivity of our work.

We are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Thank you

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