NHRS
New Hampshire Retirement System

FAQ: 2019 Actuarial Experience Study

The New Hampshire Retirement System (NHRS, the retirement system) has prepared answers to some common questions that participating employers, lawmakers, and other stakeholders may have regarding the revised actuarial assumptions adopted by the NHRS Board of Trustees based on the results of a four-year actuarial experience study, and the impact these assumptions will have on future employer contribution rates.

KEY TAKEAWAYS

- The NHRS Board of Trustees is bound by legal and constitutional requirements to use assumptions based on sound actuarial practice.
- These changes were necessary to properly fund the plan over the long term.
- These changes address various concerns about the retirement system's prior assumptions raised by our consulting actuary and external auditor, and are expected to be viewed favorably by bond rating agencies.

INDEX

I. OVERVIEW

What are actuarial assumptions?

Pension plans and their actuaries rely on a number of assumptions about future events when they project benefit payments, calculate the present value of those benefits, and determine the amount of contributions needed to fund those benefits going forward.

These assumptions include the ages when members will retire, their rate of salary growth, how long they'll live after retirement, and how much the plan's investments will earn over time. Because all of these factors can change over time, they are reviewed every few years and adjusted as needed.

The NHRS Board of Trustees has a legal (NH Constitution, Part, I, Article 36-a) and a fiduciary obligation to adopt actuarially sound assumptions. This regular review and, when appropriate, recalibration, of actuarial assumptions is necessary to ensure that the retirement system meets its long-term funding needs.

How often are assumptions reviewed?

State law requires the retirement system to authorize actuarial experience studies no more than five years apart. The NHRS actuarial funding policy adopted by the NHRS Board requires an experience study to be undertaken every four years.

What is an actuarial experience study?

An experience study looks back at the actual experience of the plan compared to demographic and economic assumptions and looks forward using demographic, economic, and capital market projections.

These studies involve an in-depth actuarial review of all assumptions, which is vital to the financial integrity and funding condition of the plan.

The most recent actuarial experience study looked at the four-year period ending June 30, 2019, and determined that existing assumptions needed modification to more accurately reflect actual experience.

Assumptions do not set the cost of the plan, only the timing of contributions. Plan costs, especially in the short term, are dictated by the relationship between liabilities incurred and anticipated as compared to actual and expected contributions and investment income. Deferring expected costs understates liabilities and results in increasing the long-term cost of funding the plan. It is important to note that the ultimate cost of the plan will be determined by actual experience, which cannot be predicted with 100% accuracy and is independent of actuarial assumptions.

Who is impacted by these changes?

The adjustments adopted do not affect the benefit amounts for current retirees, and do not change the benefit formulas for active members. What these adjustments do, especially the reduction to the assumed

rate of return, is increase the size of projected pension liabilities, which will lead to increased employer contribution rates beginning in July 2021.
A more detailed review of key adjustments is contained in Section II, but in broad terms, the revisions to actuarial assumptions will:

- Decrease the funded ratio of the plan.
- Increase the stated unfunded liability of the pension plan.
- Increase pension costs for employers.
- Have a limited impact on Medical Subsidy contributions, which will mostly decrease or stay flat.

Overall, the adjustments decreased the NHRS funded ratio from 64.8% to 60.8% and increased the retirement system's unfunded actuarial accrued liability (UAAL) from $4.95 billion to $5.89 billion.

II. EXPERIENCE STUDY/ACTUARIAL ASSUMPTIONS

What were some of the major adjustments to the actuarial assumptions adopted by the NHRS Board?

GRS, the retirement system's consulting actuary, presented a draft of the experience study at the May 2020 Board meeting and the NHRS Board accepted the experience study and adopted a series of revised actuarial assumptions the following month.

Key revisions included:

- Updated demographic assumptions, including merit and longevity salary increases, disability rates, retirement rates, and mortality tables. (See Appendix A for full list of demographic assumptions.)
- Reduced wage inflation from 3.25% to 2.75% (2.25% for teachers)
- Reduced price inflation from 2.5% to 2.0%
- Reduced the assumed rate of investment return from 7.25% to 6.75%
- Increased the medical subsidy margin for teachers from 0.20% to 0.50%

In the long term, these changes will strengthen the funding of the pension plan. A more detailed explanation of these adjustments is addressed in the next several questions.

What changes to the demographic assumptions were the most impactful?

Mortality is the most critical demographic assumption. New public pension plan tables have been issued since the last NHRS experience study in 2016. The magnitude of the impact varies by member classification. Generally, the changes to the mortality assumptions increased cost estimates because people are living longer.

What was the basis for reducing the price inflation assumption from 2.5% to 2.0%?

GRS reviews multiple sources for future price inflation expectations over the next 30 years. This review showed a continuing trend of lowering price inflation expectations. For example, the U.S. Department of Treasury forecasts inflation to average between 1.65% to 2.00% over the next 10 to 100 years.

What was the basis for reducing the wage inflation assumption from 3.25% to 2.75% (2.75% to 2.25% for teachers)?

The selection of wage inflation is linked to the selection of price inflation. The recommendation from GRS to reduce wage inflation by 0.50% coincided with a similar reduction in the price inflation assumption.

The payroll growth assumption for teachers is 2.25%, based primarily on continued reduction in the number of teachers over time as a result of a declining school-age population in New Hampshire. From 2009 to 2019, the number of active teachers has declined from 18,709 to 17,730.

Do the price and wage inflation assumptions have an impact on the rate of return assumption?

Both the wage inflation assumption and price inflation assumption are directly linked to the selection of the rate of return assumption. Price inflation is the first building block for evaluating the rate of return. The rate of wage inflation on member pay in general corresponds to increases in average member pay driven by aggregate market forces and generally exceeds price inflation by a range of 0% to 1%. The remaining building block of the rate of return assumption is the expected real rate of return, which is the annual percentage of profit earned on investments adjusted for inflation.

What was the basis for the GRS recommendation for reducing the assumed rate of return from 7.25% to a range of 6.25% to 7.0%?

The analysis of the investment return assumption is based on forward-looking measures of likely investment return outcomes for the asset classes and allocations included in the retirement system's investment policy. For purposes of this analysis, GRS analyzed the capital market assumptions from 14 nationally recognized investment advisors and compared this analysis with that of the retirement system's investment staff and external investment advisor. While GRS indicated 7.00% could be considered reasonable, their recommendation was for an assumed rate of return of 6.75% or less.

Of all the assumptions used to estimate the cost of a public pension plan, none has a larger effect on employer contribution rates than the investment return assumption. This is because, over time, earnings from investments account for a majority of the retirement system's funding.

The assumed rate of return selected represents the best collective judgment of the Board based on information and analysis provided by its actuaries and investment experts. No one can predict the future of the performance of investments over any time horizon with complete accuracy.

How does the NHRS 6.75% assumed rate of return compare to other state pension plans?

The National Association of State Retirement Administrators (NASRA) regularly analyzes data from more than 100 of the largest public pension plans in the country. Out of 127 public pension plans surveyed in February 2016, 114 have reduced their assumed rate of return since then.

When NHRS reduced its assumed rate of return from 7.75% from 7.25% in 2016, the average among all plans was 7.62%; the average rate, as of February 2020, was 7.22%, and more plans have reduced their assumed rate of return since then.

What impact will these changes have on the employer contribution rates?

In general, the FY 22-23 employer contribution rates are expected to increase over current rates for all four member classifications within a range of 2.60% to 5.45% as a percent of payroll compared to current rates. In terms of percentage increase over current FY 20-21 contribution rates, the increases range from 9.64% (Fire) to 25.87% (Employee) among the member groups. (Member contribution rates are not affected because they are set in statute).

What does "increasing the margin" on the Teachers' medical subsidy rate mean?

The medical subsidy is a payment made by NHRS directly to an eligible retiree's former employer or the employer's health insurance administrator that goes toward the cost of health insurance for a qualified retired member, spouse, or dependent child(ren). Medical subsidy benefits are funded from a 401(h) trust for political subdivision Employees, state Employees, Teachers, and Police and Fire members. As required by the statutes (RSA 100-A:53, 53-b, 53-c and 53-d), the funding objective for medical subsidy benefits is to contribute the minimum amount necessary to maintain assets sufficient to pay medical subsidy benefits in each of the four 401(h) accounts.

Given the absence of significant assets from prior pre-funding, as exists for pension benefits, medical subsidy benefits are effectively funded on a pay-as-you-go basis through employer contributions. Year-to-year deviations between actual medical subsidy contributions and benefits and projected contributions and benefits are more problematic with regard to medical subsidy funding than pension funding due to the lack of significant assets for medical subsidy benefits and the lag between the setting of the rates and the collection of contributions. This is particularly acute for the Teacher account. The margin was increased to ensure that the Teacher account does not accrue a negative balance during the next biennium.

When will the assumptions be reviewed again?

The next experience study – covering the period of July 1, 2019-June 30, 2023 – is expected to be conducted in early 2024. If any adjustments are made to current assumptions as a result of this experience study, they will be recognized in FY 26-27 employer contribution rates.

III. OTHER QUESTIONS

Will the adjustments to the assumptions affect retiree benefits?

No. Existing benefits do not change as a result of the new assumptions.

Will the adjustments to the assumptions affect active members?

Existing benefit formulas do not change as a result of the new assumptions; changes to the benefit formulas are at the discretion of the New Hampshire Legislature.

However, the statutory interest rate on member contributions is tied to the assumed rate of return, so the reduction in the assumed rate of return (ARR) will reduce the maximum annual interest credited to member accounts. Also, the changes to the mortality assumptions could impact the calculation of survivorship benefit calculations. Finally, the overall adjustments to the assumptions could impact the cost to purchase service credit.

Did the coronavirus (COVID-19) pandemic impact the adjustments to the assumptions?

No. The study is based upon actuarial experience for the period July 1, 2015, to June 30, 2019, and does not take into consideration any market volatility or potential long-term economic impact related to the COVID-19 pandemic. The study was authorized by the Board in December 2019.

Considering the uncertainty over COVID-19, wouldn't it have been better to defer these changes for a few years?

First, the state Constitution and NHRS statutory provisions require the Trustees to set employer rates in accordance with sound actuarial practice. There is no exception based on current financial or budgetary considerations.

Second, in addition to the constitutional and fiduciary requirements outlined above, deferring these adjustments would only defer costs and lead to even higher employer contribution rates in the future, effectively "kicking the can down the road." This occurred in 1991, when a projected increase in contribution rates amidst an economic downturn spurred legislation intended to provide "temporary" relief to employers, which was not repealed until 2007 and created a structural underfunding of the pension plan. The consequences of this action represent a significant portion of the current unfunded pension liability.

What impact will the recent retiree cost-of-living adjustment (COLA) have on the rates?

The COLA enacted by the Legislature in 2019 – which phases in a permanent increase to the monthly benefit for eligible retirees and beneficiaries – will increase the employer contribution rates within a range of 0.11% to 0.34% as a percent of payroll, depending on the member classification, and decrease the funded ratio of the pension plan by 0.2%.

What impact, if any, will layered amortization have on the rates?

In 2018, legislation was enacted to recognize actuarial gains and losses incurred after July 1, 2017, over closed periods of no more than 20 years. This is referred to as "layered amortization" of the unfunded actuarial accrued liability (UAAL). The outstanding UAAL balance as of June 30, 2017, referred to as the "Initial UAAL," remains scheduled to be paid by 2039. New two-year layers will be established as they occur in future biennial valuations and will be amortized over separate periods of no more than 20 years. This approach will spread future actuarial gains and losses more evenly over time, avoid some of the potential employer contribution rate volatility as 2039 approaches, and provide a basis to deal with gains and losses incurred beyond 2039.

Because it was only enacted recently, layered amortization has only a minor impact on the FY 22-23 contribution rates, although it did, in fact, slightly reduce the rate impact of the assumption changes.

July 2020

APPENDIX A

A summary of the changes to the major assumptions follows:

Mortality Rates

The Society of Actuaries (SOA) published new tables for U.S. public pension plans called the Pub-2010 tables in February 2019. The SOA also published the MP-2019 projection scales to reflect mortality improvements after 2019. These tables were used for the corresponding employee groups with partial credibility adjustments to healthy retiree mortality rates. Changing this assumption resulted in a moderate increase in employer contribution rates for Employees and Teachers. The change in healthy post-retirement mortality tables for the Police and Fire groups resulted in a marginal decrease to contribution rates, which was outweighed by the moderate increase in rates resulting from changes to disabled post-retirement mortality tables.

Rates of Withdrawal

Overall rates of termination were decreased and male and female rates were combined for all groups. This change caused a marginal increase in employer contribution rates.

Rates of Disability

There was a decrease in the overall rates of disability for all four member classifications, which resulted in a marginal decrease in employer contribution rates.

Rates of Retirement

Male and female experience was updated separately for Group I and jointly for Group II. In general, rates of retirement were lowered from previous assumptions. This change caused a marginal decrease in employer contribution rates.

Merit and Longevity Salary Increases

Rates of merit and longevity salary increases were updated for all member classifications resulting in a moderate increase in employer contribution rates.

Medical Subsidy Margin for Adverse Experience

The margin for adverse experience was increased for the Teachers group from 20% to 50%, which increased the employer contribution by 0.19% of pay. The margin for all other groups remains at 20%.

Medical Subsidy Opt-In Assumption (for members who have currently opted-out)

There were no changes to the assumption that 25% of those members eligible for medical subsidy benefits who have opted-out will elect to opt-back in in the future.

Source: GRS