NEW HAMPSHIRE RETIREMENT SYSTEM
BOARD MEETING
Tuesday, August 13, 2024
Agenda

9:30 am	**1.**	**Ascertain Quorum and Call to Order**	M. Kelliher
9:35 am	**2.**	**Approval of Minutes** June 11, 2024 ***(Action Expected)***	M. Kelliher
9:40 am	**3.**	**Standing Committee Reports**	
		• Audit	M. Mezzapelle
		• Governance	D. Roy
		o OFAC Policy Review ***(Action Expected)***	
		o Cyber Insurance Renewal Update	
		o Investment Counsel RFP ***(Action Expected)***	
		o Statement of Beliefs ***(Action Expected)***	
		• Investment	P. Provost
		o IIC Monthly Report	R. Leveque
		o Callan Monthly Report	R. Leveque
		o Quarterly IIC Report	R. Leveque
		• Legislative	K. Merrifield
		• Benefits	J. Frederick
		o Disability Consent Agenda Reports	
		• PPCC ***(Non-public Expected)*** ***(Action Expected)***	S. Hannan
		• Ad Hoc Real Estate Committee	J. Quigley
		o Space Options ***(Non-public Expected)*** ***(Action Expected)***	
10:30 am	**4.**	**FY 2023 Valuation Report** **FY 2026 & 2027 Employer Rates** ***(Action Expected)***	H. Barry, GRS
10:40 am	**5.**	**Operating Reports**	
		• Executive	J. Goodwin
		• Member Services	N. Miller
		• Investments	R. Leveque

- Investment Office Strategy Review
  (Action Expected)
  (Non-public Possible)

		• Finance	M. Mullen
		○ Statutory Adm. Budget ***(Action Expected)***	
		○ Revised Trust Fund Budget ***(Action Expected)***	
		• Human Resources	R. Cain
		• Legal	T. Crutchfield
		○ Annual Retiree Reporting Update	
		• PIO	M. Karlon
		• IT	J. Laferriere
		○ Security Update	
12:00 pm	**6.**	**Consent Agenda** ***(Action Expected)***	M. Kelliher
12:05 pm	**7.**	**Trustee Travel Reports/Requests**	M. Kelliher
12:10 pm	**8.**	**Action Items – June 11, 2024**	J. Goodwin
12:15 pm	**9.**	**Board Checkpoint Discussion**	M. Kelliher
12:20 pm	**10.**	**Adjournment**	M. Kelliher
	11.	**Informational Materials**	

Executive Summary of Board Actions
2024 Board Action Calendar
Trustee Appointments and Terms
Committee Membership
Trustee Confidential Contact Information
NHRS Conference Resource List
NHRS Acronyms

Remote access information is available at:
https://www.nhrs.org/meetings-events/event/2024/06/11/default-calendar/board-of-trustees-meeting

The following email will be monitored throughout the meeting by someone who can assist with and alert the Board to any technical issues: public_relations@nhrs.org (or call 603-410-3578)

NHRS Board of Trustees

DRAFT Minutes – June 11, 2024

Note: These draft minutes from the June 11, 2024, Public Session are subject for approval at a subsequent Board of Trustees meeting.

Board of Trustees
June 11, 2024

DRAFT Public Minutes

New Hampshire Retirement System 54 Regional Drive
Concord, New Hampshire 03301

Participating: *Trustees Maureen Kelliher, Chair; Jon Frederick, Sue Hannan, Jason Henry, Robert Maloney*, Andrew Martineau, Germano Martins, Ken Merrifield, Monica Mezzapelle, Paul Provost, Joshua Quigley, and Don Roy.*

* Participating remotely. Because some Trustees were participating remotely, all votes were by roll call.

Staff: *Jan Goodwin, Executive Director; Timothy Crutchfield, Deputy Director and Chief Legal Counsel; Rosamond Cain, Director of Human Resources; Marty Karlon, Director of Communications & Legislative Affairs; John Laferriere, Director of IT; Raynald Leveque, Chief Investment Officer; Nancy Miller, Director of Member Services; Marie Mullen, Director of Finance; Mark Cavanaugh, Associate Counsel and Compliance Officer; Heather Hoffacker, Internal Auditor; Nina Calkins, Administrative and Contact Center Manager; Deanna Higgins, Contact Center Supervisor; Diana Crichton, Hearings Examiner; Jonathan Diaz, Investment Officer; Jesse Pasierb, Investment Operations Analyst; Mariel Holdredge, Executive Assistant.*

Guests: Denis Dancoes, Thomas Farrelly, and Dillon Carlyle: Cushman & Wakefield; Heidi Barry and Jeff Tebeau: GRS; Anthony Frammartino, Tony Pietro, Joe Davenport, and Christian Nye: The Townsend Group.

Chair Maureen Kelliher called the June 11, 2024, regular meeting of the NHRS Board of Trustees to order at 9:15 a.m.

A quorum was established and Chair Kelliher called for a vote to approve the minutes of the April 9, 2024, Board meeting. On a motion by Trustee Quigley, seconded by Trustee Roy, the Board voted unanimously to approve the meeting minutes, with Trustee Maloney not present.

Trustee Mezzapelle provided the Audit Committee report, noting the Committee met this morning prior to the Board meeting. The Committee heard a presentation from the System's external auditor, Plante Moran, on its approach to the Fiscal Year (FY) 24 Audit and encouraged the Committee to bring forward any concerns. The Committee then reviewed the status of the Audit Tracker, the FY 24 Risk Assessments, and the FY 25 Internal Audit Plan. Trustee Mezzapelle reported on updates the Committee heard from Internal Audit and Finance.

Trustee Roy provided the report of the Governance Committee, which met on May 16, and June 4, to review the first two sections of the Statement of Beliefs as part of its preparation to bring a recommendation to the Board.

Trustee Provost gave his report on the April 9, 2024, Independent Investment Committee (IIC, Committee) meeting, with four of the five members participating with one vacant position. He reported that the Committee heard from Chief Investment Officer Raynald Leveque, who provided an update on investment returns, holdings, and reported on the team's investment activities and work plan. The Committee then heard a presentation from Brookfield Asset Management on infrastructure investing.

Trustee Provost turned to Mr. Leveque who reported on the NHRS performance as of April 30, 2024. Mr. Leveque remarked on the long-term performance of the Total Fund for 3, 5, and 10 years, noting it continues to do well relative to the policy benchmark. He provided a calendar year-to-date overview of the System's portfolio performance, highlighting the positive returns in fixed income, real estate, private debt, and private equity. As of April 30, 2024, the Plan's assets total $11.8 billion.

Trustee Merrifield reported on the Legislative Committee, which had not met since the last Board meeting. He updated the Board that there were three NHRS-related bills that will be sent to the Governor: HB 1307, HB 1559, and HB 1647. He provided a high-level summary of those bills.

Trustee Martins delivered an update of the Benefits Committee, noting it met twice since the last Board meeting, on May 7, and June 4, and approved four disability applications at each meeting.
In addition, the Committee reviewed a Gainful Occupation Offset Waiver Request with a recommendation on today's Consent Agenda that the reduction for excess earnings not be made at this time.

Trustee Hannan gave the PPCC report, which met virtually on May 17, and May 24. Trustee Hannan asked to enter into non-public session to discuss employee compensation under RSA 91-A:3, II(a).

On a motion by Trustee Henry, seconded by Trustee Mezzapelle, the Board voted unanimously to enter into a non-public session.

On a motion by Trustee Henry, seconded by Trustee Quigley, the Board voted unanimously to conclude the non-public session. No action was taken in the non-public session.

Trustee Quigley, the Ad hoc Real Estate Committee Chair, reported the Committee met on May 15 and June 3 to tour and discuss office space options.

On a motion by Trustee Quigley, seconded by Trustee Roy, the Board voted unanimously to enter into a non-public session to discuss the possible lease or acquisition of real property under RSA 91-A:3, II(d).

On a motion by Trustee Hannan, seconded by Trustee Roy, the Board voted unanimously to conclude the non-public session.

On a motion by Trustee Hannan, seconded by Trustee Roy, the Board voted unanimously to seal the minutes of the non-public session.

Trustee Maloney then excused himself from the meeting and was subsequently absent for the remainder of the session.

Chair Kelliher turned to Ms. Goodwin, who introduced Heidi Barry and Jeffrey Tebeau of Gabriel, Roeder, Smith & Company to review the fiscal years 2020-2023 experience study and proposed revisions to the System's actuarial assumptions.

Following the review, on a motion by Trustee Merrifield and seconded by Trustee Mezzapelle, the Board unanimously voted to adopt the GRS Experience Study for the period July 1, 2019, through June 30, 2023.

On a motion by Trustee Quigley and seconded by Trustee Henry, the Board unanimously voted to adopt the proposed demographic assumptions as set forth in the GRS Experience Study.

Next, Trustee Merrifield proposed a motion, seconded by Trustee Provost, that the Board adopt the proposed economic assumptions as set forth in the GRS Experience Study, and referred to as Alternative 1 in the Board materials: Wage Inflation Assumption of 3.00% for Employees, Police, and Fire, and, as amended, 2.50% for Teachers; Price Inflation Assumption of 2.25%; and Assumed Rate of Return (ARR) assumption of 6.75%. The ARR was unchanged from the current assumption. The Board voted unanimously to adopt the new economic assumptions.

Executive Director Goodwin gave her executive report, including these highlights. Key performance measure (KPM) scores for April and May were 95.65% and 95.52%, respectively. The PGV3 project is at 89% completion, at the mid-point of the warranty period fewer new bugs are being discovered. In addition, staff is working on the rollout of the enhanced *My Account.* She also reported on member satisfaction surveys, which continue to report that members are pleased with customer service.

Next, Executive Director Goodwin presented NHRS' FY 25 Three-Year Strategic Plan. She noted that the ETeam has worked closely with Funston Advisory Services to develop a new format for NHRS' Strategic Plan. The Strategic Plan focuses on four goals: build on the new pension administration IT platform and implement a longer-term retirement operations strategy and plan; improve organizational effectiveness and accountability; build additional Investment Office capabilities to reduce costs and reliance on external resources while improving performance; and build organizational resilience.

On a motion by Trustee Hannan and seconded by Trustee Roy, the Board voted unanimously to accept the FY 25 Three-Year Strategic Plan.

Mr. Leveque began his Investment operating report, noting Trustee Provost's earlier report on the April IIC meeting and his earlier report on the plan's performance highlights for April. March's investment performance was emailed to Trustees, along with a summary of what happened in the market. Five of the 10 KPMs were achieved, one KPM not achieved, and one KPM was not applicable. Mr. Leveque wrapped up his presentation by highlighting the Investment Team's achievements, including their collaboration with a third-party consultant to draft a five-year strategic plan, to be presented to the Board at the August Board meeting.

Director of Member Services Nancy Miller updated the Board on some of the activities in her department. The retirement application filing window for July 1 closed on June 1 and the department is now focused on processing nearly 600 applications, which is down from recent years. Ms. Miller provided an overview of ongoing and upcoming PGV3 projects that include the teacher salary contract project slated to start at the end of June, front-end imaging work, training materials for employer reporting, and the design of a Member Services dashboard. Ms. Miller closed by noting that recruiting was ongoing for open positions and that progress continues on action plan items and KPMs.

Director of Finance Marie Mullen updated the Board on the status of Employer Reporting for PGV3, noting the improvement in timeliness of reporting by employers with only 21 out of 464 that had not reported through May. She also provided an update on the Employer Listening sessions noting the outcomes from the sessions to include additional reporting, training materials, and automation of posting reports. She noted that Trust Fund and Administrative operating expenses and PGV3 project were within budget.

Director Mullen next presented the FY 25 Trust Fund Budget noting the areas of the budget with increases, which were primarily related to an increase in Investment Management fees due to the higher beginning balances for assets. She also noted that, pending the review and approval of the Investment Strategic Plan by the IIC and the Board, there would be a proposed revision to the Trust Fund Budget at the August meeting. On a motion by Trustee Hannan and seconded by Trustee Roy, the Board voted unanimously to approve FY 25 Trust Fund Budget.

Director of Human Resources (HR) Rosamond Cain opened her report with updates on recruiting and current projects. NHRS has formed a task force on communication with volunteers from staff; this task force is charged with enhancing our internal organizational communication and strengthening our culture. She reported that NHRS is currently recruiting for two positions and two positions have been reassessed. She noted that Korn Ferry was selected to conduct an organization wide salary survey. She concluded by reporting that all action plan items are either completed or in process.

Deputy Director and Chief Legal Counsel Timothy Crutchfield gave his Legal report, noting that only four responses from the RFP for IME services had been received by the deadline last Friday. He also provided a summary of oral argument presented on May 29th at the Supreme Court in the Keene School District compensation matter. He noted that Legal had achieved all eight of its KPMs for May. Mr. Crutchfield concluded his report with a review of the pending administrative and disability appeals and progress on action items.

Mr. Karlon provided his report on Legislative Affairs and communications, noting while the 2024 legislative session is almost over, the internal implementation work is only getting started and if the governor signs all three pending bills, there will be a significant amount printed and online material to update, not to mention communicating the changes to stakeholders and implementing changes to PensionGold. He also reported that the communications team continues to work closely with multiple business units to roll out a promotional campaign in mid-July to encourage more members to sign up for *My Account* 2.0. He noted that his team had achieved all of its KPMs for April and May.

Director of Information Technology (IT) John Laferriere opened his report indicating no significant security issues have been identified since the last board meeting. Mr. Laferriere also stated that there have been no significant security breaches or problems during the technology infrastructure refresh of all major IT systems. Mr. Laferriere also noted the major IT projects of network, desktop, internet access, and firewall upgrades have been completed, and IT can now support business-driven projects. Additionally, Mr. Laferriere indicated eighty-six change requests were approved and deployed into the production environment and a Cloud engineering consultant has temporarily joined the IT team to ensure the PG production suite is migrated to the Cloud. Finally, Mr. Laferriere presented a graph that the change in focus from bugs and defects to a more normal operations state focused on enhancements and change requests.

Trustee Henry moved and Trustee Roy seconded a motion to approve the Consent Agenda that was unanimously approved.

There were no travel reports and two Board members requested to attend the CAPPP program.

Ms. Goodwin provided an update on Action Items from the April 9, 2024, Board meeting, commenting that four of the six issues have been completed and the other two were completed during this meeting.

During the Board Checkpoint Discussion, Chair Kelliher announced the retirement of Trustee Martins, who has represented state employees on the Board for three separate stints beginning in 2007.

She also informed the Board that she appointed Trustee Frederick to succeed Trustee Martins as the Benefits Committee chair.

With no further business to discuss, on a motion by Trustee Henry, seconded by Trustee Martins, the Board voted unanimously to adjourn the meeting at 12:45 p.m.

Respectfully submitted,

Mariel Holdrege,
Executive Assistant

NHRS Board of Trustees
DRAFT minutes – June 11, 2024

Note: These draft minutes from the June 11, 2024 Non-Public Session are subject to approval at a subsequent meeting of the Board of Trustees.

Board of Trustees June 11, 2024
Draft Non-Public Minutes

New Hampshire Retirement System 54 Regional Drive
Concord, New Hampshire 03301

Participating: *Trustees Maureen Kelliher, Chair; Jon Frederick, Sue Hannan, Jason Henry, Robert Maloney*, Andrew Martineau, Germano Martins, Ken Merrifield, Monica Mezzapelle, Paul Provost, Joshua Quigley, and Don Roy.*

* Participating remotely. Because some Trustees were participating remotely, all votes were by roll call.

During her PPCC report, Trustee Hannan asked to enter into a non-public session to discuss employee compensation under RSA 91-A:3, II(a).

On a motion by Trustee Henry, seconded by Trustee Mezzapelle, the Board voted unanimously to enter into a non-public session.

On a motion by Trustee Henry, seconded by Trustee Quigley, the Board voted unanimously to conclude the non-public session. No action was taken in the non-public session.

During the Ad hoc Real Estate Committee report, on a motion by Trustee Quigley, seconded by Trustee Roy, the Board voted unanimously to enter into a non-public session to discuss the possible lease or acquisition of real property under RSA 91-A:3, II(d).

On a motion by Trustee Hannan, seconded by Trustee Roy, the Board voted unanimously to conclude the non-public session.

Respectfully submitted,

Mariel Holdredge,
Executive Assistant

AUDIT COMMITTEE

GOVERNANCE COMMITTEE

NHRS
New Hampshire Retirement System

To: NHRS Board of Trustees

From: Mark F. Cavanaugh, Esq.
Deputy Counsel and Compliance Officer

Date: July 29, 2024

Re: OFAC Compliance Statement and Proposed Policy Revisions

Item: Action: X Discussion: Informational:

In my capacity as OFAC Compliance Officer pursuant to the NHRS OFAC Compliance Policy, I am reporting that the NHRS staff has complied with the Policy and there were no known or suspected violations of the federal OFAC rules in the past year.

In addition, attached is a draft of proposed revisions to the Policy, which was first adopted by the Board on August 8, 2013, and subsequently revised on October 15, 2015, October 12, 2017, October 13, 2020, September 13, 2022, and September 12, 2023. The proposed revisions now presented consist of updating position titles.

At its meeting on July 29, 2024 the Governance Committee voted to recommend that the Board of Trustees adopt the revised OFAC Compliance Policy that is included with this memo.

New Hampshire Retirement System

OFAC Compliance Policy – Board approved XX/XX/XXXX

I. Purpose And Intent

This Policy addresses compliance obligations with respect to controls on prohibited transactions imposed by the United States Department of the Treasury, Office of Foreign Assets Control. This Policy aims to create and implement thorough, targeted, and reasonable procedures designed to mitigate the risk of NHRS engaging in Prohibited Transactions. This Policy applies to all investment transactions, payroll transactions, benefit payment transactions, and vendor transactions that NHRS initiates, as well as investment transactions entered into on behalf of NHRS by external investment managers.

II. Definitions

A. "Board" shall mean the Board of Trustees of NHRS.

B. "NHRS" shall mean the New Hampshire Retirement System.

C. "OFAC" shall mean the Office of Foreign Assets Control.

D. "Procedure" shall mean the compliance procedures established for each operational area as hereinafter provided.

E. "Prohibited Transactions" shall mean any transaction that results in a violation of the rules and regulations promulgated by OFAC.

F. "Sanctions List(s)" shall mean, collectively, the Specially Designated Nationals List ("SDN LIST"), the Foreign Sanctions Evader List ("FSE List" and the Sectoral Sanctions List ("SS List), each as issued and maintained by OFAC, a searchable version of which is located on the OFAC website at https://sdnsearch.ofac.treas.gov.

III. Governing Authority

RSA 100-A:15, I-a(1) and (2) provide that the Board is to discharge its duties solely in the interest of participants and beneficiaries for the exclusive purpose of providing benefits and incurring only reasonable expenses. The Board's fiduciary duty requires the NHRS to adhere to OFAC's regulations because failure to do so would violate federal law and possibly expose NHRS to civil and criminal penalties.

IV. OFAC Compliance Officer

The Deputy Counsel and Compliance Officer is hereby designated as the OFAC Compliance Officer with such duties, responsibilities, and authority as hereinafter provided.

V. Roles and Responsibilities

A. *OFAC Compliance Officer* - The OFAC Compliance Officer is responsible for (i) providing advice regarding legal compliance with OFAC; (ii) monitoring compliance with this Policy, including Procedures established pursuant to it, (iii) creating and maintaining an OFAC Compliance Manual; and, (iv) conducting staff training and education with respect to this Policy. If it is determined that a violation of this Policy has occurred, the OFAC Compliance Officer shall notify the Deputy Director and Chief Legal Counsel and the Executive Director.

B. *Deputy Director and Chief Legal Counsel* - The Deputy Director and Chief Legal Counsel, in conjunction with the OFAC Compliance Officer, shall (i) determine when disclosure of actual and potential Prohibited Transactions is required; (ii) prepare disclosure submissions in accordance with OFAC regulations; and, (ii) submit an annual compliance report to the Board.

C. *Executive and Management Staff* - The Chief Investment Officer, Director of Human Resources, Director of Finance, and Director of Member Services are, with respect to their respective operational areas, responsible for (i) developing compliance Procedures; (ii) implementing the Procedures, and training staff accordingly; (iii) monitoring compliance with this Policy and the Procedures; and (iv) recommending changes to the OFAC Compliance Officer.

Investment Transactions

I. Risk Assessment

Investment transactions represent a greater risk of violations due to the difficulty with certain investments in identifying counterparties, beneficial owners, and co-investors. It is more difficult to protect against business exchanges with a sanctioned party indirectly, or where the involvement of the sanctioned party is not readily apparent. While automated screening by the asset custodian of individual, entity, or country names can help alert NHRS to possible red flags in transactions, identifying the indirect involvement of a sanctioned party may require extra scrutiny and due diligence. This may be particularly true for alternative investments and investments with tiered ownership structures.

II. Procedures

The Chief Investment Officer will create and maintain Procedures to identify investment transactions prohibited by OFAC. In particular, the Procedures should provide as follows:

A. *Reporting Violations* - All perceived OFAC violations shall be reported immediately to the OFAC Compliance Officer.

B. *Divestment* – If it is determined that an OFAC violation has occurred, NHRS shall divest from any investment prohibited by OFAC, as soon as reasonably possible.

C. *Vendor Due Diligence* - The OFAC Compliance Officer should periodically obtain written summaries of the OFAC compliance policies and procedures utilized by investment service providers, such as external investment managers, asset custodians, and consultants. Additionally, the OFAC Compliance Officer should review the same to ensure that such service providers have established reasonable policies and procedures to ensure compliance with OFAC regulations including, but not limited to, automated screening of all transactions involving assets of NHRS.

D. *Vendor Agreements* - The Chief Investment Officer, in conjunction with the Deputy Director and Chief Legal Counsel and the OFAC Compliance Officer, should ensure that investment-related service provider agreements contain provisions regarding OFAC compliance, including, but not limited to, appropriate representations, warranties, covenants, and indemnifications consistent with industry standards.

Payroll Transactions

I. Risk Assessment

Given the general nature of the employee population of NHRS, payroll transactions present a limited risk of OFAC violations because employees are unlikely to live in sanctioned countries or appear as a "blocked person" on the Sanctions List. Moreover, because most payroll transactions are made by means of ACH or ETF, and the vendors clearing NHRS payroll checks utilize automated screening of all transactions, the likelihood of a Prohibited Transaction occurring is relatively low. Nevertheless, procedures should be implemented to ensure compliance.

II. Procedures

The Director of Human Resources will create and maintain Procedures to ensure that payroll transactions will not result in a Prohibited Transaction. In particular, the Procedures should provide for the following:

A. *Reporting Violations* - All perceived OFAC violations shall be reported immediately to the OFAC Compliance Officer.

B. *Payee Due Diligence* - The Director of Human Resources shall establish procedures for reviewing the name and address of each current employee and each new hire and, where appropriate, periodically search the Sanctions List to confirm that such persons are not "blocked persons".

C. *Vendor Due Diligence* - The OFAC Compliance Officer should periodically obtain written summaries of the OFAC compliance policies and procedures utilized by any vendor processing outgoing payroll transactions, and confirm that each such vendor has established reasonable procedures to ensure compliance with OFAC regulations including, but not limited to, automated screening of all payroll transactions.

D. *Vendor Contracts* - The Director of Human Resources, in conjunction with the Deputy Director and Chief Legal Counsel and the OFAC Compliance Officer, should ensure that all agreements with vendors processing payroll transactions contain appropriate warranties, representations, covenants, and indemnifications consistent with industry standards.

Benefit Payment Transactions and Vendor Transactions

I. Risk Assessment

Given the general makeup of the NHRS beneficiary population, benefit payment transactions present a limited risk of violations of OFAC. NHRS beneficiaries are unlikely to live in sanctioned countries or appear as a "blocked person" on the Sanctions List. Moreover, because many benefit payment transactions are made by means of ACH or ETF, and the vendors clearing the checks utilize automated screening of all transactions, the likelihood of a Prohibited Transaction occurring is relatively low. Manual checks present slightly more risk and may require manual due diligence. In addition, most NHRS vendors are U.S. entities and, therefore, the risk of a Prohibited Transactions is small.

II. Procedures

The Director of Finance and the Director of Member Services will create and maintain Procedures to ensure that benefit payment transactions will not result in a Prohibited Transaction. In particular, the Procedures should provide for the following:

A. *Reporting Violations* - All perceived OFAC violations shall be reported immediately to the OFAC Compliance Officer.

B. *Payee Due Diligence* - The Director of Member Services shall establish procedures for reviewing the name and address of each beneficiary receiving a benefit payment and, where appropriate, perform a search of the Sanctions List to confirm that such beneficiaries are not "blocked persons".

C. *Vendor Due Diligence* - The OFAC Compliance Officer should periodically obtain written summaries of the OFAC compliance policies and procedures utilized by any vendor processing benefit payments and confirm that each such vendor has established reasonable procedures to ensure compliance with OFAC regulations including, but not limited to, automated screening of all benefit payment transactions.

D. *Vendor Contracts* - The Director of Finance and the Director of Member Services, in conjunction with the Deputy Director and Chief Counsel and the OFAC Compliance Officer, should ensure that all agreements with any vendors processing benefit payments contain appropriate warranties, representations, covenants, and indemnifications consistent with industry standards.

NHRS
New Hampshire Retirement System

To: NHRS Governance Committee

From: Tim Crutchfield, Deputy Director and Chief Legal Counsel

Date: July 11, 2024

Re: Cyber Insurance Renewal

Item: Action: ☒ Discussion: ☐ Informational: ☐

Since 2015, NHRS has purchased cyber insurance as a best practice in the event of a data incident to cover damages to third parties and related legal defense costs. More importantly, in the event of a covered data incident, this insurance provides access to a wide range of incident response and remediation services on an immediate, real-time basis such as forensic computer experts, notification and call center services, credit monitoring, public relations, and crisis management. Two years ago, the Committee and the Board decided to increase coverage from $3 million to $5 million with a $25,000 deductible, and the policy was placed with the incumbent carrier, Tokio Marine, through the Houston Casualty Company.

This year, Houston Casualty is offering the same coverage and limits with a premium cost of $53,891.56, a modest 3% increase from last year's premium of $52,126.24 given the current cyber environment.

The only other quote that our broker at Cross Insurance thought was worth considering was offered through Beazley with the same $5 million in coverage, but with a $50,000.00 deductible with a $50,000 premium. Other carriers approached by our broker included:

- At Bay only will quote $3M with $250K deductible and $155,544 premium
- CFC $5M with $250k deductible and $160,000 premium
- XL cannot compete with pricing
- Berkely declined
- Erisk declined
- Travelers declined
- Abridge declined
- Markel declined
- Sompo, Crum and Forster and AM Trust: still reviewing, have not declined but do not seem that they will be competitive.

Based on the quotes provided, and staff's positive experience with Houston Casualty when needed, staff respectfully requests that the Committee authorize staff to renew the cyber coverage with Houston Casualty as presented above.

NHRS
New Hampshire Retirement System

To: NHRS Board of Trustees

From: Mark F. Cavanaugh, Esq., Deputy Counsel and Compliance Officer

Date: July 31, 2024

Re: Investment Counsel - Request for Proposal (RFP)

Item: Action: X Discussion: Informational:

It is NHRS' policy to conduct RFPs at least every 5 years for various legal counsel (investment counsel, fiduciary and tax counsel and NH counsel for administrative proceedings, litigation and employment matters). The last RFPs were issued in 2019. First up this year is Investment Counsel for which the current engagement terminates effective 12/31/2024. A schedule for RFPs for the other outside counsel is included with this memo for informational purposes.

Also included is a draft RFP for Investment Counsel for the Board's consideration. It is staff's intent to issue the RFP shortly after the Board authorizes it. Further, it is staff's plan to present its engagement recommendation(s) to the Governance Committee in advance of the October Board meeting for consideration at that time.

The RFP requests submissions from counsel with respect to public market managers and private market transactions. In addition, this year we will also be seeking submissions for securities litigation counsel. We anticipate engaging with multiple firms to provide flexibility and encourage competitive pricing, rather than using exclusive counsel.

At its meeting on July 29, 2024, the Governance Committee unanimously voted to recommend to the Board that it authorize staff to issue the RFP as presented today.

NHRS Legal RFP Schedule – 2024

Type	Current Effective Date	Term	Next Effective Date	Prepare RFP	Issue RFP Date	Governance Committee Vote to Recommend Counsel	Board Vote to Select Counsel
Fiduciary and Tax Counsel	5/1/19	3 years with 3 extensions	5/1/25	1/25	2/25	4/25	4/25
Investment Counsel	1/1/20	3 years with 2 extensions	1/1/25	7/24	8/24	10/24	10/24
NH Counsel	2/1/20	3 years with 2 extensions	2/1/25	10/24	11/24	1/25	2/25

REQUEST FOR PROPOSALS FOR LEGAL SERVICES AS INVESTMENT COUNSEL FOR FUND INVESTMENTS AND SECURITIES LITIGATION

This Request for Proposals ("RFP") invites the submission of offers to the New Hampshire Retirement System ("NHRS") for the provision of legal services as Investment Counsel in several areas of expertise, as discussed below. NHRS reserves the right to enter into Letters of Engagement with one or more entities for the various services.

A. LEGAL SERVICES SOUGHT

I. Background and Organizational Structure

The New Hampshire Retirement System ("NHRS") is a contributory public employee governmental defined benefit plan intended to be qualified under section 401(a) of the Internal Revenue Code (Code) and funded through a trust which is exempt from tax under Code Section 501(a). Assets under management were approximately $12.3 billion, unaudited, as of June 30, 2024. NHRS provides benefits to its eligible members and their beneficiaries upon retirement, disability, or death. Benefits are based on members' average final compensation and years of creditable service. Separate benefit structures apply to Group I members (employees and teachers) and Group II members (police officers and firefighters). In addition, NHRS administers a Code Section 401(h) subtrust for four post-retirement medical plans covering qualified retired members. It has approximately 48,500 active members including firefighters, police officers, teachers, and state and local government employees. Approximately 43,600 individuals currently receive a monthly benefit from NHRS.

The plan is independent from the New Hampshire administrative branch of government, including its Treasury Department. It is administered by an independent Board of Trustees ("Board"), consisting of 13 Trustees including the State Treasurer as an ex-officio member, four public non-members, four employer representatives, and a Trustee representing each of the four member classifications: employee, teacher, police officer, and firefighter. NHRS is governed by New Hampshire RSA 100-A and the rules and policies adopted by the Board, as well any applicable federal laws. The Board of Trustees formulates governance, administrative and investment policies, authorizes benefit payments to members and their beneficiaries, and manages the trust fund.

Pursuant to the Board's investment policy, NHRS investment activity is managed and administered by the Independent Investment Committee (IIC), which is charged with statutory authority under New Hampshire RSA 100-A:14-b and RSA 100-A:15 to review investment performance, choose fund managers and make investments on behalf of the Board.

The Executive Director oversees all NHRS administrative functions which are carried out by the staff of approximately 75 employees, including the investment management staff which consists of the Chief Investment Officer (CIO) and a team of three individuals. The CIO is responsible for working with the IIC to manage, implement, and administer NHRS investment policy in accordance with statutory authority referenced above. For purposes of this RFP as it concerns the provision of investment-related legal services, the CIO shall be considered as a "designee" of the Executive Director and will have the authority to act in the stead of the Executive Director in any and all instances as outlined below, except as Board approval is required for the initial engagement.

II. General Requirements

NHRS, its Board of Directors and Independent Investment Committee are seeking submissions for legal counsel for investment matters. The nature and extent of legal services needed by the NHRS cannot be predetermined with reasonable precision and the Board may enter into Letters of Engagement with one or more Offerors as described below.

III. Statement of Work

A. NHRS is seeking to engage Investment Counsel for two areas of expertise. The law firms selected shall, on an as-needed basis, provide legal services including, but not limited to, the following:

1. Fund Investments

    a. Advice with respect to the engagement and negotiation of terms for prospective contracts with investment consultants; public fund managers; subscription to private mandates and commitments; and the related due diligence with respect to the potential legal and contractual risks in consideration of current law and industry practices.

    b. Represent or assist in litigation, administrative and regulatory proceedings relating to investment matters.

    c. Consult and assist in the review and drafting of policies, procedures, legislative and regulatory matters relating to investments.

    d. Attend Board or IIC meetings and make presentations, as requested, to conduct training and education.

    e. Provide ongoing notification and education relevant to changes in the law and industry practices affecting investments.

f. Provide assistance to respond to any auditors, oversight or investigative entities.

g. Review and assist with negotiating private investments, including but not limited to, agreements relating to private equity, private credit, real estate, infrastructure, natural resources, hedge funds and other alternative investment strategies. The work will include the review of limited partnership agreements, limited liability agreements, private placement memoranda; preparation of side letters and preparation of subscription documents and threshold issue matrix.

h. Review amendments and consents to existing agreements and preparation of recommendations for most favored nation elections.

i. Review co-investment legal documents.

j. Advise on the legal structure of investment funds, including, but not limited to, fund-of-funds, limited liability companies and limited liability partnerships.

k. Draft agreements relating to fund-of-funds, investment management agreements, investment consultant and custodial banking agreements.

l. Advise and draft agreements and amendments relating to cash transactions and banking relationships.

m. Seek any necessary opinions, review of no action letters from the SEC, letter rulings or other documentation from the IRS or other federal or state regulatory bodies.

n. Futures, forwards and repurchase agreements.

o. Provide legal advice on federal, state and international tax matters related to investments.

2. Securities Litigation.

a. Identify potential domestic and international class action cases involving NHRS investments.

b. Counsel and advise on the merits of the cases and likelihood of recovery.

c. Represent NHRS in cases if NHRS is a lead plaintiff or member of a class.

B. Any Offeror may submit proposals with respect to either or both of these roles. All submissions are guided by and subject to the NHRS Investment Policy, as amended on May 19, 2019, attached as Exhibit A.

IV. Engagement Provisions

The following clauses shall be included in all Letters of Engagement with the Board:

A. Contract Term

1. Any engagement shall be effective upon approval by the Board or its designee and execution of the Letter of Engagement with the Offeror.

2. The engagement shall be for three years from the effective date. The Board may unilaterally exercise options for two additional periods of performance not to exceed one (1) year each. The engagement shall extend automatically unless NHRS provides written notice to the firm of its intent not to exercise the option not less than thirty (30) days prior to the Engagement's expiration date (as extended by a previously exercised option).

3. Any engagement may be terminated by the Executive Director or designee at his or her discretion at any time with ten (10) days prior written notice to the firm.

B. Legal Fees and Expenses

1. Legal fees will be provided in accordance with section B.III. of this RFP.

2. The award of a general engagement does not guarantee a selected firm will receive a minimum amount of work. Fees for specific engagements will be determined based upon the agreed hourly or fixed transactional fee, as the case may be.

3. The Executive Director or designee may specify the labor mix for any specific project that is billed on an hourly basis.

4. Only reasonable and allocable direct costs and expenses are reimbursable. Expenses are reimbursable at cost and shall not contain a mark-up of any kind. Expenses that are not reimbursable include: photocopying; secretarial services; local transportation (including after-hours transportation); paraprofessional overtime expenses; and non-local travel expenses without the prior written authorization of the Executive Director or designee.

C. Notices, Billing and Administrative Instructions

1. The Executive Director is responsible for this Engagement:

Name: Jan Goodwin, Executive Director
Address: New Hampshire Retirement

System 54 Regional Drive
Concord, NH 03301

Telephone: (603) 410-3520
Fax: (603) 410-3505
Email: jan.goodwin@nhrs.org

2. All instructions, notices, demands, other correspondence to be given by either party to the other party shall be in writing and shall be given by first class mail with verification of delivery or by a recognized delivery or courier service that maintains written verification of actual delivery or by email. Such communications shall be sufficient and effective upon delivery to the Executive Director, his or her designee or the designated point of contact, or designee.

3. Invoices for worked performed and expenses incurred shall be submitted to the Executive Director or designee monthly no later than thirty (30) days after the end of the preceding month. Monthly invoices shall be in two parts consisting of:

    a. A summary table showing:
        i. The names of each attorney and paraprofessional who performed work during the preceding month;

        ii. The time spent by each attorney and paraprofessional during the preceding month broken down by quarter hour, or as otherwise provided in the Letter of Engagement;

        iii. The hourly rate for each attorney and paraprofessional;

        iv. The total charge (hours worked x hourly rate) for each attorney and paraprofessional; and

        v. Total expenses incurred broken down by type of expense.

    b. A detailed table showing:

        i. All dates work was performed by each attorney and paraprofessional;

        ii. A brief description of the work performed by date broken down by matter worked on; and

        iii. The time spent by each attorney and paraprofessional by date broken down by matter worked on.

Or, as in such other mutually agreeable format as provided in the Letter of Engagement.

D. Special Engagement Terms.

1. Bar Membership.

a. All attorneys working on matters pursuant to this Agreement shall at all times be active members in good standing of the Bar of the State of New Hampshire, another state, the District of Columbia, or the Commonwealth of Puerto Rico.

b. Notwithstanding the above, all attorneys representing NHRS before any entity of the State of New Hampshire in litigation or any other matter, must be active members in good standing of the Bar of the State of New Hampshire or admitted pro hac vice.

2. This Engagement shall be effective upon approval by the Board or its designee and execution of the Letter of Engagement.

3. If the continued provision of legal services to the Board would create a professional conflict of interest that is not subject to mitigation under the New Hampshire Rules of Professional Conduct or other applicable authority (mitigation shall not include a waiver of a conflict by the Board), the firm shall immediately cease performance and notify the Executive Director in writing.

4. Dispute resolution.

a. The parties waive the right to trial by jury in any judicial action, proceeding or counterclaim arising from this Engagement.

b. Any legal proceedings involving this Engagement shall be filed with a state court located in the State of New Hampshire with subject matter jurisdiction, and New Hampshire law shall apply, excluding its choice of law provisions.

5. Neither party will, directly or indirectly, assign or transfer any claim arising out of this Engagement.

6. The failure of either party to enforce any of the terms of this Engagement shall not be a waiver or relinquishment of any future requirements of this Engagement.

7. This Engagement, which includes the Letter of Engagement, the RFP and the firm’s technical and fee proposals, constitutes the entire engagement between the parties regarding the subject matter of this Engagement. It replaces and supersedes any previous understandings or representations between the parties, whether written or oral, regarding the subject matter of this Engagement. Except as explicitly stated otherwise, this Engagement may not be modified, amended, changed, or altered

except by written engagement executed by the parties.

8. The section headers in this Engagement are for information only and shall not be used to construe the meaning of any particular clause.

9. The firm shall discharge its duties and responsibilities under this Engagement with the standard of care, skill, and diligence normally provided by legal counsel in the performance of similar services under similar circumstances.

10. The firm shall at all times maintain sufficient insurance to reimburse the Board and the participants and beneficiaries of NHRS in full for any professional liability on its part and provide proof of such insurance upon request.

11. This Engagement is severable. If any provision or term hereof is determined, for any reason, to be illegal or otherwise unenforceable, such determination shall not affect the validity of the remaining provisions and terms hereof. The provision or term determined to be illegal or unenforceable shall be amended to conform to applicable law and the intent of the parties.

12. The rights and remedies described in this Engagement are cumulative and are in addition to any other remedies available to the Board in law or in equity, and the exercise of any one or more of such remedies shall not be construed as a waiver of any other right or remedy.

13. The firm shall promptly notify the Executive Director or designee of any change in the availability of the personnel proposed to perform legal services under this Engagement, and shall propose a replacement of similar experience and knowledge who will be subject to acceptance by the Executive Director.

14. The firm shall assist NHRS in asserting a claim of privilege when so requested.

15. The firm shall not subcontract any of the services to be performed under this Engagement without the prior written consent of the Executive Director or designee.

16. In the event of a conflict between a Letter of Engagement, the Board's Request for Proposals (RFP), and the firm's Technical and Fee Proposals, the order of precedence shall be:

a. the Letter of Engagement;

b. the RFP; and

c. the firm's Proposals.

17. The firm shall perform such work as is necessary to correct errors, defects, and

omissions in the services provided under this Engagement without undue delay and without cost to NHRS.

18. The Executive Director or designee may order the firm to suspend, delay, or interrupt all or any part of work it is performing without cost for such period of time as he or she may deem appropriate.

19. During the term of this Engagement, the firm shall not represent any person or entity in a matter, proceeding, or lawsuit against NHRS. Following expiration or termination of this Engagement, the firm shall not represent any person or entity in a matter, proceeding, or lawsuit substantially related to this Engagement for a period of no less than five years after such termination.

20. This Engagement is non-exclusive, and work within the purview of this Engagement may be awarded to other firms or performed in-house.

B. INSTRUCTIONS TO OFFERORS

I. <u>In General</u>.

A. Offerors must submit one electronic copy by email.

B. Proposals shall be submitted electronically by email and delivered to:

Timothy J. Crutchfield, Deputy Director and Chief Legal Counsel
New Hampshire Retirement System
54 Regional Drive
Concord, NH 03301

C. Proposals must be received no later than Friday, September 13, 2019, at 4:00 pm EST. Untimely proposals shall not be considered.

D. Questions about the solicitation shall be in writing via email and directed to:

Timothy J. Crutchfield, Deputy Director and Chief Legal Counsel
New Hampshire Retirement System 54 Regional Drive
Concord, NH 03301

Fax: (603) 410-3505
Email: tim.crutchfield@nhrs.org

Questions must be received by Friday, August 30, 2019, at 4:00 pm EST in order to be assured of a response. Questions and responses shall be shared with all entities at their request.

E. The Board may amend or terminate this RFP at its discretion at any time prior to awarding a Letter of Engagement.

F. Technical proposals shall be no more than ten (10) pages in length, excluding a cover page described below, an introductory page, an index page, and résumés for all personnel identified as available to work on the contract. Pages exceeding this limit will not be read or evaluated.

G. Fee proposals shall be no more than three (3) pages in length, excluding an introductory page and an index page. Pages exceeding this limit shall not be considered or evaluated.

H. The text of all proposals shall be in 12 point Times New Roman type.

I. Pages of a proposal containing confidential or proprietary information shall contain a header and footer with an appropriate restrictive legend. Identifying pages as containing confidential or proprietary information is not a guarantee against disclosure under New Hampshire Right To Know Law at NHRSA 91-A.

J. Under no circumstances shall NHRS be responsible for the expense of preparing a proposal for this RFP.

K. Proposals shall be self-contained and shall not refer to a web site or other external sources for additional information.

L. The cover page of the technical proposal shall contain the name, title, street address, telephone and fax numbers, email address and signature of an individual attesting that:

1. He or she has actual authority to accept the terms of engagement on behalf of the Offeror;

2. The offer may be accepted by the Board without discussions and;

3. The entity accepts all of the terms of the engagement as set forth herein.

M. Proposals may be withdrawn at any time up to award. Unless withdrawn, all offers shall remain in effect for ninety (90) days after the proposal due date, including any extensions thereto.

N. Graphics in a technical or price proposal shall be included in their respective page limits.

II. <u>Technical Proposals</u>.

Offerors shall provide in their technical proposals:

A. A clear statement of which role(s) the Offeror is seeking: Investment Counsel and/or Securities Litigation.

B. The names, titles, and résumés of the attorneys who are expected to provide legal services under the Engagement.

C. A description of the experience and knowledge of those attorneys for the past ten (10) years (or for the entire time they have been practicing, if shorter) in the area of investment counsel, including:

1. The nature of advice and representation provided on such matters;

2. The length of engagement; and

3. The outcomes of such matters.

D. The name of the attorney who will serve as the point of contact for strategic, tactical, administrative, and performance matters relating to the engagement.

E. A brief description of how attorney assignments are made, how workload is managed by the Offeror, and how back up assistance is provided.

F. The percentage of annual attorney turnover.

G. A certification that the Offeror is not and has not been for the past ten (10) years disbarred or suspended by the State of New Hampshire, the U.S. Government, or any other jurisdiction from doing business, and that no attorney proposed to work on the Agreement has been sanctioned, disbarred or suspended by any jurisdiction for the past ten (10) years.

H. A certification that the Offeror has no known conflicts that would restrict its ability to provide advice to the Board; if any conflict is known, the nature of the conflict and its effect on performance of the contract must be described in detail.

I. A description of the Offeror's conflicts avoidance procedures.

J. A description of the Offeror's professional liability insurance applicable to the work described in this contract, including limits of coverage.

K. The Offeror's process and resources for keeping abreast of proposed and actual changes in the laws affecting its area(s) of engagement.

L. A description of any other relevant experience and knowledge.

M. Names and telephone numbers of three clients for purposes of reference checking.

<u>Technical proposals shall not contain or describe proposed hourly rates or other price factors. Proposals violating this requirement shall not be considered.</u>

III. <u>Fee Proposals</u>.

A. Offerors shall provide in their fee proposals the hourly rates of the attorneys and paraprofessionals proposed to perform services and their fully-loaded hourly rates, including discount rates for governmental plans. In the alternative, Offerors have an option to provide blended rates.

B. Offerors shall indicate whether the firm is or is not willing to consider fixed fee pricing for deal-oriented engagements. NHRS reserves the right to conduct competitive fixed fee pricing between multiple firms engaged.

C. Offerors shall provide justifications for proposed hourly rates significantly below or in excess of prevailing market rates.

D. NHRS reserves the right to negotiate with the selected Offeror any contract pricing or terms more favorable to NHRS than those presented in the Offeror's proposal.

IV. <u>Evaluation of Proposals</u>.

A. Proposals shall be reviewed for soundness of technical capability and reasonableness of fees. Technical factors shall constitute 2/3 of a proposal's overall rating and fees shall constitute 1/3 of its overall rating.

B. Awards shall be made to those Offerors whose proposals are most advantageous to NHRS, fees and other factors considered.

C. Appropriate NHRS staff will evaluate the proposals and provide recommendations to the Board or a Board committee for selection.

D. Offerors may be required to make presentations to the Board or a Board committee prior to award of an engagement. Offerors shall be solely responsible for any costs associated with such presentations, including travel expenses.

V.3 - 6/27/24

NHRS Board Statement of Beliefs and Guiding Principles

This statement provides a strategic framework for the administration of the New Hampshire Retirement System ("NHRS" or "the Board") and its related pension trust fund ("the Trust" or "Fund"), its pension benefits ("the Plan") and the organization. The material below is numbered for reference, however, all of these statements are of equal importance to the administration of the Trust, the Plan, and the organization, and are consistent with our mission to "Provide secure benefits and superior service".

General

1. The Board is committed to being a trusted and effective fiduciary by always acting solely in the collective best interest of our membership per RSA 100-A:15, I-a, and general trust law.
2. The Board will not support any legislation that either interferes with the Board's fiduciary duty or threatens the Plan's tax qualified status.
3. The Board believes in applying a best practices approach to governance of the Board, the Trust, the Plan, and the organization. In the absence of industry accepted best practices, staff will develop policies and practices that are in the best interest of the NHRS and recommend them to the Board. These best practices include:
    a. clear and documented allocation of responsibilities,
    b. development and documentation of all related policies and procedures,
    c. proper reporting, oversight, and performance evaluation,
    d. reviewing peer pension practices, and
    e. obtaining advice from experts and/or delegating specific responsibilities, as needed.
4. All beliefs, guiding principles, and related policies should be consistent with, and mutually supportive of, each other and be balanced and reasonable.
5. The Executive Director and all staff must be guided at all times by what is in the best long-term interest of the Plan members and beneficiaries in all investment and administrative functions.
6. All Plan-related activities will comply with statutes and related regulations (federal and state), and NHRS policies and rules.
7. All Plan-related activities and reporting will be in compliance with current professional standards and based on transparency and full disclosure where relevant and appropriate.
8. The Board and Staff are committed to adhering to best practices regarding data protection.
9. Board and staff are committed to developing prudent NHRS operating budgets, hiring qualified staff, adopting actuarially sound employer contribution rates as

required under Part, I, Article 36-a of the NH Constitution, and providing data and factual analysis of Plan design changes or amendments to RSA 100-A.

10. Board and staff recognize that retirement benefits are an important part of public employees' total compensation package.

11. The Board and staff are part of two important peer groups - pension plan administrators and investors- and must actively monitor issues and trends affecting these groups.

12. The statutory purpose of the NHRS retirement benefits is to replace a portion of the working salaries of our members.

Plan Design

1. The design and operation of the Plan should reflect the foundational concept that saving for retirement is a shared responsibility and is dependent on the consistent efforts of federal and state governments, employers, and members. This approach is often referred to as the three-legged stool for retirement income: an employer-provided defined benefit plan, Social Security (if applicable), and additional member savings, such as through an employer-provided defined contribution plan, Independent Retirement Account (IRA), or other investment vehicles.
2. The Plan must be cost-effective to participating employers and members.
3. Pursuant to RSA 100-A:16, II, the participating employers shall pay a portion of the normal cost in addition to amortizing the unfunded liability.
4. The eligibility for, and payment of, NHRS benefits are designed to encourage long-term employment and to compensate members for their service to our participating employers and the people of NH.
5. The Plan will provide a lifetime retirement income for its retirees and eligible beneficiaries, if chosen.
6. Eligible public employees who can be a member, should be a member per 100-A:1 and 100-A:3.
7. Working in retirement for a participating employer must be actuarially sound, not encourage retirement with the intent to return to service, and not threaten the Plan's tax qualified status.
8. To ensure intergenerational equity, each cohort of members, during their working years for NHRS participating employers, along with their employers, should pay enough in contributions so that those contributions and related investment earnings are sufficient to pay for the retirement benefits earned by members.
9. The Board supports prefunding as the most responsible funding method for benefit enhancement proposals.

Funding

1. Market risk is borne by the Fund – and by participating employers – and mitigated through prudent investment decisions made by the Board and the Independent Investment Committee and implemented by the Investment Team.
2. The Plan and its benefits must be sustainable and remain on a path to amortize the pre-7/1/2017 unfunded liability by 2039 due to its closed 30-year amortization period. Subsequent changes in liability after 6/30/17 are amortized in layers of no more than 20

years. Layers are determined every two years in the rate-setting actuarial valuations per 100-A:16.

3. To achieve and maintain full funding of the Plan is an important goal. When the Plan is 100% funded, actuarial contribution levels will be significantly lower because the unfunded liability will be eliminated.
4. Contributions from the employers and the members should be stable and predictable per RSA 100-A:16.
5. In general, the funding mechanisms for the Plan should be tax effective for the members per RSA 100-A:16.
6. The Board and staff are committed to maintaining the Plan's tax qualified status per RSA 100-A:2.

Investments

1. NHRS is a long-term investor with the goal to deliver secure retirement benefits through prudent investment management.
2. The performance goal for the Fund is to achieve a risk adjusted rate of return over the long-term, equal to or exceeding the assumed rate of return.
3. All investment decisions are based solely in the interest of NHRS' participants and beneficiaries per RA 100-A:15, I-a.
4. Asset allocation is an important determinant of long-term investment performance, incorporating diversification and risk management as factors to achieve the long-term rate of return.
5. NHRS investment processes should be efficient, prudent, transparent and provide net value.
6. The Board, the Independent Investment Committee, and Investment team will regularly review and identify opportunities to achieve the long-term goals for plan assets.
7. As a long-term investor, NHRS is focused on generating sufficient funds to pay retirement benefits to current and future beneficiaries and takes a measured approach to short-term market and economic conditions.
8. The Fund has a responsibility to engage with investment managers and advisors to encourage and improve transparency in the funds we invest in.

Organization

1. We are committed to acting in an ethical, honest, and professional manner in all our interactions.
2. We desire to create an environment in which all employees can thrive and be aware of the importance of the work they do for our members, beneficiaries, and participating employers.
3. We have a commitment to a diversified workforce that reflects our state and our membership.
4. We recognize the importance of lifelong learning and creation of career paths for all employees.
5. Total compensation for all employees must be competitive with comparable public pension plans.

6. We strive to provide responsive, accurate, and timely information to our stakeholders, including, but not limited to, educating plan members to prepare for retirement by providing relevant information online, in newsletters, through regular member education events, and other effective means of communication.
7. We are committed to safeguarding the confidentiality of personal information.
8. We strive to exceed expectations through innovation, accountability, and teamwork.

- **Two tabled items from the Plan Design section reserved for Board discussion**.

1. The Legislature should consider having retirees working in retirement for NHRS employers pay contributions, along with their employers. No additional retirement benefits should accrue to working retired members in receipt of a pension.
2. Retirement income from the Plan should keep pace with inflation over the long term and maintain its real value over the long-term subject to available funding.

INDEPENDENT INVESTMENT COMMITTEE (IIC)

Independent Investment Committee's Monthly Report to the Board

NHRS Investment Team

Board of Trustees Meeting

August 13, 2024

Total Plan Performance as of June 30, 2024

40 NHRS New Hampshire Retirement System

The table below details the rates of return for the fund's asset classes over various time periods ended June 30, 2024. Negative manager excess returns are shown in red, positive excess returns in green. Returns for one year or greater are annualized.

Net of Fees Returns for Periods Ended June 30, 2024									
Composite	Total Fund Weighting As of 6/30/2024	Last Month	Last 3 Months	FYTD	CYTD	LTM	3-YR	5-YR	10-YR
Total Domestic Equity	32.35%	1.54%	1.28%	18.95%	10.30%	18.95%	6.48%	12.21%	10.64%
Domestic Equity Benchmark(1)		3.10%	3.22%	23.13%	13.56%	23.13%	8.05%	13.81%	12.24%
Excess Return		-1.56%	-1.94%	-4.17%	-3.26%	-4.17%	-1.57%	-1.60%	-1.60%
Total Non US Equity	19.00%	-0.52%	-0.22%	11.31%	5.78%	11.31%	1.47%	5.80%	4.57%
Non US Equity Benchmark(2)		-0.10%	0.96%	11.62%	5.69%	11.62%	0.46%	5.55%	3.84%
Excess Return		-0.42%	-1.18%	-0.32%	0.09%	-0.32%	1.01%	0.25%	0.73%
Total Fixed Income	19.18%	0.73%	-0.04%	3.50%	-0.58%	3.50%	-2.25%	1.04%	1.90%
Bloomberg Capital Universe Bond Index		0.91%	0.19%	3.47%	-0.28%	3.47%	-2.68%	0.11%	1.63%
Excess Return		-0.18%	-0.23%	0.03%	-0.30%	0.03%	0.43%	0.93%	0.27%
Total Cash	1.61%	0.44%	1.30%	5.48%	2.65%	5.48%	3.14%	2.25%	1.60%
3-Month Treasury Bill		0.41%	1.32%	5.40%	2.63%	5.40%	3.03%	2.16%	1.51%
Excess Return		0.03%	-0.02%	0.08%	0.02%	0.08%	0.11%	0.10%	0.09%
Total Real Estate (Q1)*	9.28%	-1.19%	-2.43%	-7.07%	-5.26%	-7.07%	3.69%	5.98%	8.31%
Real Estate Benchmark(3)		-0.87%	-2.58%	-12.00%	-7.45%	-12.00%	2.47%	2.56%	5.89%
Excess Return		-0.32%	0.15%	4.93%	2.18%	4.93%	1.22%	3.42%	2.42%
Total Private Equity (Q1)*	13.84%	0.75%	1.09%	3.38%	2.02%	3.38%	5.14%	12.65%	11.40%
Private Equity Benchmark(4)		3.34%	10.40%	31.52%	24.19%	31.52%	13.76%	17.92%	16.26%
Excess Return		-2.59%	-9.31%	-28.14%	-22.17%	-28.14%	-8.62%	-5.27%	-4.86%
Total Private Debt (Q1)*	4.73%	1.64%	1.91%	4.72%	2.99%	4.72%	6.03%	5.34%	5.73%
Private Debt Benchmark(5)		0.93%	1.96%	12.70%	7.48%	12.70%	5.07%	4.88%	5.54%
Excess Return		0.71%	-0.05%	-7.98%	-4.50%	-7.98%	0.96%	0.46%	0.19%
Total Fund Composite	100.00%	0.61%	0.36%	8.53%	4.09%	8.53%	3.31%	7.62%	7.01%
Total Fund Benchmark(6)		1.43%	2.08%	12.43%	6.96%	12.43%	4.08%	7.95%	7.41%
Excess Return		-0.82%	-1.72%	-3.90%	-2.87%	-3.90%	-0.77%	-0.34%	-0.40%

(1) The Domestic Equity Benchmark is the Russell 3000 Index as of 7/1/2021.
(2) The Non US Equity Index is the MSCI ACWI ex US Index as of 7/1/2003. Prior to 7/1/2003 it was the MSCI EAFE Index.
(3) The Real Estate Benchmark is the NCREIF NFI-ODCE Value Weight Net Index lagged 1 quarter as of 7/1/2015.
(4) The Private Equity Benchmark is the Russell 3000 Index + 2% lagged 1 quarter as of 7/1/2022.
(5) The Private Debt Benchmark is (50% MStar LSTA Leveraged Loan 100 Idx + 50% Bloomberg High Yield Index) + 1% lagged 1 quarter as of 7/1/2022.
(6) Current Month Target = 30.0% Russell 3000 Index, 25.0% Bloomberg Universal, 20.0% MSCI ACWI ex-US, 10.0% NCREIF NFI-ODCE Value Weight Net lagged 3 months, 10.0% Russell 3000 Index lagged 3 months+2.0%, 2.5% Bloomberg High Yield Corp lagged 3 months+1.0% and 2.5% MStar LSTA Lev Loan 100 lagged 3 months +1.0%.
(7) For the trailing 25 year period ended 6/30/24, the Total Fund has returned 6.28% versus the Total Fund Custom Benchmark return of 6.51%.
*Real Estate and Alternatives market values reflect current custodian valuations, which are typically lagged approximately 1 quarter.

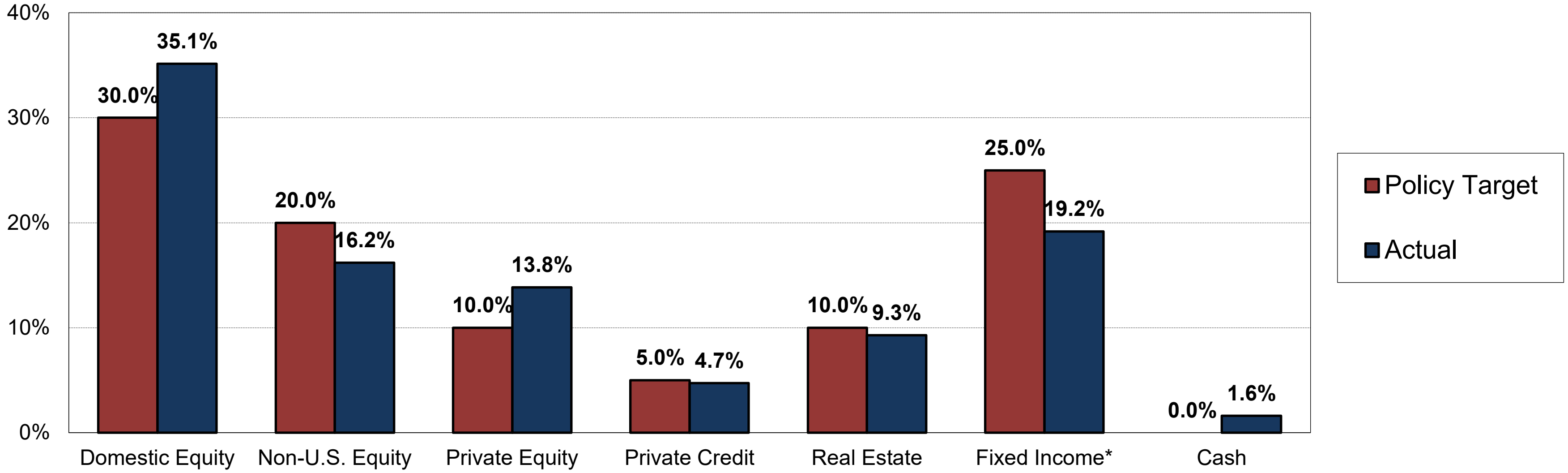
FYTD *Fiscal Year to Date*
CYTD *Calendar Year to Date*
LTM *Last Twelve Months*

Source: Callan

Asset Class Policy Targets vs. Actual Allocation

NHRS
New Hampshire Retirement System

Asset Class Targets vs. Actual Allocation
as of June 30, 2024 (Preliminary)



Asset Class	Policy Target	Actual	Range
Domestic Equity	30.0%	35.1%	20 - 40%
Non-U.S. Equity	20.0%	16.2%	15 - 25%
Private Equity	10.0%	13.8%	5 - 15%
Private Credit	5.0%	4.7%	0 - 10%
Real Estate	10.0%	9.3%	5 - 20%
Fixed Income*	25.0%	19.2%	20 - 30%
Cash	0.0%	1.6%	NA
	100.0%	100.0%	

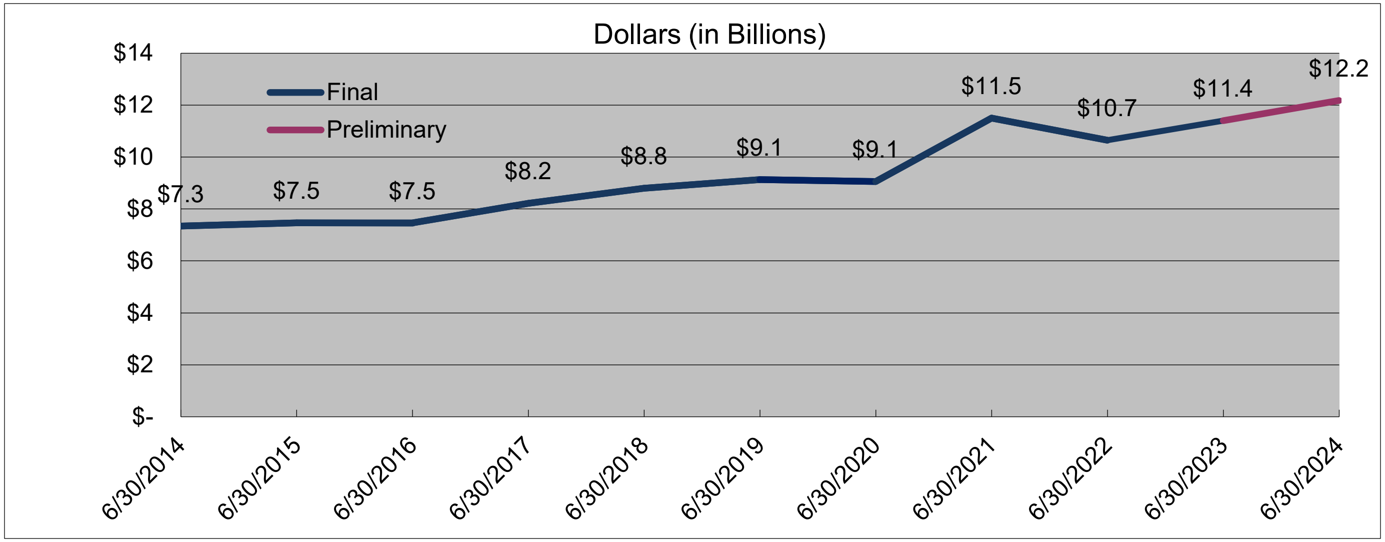
**The new Target Asset Allocation approved by the Board in December 2023 will be effective beginning in the new fiscal year (7/1/24)*

Source: NHRS

**Fixed Income is within range when Cash is included*

Total Fund Market Value

Fiscal Year	Dollars (in Billions)
June 30,2014	$7.3
June 30,2015	$7.5
June 30,2016	$7.5
June 30,2017	$8.2
June 30,2018	$8.8
June 30,2019	$9.1
June 30,2020	$9.1
June 30,2021	$11.5
June 30,2022	$10.7
June 30,2023	$11.4
June 30,2024*	$12.2



*6/30/2024 Total Fund Market Value reflects preliminary 6/30/24 data

Source: NHRS

Callan

June 30, 2024

New Hampshire Retirement System

Investment Measurement Service Monthly Review

The table below details the rates of return for the fund's asset classes over various time periods ended June 30, 2024. Negative manager excess returns are shown in red, positive excess returns in green. Returns for one year or greater are annualized.

Net of Fees Returns for Periods Ended June 30, 2024									
Composite	Total Fund Weighting As of 6/30/2024	Last Month	Last 3 Months	FYTD	CYTD	LTM	3-YR	5-YR	10-YR
Total Domestic Equity	**32.35%**	**1.54%**	**1.28%**	**18.95%**	**10.30%**	**18.95%**	**6.48%**	**12.21%**	**10.64%**
Domestic Equity Benchmark(1)		*3.10%*	*3.22%*	*23.13%*	*13.56%*	*23.13%*	*8.05%*	*13.81%*	*12.24%*
Excess Return		*-1.56%*	*-1.94%*	*-4.17%*	*-3.26%*	*-4.17%*	*-1.57%*	*-1.60%*	*-1.60%*
Total Non US Equity	**19.00%**	**-0.52%**	**-0.22%**	**11.31%**	**5.78%**	**11.31%**	**1.47%**	**5.80%**	**4.57%**
Non US Equity Benchmark(2)		*-0.10%*	*0.96%*	*11.62%*	*5.69%*	*11.62%*	*0.46%*	*5.55%*	*3.84%*
Excess Return		*-0.42%*	*-1.18%*	*-0.32%*	*0.09%*	*-0.32%*	*1.01%*	*0.25%*	*0.73%*
Total Fixed Income	**19.18%**	**0.73%**	**-0.04%**	**3.50%**	**-0.58%**	**3.50%**	**-2.25%**	**1.04%**	**1.90%**
Bloomberg Capital Universe Bond Index		*0.91%*	*0.19%*	*3.47%*	*-0.28%*	*3.47%*	*-2.68%*	*0.11%*	*1.63%*
Excess Return		*-0.18%*	*-0.23%*	*0.03%*	*-0.30%*	*0.03%*	*0.43%*	*0.93%*	*0.27%*
Total Cash	**1.61%**	**0.44%**	**1.30%**	**5.48%**	**2.65%**	**5.48%**	**3.14%**	**2.25%**	**1.60%**
3-Month Treasury Bill		*0.41%*	*1.32%*	*5.40%*	*2.63%*	*5.40%*	*3.03%*	*2.16%*	*1.51%*
Excess Return		*0.03%*	*-0.02%*	*0.08%*	*0.02%*	*0.08%*	*0.11%*	*0.10%*	*0.09%*
Total Real Estate (Q1)*	**9.28%**	**-1.19%**	**-2.43%**	**-7.07%**	**-5.26%**	**-7.07%**	**3.69%**	**5.98%**	**8.31%**
Real Estate Benchmark(3)		*-0.87%*	*-2.58%*	*-12.00%*	*-7.45%*	*-12.00%*	*2.47%*	*2.56%*	*5.89%*
Excess Return		*-0.32%*	*0.15%*	*4.93%*	*2.18%*	*4.93%*	*1.22%*	*3.42%*	*2.42%*
Total Private Equity (Q1)*	**13.84%**	**0.75%**	**1.09%**	**3.38%**	**2.02%**	**3.38%**	**5.14%**	**12.65%**	**11.40%**
Private Equity Benchmark(4)		*3.34%*	*10.40%*	*31.52%*	*24.19%*	*31.52%*	*13.76%*	*17.92%*	*16.26%*
Excess Return		*-2.59%*	*-9.31%*	*-28.14%*	*-22.17%*	*-28.14%*	*-8.62%*	*-5.27%*	*-4.86%*
Total Private Debt (Q1)*	**4.73%**	**1.64%**	**1.91%**	**4.72%**	**2.99%**	**4.72%**	**6.03%**	**5.34%**	**5.73%**
Private Debt Benchmark(5)		*0.93%*	*1.96%*	*12.70%*	*7.48%*	*12.70%*	*5.07%*	*4.88%*	*5.54%*
Excess Return		*0.71%*	*-0.05%*	*-7.98%*	*-4.50%*	*-7.98%*	*0.96%*	*0.46%*	*0.19%*
Total Fund Composite	**100.00%**	**0.61%**	**0.36%**	**8.53%**	**4.09%**	**8.53%**	**3.31%**	**7.62%**	**7.01%**
Total Fund Benchmark(6)		*1.43%*	*2.08%*	*12.43%*	*6.96%*	*12.43%*	*4.08%*	*7.95%*	*7.41%*
Excess Return		*-0.82%*	*-1.72%*	*-3.90%*	*-2.87%*	*-3.90%*	*-0.77%*	*-0.34%*	*-0.40%*

(1) The Domestic Equity Benchmark is the Russell 3000 Index as of 7/1/2021.

(2) The Non US Equity Index is the MSCI ACWI ex US Index as of 7/1/2003. Prior to 7/1/2003 it was the MSCI EAFE Index.

(3) The Real Estate Benchmark is the NCREIF NFI-ODCE Value Weight Net Index lagged 1 quarter as of 7/1/2015.

(4) The Private Equity Benchmark is the Russell 3000 Index + 2% lagged 1 quarter as of 7/1/2022.

(5) The Private Debt Benchmark is (50% MStar LSTA Leveraged Loan 100 Idx + 50% Bloomberg High Yield Index) + 1% lagged 1 quarter as of 7/1/2022.

(6) Current Month Target = 30.0% Russell 3000 Index, 25.0% Bloomberg Universal, 20.0% MSCI ACWI ex-US, 10.0% NCREIF NFI-ODCE Value Weight Net lagged 3 months, 10.0% Russell 3000 Index lagged 3 months+2.0%, 2.5% Bloomberg High Yield Corp lagged 3 months+1.0% and 2.5% MStar LSTA Lev Loan 100 lagged 3 months +1.0%.

(7) For the trailing 25 year period ended 6/30/24, the Total Fund has returned 6.28% versus the Total Fund Custom Benchmark return of 6.51%.

*Real Estate and Alternatives market values reflect current custodian valuations, which are typically lagged approximately 1 quarter.

The table below details the rates of return for the fund's investment managers over various time periods ended June 30, 2024. Negative manager excess returns are shown in red, positive excess returns in green. Returns for one year or greater are annualized.

Composite	Total Fund Weighting As of 6/30/2024	Last Month	Last 3 Months	FYTD	CYTD	LTM	3-YR	5-YR	10-YR
				Net of Fees Returns for Periods Ended June 30, 2024					
Total Domestic Equity	**32.35%**	**1.54%**	**1.28%**	**18.95%**	**10.30%**	**18.95%**	**6.48%**	**12.21%**	**10.64%**
Domestic Equity Benchmark(1)		*3.10%*	*3.22%*	*23.13%*	*13.56%*	*23.13%*	*8.05%*	*13.81%*	*12.24%*
Excess Return		*-1.56%*	*-1.94%*	*-4.17%*	*-3.26%*	*-4.17%*	*-1.57%*	*-1.60%*	*-1.60%*
Large Cap Domestic Equity	**18.93%**	**3.59%**	**4.35%**	**24.63%**	**15.36%**	**24.63%**	**9.99%**	**14.24%**	**11.94%**
S&P 500 Index		*3.59%*	*4.28%*	*24.56%*	*15.29%*	*24.56%*	*10.01%*	*15.05%*	*12.86%*
Excess Return		*0.00%*	*0.07%*	*0.07%*	*0.07%*	*0.07%*	*-0.02%*	*-0.80%*	*-0.92%*
BlackRock S&P 500	**18.93%**	**3.59%**	**4.35%**	**24.63%**	**15.36%**	**24.63%**	**9.99%**	**15.00%**	**12.83%**
S&P 500 Index		*3.59%*	*4.28%*	*24.56%*	*15.29%*	*24.56%*	*10.01%*	*15.05%*	*12.86%*
Excess Return		*0.00%*	*0.07%*	*0.07%*	*0.07%*	*0.07%*	*-0.02%*	*-0.04%*	*-0.03%*
Smid Cap Domestic Equity	**5.78%**	**-1.82%**	**-4.29%**	**10.09%**	**3.13%**	**10.09%**	**0.74%**	**8.46%**	**7.59%**
Russell 2500 Index		*-1.50%*	*-4.27%*	*10.47%*	*2.35%*	*10.47%*	*-0.29%*	*8.31%*	*7.99%*
Excess Return		*-0.32%*	*-0.02%*	*-0.38%*	*0.78%*	*-0.38%*	*1.03%*	*0.15%*	*-0.40%*
AllianceBernstein	**3.66%**	**-1.41%**	**-4.53%**	**12.61%**	**4.51%**	**12.61%**	**-0.51%**	**8.97%**	**8.73%**
Russell 2500 Index		*-1.50%*	*-4.27%*	*10.47%*	*2.35%*	*10.47%*	*-0.29%*	*8.31%*	*7.99%*
Excess Return		*0.08%*	*-0.25%*	*2.14%*	*2.16%*	*2.14%*	*-0.21%*	*0.66%*	*0.74%*
TSW	**2.12%**	**-2.51%**	**-3.88%**	**5.99%**	**0.82%**	**5.99%**	**3.06%**	**7.61%**	**5.88%**
TSW Blended Benchmark (2)		*-2.01%*	*-4.31%*	*11.24%*	*1.50%*	*11.24%*	*2.15%*	*8.01%*	*7.84%*
Excess Return		*-0.50%*	*0.42%*	*-5.25%*	*-0.69%*	*-5.25%*	*0.91%*	*-0.41%*	*-1.95%*
Small Cap Domestic Equity	**7.65%**	**-0.74%**	**-1.63%**	**12.63%**	**4.08%**	**12.63%**	**2.54%**	**10.25%**	**9.52%**
Russell 2000 Index		*-0.93%*	*-3.28%*	*10.06%*	*1.73%*	*10.06%*	*-2.58%*	*6.94%*	*7.00%*
Excess Return		*0.18%*	*1.65%*	*2.57%*	*2.35%*	*2.57%*	*5.12%*	*3.30%*	*2.52%*
Boston Trust	**1.95%**	**-1.16%**	**-3.08%**	**7.92%**	**1.84%**	**7.92%**	**4.39%**	**9.59%**	**9.37%**
Russell 2000 Index		*-0.93%*	*-3.28%*	*10.06%*	*1.73%*	*10.06%*	*-2.58%*	*6.94%*	*7.00%*
Excess Return		*-0.23%*	*0.20%*	*-2.14%*	*0.11%*	*-2.14%*	*6.97%*	*2.65%*	*2.36%*
Segall Bryant & Hamill	**2.14%**	**-0.78%**	**-1.17%**	**14.65%**	**5.50%**	**14.65%**	**4.27%**	**11.48%**	**9.09%**
Russell 2000 Index		*-0.93%*	*-3.28%*	*10.06%*	*1.73%*	*10.06%*	*-2.58%*	*6.94%*	*7.00%*
Excess Return		*0.14%*	*2.11%*	*4.60%*	*3.77%*	*4.60%*	*6.85%*	*4.54%*	*2.09%*
Wellington	**3.56%**	**-0.49%**	**-1.10%**	**14.14%**	**4.50%**	**14.14%**	**0.62%**	**9.90%**	**9.87%**
Russell 2000 Index		*-0.93%*	*-3.28%*	*10.06%*	*1.73%*	*10.06%*	*-2.58%*	*6.94%*	*7.00%*
Excess Return		*0.43%*	*2.17%*	*4.09%*	*2.76%*	*4.09%*	*3.20%*	*2.96%*	*2.87%*

(1) The Domestic Equity Benchmark is the Russell 3000 Index as of 7/1/2021.
(2) TSW Blended Benchmark is the Russell 2500 Value Index as of 7/1/2019. Prior to 7/1/2019 it was the Russell 2500.

The table below details the rates of return for the fund's investment managers over various time periods ended June 30, 2024. Negative manager excess returns are shown in red, positive excess returns in green. Returns for one year or greater are annualized.

Net of Fees Returns for Periods Ended June 30, 2024									
Composite	Total Fund Weighting As of 6/30/2024	Last Month	Last 3 Months	FYTD	CYTD	LTM	3-YR	5-YR	10-YR
Total Non US Equity	**19.00%**	**-0.52%**	**-0.22%**	**11.31%**	**5.78%**	**11.31%**	**1.47%**	**5.80%**	**4.57%**
Non US Equity Benchmark (1)		*-0.10%*	*0.96%*	*11.62%*	*5.69%*	*11.62%*	*0.46%*	*5.55%*	*3.84%*
Excess Return		*-0.42%*	*-1.18%*	*-0.32%*	*0.09%*	*-0.32%*	*1.01%*	*0.25%*	*0.73%*
Core Non US Equity	**11.53%**	**-1.40%**	**-0.30%**	**11.12%**	**5.33%**	**11.12%**	**3.09%**	**5.95%**	**4.11%**
Core Non US Benchmark (2)		*-0.10%*	*0.96%*	*11.62%*	*5.69%*	*11.62%*	*0.46%*	*5.55%*	*3.84%*
Excess Return		*-1.30%*	*-1.26%*	*-0.50%*	*-0.36%*	*-0.50%*	*2.64%*	*0.40%*	*0.26%*
Aristotle	**1.46%**	**-2.21%**	**-0.88%**	**8.16%**	**2.74%**	**8.16%**	**0.82%**	**-**	**-**
MSCI EAFE		*-1.61%*	*-0.42%*	*11.54%*	*5.34%*	*11.54%*	*2.89%*	*-*	*-*
Excess Return		*-0.59%*	*-0.46%*	*-3.38%*	*-2.60%*	*-3.38%*	*-2.07%*	*-*	*-*
Artisan Partners	**3.34%**	**-0.58%**	**-1.26%**	**13.97%**	**8.60%**	**13.97%**	**1.55%**	**5.32%**	**-**
MSCI EAFE		*-1.61%*	*-0.42%*	*11.54%*	*5.34%*	*11.54%*	*2.89%*	*6.46%*	*-*
Excess Return		*1.03%*	*-0.84%*	*2.43%*	*3.26%*	*2.43%*	*-1.35%*	*-1.14%*	*-*
BlackRock SuperFund	**1.64%**	**-0.12%**	**1.14%**	**11.68%**	**5.85%**	**11.68%**	**-**	**-**	**-**
MSCI ACWI Ex-US		*-0.10%*	*0.96%*	*11.62%*	*5.69%*	*11.62%*	*-*	*-*	*-*
Excess Return		*-0.02%*	*0.18%*	*0.05%*	*0.16%*	*0.05%*	*-*	*-*	*-*
Causeway Capital	**3.69%**	**-2.28%**	**1.30%**	**10.71%**	**4.29%**	**10.71%**	**7.44%**	**9.45%**	**-**
MSCI EAFE		*-1.61%*	*-0.42%*	*11.54%*	*5.34%*	*11.54%*	*2.89%*	*6.46%*	*-*
Excess Return		*-0.67%*	*1.72%*	*-0.83%*	*-1.05%*	*-0.83%*	*4.55%*	*2.98%*	*-*
Lazard	**1.39%**	**-1.62%**	**-3.12%**	**8.23%**	**2.76%**	**8.23%**	**-0.20%**	**-**	**-**
MSCI EAFE		*-1.61%*	*-0.42%*	*11.54%*	*5.34%*	*11.54%*	*2.89%*	*-*	*-*
Excess Return		*-0.01%*	*-2.70%*	*-3.30%*	*-2.58%*	*-3.30%*	*-3.10%*	*-*	*-*
Emerging Markets	**1.48%**	**0.79%**	**2.68%**	**9.43%**	**6.57%**	**9.43%**	**-6.49%**	**0.76%**	**1.59%**
MSCI EM		*3.94%*	*5.00%*	*12.55%*	*7.49%*	*12.55%*	*-5.07%*	*3.10%*	*2.79%*
Excess Return		*-3.16%*	*-2.32%*	*-3.12%*	*-0.92%*	*-3.12%*	*-1.42%*	*-2.34%*	*-1.20%*
Wellington Emerging Markets	**1.48%**	**0.79%**	**2.68%**	**9.43%**	**6.57%**	**9.43%**	**-6.46%**	**0.66%**	**2.47%**
MSCI EM		*3.94%*	*5.00%*	*12.55%*	*7.49%*	*12.55%*	*-5.07%*	*3.10%*	*2.79%*
Excess Return		*-3.16%*	*-2.32%*	*-3.12%*	*-0.92%*	*-3.12%*	*-1.39%*	*-2.43%*	*-0.32%*
Non US Small Cap	**1.12%**	**-3.75%**	**-3.42%**	**8.67%**	**0.87%**	**8.67%**	**-5.13%**	**0.66%**	**-0.51%**
MSCI EAFE Small Cap		*-3.04%*	*-1.84%*	*7.78%*	*0.51%*	*7.78%*	*-3.35%*	*4.19%*	*4.30%*
Excess Return		*-0.71%*	*-1.58%*	*0.88%*	*0.36%*	*0.88%*	*-1.78%*	*-3.53%*	*-4.80%*
Wellington Int'l Small Cap Research	**1.12%**	**-3.75%**	**-3.42%**	**8.67%**	**0.87%**	**8.67%**	**-**	**-**	**-**
MSCI EAFE Small Cap		*-3.04%*	*-1.84%*	*7.78%*	*0.51%*	*7.78%*	*-*	*-*	*-*
Excess Return		*-0.71%*	*-1.58%*	*0.88%*	*0.36%*	*0.88%*	*-*	*-*	*-*
Global Equity	**4.88%**	**2.03%**	**-0.12%**	**12.97%**	**7.82%**	**12.97%**	**5.25%**	**10.53%**	**10.59%**
MSCI ACWI net		*2.23%*	*2.87%*	*19.38%*	*11.30%*	*19.38%*	*5.43%*	*10.76%*	*8.43%*
Excess Return		*-0.20%*	*-2.99%*	*-6.41%*	*-3.48%*	*-6.41%*	*-0.18%*	*-0.22%*	*2.15%*
Walter Scott Global Equity	**4.88%**	**2.03%**	**-0.12%**	**12.97%**	**7.82%**	**12.97%**	**5.25%**	**10.53%**	**10.59%**
Walter Scott Blended Benchmark (3)		*2.23%*	*2.87%*	*19.38%*	*11.30%*	*19.38%*	*5.43%*	*10.76%*	*8.43%*
Excess Return		*-0.20%*	*-2.99%*	*-6.41%*	*-3.48%*	*-6.41%*	*-0.18%*	*-0.22%*	*2.15%*

(1) The Non US Equity Index is the MSCI ACWI ex US Index as of 7/1/2003. Prior to 7/1/2003 it was the MSCI EAFE Index.
(2) The Core Non US Equity Index is the MSCI ACWI ex US as of 7/1/2007. Prior to 7/1/2007 it was the MSCI EAFE Index.
(3) The Walter Scott Blended Benchmark is the MSCI ACWI Index as 5/1/2008. Prior to 5/1/2008 it was the MSCI EAFE Index.

The table below details the rates of return for the fund's investment managers over various time periods ended June 30, 2024. Negative manager excess returns are shown in red, positive excess returns in green. Returns for one year or greater are annualized.

		Net of Fees Returns for Periods Ended June 30, 2024							
Composite	Total Fund Weighting As of 6/30/2024	Last Month	Last 3 Months	FYTD	CYTD	LTM	3-YR	5-YR	10-YR
Total Fixed Income	**19.18%**	**0.73%**	**-0.04%**	**3.50%**	**-0.58%**	**3.50%**	**-2.25%**	**1.04%**	**1.90%**
Fixed Income Benchmark (1)		*0.91%*	*0.19%*	*3.47%*	*-0.28%*	*3.47%*	*-2.68%*	*0.11%*	*1.63%*
Excess Return		*-0.18%*	*-0.23%*	*0.03%*	*-0.30%*	*0.03%*	*0.43%*	*0.93%*	*0.27%*
BlackRock SIO Bond Fund	**2.22%**	**0.90%**	**0.75%**	**6.89%**	**1.45%**	**6.89%**	**0.85%**	**2.57%**	**-**
BlackRock Custom Benchmark (2)		*0.41%*	*1.37%*	*5.49%*	*2.72%*	*5.49%*	*3.19%*	*2.29%*	-
Excess Return		*0.49%*	*-0.61%*	*1.39%*	*-1.27%*	*1.39%*	*-2.35%*	*0.28%*	-
Brandywine Asset Mgmt	**1.82%**	**-0.52%**	**-2.65%**	**-3.29%**	**-7.31%**	**-3.29%**	**-6.90%**	**-1.74%**	**-0.05%**
Brandywine Custom Benchmark (3)		*-0.10%*	*-1.83%*	*-1.06%*	*-4.38%*	*-1.06%*	*-7.07%*	*-3.29%*	*-1.24%*
Excess Return		*-0.42%*	*-0.82%*	*-2.23%*	*-2.92%*	*-2.23%*	*0.17%*	*1.55%*	*1.19%*
FIAM (Fidelity) Tactical Bond	**3.08%**	**0.78%**	**-0.01%**	**3.62%**	**-0.16%**	**3.62%**	**-1.28%**	**1.84%**	**-**
Bloomberg Aggregate		*0.95%*	*0.07%*	*2.63%*	*-0.71%*	*2.63%*	*-3.02%*	*-0.23%*	-
Excess Return		*-0.16%*	*-0.08%*	*0.99%*	*0.55%*	*0.99%*	*1.75%*	*2.08%*	-
Income Research & Management	**6.44%**	**0.90%**	**0.13%**	**3.12%**	**-0.25%**	**3.12%**	**-3.00%**	**0.36%**	**1.83%**
Bloomberg Gov/Credit		*0.87%*	*0.05%*	*2.74%*	*-0.68%*	*2.74%*	*-3.11%*	*-0.07%*	*1.51%*
Excess Return		*0.03%*	*0.09%*	*0.38%*	*0.42%*	*0.38%*	*0.12%*	*0.43%*	*0.33%*
Loomis Sayles	**2.38%**	**0.85%**	**0.51%**	**6.93%**	**1.17%**	**6.93%**	**-0.91%**	**2.92%**	**3.12%**
Loomis Sayles Custom Benchmark (4)		*0.95%*	*0.43%*	*5.31%*	*0.44%*	*5.31%*	*-1.38%*	*1.27%*	*2.43%*
Excess Return		*-0.09%*	*0.09%*	*1.62%*	*0.74%*	*1.62%*	*0.47%*	*1.65%*	*0.70%*
Manulife Strategic Fixed Income	**1.77%**	**0.77%**	**0.25%**	**4.33%**	**0.26%**	**4.33%**	**-0.95%**	**1.67%**	**-**
Bloomberg Multiverse		*0.15%*	*-1.03%*	*1.30%*	*-2.95%*	*1.30%*	*-5.26%*	*-1.84%*	-
Excess Return		*0.62%*	*1.28%*	*3.03%*	*3.21%*	*3.03%*	*4.30%*	*3.51%*	-
Mellon US Agg Bond Index	**1.46%**	**0.95%**	**0.07%**	**2.64%**	**-0.71%**	**2.64%**	**-**	**-**	**-**
Bloomberg Aggregate Bond Index		*0.95%*	*0.07%*	*2.63%*	*-0.71%*	*2.63%*	-	-	-
Excess Return		*0.00%*	*0.01%*	*0.01%*	*0.00%*	*0.01%*	-	-	-
Total Cash	**1.61%**	**0.44%**	**1.30%**	**5.48%**	**2.65%**	**5.48%**	**3.14%**	**2.25%**	**1.60%**
3-month Treasury Bill		*0.41%*	*1.32%*	*5.40%*	*2.63%*	*5.40%*	*3.03%*	*2.16%*	*1.51%*
Excess Return		*0.03%*	*-0.02%*	*0.08%*	*0.02%*	*0.08%*	*0.11%*	*0.10%*	*0.09%*
Total Marketable Assets	**72.15%**	**0.75%**	**0.50%**	**12.37%**	**5.96%**	**12.37%**	**2.66%**	**7.13%**	**6.42%**
Total Marketable Index (5)		*1.52%*	*1.62%*	*13.34%*	*6.76%*	*13.34%*	*2.57%*	*7.19%*	*6.68%*
Excess Return		*-0.77%*	*-1.12%*	*-0.97%*	*-0.80%*	*-0.97%*	*0.08%*	*-0.06%*	*-0.26%*

(1) The Fixed Income Benchmark is the Bloomberg Universal Bond Index as of 7/1/2007.

(2) The BlackRock Custom Benchmark is 3 Month SOFR compounded in arrears as of 1/1/2022.

(3) The Brandywine Blended Benchmark is the FTSE WGBI Ex-China Index as of 11/1/2021.

(4) The Loomis Sayles Custom Benchmark is 65% Bloomberg Aggregate and 35% Bloomberg High Yield.

(5) Marketable Assets Index is 40% Russell 3000, 26.7% MSCI ACWI ex US, and 33.3% Bloomberg Universal as of 7/1/2021.

The table below details the rates of return for the fund's investment managers over various time periods ended June 30, 2024. Negative manager excess returns are shown in red, positive excess returns in green. Returns for one year or greater are annualized.

Net of Fees Returns for Periods Ended June 30, 2024									
Composite	Total Fund Weighting As of 6/30/2024	Last Month	Last 3 Months	FYTD	CYTD	LTM	3-YR	5-YR	10-YR
Total Real Estate (Q1)* (5)	**9.28%**	**-1.19%**	**-2.43%**	**-7.07%**	**-5.26%**	**-7.07%**	**3.69%**	**5.98%**	**8.31%**
Real Estate Benchmark (1)		*-0.87%*	*-2.58%*	*-12.00%*	*-7.45%*	*-12.00%*	*2.47%*	*2.56%*	*5.89%*
Excess Return		*-0.32%*	*0.15%*	*4.93%*	*2.18%*	*4.93%*	*1.22%*	*3.42%*	*2.42%*
Strategic Core Real Estate (Q1)*	**5.47%**	**-2.19%**	**-3.42%**	**-9.07%**	**-7.45%**	**-9.07%**	**2.49%**	**3.96%**	**7.15%**
Real Estate Benchmark (1)		*-0.87%*	*-2.58%*	*-12.00%*	*-7.45%*	*-12.00%*	*2.47%*	*2.56%*	*5.89%*
Excess Return		*-1.33%*	*-0.84%*	*2.94%*	*-0.01%*	*2.94%*	*0.02%*	*1.40%*	*1.25%*
Tactical Non-Core Real Estate (Q1)*	**3.81%**	**0.31%**	**-0.95%**	**-3.94%**	**-1.78%**	**-3.94%**	**5.68%**	**9.57%**	**10.40%**
Real Estate Benchmark (1)		*-0.87%*	*-2.58%*	*-12.00%*	*-7.45%*	*-12.00%*	*2.47%*	*2.56%*	*5.89%*
Excess Return		*1.17%*	*1.62%*	*8.06%*	*5.66%*	*8.06%*	*3.21%*	*7.01%*	*4.51%*
Total Alternative Assets (Q1)*	**18.57%**	**0.97%**	**1.29%**	**3.71%**	**2.26%**	**3.71%**	**5.36%**	**10.38%**	**8.87%**
Alternative Assets Benchmark (2)		*2.54%*	*7.56%*	*25.08%*	*18.46%*	*25.08%*	*10.94%*	*13.48%*	*11.67%*
Excess Return		*-1.57%*	*-6.27%*	*-21.37%*	*-16.20%*	*-21.37%*	*-5.57%*	*-3.10%*	*-2.80%*
Total Private Equity (Q1)*	**13.84%**	**0.75%**	**1.09%**	**3.38%**	**2.02%**	**3.38%**	**5.14%**	**12.65%**	**11.40%**
Private Equity Benchmark (3)		*3.34%*	*10.40%*	*31.52%*	*24.19%*	*31.52%*	*13.76%*	*17.92%*	*16.26%*
Excess Return		*-2.59%*	*-9.31%*	*-28.14%*	*-22.17%*	*-28.14%*	*-8.62%*	*-5.27%*	*-4.86%*
Total Private Debt (Q1)*	**4.73%**	**1.64%**	**1.91%**	**4.72%**	**2.99%**	**4.72%**	**6.03%**	**5.34%**	**5.73%**
Private Debt Benchmark (4)		*0.93%*	*1.96%*	*12.70%*	*7.48%*	*12.70%*	*5.07%*	*4.88%*	*5.54%*
Excess Return		*0.71%*	*-0.05%*	*-7.98%*	*-4.50%*	*-7.98%*	*0.96%*	*0.46%*	*0.19%*

(1) The Real Estate Benchmark is the NCREIF NFI-ODCE Value Weight Net Index lagged 1 quarter as of 7/1/2015.

(2) The Alternative Assets Benchmark is 66.7% Russell 3000 Index + 2% lagged 1 quarter and 33.3% ((50% S&P LSTA Leveraged Loan 100 Index + 50% Bloomberg High Yield Index) + 1%) lagged 1 quarter as of 7/1/2022.

(3) The Private Equity Benchmark is the Russell 3000 Index + 2% lagged 1 quarter as of 7/1/2022.

(4) The Private Debt Benchmark is (50% MStar LSTA Leveraged Loan 100 Index / 50% Bloomberg High Yield Index) + 1% lagged 1 quarter as of 7/1/2022.

(5) Total Real Estate returns includes Townsend discretionary fee as of 7/1/2022.

*Real Estate and Alternatives market values reflect current custodian valuations, which are typically lagged approximately 1 quarter.

Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of June 30, 2024, with the distribution as of May 31, 2024. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

Asset Distribution Across Investment Managers

	June 30, 2024				May 31, 2024	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Total Domestic Equity	**$3,941,147,389**	**32.35%**	**$0**	**$60,541,314**	**$3,880,606,075**	**32.01%**
Large Cap Domestic Equity	**$2,305,420,983**	**18.93%**	**$0**	**$79,826,696**	**$2,225,594,288**	**18.36%**
Blackrock S&P 500	2,305,420,983	18.93%	0	79,826,696	2,225,594,288	18.36%
SMid Cap Domestic Equity	**$704,220,158**	**5.78%**	**$0**	**$(12,754,909)**	**$716,975,067**	**5.91%**
AllianceBernstein	445,959,496	3.66%	0	(6,218,531)	452,178,028	3.73%
TSW	258,260,662	2.12%	0	(6,536,377)	264,797,039	2.18%
Small Cap Domestic Equity	**$931,506,248**	**7.65%**	**$0**	**$(6,530,473)**	**$938,036,720**	**7.74%**
Boston Trust	236,923,311	1.95%	0	(2,705,850)	239,629,160	1.98%
Segall Bryant & Hamill	260,802,217	2.14%	0	(1,905,155)	262,707,371	2.17%
Wellington	433,780,720	3.56%	0	(1,919,469)	435,700,189	3.59%
Total Non US Equity	**$2,314,686,635**	**19.00%**	**$0**	**$(11,145,163)**	**$2,325,831,798**	**19.18%**
Core Non US Equity (1)	**$1,404,064,350**	**11.53%**	**$0**	**$(19,420,800)**	**$1,423,485,150**	**11.74%**
Aristotle	177,787,986	1.46%	0	(3,955,558)	181,743,544	1.50%
Artisan Partners	407,062,258	3.34%	0	(2,180,441)	409,242,699	3.38%
BlackRock Superfund	199,447,677	1.64%	0	(232,705)	199,680,382	1.65%
Causeway Capital	449,774,683	3.69%	0	(10,319,570)	460,094,253	3.79%
Lazard	169,339,080	1.39%	0	(2,724,095)	172,063,175	1.42%
Emerging Markets	**$179,813,061**	**1.48%**	**$0**	**$1,541,737**	**$178,271,324**	**1.47%**
Wellington Emerging Markets	179,813,061	1.48%	0	1,541,737	178,271,324	1.47%
Non US Small Cap	**$136,620,364**	**1.12%**	**$0**	**$(5,250,115)**	**$141,870,480**	**1.17%**
Wellington Int'l Small Cap Research	136,620,364	1.12%	0	(5,250,115)	141,870,480	1.17%
Global Equity	**$594,188,859**	**4.88%**	**$0**	**$11,984,015**	**$582,204,844**	**4.80%**
Walter Scott Global Equity	594,188,859	4.88%	0	11,984,015	582,204,844	4.80%
Total Fixed Income	**$2,336,137,563**	**19.18%**	**$0**	**$17,366,498**	**$2,318,771,064**	**19.13%**
BlackRock SIO Bond Fund	270,789,712	2.22%	0	2,499,255	268,290,457	2.21%
Brandywine Asset Mgmt	221,997,543	1.82%	0	(1,104,055)	223,101,598	1.84%
FIAM (Fidelity) Tactical Bond	375,407,619	3.08%	0	3,007,271	372,400,349	3.07%
Income Research & Management	784,651,371	6.44%	0	7,058,525	777,592,847	6.41%
Loomis Sayles	289,656,164	2.38%	0	2,523,351	287,132,813	2.37%
Manulife Strategic Fixed Income	215,765,425	1.77%	0	1,702,963	214,062,461	1.77%
Mellon US Agg Bond Index	177,869,728	1.46%	0	1,679,188	176,190,539	1.45%
Total Cash	**$196,464,243**	**1.61%**	**$(25,434,694)**	**$948,268**	**$220,950,669**	**1.82%**
Total Marketable Assets	**$8,788,435,830**	**72.15%**	**$(25,434,694)**	**$67,710,917**	**$8,746,159,607**	**72.14%**
Total Real Estate	**$1,130,822,864**	**9.28%**	**$2,442,061**	**$(10,951,862)**	**$1,139,332,665**	**9.40%**
Strategic Core Real Estate	666,562,084	5.47%	(2,971,436)	(13,107,594)	682,641,113	5.63%
Tactical Non-Core Real Estate	464,260,779	3.81%	6,181,696	1,387,532	456,691,551	3.77%
Total Alternative Assets	**$2,261,851,512**	**18.57%**	**$(6,528,374)**	**$29,581,082**	**$2,238,798,803**	**18.47%**
Private Equity	1,685,568,274	13.84%	(10,235,123)	16,533,658	1,679,269,739	13.85%
Private Debt	576,283,238	4.73%	3,706,749	13,047,425	559,529,065	4.61%
Total Fund Composite	**$12,181,110,205**	**100.0%**	**$(29,521,007)**	**$86,340,137**	**$12,124,291,075**	**100.0%**

-Alternatives market values reflect current custodian valuations, which may not be up to date.
(1) Includes $652,665 in legacy assets that are not actively managed and in liquidation following the termination of Fisher Investments.

New Hampshire Retirement System
Target History

30-Jun-2022 - 30-Jun-2024

Domestic Broad Eq	Russell 3000 Index	30.00%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF NFI-ODCE Value Weight Net	10.00%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	Russell 3000 Index+2.00%	10.00%
Other Alternatives	Bloomberg HY Corporate+1.00%	2.50%
Other Alternatives	Morningstar LSTA Leveraged Loan 100+1.00%	2.50%
		100.00%

30-Jun-2021 - 30-Jun-2022

Domestic Broad Eq	Russell 3000 Index	30.00%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF NFI-ODCE Value Weight Net	10.00%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	S&P 500 Index+3.00%	10.00%
Other Alternatives	Morningstar LSTA Leveraged Loan 100	5.00%
		100.00%

30-Sep-2020 - 30-Jun-2021

Domestic Broad Eq	S&P 500 Index	30.00%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF NFI-ODCE Value Weight Net	10.00%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	S&P 500 Index+3.00%	10.00%
Other Alternatives	Morningstar LSTA Leveraged Loan 100	5.00%
		100.00%

30-Jun-2015 - 30-Sep-2020

Domestic Broad Eq	S&P 500 Index	30.00%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF NFI-ODCE Value Weight Net	10.00%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	Alternative Asset Benchmark	15.00%
		100.00%

31-Mar-2015 - 30-Jun-2015

Domestic Broad Eq	Russell 3000 Index	37.30%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF Property Index+0.50%	8.70%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	S&P 500 Index+5.00%	9.00%
		100.00%

31-Dec-2014 - 31-Mar-2015

Domestic Broad Eq	Russell 3000 Index	37.70%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF Property Index+0.50%	8.80%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	S&P 500 Index+5.00%	8.50%
		100.00%

30-Sep-2014 - 31-Dec-2014

Domestic Broad Eq	Russell 3000 Index	39.00%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF Property Index+0.50%	8.60%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	S&P 500 Index+5.00%	7.40%
		100.00%

30-Jun-2014 - 30-Sep-2014

Domestic Broad Eq	Russell 3000 Index	39.60%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF Property Index+0.50%	8.90%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	S&P 500 Index+5.00%	6.50%
		100.00%

31-Mar-2014 - 30-Jun-2014

Domestic Broad Eq	Russell 3000 Index	42.20%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF Property Index+0.50%	8.60%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	S&P 500 Index+5.00%	4.20%
		100.00%

31-Dec-2013 - 31-Mar-2014

Domestic Broad Eq	Russell 3000 Index	41.80%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF Property Index+0.50%	9.10%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	S&P 500 Index+5.00%	4.10%
		100.00%

30-Sep-2013 - 31-Dec-2013

Domestic Broad Eq	Russell 3000 Index	42.90%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF Property Index+0.50%	8.60%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	S&P 500 Index+5.00%	3.50%
		100.00%

30-Jun-2013 - 30-Sep-2013

Domestic Broad Eq	Russell 3000 Index	42.50%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF Property Index+0.50%	9.00%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	S&P 500 Index+5.00%	3.50%
		100.00%

31-Mar-2013 - 30-Jun-2013

Domestic Broad Eq	Russell 3000 Index	43.00%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF Property Index+0.50%	8.60%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	Alternative Asset Benchmark	3.40%
		100.00%

31-Dec-2012 - 31-Mar-2013

Domestic Broad Eq	Russell 3000 Index	43.60%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF Property Index+0.50%	8.80%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	Alternative Asset Benchmark	2.60%
		100.00%

Alternatives Benchmark represents from 7/1/2022 to present: 66.7% Russell 3000 Idx + 2% (1 qtr lag) and 33.3% ((50% S&P LSTA Leveraged Loan 100 Idx + 50% Bloomberg HY Idx) + 1%) (1 qtr lag).
From 7/1/2019 to 7/1/2022: 66.7% S&P 500 +3% (1 qtr lag) + 33.3% S&P LSTA Leverage Loan 100 Index (1 qtr lag). From 7/1/2016 to 7/1/2019: 33.3% S&P 500 +3% (1 qtr lag) + 33.3% S&P LSTA Leverage Loan 100 Index (1 qtr lag) + 33.3% of Cash (6-mo USD LIBOR) + 5%. From 7/1/2015 to 7/1/2016: 33.3% S&P 500 +3% (1qtr lag) + 33.3% S&P LSTA Leverage Loan 100 Idx(1 qtr lag) + 33.3% of Cash (1 month USD LIBID) +5%. From 7/1/2013 to 7/1/2015: S&P 500 plus 5% (1 qtr lag). From 7/1/2011 to 7/1/2013: Qtr ending weight of Private Equity x S&P 500 plus 5% + Qtr ending weight Absolute Return x CPI + 5%. Prior to 7/1/2011: CPI + 5%.

New Hampshire Retirement System
Target History

30-Sep-2012 - 31-Dec-2012		
Domestic Broad Eq	Russell 3000 Index	43.90%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF Property Index+0.50%	8.70%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	Alternative Asset Benchmark	2.40%
		100.00%

30-Jun-2012 - 30-Sep-2012		
Domestic Broad Eq	Russell 3000 Index	43.50%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF Property Index+0.50%	9.00%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	Alternative Asset Benchmark	2.50%
		100.00%

31-Mar-2012 - 30-Jun-2012		
Domestic Broad Eq	Russell 3000 Index	40.10%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	7.60%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	Alternative Asset Benchmark	2.30%
		100.00%

31-Dec-2011 - 31-Mar-2012		
Domestic Broad Eq	Russell 3000 Index	39.70%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	8.00%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	Alternative Asset Benchmark	2.30%
		100.00%

30-Sep-2011 - 31-Dec-2011		
Domestic Broad Eq	Russell 3000 Index	40.20%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	7.40%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	Alternative Asset Benchmark	2.40%
		100.00%

30-Jun-2011 - 30-Sep-2011		
Domestic Broad Eq	Russell 3000 Index	42.50%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	5.40%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	Alternative Asset Benchmark	2.10%
		100.00%

31-Mar-2011 - 30-Jun-2011		
Domestic Broad Eq	Russell 3000 Index	43.00%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	5.30%
Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Alternative Asset Benchmark	1.70%
Global Equity Broad	MSCI ACWI (Net)	5.00%
		100.00%

31-Dec-2010 - 31-Mar-2011		
Domestic Broad Eq	Russell 3000 Index	43.00%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	5.20%
Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Alternative Asset Benchmark	1.80%
Global Equity Broad	MSCI ACWI (Net)	5.00%
		100.00%

30-Sep-2010 - 31-Dec-2010		
Domestic Broad Eq	Russell 3000 Index	42.80%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	5.40%
Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Alternative Asset Benchmark	1.80%
Global Equity Broad	MSCI ACWI (Net)	5.00%
		100.00%

30-Jun-2010 - 30-Sep-2010		
Domestic Broad Eq	Russell 3000 Index	42.90%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	5.00%
Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Alternative Asset Benchmark	2.10%
Global Equity Broad	MSCI ACWI (Net)	5.00%
		100.00%

31-Dec-2009 - 30-Jun-2010		
Domestic Broad Eq	Russell 3000 Index	43.30%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	4.70%
Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Alternative Asset Benchmark	2.00%
Global Equity Broad	MSCI ACWI (Net)	5.00%
		100.00%

30-Sep-2009 - 31-Dec-2009		
Domestic Broad Eq	Russell 3000 Index	42.30%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	5.50%
Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Alternative Asset Benchmark	2.20%
Global Equity Broad	MSCI ACWI (Net)	5.00%
		100.00%

30-Jun-2009 - 30-Sep-2009		
Domestic Broad Eq	Russell 3000 Index	41.50%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	6.20%
Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Alternative Asset Benchmark	2.30%
Global Equity Broad	MSCI ACWI (Net)	5.00%
		100.00%

Alternatives Benchmark represents from 7/1/2022 to present: 66.7% Russell 3000 Idx + 2% (1 qtr lag) and 33.3% ((50% S&P LSTA Leveraged Loan 100 Idx + 50% Bloomberg HY Idx) + 1%) (1 qtr lag).
From 7/1/2019 to 7/1/2022: 66.7% S&P 500 +3% (1 qtr lag) + 33.3% S&P LSTA Leverage Loan 100 Index (1 qtr lag). From 7/1/2016 to 7/1/2019: 33.3% S&P 500 +3% (1 qtr lag) + 33.3% S&P LSTA Leverage Loan 100 Index (1 qtr lag) + 33.3% of Cash (6-mo USD LIBOR) + 5%. From 7/1/2015 to 7/1/2016: 33.3% S&P 500 +3% (1qtr lag) + 33.3% S&P LSTA Leverage Loan 100 Idx(1 qtr lag) + 33.3% of Cash (1 month USD LIBID) +5%. From 7/1/2013 to 7/1/2015: S&P 500 plus 5% (1 qtr lag). From 7/1/2011 to 7/1/2013: Qtr ending weight of Private Equity x S&P 500 plus 5% + Qtr ending weight Absolute Return x CPI + 5%. Prior to 7/1/2011: CPI + 5%.

New Hampshire Retirement System
Target History

31-Mar-2009 - 30-Jun-2009

Domestic Broad Eq	Russell 3000 Index	38.00%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	9.30%
Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Alternative Asset Benchmark	2.70%
Global Equity Broad	MSCI ACWI (Net)	5.00%
		100.00%

31-Dec-2008 - 31-Mar-2009

Domestic Broad Eq	Russell 3000 Index	37.20%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	9.70%
Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Alternative Asset Benchmark	3.10%
Global Equity Broad	MSCI ACWI (Net)	5.00%
		100.00%

30-Sep-2008 - 31-Dec-2008

Domestic Broad Eq	Russell 3000 Index	38.90%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index	8.20%
Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Consumer Price Index (W) + 5%	2.90%
Global Equity Broad	MSCI ACWI (Net)	5.00%
		100.00%

30-Jun-2008 - 30-Sep-2008

Domestic Broad Eq	Russell 3000 Index	40.00%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index	7.30%
Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Consumer Price Index (W) + 5%	2.70%
Global Equity Broad	MSCI ACWI (Net)	5.00%
		100.00%

30-Jun-2007 - 30-Jun-2008

Domestic Broad Eq	Russell 3000 Index	44.00%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index	5.00%
Intl Equity	MSCI ACWI xUS (Net)	16.00%
Other Alternatives	Consumer Price Index (W) + 5%	5.00%
		100.00%

30-Nov-2006 - 30-Jun-2007

Domestic Broad Eq	Russell 3000 Index	44.00%
Domestic Fixed	Bloomberg Universal	26.00%
Real Estate	NCREIF Property Index	5.00%
Intl Equity	MSCI ACWI xUS (Net)	16.00%
Other Alternatives	Consumer Price Index (W) + 5%	5.00%
Global Fixed-Inc	Brandywine Blended Benchmark	4.00%
		100.00%

30-Jun-2003 - 30-Nov-2006

Domestic Broad Eq	Russell 3000 Index	47.00%
Domestic Fixed	Bloomberg Universal	18.00%
Real Estate	NCREIF Property Index	10.00%
Intl Equity	MSCI ACWI xUS (Net)	12.00%
Other Alternatives	Consumer Price Index (W) + 5%	10.00%
Global Fixed-Inc	Brandywine Blended Benchmark	3.00%
		100.00%

31-Oct-1997 - 30-Jun-2003

Domestic Broad Eq	S&P 500 Index	50.00%
Domestic Fixed	Bloomberg Universal	18.00%
Real Estate	NCREIF Property Index	10.00%
Intl Equity	MSCI EAFE (Net)	9.00%
Other Alternatives	Consumer Price Index (W) + 5%	10.00%
Global Fixed-Inc	Brandywine Blended Benchmark	3.00%
		100.00%

31-Mar-1990 - 31-Oct-1997

Domestic Broad Eq	S&P 500 Index	50.00%
Domestic Fixed	Bloomberg Universal	18.00%
Real Estate	NCREIF Property Index	10.00%
Intl Equity	MSCI EAFE (Net)	9.00%
Other Alternatives	Consumer Price Index (W) + 5%	10.00%
Global Fixed-Inc	JPM GBI Global Unhedged USD	3.00%
		100.00%

30-Jun-1975 - 31-Mar-1990

Domestic Broad Eq	S&P 500 Index	50.00%
Real Estate	NCREIF Property Index	10.00%
Intl Equity	MSCI EAFE (Net)	9.00%
Other Alternatives	Consumer Price Index (W) + 5%	10.00%
Global Fixed-Inc	JPM GBI Global Unhedged USD	3.00%
		82.00%

Alternatives Benchmark represents from 7/1/2022 to present: 66.7% Russell 3000 Idx + 2% (1 qtr lag) and 33.3% ((50% S&P LSTA Leveraged Loan 100 Idx + 50% Bloomberg HY Idx) + 1%) (1 qtr lag).
From 7/1/2019 to 7/1/2022: 66.7% S&P 500 +3% (1 qtr lag) + 33.3% S&P LSTA Leverage Loan 100 Index (1 qtr lag). From 7/1/2016 to 7/1/2019: 33.3% S&P 500 +3% (1 qtr lag) + 33.3% S&P LSTA Leverage Loan 100 Index (1 qtr lag) + 33.3% of Cash (6-mo USD LIBOR) + 5%. From 7/1/2015 to 7/1/2016: 33.3% S&P 500 +3% (1qtr lag) + 33.3% S&P LSTA Leverage Loan 100 Idx(1 qtr lag) + 33.3% of Cash (1 month USD LIBID) +5%. From 7/1/2013 to 7/1/2015: S&P 500 plus 5% (1 qtr lag). From 7/1/2011 to 7/1/2013: Qtr ending weight of Private Equity x S&P 500 plus 5% + Qtr ending weight Absolute Return x CPI + 5%. Prior to 7/1/2011: CPI + 5%.

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Past performance is no guarantee of future results.

NHRS
New Hampshire Retirement System

Independent Investment Committee's 1st Quarter Report to the Board

August 13, 2024

NHRS
New Hampshire Retirement System

Discussion Topics

- Asset Allocation and Portfolio Structure
- Investment Performance
- Universe Comparisons
- Investment Expenses by Asset Class

Key Observations

NHRS Pension Plan

Asset Allocation and Portfolio Structure

- Overall, the Fund's asset allocation was close to the permissible Policy ranges at quarter-end. The Fund's allocation to defensive positions, including fixed income and cash, represented 19.5% of total assets. The fixed income allocation was slightly below the policy range by 0.8%, partially balanced by a 0.3% allocation to cash equivalent instruments. The Fund had an overweight to domestic equity and alternatives relative to target, and underweight positions to international equity fixed income, and real estate.

Investment Performance

- The Fund had a gross return of 3.83% over the third quarter of Fiscal Year 2024, underperforming the market benchmark return of 4.78% and ranking in the 73rd percentile of its peers. On a net-of-fees basis, the Fund returned 3.72%
  - The Alternative Assets and U.S. Equity portfolios detracted most from relative performance over the quarter
  - By contrast, the Non-U.S. Equity and Real Estate portfolios contributed to performance. Artisan, Lazard, Wellington EM, and Wellington International Small Cap drove Non-U.S. Equity outperformance.
- Overall, performance is competitive relative to both benchmarks over longer periods measured. The Fund outperformed the peer group median over the long term, ranking in the top 24% of peers for the trailing 10-year period, and in the top 43% of peers over the last 25 years
- The Fund exhibits attractive risk-adjusted performance, as measured by the Sharpe Ratio over the last five years. In addition, relative risk-adjusted scores, as measured by the Excess Return Ratio, are also strong. Both of these ratios ranked in the top 34% of peers

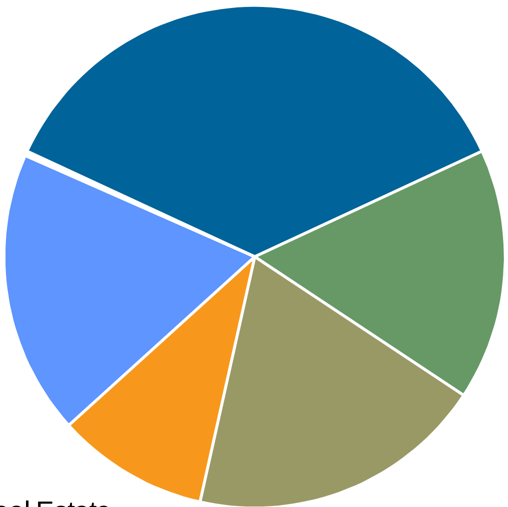
Other Developments

- In late April, Jeff Moore, co-PM of FIAM Tactical Bond (and FIAM Core Plus Fixed Income strategies), announced his retirement effective end of year 2024. FIAM is still determining how they will restructure the impacted PM teams and a replacement co-PM has not been named for FIAM Tactical Bond. Callan does not have any immediate concerns regarding the FIAM Tactical Bond PM team given Mike Plage has been a co-PM on the strategy since 2016 and Jeff will remain on the team until the end of the year.
- Murali Srikantaiah, Partner and PM of Wellington Emerging Markets Local Equity ("EMLE"), will be withdrawing from the Wellington partnership on June 30, 2024. Bo Meunier, a partner of the firm and current PM of Emerging Markets Equity ("EME") and dedicated China equity strategies, assumed Co-PM responsibilities of EMLE on January 1, 2024. David Reed will be named Meunier's backup portfolio manager. Meunier will be supported by the dedicated EME team, whose existing research will effectively translate to both EME and EMLE portfolios. Meunier is relocating from Hong Kong to London to manage the broader Emerging Markets team better. There are no plans for resource expansion. Callan will continue to monitor the transition but does have concerns about a potential change in investment philosophy and portfolio structure given Srikantaiah's departure.

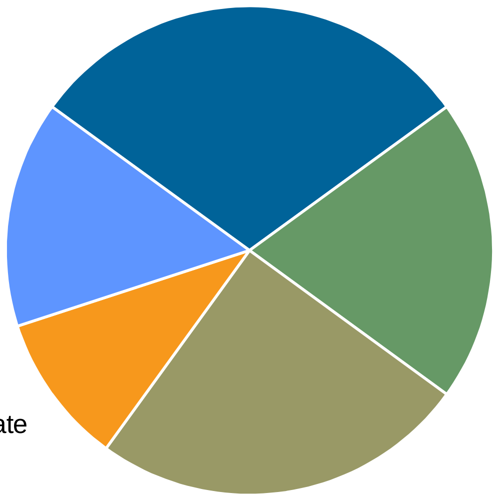
Total Fund

Actual Asset Allocation vs. Target, as of March 31, 2024

Actual Asset Allocation



Target Asset Allocation



Asset Class	$000s Actual	Weight Actual	Target	Percent Difference	$000s Difference
Domestic Equity	4,417,181	36.3%	30.0%	6.3%	763,188
Non US Equity	1,969,763	16.2%	20.0%	(3.8%)	(466,233)
Fixed Income	2,335,505	19.2%	25.0%	(5.8%)	(709,489)
Real Estate	1,187,800	9.8%	10.0%	(0.2%)	(30,198)
Alternative Assets	2,227,808	18.3%	15.0%	3.3%	400,811
Cash	41,920	0.3%	0.0%	0.3%	41,920
Total	12,179,977	100.0%	100.0%		

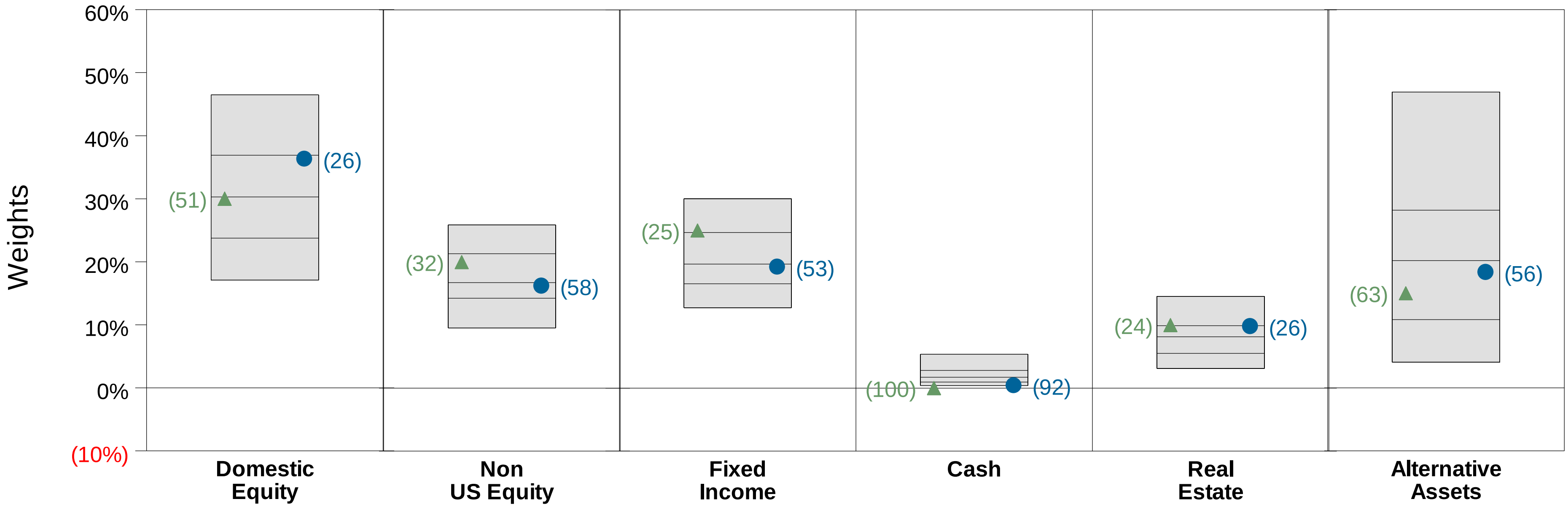
*Current Quarter Target = 30% Russell 3000 Index, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net lagged 3 months, 10% Russell 3000 Index lagged 3 months+2.0%, 2.5% Bloomberg HY Corp lagged 3 months+1.0%, and 2.5% S&P/LSTA Lev Loan 100 lagged 3 months+1.0%.

**The United States equity portion of the Walter Scott Global Equity fund is allocated to the Domestic Equity composite.

Total Fund

Actual Asset Allocation vs. Large Public DB Plan (>$1B) Peer Group, as of March 31, 2024

Asset Class Weights vs Callan Public Fund Spons - Large (>1B)



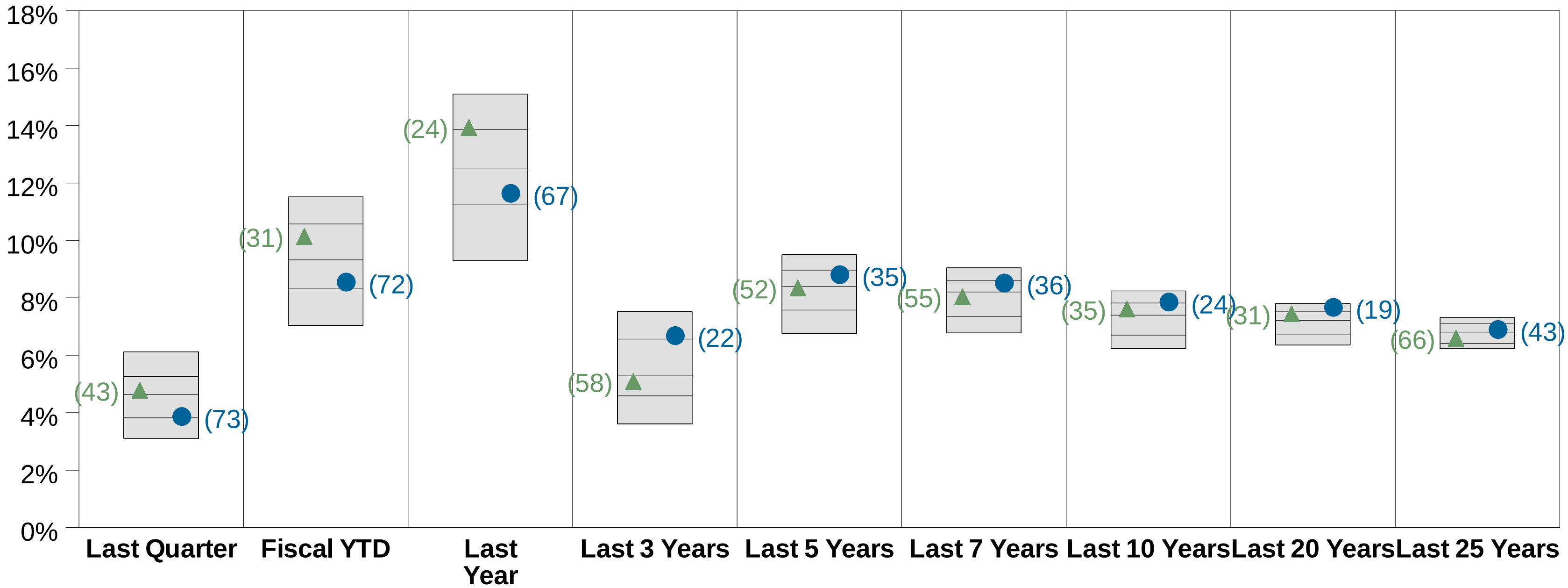
	Domestic Equity	Non US Equity	Fixed Income	Cash	Real Estate	Alternative Assets
10th Percentile	46.49	25.88	30.04	5.36	14.55	46.92
25th Percentile	36.90	21.33	24.69	2.80	9.89	28.18
Median	30.29	16.73	19.68	1.72	8.15	20.19
75th Percentile	23.76	14.25	16.56	0.95	5.52	10.83
90th Percentile	17.09	9.54	12.74	0.40	3.11	4.06
Fund ●	36.27	16.17	19.17	0.34	9.75	18.29
Target ▲	30.00	20.00	25.00	0.00	10.00	15.00
% Group Invested	100.00%	98.36%	96.72%	85.25%	80.33%	80.00%

*Current Quarter Target = 30% Russell 3000 Index, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net lagged 3 months, 10% Russell 3000 Index lagged 3 months+2.0%, 2.5% Bloomberg HY Corp lagged 3 months+1.0%, and 2.5% S&P/LSTA Lev Loan 100 lagged 3 months+1.0%.

Total Fund Performance – Gross of Investment Management Fees

Performance vs. Large Public DB Plan (>$1B) Peers, as of March 31, 2024

Performance vs Callan Public Fund Large DB (Gross)



	Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 20 Years	Last 25 Years
10th Percentile	6.12	11.52	15.09	7.52	9.51	9.05	8.24	7.80	7.32
25th Percentile	5.26	10.58	13.86	6.56	8.97	8.61	7.82	7.52	7.12
Median	4.63	9.33	12.49	5.28	8.40	8.20	7.40	7.21	6.78
75th Percentile	3.83	8.34	11.26	4.59	7.58	7.35	6.70	6.74	6.41
90th Percentile	3.10	7.04	9.30	3.61	6.76	6.77	6.24	6.35	6.23
Total Fund Composite ●	3.83	8.52	11.61	6.66	8.78	8.49	7.82	7.64	6.87
Total Fund Benchmark ▲	4.78	10.14	13.94	5.09	8.35	8.04	7.61	7.44	6.59

Note: Investment results are shown gross of investment management fees versus corresponding peer group.

*Current Quarter Target = 30% Russell 3000 Index, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net lagged 3 months, 10% Russell 3000 Index lagged 3 months+2.0%, 2.5% Bloomberg HY Corp lagged 3 months+1.0%, and 2.5% S&P/LSTA Lev Loan 100 lagged 3 months+1.0%.

Callan

INVESTMENT EXPENSES BY ASSET CLASS

Investment activity fees and other related expenses:

For the Quarter and Fiscal Year to Date through 3/31/24 (in thousands)

	Assets Under Management	Fees (Quarter)	Fees (FYTD)
Equity Investments			
Domestic (U.S.)	4,417,163	2,536	7,790
Non-U.S.	1,969,782	2,322	6,833
Fixed Income Investments	2,335,505	1,501	4,425
Alternative Investments	2,227,808	3,301	14,569
Real Estate Investments	1,187,800	2,969	9,970
Cash	41,920		
Subtotal Gross Investment Mgt Fees		**12,629**	**43,587**
Custodial Fees		186	679
Brokerage Fees		687	1,550
Investment Advisor Fees		163	488
Investment Professional Fees		121	422
Investment Staff Administrative Expense		295	781
Subtotal Investment Servicing Fees		**1,451**	**3,920**
TOTAL GROSS INVESTMENT EXPENSES	**12,179,977**	**14,080**	**47,508**

Notes:

1. Fees for both the Quarter and the Fiscal Year to Date shown here are reported on a cash basis. For most fees, there is a lag between the service provided and payment of the fee.

2. Gross fees are those paid in the quarter for partnership operating costs.

3. Annual audited GAAP accrual fee amounts are included in the Annual Comprehensive Financial Report (ACFR), audited by the external auditor Plante Moran, as well as in the Comprehensive Annual Investment Report (CAIR). Both reports are available at https://www.nhrs.org/funding-and-investments/reports-valuations.

4. NHRS requires a "most favored nation" clause in investment contracts that states that if another comparable public plan invests in a fund at a lower fee structure, NHRS' fees will also be adjusted downward.

DEFINITION OF ASSET CLASSES

Domestic Equity: The allocation to domestic equity serves to expose the fund to the largest economy of the world. An allocation to domestic equity should allow for return enhancement and principal appreciation.

Non-U.S. Equity: The allocation to non-U.S. equity, both developed and emerging markets, will serve as potential for return enhancement and principal appreciation. A secondary consideration is the diversification it provides from the U.S. market. While the U.S. and non-U.S. markets are considerably correlated, they are not perfectly correlated. Assets that are not perfectly correlated serve to reduce volatility over the long term.

Fixed Income: The investment in fixed income will serve to reduce volatility experienced in the equity markets, as well as offer an opportunity for return enhancement by investment in selected securities (for example, investment grade corporates and high yield).
A portion of the fixed income allocation is expected to be invested in Treasury or other government-related issues, which will serve to reduce risk within the portfolio.

Alternative Investments: Alternative investments are nontraditional investments, not covered by another investment class. In general, alternative investments are incorporated into the NHRS asset allocation to enhance the portfolio's risk-adjusted return (private equity/private debt) or to diversify volatility (opportunistic strategies). While the risk associated with these types of investments is higher than that of other asset classes, the expected return is also higher.

Real Estate: The investment in real estate will serve as an inflation hedge, return enhancement opportunity, income generator, and diversification source and will include investments within core, value-added, and opportunistic opportunities.

LEGISLATIVE COMMITTEE

New Hampshire Retirement System
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Website: www.nhrs.org - Email: info@nhrs.org

2024 Legislative Tracker

Final

Legislation introduced in the 2024 session that would impact the New Hampshire Retirement System (NHRS, the retirement system) is listed below. For details on a particular bill, visit the State of New Hampshire General Court website at: http://gencourt.state.nh.us/

Note: Bills that have been killed or for which no further action is expected in the current legislative session are shaded in gray

BILL #	BRIEF DESCRIPTION	PRIMARY SPONSOR	STATUS
2024 NHRS-RELATED BILLS			
HB 1211	This bill temporarily increases the number of hours a retired employee can work in a calendar year from 1,352 to 1,872. After 10 years, the number of hours would revert to 1,352.	Rep. Mark Proulx	2/22/24: House, on a voice vote, accepted committee recommendation of inexpedient to legislate (ITL). **The bill is dead.**
HB 1267	This bill prohibits the investment of funds of the state treasury, executive branch agencies, and the state retirement system in investments which consider environmental, social, and governance (ESG) criteria.	Rep. Mike Belcher	2/8/24: House, on a voice vote, accepted committee recommendation of inexpedient to legislate (ITL). **The bill is dead.**
HB 1279	This bill provides that the state shall pay 7.5% of local employer retirement contributions for Group I Teachers and Group II Police and Fire members.	Rep. Michael Edgar	4/18/24: Senate, on voice vote, accepted committee recommendation of refer to interim study. **No further action expected in 2024.**
HB 1299	This bill makes community college fire educators eligible for Group II membership.	Rep. Douglas Trottier	2/15/24: House, on a voice vote, accepted committee recommendation of inexpedient to legislate (ITL). **The bill is dead.**
HB 1307	This bill, as amended, makes a one-time supplemental allowance of $500 in fiscal year 2025 to accidental disability benefit retirees and beneficiaries retired prior to or on July 1, 2018, who have an annual pension benefit of $50,000 or less. The bill also provides for any future supplemental allowances and cost-of-living adjustments for accidental disability beneficiaries to be granted without regard to years of creditable service.	Rep. Hope Damon	**7/19/24: Signed into law by the Governor. Effective 7/1/24.**
HB 1421	This bill requires the NHRS Board of Trustees to contract for two investment consulting firms and review their performance.	Rep. Stephen Pearson	2/15/24: House, on a voice vote, accepted committee recommendation of inexpedient to legislate (ITL). **The bill is dead.**

BILL #	BRIEF DESCRIPTION	PRIMARY SPONSOR	STATUS
HB 1435	This bill provides that if a retirement system retiree returns to being a member of the system, the portion of the retiree's allowance which is paid to a former spouse under a qualified domestic relations order will continue.	Rep. Barbara Comtois	2/8/24: House, on a voice vote, accepted committee recommendation of inexpedient to legislate (ITL). **The bill is dead.**
HB 1451	This bill provides that mandatory overtime shall be reported as part of the full base rate of compensation.	Rep. Carol McGuire	5/23/24: Senate, on a voice vote, accepted committee recommendation of inexpedient to legislate (ITL). **The bill is dead.**
HB 1559	This bill, as amended, establishes a new retirement system disability benefit for Group II members who retire as a result of a purposeful, violent attack by means of a deadly weapon. (Note: This bill replaced SB 134)	Rep. John Hunt	**7/12/24: Signed into law by the Governor. Effective 7/1/24.**
HB 1647	This bill, as amended, increases the multiplier for Group II Tier B members to 2.5% for all years worked in excess of 15 years for members who retire under service or disability retirement. The bill includes a $26 million appropriation toward the cost of this change.	Rep. Peter Leishman	**7/19/24: Signed into law by the Governor. Effective 6/30/24.**
HB 1653	This bill modifies the definition of earnable compensation for Group II members hired prior to July 1, 2011, and who did not attain vested status prior to January 1, 2012.	Rep. Kevin Pratt	2/15/24: House, on a voice vote, accepted committee recommendation of refer to interim study. **No further action expected in 2024.**
HB 1673	This bill redefines average final compensation for Group II members hired prior to July 1, 2011, and who did not attain vested status prior to January 1, 2012.	Rep. Kevin Pratt	2/15/24: House, on a voice vote, accepted committee recommendation of refer to interim study. **No further action expected in 2024.**
SB 309	This bill changes the vesting period for retirement system benefits from 10 years to 5 years.	Sen. Donna Soucy	4/11/24: Senate, on voice vote, tabled the bill. **No further action expected in 2024.**
SB 368	This bill links the recalculation of a Group I retiree's NHRS benefit to his or her full retirement age under the federal Social Security system for members who retired prior to July 1, 2023, and who have not attained age 65 prior to July 1, 2024.	Sen. Donovan Fenton	3/21/24: Senate, on voice vote, accepted committee recommendation of refer to interim study. **No further action expected in 2024.**
SB 520	This bill requires state and local public retirement systems to discharge its duties solely in the financial interest of the participants and beneficiaries.	Sen. Bill Gannon	2/21/24: Senate, on a voice vote, accepted committee recommendation of inexpedient to legislate (ITL). **The bill is dead.**
Committee Key: ED&A = Executive Departments & Administration; **Location Key:** LOB = Legislative Office Building; SH = State House.			

RETAINED/RE-REFERRED 2023 BILLS			
HB 183	This bill allows retired Group II Fire members to be employed by the state fire academy and not have those employment hours count against the annual limit on part-time hours.	Rep. Dan Wolf	1/3/24: House, on voice vote, accepted committee recommendation of inexpedient to legislate (ITL). **The bill is dead.**

HB 250	This bill modifies the amount of the retirement annuity payable upon the accidental death of a member to 100 percent of average final compensation at the member's death with a maximum benefit of $85,000.	Rep. Ben Baroody	1/3/24: Senate, on voice vote, accepted committee recommendation of refer to interim study. **The bill is dead.**
HB 436	This bill, as amended, provides a one-time, $50 million appropriation toward the retirement system's unfunded pension liability in fiscal year 2023.	Rep. Kevin Pratt	4/18/24: Senate, on voice vote, accepted committee recommendation of refer to interim study. **No further action expected in 2024.**
HB 449	This bill increases the service retirement and disability retirement annuity multiplier for the first 20 years of service of Group II retirement system members under the transition provisions adopted in 2011.	Rep. Jeff Goley	1/3/24: House, on voice vote, accepted committee recommendation of inexpedient to legislate (ITL). **The bill is dead.**
HB 559	This bill establishes a defined contribution retirement plan for new state employees who begin service on or after July 1, 2024, and who would previously have been enrolled in Group I. All new state employees on and after July 1, 2024, will be required to participate in a defined contribution plan administered by the state Deferred Compensation Commission and would not be members of NHRS.	Rep. Dan McGuire	1/3/24: House voted 201-174 to accept a motion of indefinite postponement. The bill can only be taken up by a two-thirds vote. **No further action expected in 2024.**
HB 571	This bill authorizes a one-time payment to a retired Group II member or beneficiary.	Rep. Ben Baroody	1/3/24: House, on voice vote, accepted committee recommendation of inexpedient to legislate (ITL). **The bill is dead.**
SB 134	The bill establishes a new retirement system disability benefit for Group II members who retire as a result of a purposeful, violent attack by means of a deadly weapon. A floor amendment added to the bill by the House related to landfill permitting.	Sen. Regina Birdsell	5/30/24: Senate, on a voice vote, non-concurred with House version of the bill. **The bill is dead.** **Note:** The underlying Group II enhanced disability sections was added to another bill (HB 1559) and adopted by the House and Senate.

2024 Legislative Calendar

2024 HOUSE SCHEDULE

Tuesday, September 3, 2024 – First day for incumbents running for re-election to file LSRs with complete information

Friday, September 13, 2024 – Last day prior to the General Election for incumbents running for re-election to file LSRs with complete information

Friday, October 25, 2024 – Last day to file 2024 Interim Study reports

Wednesday, November 6, 2024 – First day for all Representatives to file LSRs with complete information

Friday, November 22, 2024 – Last day to file LSRs with complete information (4:00 p.m.) Ten-day signoff begins

Thursday, January 2, 2025 – Last day to sign-off on all LSRs (12:00 p.m.)

Friday, January 24, 2025 – Last day to introduce House Bills; Last day to amend House Rules by majority vote

2024 SENATE SCHEDULE

None listed.

BENEFITS COMMITTEE

New Hampshire Retirement System
Benefits Committee Meeting

Consent Agenda
July 2, 2024

Disability Application Recommendations

1. G.R. Grant ordinary disability retirement (ODR) to this group II member who worked for the State of New Hampshire and has 12 years and 10 months of creditable service, based on medical evidence that supports his claim for permanent incapacity from his work duties due to a medical condition.
2. D.T. Grant ordinary disability retirement (ODR) to this group I member who worked for the State of New Hampshire and has 18 years and 1 month of creditable service, based on medical evidence that supports her claim for permanent incapacity from her work duties due to a medical condition.

New Hampshire Retirement System
Benefits Committee Meeting

Consent Agenda
July 31, 2024

Disability Application Recommendations

1. D.C. Grant ordinary disability retirement (ODR) to this group I member who worked for a political subdivision and has 13 years and 5 months of creditable service, based on medical evidence that supports her claim for permanent incapacity from her work duties.

2. J.D. Grant accidental disability retirement (ADR) to this group II member who worked for a political subdivision and has 10 years and 4 months of creditable service, based on medical evidence that supports his claim for permanent incapacity from his work duties.

3. M.L. Grant ordinary disability retirement (ODR) to this group I member who worked for a political subdivision and has 20 years and 7 months of creditable service, based on medical evidence that supports his claim for permanent incapacity from his work duties.

4. G.L. Grant accidental disability retirement (ADR) to this group II member who worked for the State of New Hampshire and has 16 years and 6 months of creditable service, based on medical evidence that supports his claim for permanent incapacity from his work duties.

5. D.T. Grant ordinary disability retirement (ODR) to this group I member who worked for the State of New Hampshire and has 20 years and 7 months of creditable service, based on medical evidence that supports her claim for permanent incapacity from her work duties.

6. W.V. Grant accidental disability retirement (ADR) to this group I member who worked for the State of New Hampshire and has 11 months of creditable service, based on medical evidence that supports his claim for permanent incapacity from his work duties due to a medical condition.

7. K.W. Grant ordinary disability retirement (ODR) to this group I member who worked for the State of New Hampshire and has 11 years and 9 months of creditable service, based on medical evidence that supports his claim for permanent incapacity from his work duties due to a medical condition.

PERSONNEL PERFORMANCE & COMPENSATION COMMITTEE

Oral Presentation Only

AD HOC REAL ESTATE COMMITTEE

Oral Presentation Only

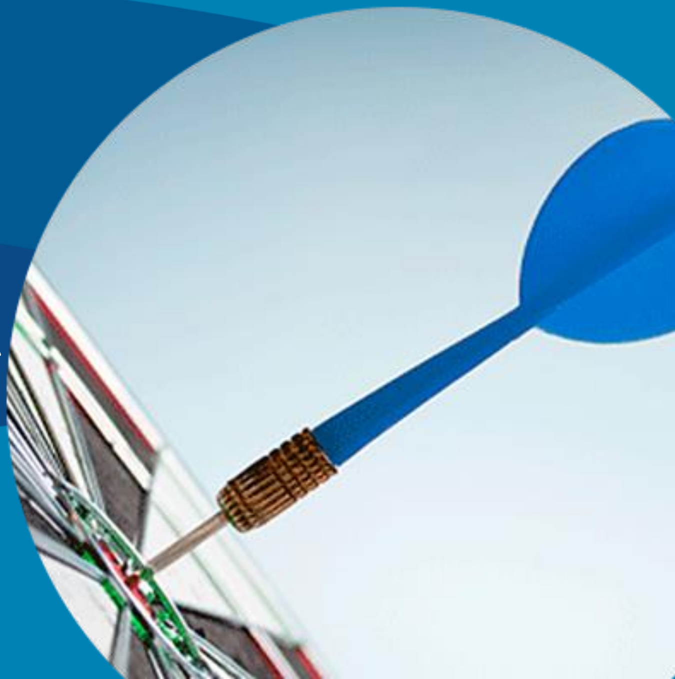
New Hampshire Retirement System
June 30, 2023 Funding Valuation

August 13, 2024

Heidi Barry, ASA, FCA, MAAA

Casey Ahlbrandt-Rains, ASA, FCA, MAAA

Jeffrey Tebeau, FSA, EA, FCA, MAAA



Today’s Topics

- Purposes of the Valuation
- Executive Summary
- Plan Experience
- Changes for the June 30, 2023 Funding Valuation
- Pension Funded Status and Contributions
- Medical Subsidy Methodology
- Key Takeaways
- Assumed Rate of Return
- Timeline
- Questions

PURPOSES OF THE VALUATION

Purposes of the Valuation

- To measure the System’s funding progress
- To determine the employer contribution rates for Fiscal Years 2026 and 2027

GRS

EXECUTIVE SUMMARY

June 30, 2023 Valuation
Executive Summary – Pension

Covered Group	Employees	Teachers	Police	Fire	Total
I. Number of Participants as of June 30, 2023					
a. Actives	24,640	18,141	4,042	1,766	48,589
b. Retirees, Disabilities, and Beneficiaries	21,302	15,607	4,764	1,930	43,603
c. Vested Terminations	1,668	1,364	185	49	3,266
d. Non-Vested Inactive Terminations	13,005	4,626	1,092	103	18,826
e. Total	60,615	39,738	10,083	3,848	114,284
f. Total Covered Annual Payroll	$ 1,412,494,283	$ 1,260,239,621	$ 349,469,309	$ 155,892,931	$ 3,178,096,144
g. Ratio of Actives to Benefit Recipients	1.2	1.2	0.8	0.9	1.1
II. Statutory Funding Information					
a. Actuarial Present Value of Projected Benefits	$ 6,641,746,991	$ 7,682,270,435	$ 3,892,933,528	$ 1,826,589,794	$ 20,043,540,748
b. Actuarial Present Value of Future Normal Costs	996,689,517	1,144,270,739	576,346,719	295,792,975	3,013,099,950
c. Actuarial Accrued Liability (AAL): a. – b.	5,645,057,474	6,537,999,696	3,316,586,809	1,530,796,819	17,030,440,798
d. Actuarial Value of Assets	3,850,701,345	4,210,979,415	2,310,556,236	1,123,345,036	11,495,582,032
e. Unfunded Actuarial Accrued Liability (UAAL): c. – d.	1,794,356,129	2,327,020,281	1,006,030,573	407,451,783	5,534,858,766
f. Funded Status: d. / c.	68.2%	64.4%	69.7%	73.4%	67.5%
III. Additional Information on Payroll					
State	$ 628,330,727	$ -	$ 94,372,975	$ 2,428,519	$ 725,132,221
Political Subdivisions	784,163,556	1,260,239,621	255,096,334	153,464,412	2,452,963,923
Total	$ 1,412,494,283	$ 1,260,239,621	$ 349,469,309	$ 155,892,931	$ 3,178,096,144
IV. Contribution Rates for Fiscal Year 2026/2027 (% of Payroll)					
Member	7.00%	7.00%	11.55%	11.80%	
Employer* (Including Health Subsidy)	12.80%	19.23%	30.95%	29.15%	

** Employees employer contribution rate is weighted average of 12.87% and 12.75% for State and Political Subdivision Employees, respectively.*

GRS

June 30, 2023 Valuation
Executive Summary – Medical Subsidy

Covered Group	State Employees	Political Subdivision Employees	Teachers	Police and Fire	Grand Total
I. Number of Participants Covered by					
Post Retirement Medical Subsidy as of June 30, 2023					
a. Actives	-	-	-	1,291	1,291
b. Retirees, Disabilities, and Beneficiaries	1,224	937	3,745	2,963	8,869
c. Vested Terminations	-	-	-	-	-
d. Total	1,224	937	3,745	4,254	10,160
e. Total NHRS Covered Annual Payroll	$ 628,330,727	$ 784,163,556	$ 1,260,239,621	$ 505,362,240	$ 3,178,096,144
II. Statutory Funding Information					
a. Actuarial Present Value of Projected Benefits	$ 36,220,162	$ 36,797,255	$ 175,793,207	$ 262,284,517	$ 511,095,141
b. Actuarial Present Value of Future Normal Costs	-	-	-	3,755,771	3,755,771
c. Actuarial Accrued Liability (AAL): a. – b.	36,220,162	36,797,255	175,793,207	258,528,746	507,339,370
d. Valuation Assets	3,787,317	9,076,989	14,703,773	22,749,215	50,317,294
e. Unfunded Actuarial Accrued Liability (UAAL): c. – d.	32,432,845	27,720,266	161,089,434	235,779,531	457,022,076
f. Funded Status: d. / c.	10.5%	24.7%	8.4%	8.8%	9.9%

June 30, 2023 Valuation
Executive Summary – Contribution Rates

State Members

Covered Group	Employees	Teachers	Police	Fire	Total
Total Normal Cost (% of Payroll)	9.42%		17.35%	17.90%	10.47%
UAAL Contribution (% of Payroll)	10.11%		22.92%	20.82%	11.81%
Total Pension Contribution (% of Payroll)	19.53%		40.27%	38.72%	22.28%
Fiscal Year 2026					
Member Contributions (% of Payroll)	7.00%		11.55%	11.80%	7.61%
Employer Pension Contribution (% of Payroll)	12.53%		28.72%	26.92%	14.67%
Employer Medical Subsidy Contribution (% of Payroll)	0.34%		2.23%	2.23%	0.59%
Total Employer Contributions for Fiscal Year 2026					
1. Percent of Payroll	12.87%	N/A	30.95%	29.15%	15.26%
2. Projected Payroll for Fiscal Year	$ 686,593,950		$ 103,123,898	$ 2,653,708	$ 792,371,556
3. Projected Dollar Amount	$ 88,364,641	N/A	$ 31,916,846	$ 773,556	$ 121,055,043
Fiscal Year 2027					
Member Contributions (% of Payroll)	7.00%		11.55%	11.80%	7.61%
Employer Pension Contribution (% of Payroll)	12.53%		28.72%	26.92%	14.67%
Employer Medical Subsidy Contribution (% of Payroll)	0.34%		2.23%	2.23%	0.59%
Total Employer Contributions for Fiscal Year 2027					
1. Percent of Payroll	12.87%	N/A	30.95%	29.15%	15.26%
2. Projected Payroll for Fiscal Year	$ 707,191,769		$ 106,217,615	$ 2,733,319	$ 816,142,703
3. Projected Dollar Amount	$ 91,015,581	N/A	$ 32,874,352	$ 796,762	$ 124,686,695

June 30, 2023 Valuation
Executive Summary – Contribution Rates

Political Subdivison Members

Covered Group	Employees	Teachers	Police	Fire	Total
Total Normal Cost (% of Payroll)	9.42%	9.89%	17.35%	17.90%	11.02%
UAAL Contribution (% of Payroll)	10.11%	15.39%	22.92%	20.82%	14.82%
Total Pension Contribution (% of Payroll)	19.53%	25.28%	40.27%	38.72%	25.84%
Fiscal Year 2026					
Member Contributions (% of Payroll)	7.00%	7.00%	11.55%	11.80%	7.77%
Employer Pension Contribution (% of Payroll)	12.53%	18.28%	28.72%	26.92%	18.07%
Employer Medical Subsidy Contribution (% of Payroll)	0.22%	0.95%	2.23%	2.23%	0.93%
Total Employer Contributions for Fiscal Year 2026					
1. Percent of Payroll	12.75%	19.23%	30.95%	29.15%	19.00%
2. Projected Payroll for Fiscal Year	$ 856,876,690	$ 1,357,140,233	$ 278,750,652	$ 167,694,707	$ 2,660,462,282
3. Projected Dollar Amount	$ 109,251,778	$ 260,978,067	$ 86,273,327	$ 48,883,007	$ 505,386,179
Fiscal Year 2027					
Member Contributions (% of Payroll)	7.00%	7.00%	11.55%	11.80%	7.77%
Employer Pension Contribution (% of Payroll)	12.53%	18.28%	28.72%	26.92%	18.07%
Employer Medical Subsidy Contribution (% of Payroll)	0.22%	0.95%	2.23%	2.23%	0.93%
Total Employer Contributions for Fiscal Year 2027					
1. Percent of Payroll	12.75%	19.23%	30.95%	29.15%	19.00%
2. Projected Payroll for Fiscal Year	$ 882,582,991	$ 1,391,068,739	$ 287,113,172	$ 172,725,548	$ 2,733,490,450
3. Projected Dollar Amount	$ 112,529,331	$ 267,502,519	$ 88,861,527	$ 50,349,497	$ 519,242,874

June 30, 2023 Valuation
Executive Summary – Contribution Rates

Total NHRS Members

Covered Group	Employees	Teachers	Police	Fire	Total
Fiscal Year 2026					
1. Projected Payroll for Fiscal Year	$ 1,543,470,640	$ 1,357,140,233	$ 381,874,550	$ 170,348,415	$ 3,452,833,838
2. Projected Employer Dollar Amount	$ 197,616,419	$ 260,978,067	$ 118,190,173	$ 49,656,563	$ 626,441,222
Fiscal Year 2027					
1. Projected Payroll for Fiscal Year	$ 1,589,774,760	$ 1,391,068,739	$ 393,330,787	$ 175,458,867	$ 3,549,633,153
2. Projected Employer Dollar Amount	$ 203,544,912	$ 267,502,519	$ 121,735,879	$ 51,146,259	$ 643,929,569

PLAN EXPERIENCE

June 30, 2023 Valuation
Active Member Experience

	June 30, 2022	June 30, 2023	Percent Change
Count	48,687	48,589	(0.2)%
Total Payroll (000s)	$3,077,584	$3,178,096	3.3%
Average Pay	$63,212	$65,408	3.5%
Average Age	46.3	46.3	0.0%
Average Service	11.4	11.3	(0.9)%

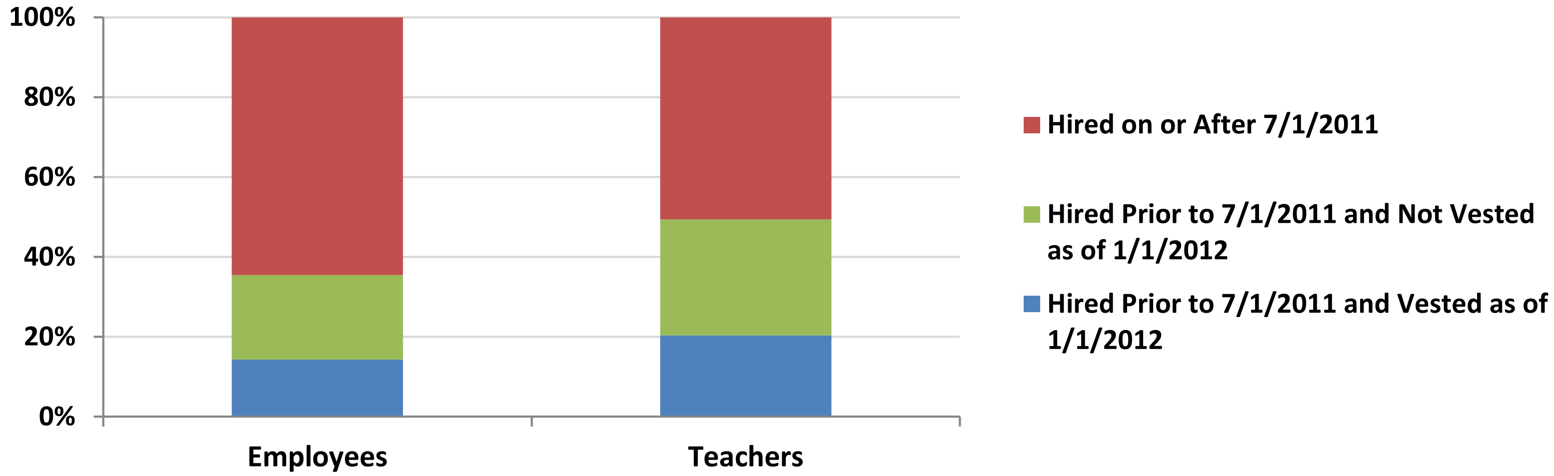
Salary increases were higher than expected for all member classifications.

	June 30, 2022		June 30, 2023		Percent Change in Payroll
	Active Members	Valuation Payroll (000s)	Active Members	Valuation Payroll (000s)	
Employees	24,644	$1,367,482	24,640	$1,412,494	3.29%
Teachers	18,217	1,226,570	18,141	1,260,240	2.75%
Police	4,103	336,500	4,042	349,469	3.85%
Fire	1,723	147,032	1,766	155,893	6.03%
Total	48,687	$3,077,584	48,589	$3,178,096	3.27%

Total payroll is assumed to grow at 2.50% for Teachers and 3.00% for other member classifications going forward.

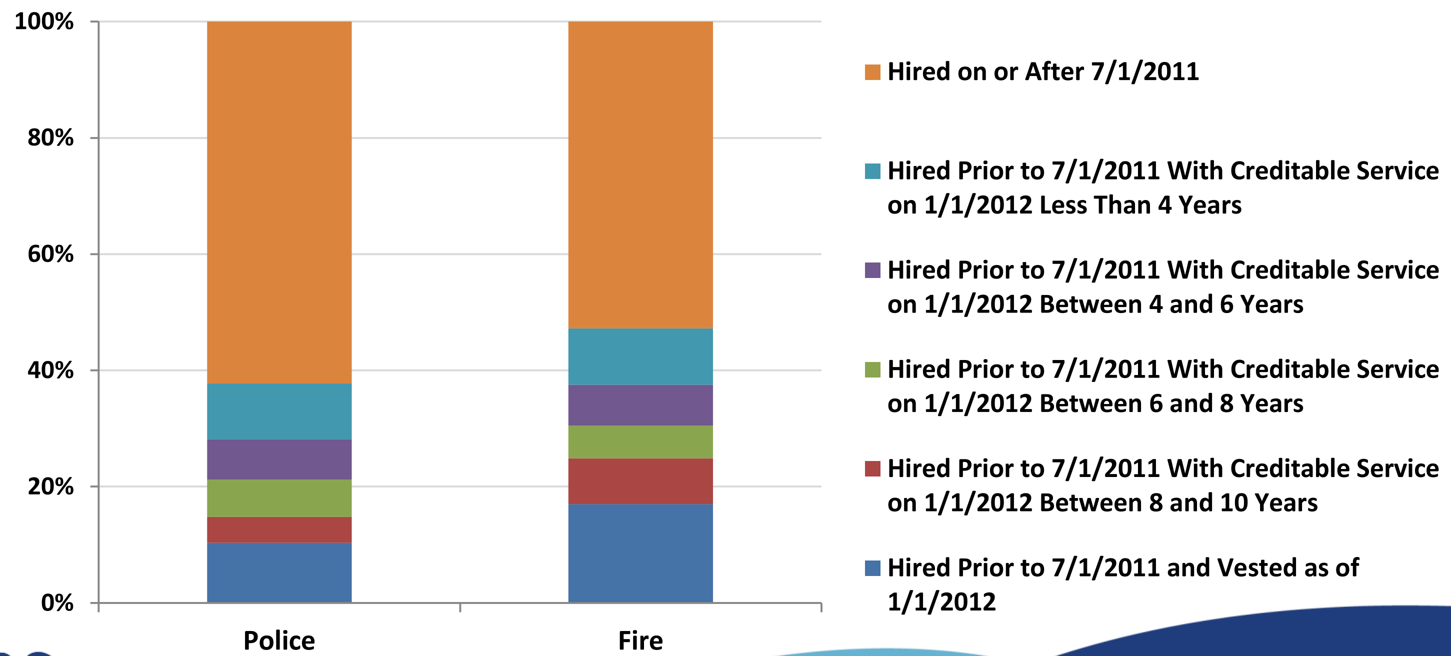
Proportion of Active Population by Benefit Structure as of June 30, 2023 – Group I

	Employees	Teachers
Hired Prior to 7/1/2011 and Vested as of 1/1/2012	3,525	3,694
Hired Prior to 7/1/2011 and Not Vested as of 1/1/2012	5,220	5,265
Hired on or After 7/1/2011	15,895	9,182
Total	24,640	18,141

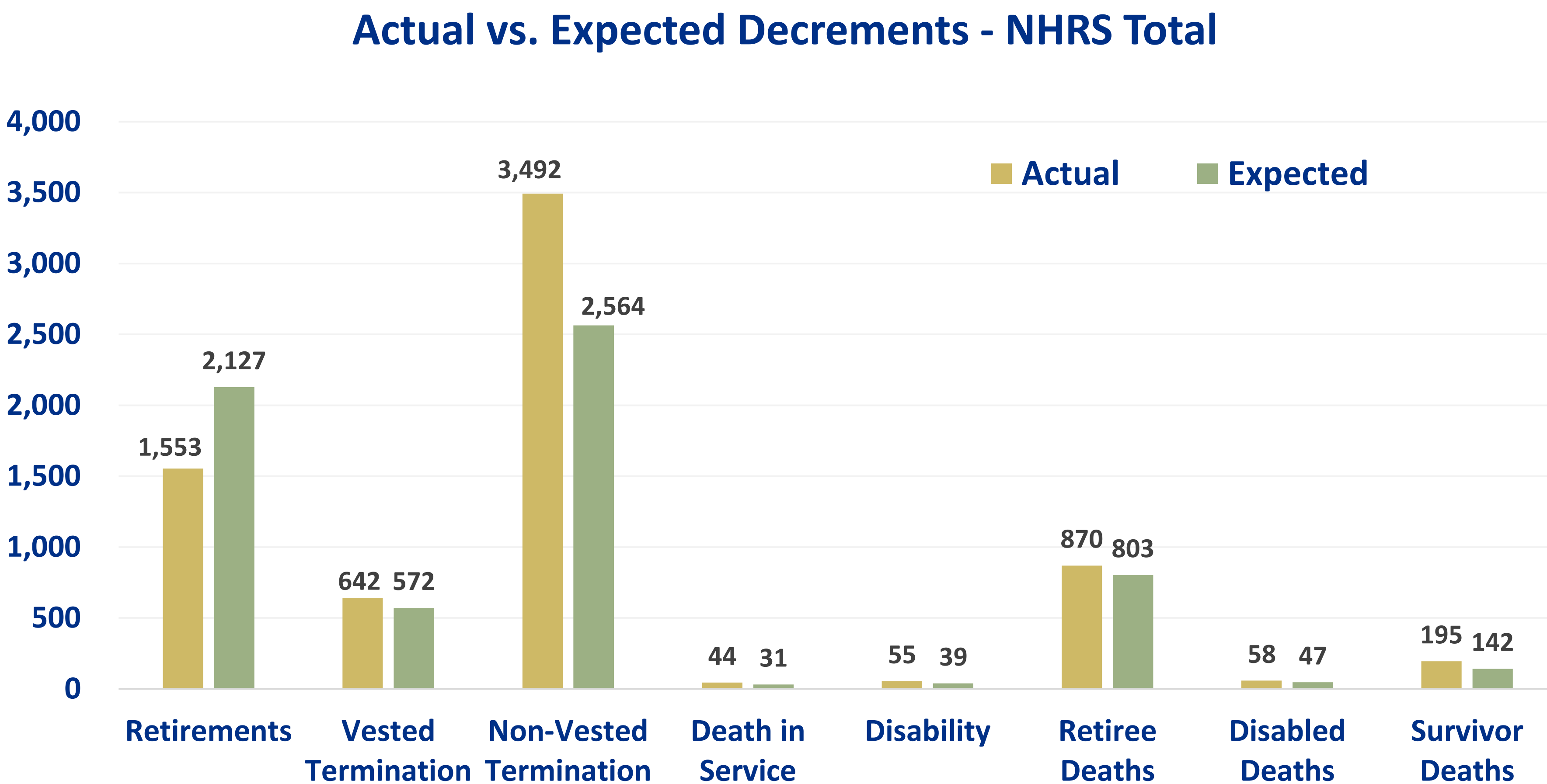


Proportion of Active Population by Benefit Structure as of June 30, 2023 – Group II

	Police	Fire
Hired Prior to 7/1/2011 and Vested as of 1/1/2012	417	300
Hired Prior to 7/1/2011 With Creditable Service on 1/1/2012 Between 8 and 10 Years	181	139
Hired Prior to 7/1/2011 With Creditable Service on 1/1/2012 Between 6 and 8 Years	259	99
Hired Prior to 7/1/2011 With Creditable Service on 1/1/2012 Between 4 and 6 Years	281	125
Hired Prior to 7/1/2011 With Creditable Service on 1/1/2012 Less Than 4 Years	387	171
Hired on or After 7/1/2011	2,517	932
Total	4,042	1,766



June 30, 2023 Valuation Demographic Experience



June 30, 2023 Valuation Demographic Experience

	June 30, 2022	June 30, 2023	Percent Change
Benefit Recipient Count	42,415	43,603	2.8%
Annual Allowances (000s)	$927,297	$968,769	4.5%
Average Allowance	$ 21,862	$ 22,218	1.6%

- There were fewer retirements than expected among active members and more deaths than expected among benefit recipients based on projections from the prior year.
- Ratio of actives to benefit recipients is 1.1, indicating a continued shift to a maturing plan.

GRS

June 30, 2023 Valuation
Asset Experience

- Combined for Pension and Medical Subsidy
  - Market Return of 7.99% (dollar weighted)
    - Not the same as NHRS time-weighted calculation
    - Not to be used as a performance measure
  - Actuarial Rate of Return 6.91%
    - Asset losses scheduled to be recognized over the next four years (next slide)
- Market Value of Assets $11.51 billion
- Actuarial Value of Assets $11.55 billion

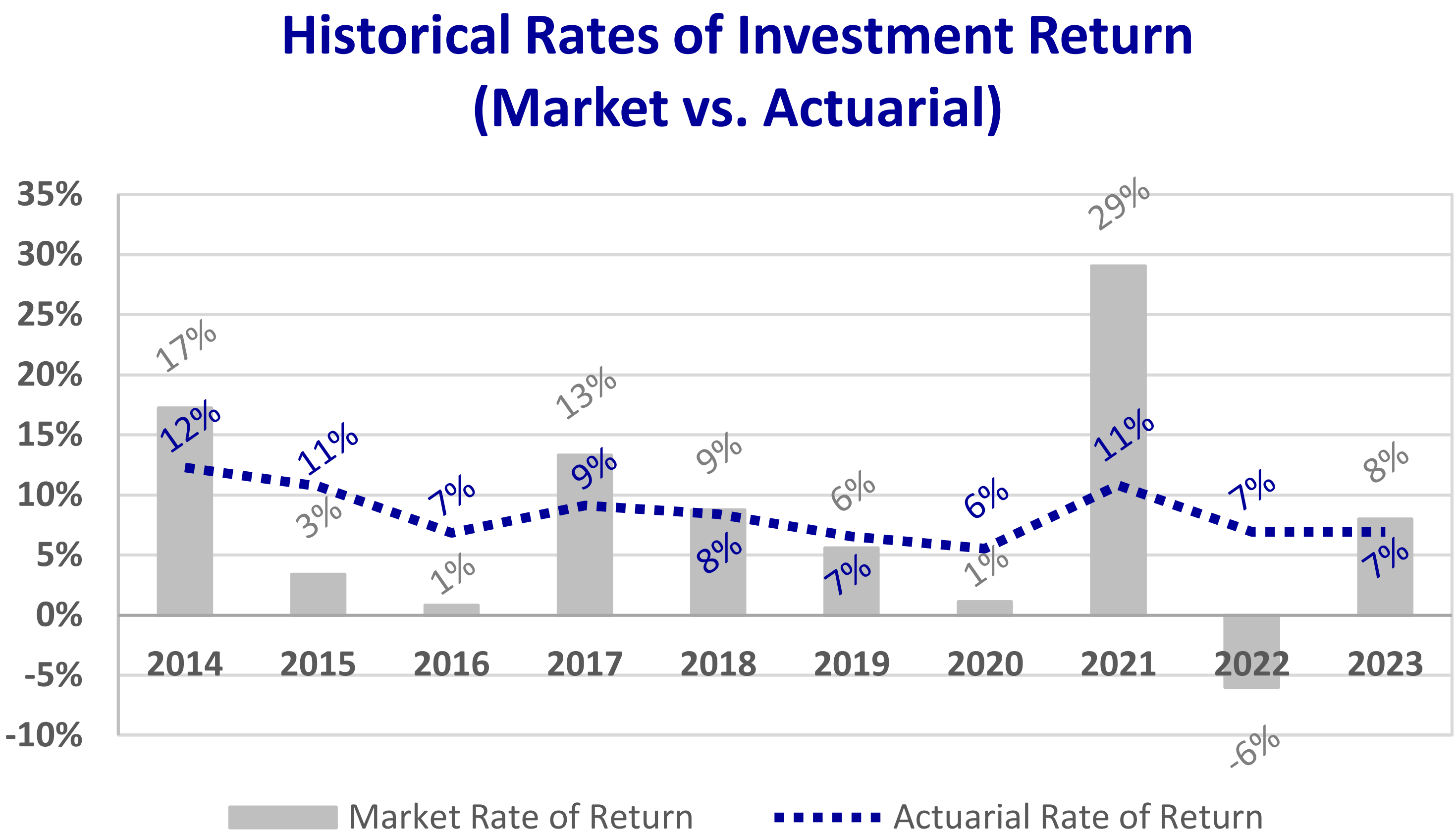
GRS

June 30, 2023 Valuation
Actuarial Value of Assets

Year Ended June 30:	2021	2022	2023	2024	2025	2026	2027
A. Actuarial Value Beginning of Year	$ 9,485,963,700	$10,312,682,279	$10,895,279,638				
B. Market Value End of Year	11,573,674,295	10,753,348,857	11,509,543,587				
C. Market Value Beginning of Year	9,134,075,534	11,573,674,295	10,753,348,857				
D. Non-Investment Net Cash Flow*	(189,334,651)	(127,984,808)	(98,613,371)				
E. Investment Income							
E1. Market Total: B - C - D	2,628,933,412	(692,340,630)	854,808,101				
E2. Assumed Rate	6.75%	6.75%	6.75%				
E3. Amount for Immediate Recognition	633,912,505	691,786,567	732,103,174				
E4. Amount for Phased-In Recognition: E1-E3	1,995,020,907	(1,384,127,197)	122,704,927				
F. Phased-In Recognition of Investment Income							
F1. Current Year: 0.20 x E4	399,004,181	(276,825,439)	24,540,985				
F2. First Prior Year	(102,051,727)	399,004,181	(276,825,439)	$ 24,540,985			
F3. Second Prior Year	(27,538,113)	(102,051,727)	399,004,181	(276,825,439)	$ 24,540,985		
F4. Third Prior Year	26,206,697	(27,538,113)	(102,051,727)	399,004,181	(276,825,439)	$ 24,540,985	
F5. Fourth Prior Year	86,519,687	26,206,698	(27,538,115)	(102,051,726)	399,004,183	(276,825,441)	$ 24,540,987
F6. Total Recognized Investment Gain (Loss)	382,140,725	18,795,600	17,129,885	44,668,001	146,719,729	(252,284,456)	24,540,987
G. Preliminary Actuarial Value End of Year: A + D + E3 + F6	$10,312,682,279	$10,895,279,638	$11,545,899,326				
H. Additional Recognized G/L due to Corridor	-	-	-				
I. Final Actuarial Value after 20% Corridor	$10,312,682,279	$10,895,279,638	$11,545,899,326				
J. Difference between Market & Actuarial Value: B-I	$ 1,260,992,016	$ (141,930,781)	$ (36,355,739)				
K. Recognized Rate of Return	10.82%	6.93%	6.91%				
L. Market Rate of Return	29.08%	(6.02%)	7.99%				
M. Ratio of Actuarial Value to Market Value	89.10%	101.32%	100.32%				

* *Information regarding net cash flows for funding purposes is provided separately from the GASB Statement Nos. 67 and 74 information and may differ. Total non-investment net cash flow includes $681,061 in expenses that were unallocated in the GASB accounting statements. Additionally, the non-investment net cash flow excludes $2,600 in contributions that were reported for GASB accounting statements.*

June 30, 2023 Valuation
Actuarial Value of Assets



June 30, 2023 Valuation Plan Experience

- Gain/(Loss) recognized (Pension only) from July 1, 2022 through June 30, 2023 (before benefit and assumption changes are reflected):
  - Investment Gain/(Loss): $17.3 million
  - Liability Gain/(Loss): $(100.5) million
  - Net Gain/(Loss) recognized $(83.2) million*
  - Increased Pension Funded Ratio 1.7%
- Investment experience over the two-year valuation cycle was favorable
  - The recognized asset gains were $19 million in 2022 and $17 million in 2023 (pension and medical subsidy)
- Plan experience as a whole was unfavorable for pension and favorable for the medical subsidy over the two-year period from July 1, 2021 through June 30, 2023

* *The total loss for pension and medical subsidy combined was $65 million comprised of an asset gain of $17 million and a liability loss of $82 million.*

CHANGES FOR THE JUNE 30, 2023 FUNDING VALUATION

Changes for the June 30, 2023 Funding Valuation

- Plan changes (reflected in 2022 valuation):
  - House Bill No. 1535 - TSA to current retirees
    - Terminally funded by the State - an appropriation of $10,793,500 was made by the State for this benefit
  - Senate Bill No. 363 allows members who commenced Group II service between January 1, 2002, and June 30, 2011, to purchase nonqualified service time in order to reduce certain transition provision requirements for service retirement
    - The member is responsible for paying the full actuarial cost of the service credit purchased
- Plan changes (reflected in 2023 valuation):
  - House Bill No. 2 - defers the recalculation of a Group I retirees' NHRS benefit from age 65 to his or her full retirement age under the federal Social Security system
    - Increase in actuarial accrued liabilities of approximately $18.7 million for Employees and $25.2 million for Teachers
    - Decreased the funded status of 0.2% for both Employees and Teachers
  - House Bill No. 2 – includes TSA to current retirees
    - Terminally funded by the State - an appropriation of $7.1 million is expected to be made by the State for this benefit
  - HB 1587 modifies the definition of Average Final Compensation (AFC) for Group II members who commenced service on or after July 1, 2011 or who have not attained vested status prior to January 1, 2012
    - Terminally funded by the State - an appropriation of $42.9 million was made by the State for this benefit

Changes for the June 30, 2023 Valuation

- Assumption and method changes:
  - Set of new demographic and economic assumptions were adopted as a result of the experience study of the four-year period ending June 30, 2023
  - Investment return assumption remains at 6.75%
    - Our analysis pertains specifically to NHRS –the analysis is based on forward-looking measures of likely investment return outcomes for the asset classes in the System’s new investment policy
    - 6.75% is within our reasonable range
  - Wage inflation and price inflation assumptions increased from 2.75%/2.00% to 3.00%/2.25%, respectively
  - $74.6 million decrease in liabilities
  - 0.3% increase in the pension funded ratio

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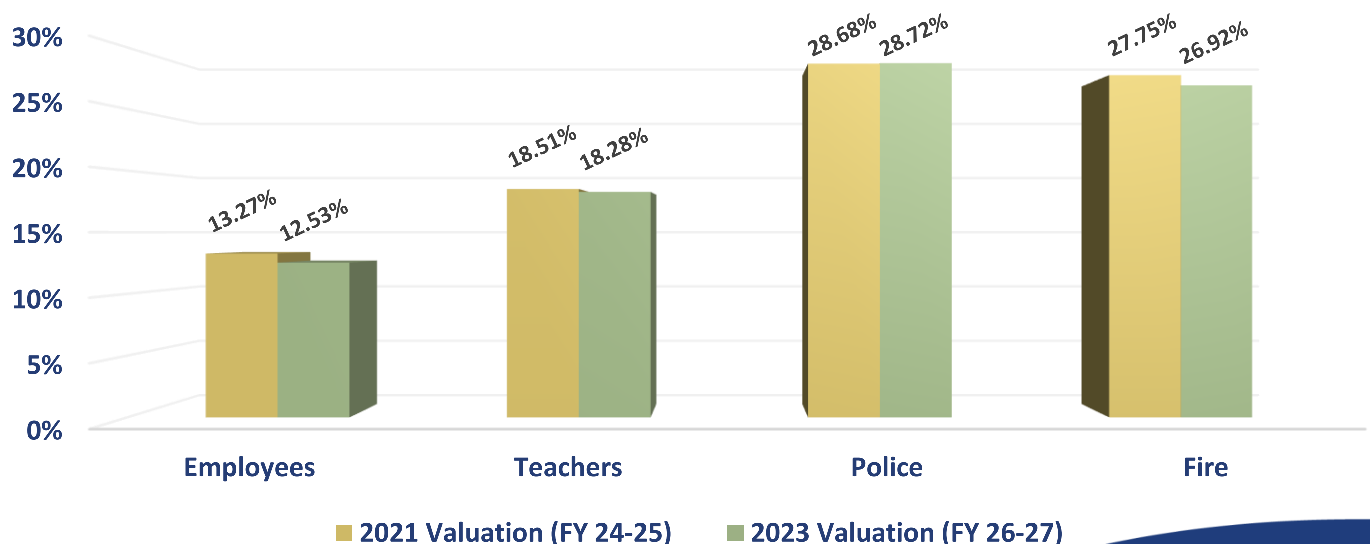
Changes in Pension Contribution Rates

- Employer rates for the 2026-2027 biennium decreased from 2024-2025 rates (slight increase for Police)
  - Most of the decrease in pension rates is attributable to assumption changes



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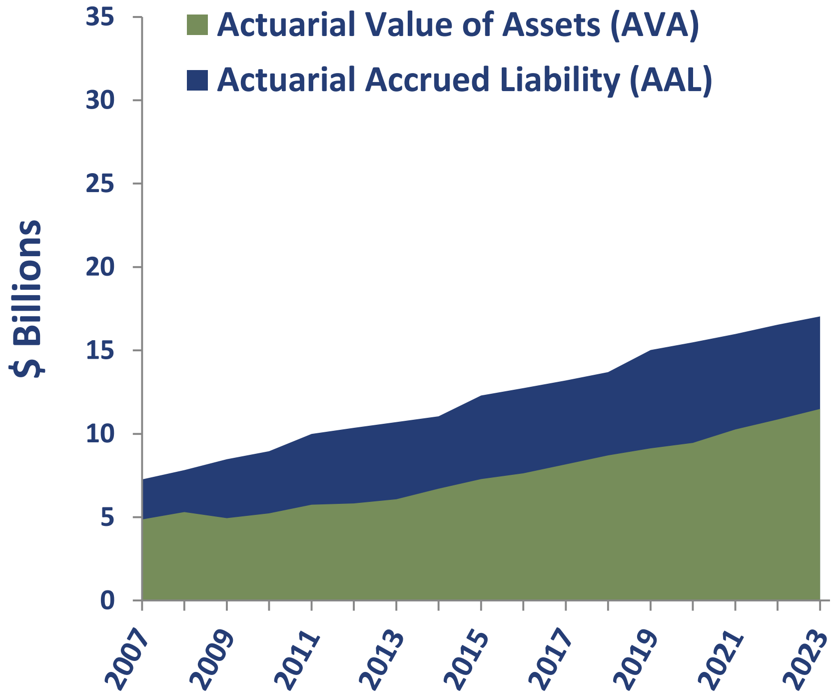
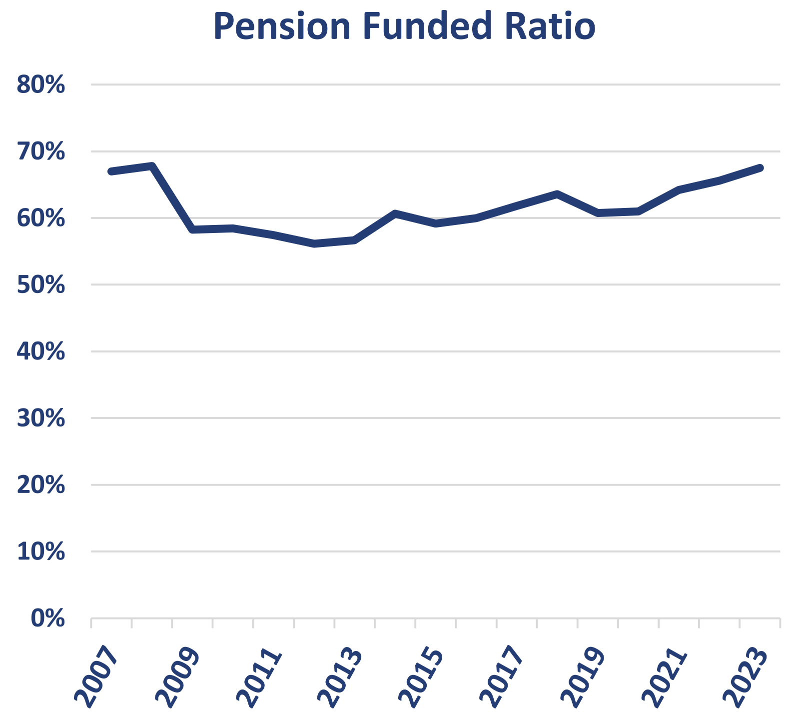
Observations

- Future expectations on pension rates
  - Normal cost rates will decline with new hires
  - UAAL rates are designed to be a level percent for 20 years
    - Initial UAAL will be funded in 14 years (ending June 30, 2039)
    - Unrecognized asset losses in smoothing method will put upward pressure on rates
  - If future payroll growth is greater than expected
    - Will put downward pressure on rates
    - May be a short term effect rather than long term
  - Other sources of gains and losses affect rates

PENSION FUNDED STATUS AND CONTRIBUTIONS

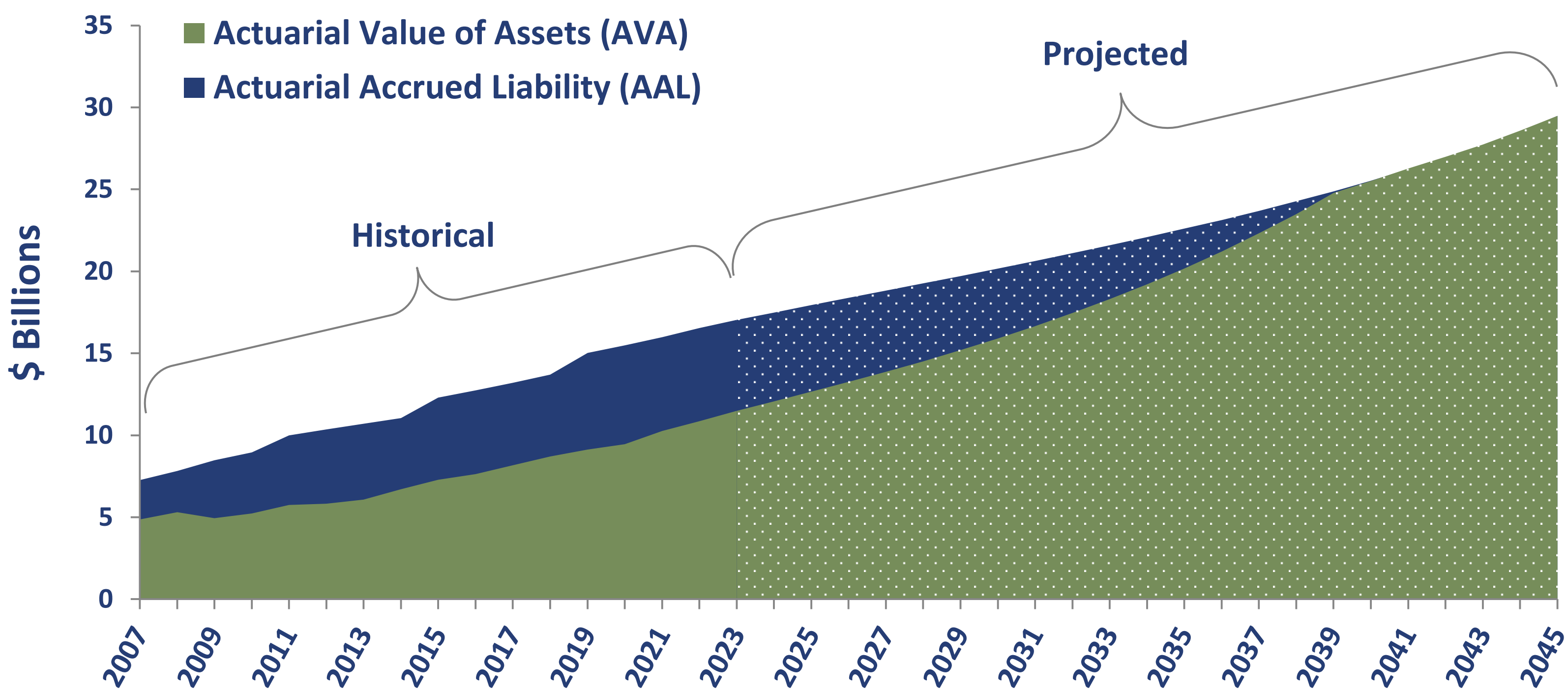
Pension Funded Status (Historical)





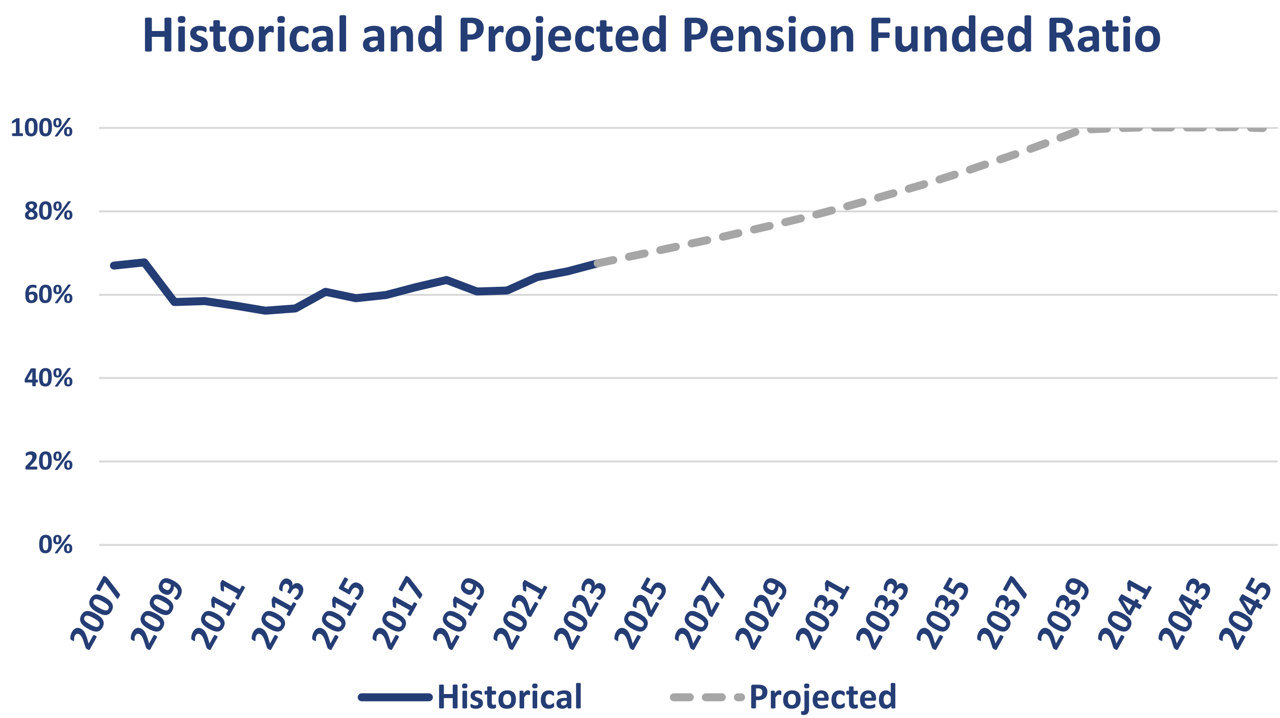
In the years following the Great Recession, the funded ratio fell to 56% in 2012. The funded ratio has grown steadily to 67% in 2023.

Pension Funded Status (Projected)



The objective is to determine contributions to be made in coming years such that the assets (AVA) are ultimately sufficient to cover liabilities (AAL).

Pension Funded Ratio (Projected)



- **Making actuarially determined contributions, calculated based on the NHRS funding policy, is projected to result in a 100% funded ratio in year 2041.**
  - **Initial UAAL will be paid off in year 2039**
  - **2019 UAAL, due to experience study changes, benefit increases and losses from experience, will be paid off in 2041**

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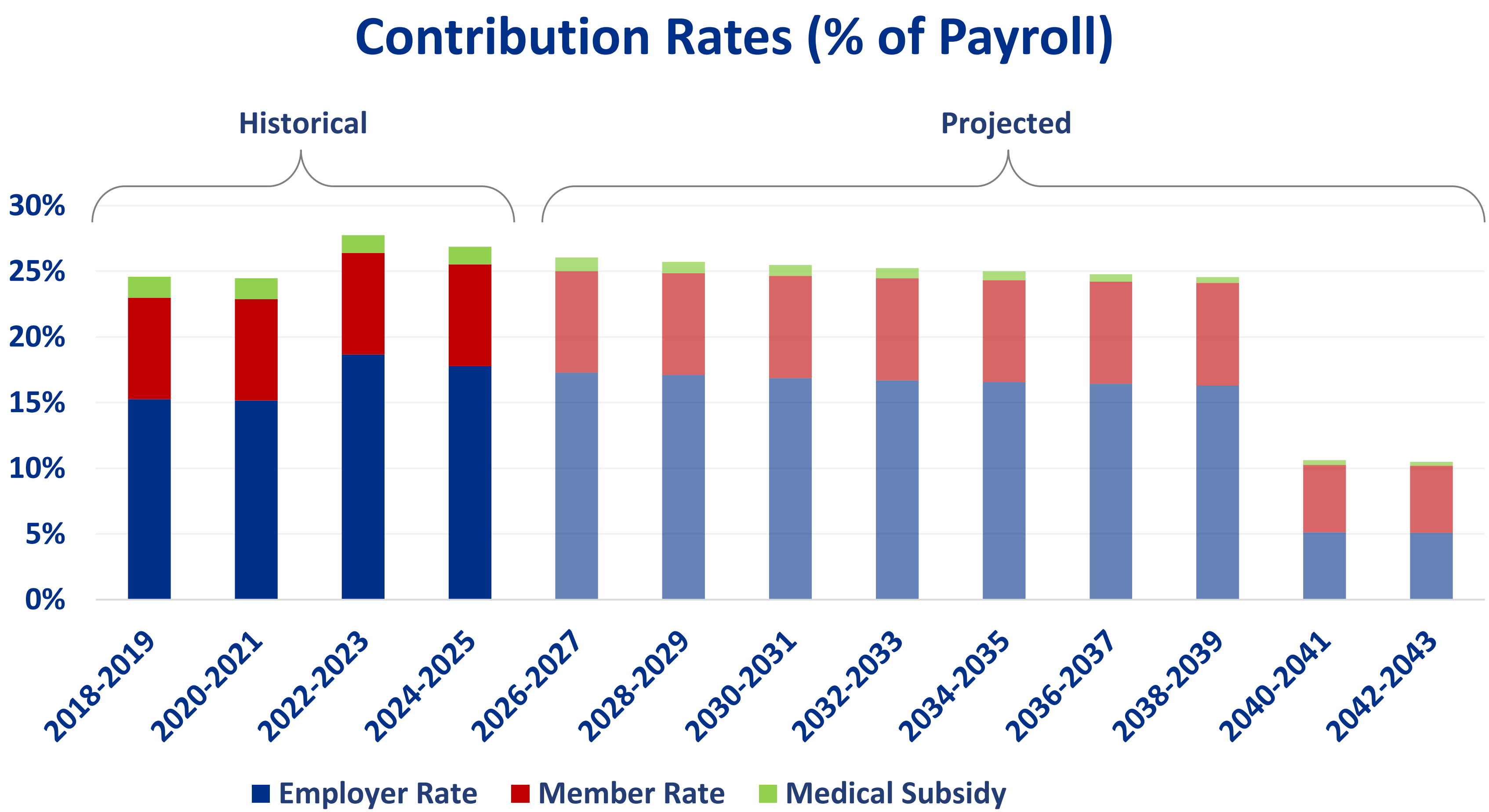
Historical Pension Contributions

Fiscal Year Ending	Employer Contribution Rates				
	Employees	Teachers	Police	Fire	Total
2010	9.09%	9.38%	17.34%	22.52%	10.70%
2011	9.09%	9.38%	17.34%	22.52%	10.70%
July 1, 2011 -July 30, 2011	10.71%	11.51%	22.92%	28.25%	13.11%
Aug 1, 2011 - June 30, 2012	8.48%	8.99%	15.98%	18.92%	9.97%
2013	8.48%	8.99%	15.98%	18.92%	9.97%
2014-2015#	10.44%	11.96%	21.35%	23.79%	12.79%
2016-2017	10.86%	12.72%	22.54%	25.32%	13.55%
2018-2019	11.08%	15.70%	25.33%	27.79%	15.27%
2020-2021	10.88%	15.99%	24.77%	26.43%	15.17%
2022-2023	13.75%	19.48%	30.67%	29.78%	18.67%
2024-2025	13.27%	18.51%	28.68%	27.75%	17.79%
2026-2027	12.53%	18.28%	28.72%	26.92%	17.27%

 # Rates shown are for Political Subdivision. Rates for State are 10.51%, 21.45% and 23.90% for Employees, Police and Fire, respectively.

Contributions (Historical and Projected)



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MEDICAL SUBSIDY METHODOLOGY

Medical Subsidy Statutory Funding Methodology

- The four medical subsidy subaccounts (which are different from the four pension plan groups) are:
  - State Employees
  - Political Subdivision Employees
  - Teachers
  - Police and Fire
- As required by the statutes*, contribution rates for each of the four subaccounts are the lesser of:
  - 25% of the total employer contribution rate
  - The minimum amount necessary to maintain medical subsidy benefits (solvency funding)
  - Solvency rates for medical subsidy benefits, such that a specified margin is established by the end of the biennium and for all future years thereafter

**RSA 100-A:53, RSA 100-A:53-b, RSA 100-A:53-c, and RSA 100-A:53-d. Rates are also limited by IRC Section 401(h).*

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Solvency Rate Methodology

- The margin requirement used to determine the health subsidy solvency rate is 20%
  - Teachers group is 50%
- Solvency rates are set for each of the four medical subsidy accounts separately
  - The Teachers' margin is higher in part because the Teachers' medical subsidy account went negative in the past
  - In effect, the Teachers "borrowed" from the other medical subsidy accounts and have paid back that debt with interest
  - Implicit borrowing between medical subsidy accounts is undesirable, but not prohibited
  - Borrowing between medical subsidy and pension is prohibited

June 30, 2023 Valuation
History of Medical Subsidy Contributions

	Employer Contribution Rates				
Fiscal Year Ending	State Employees	Employees Political Sub	Teachers	Police & Fire	Total
2010	3.03%	0.00%	1.32%	2.17%	1.47%
2011	3.03%	0.00%	1.32%	2.17%	1.47%
July 1, 2011 -July 30, 2011	1.60%	0.38%	2.44%	2.65%	1.82%
Aug 1, 2011 - June 30, 2012	1.60%	0.32%	2.31%	3.97%	1.95%
2013	1.60%	0.32%	2.31%	3.97%	1.95%
2014-15	1.62%	0.33%	2.20%	3.95%	1.90%
2016-17	1.64%	0.31%	2.95%	3.84%	2.21%
2018-19	1.07%	0.30%	1.66%	4.10%	1.60%
2020-21	1.05%	0.29%	1.81%	3.66%	1.58%
2022-23	0.78%	0.31%	1.54%	3.21%	1.36%
2024-25	0.58%	0.26%	1.13%	2.60%	1.05%
2026-27	0.34%	0.22%	0.95%	2.23%	0.85%

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Medical Subsidy Position

- The medical subsidy is in a much better position than in the past
- Enhancements to funding have been working
  - Implementing and increasing margin as needed
  - Lowering Teachers payroll growth assumption
    - Teachers are now in a positive position compared to several years ago

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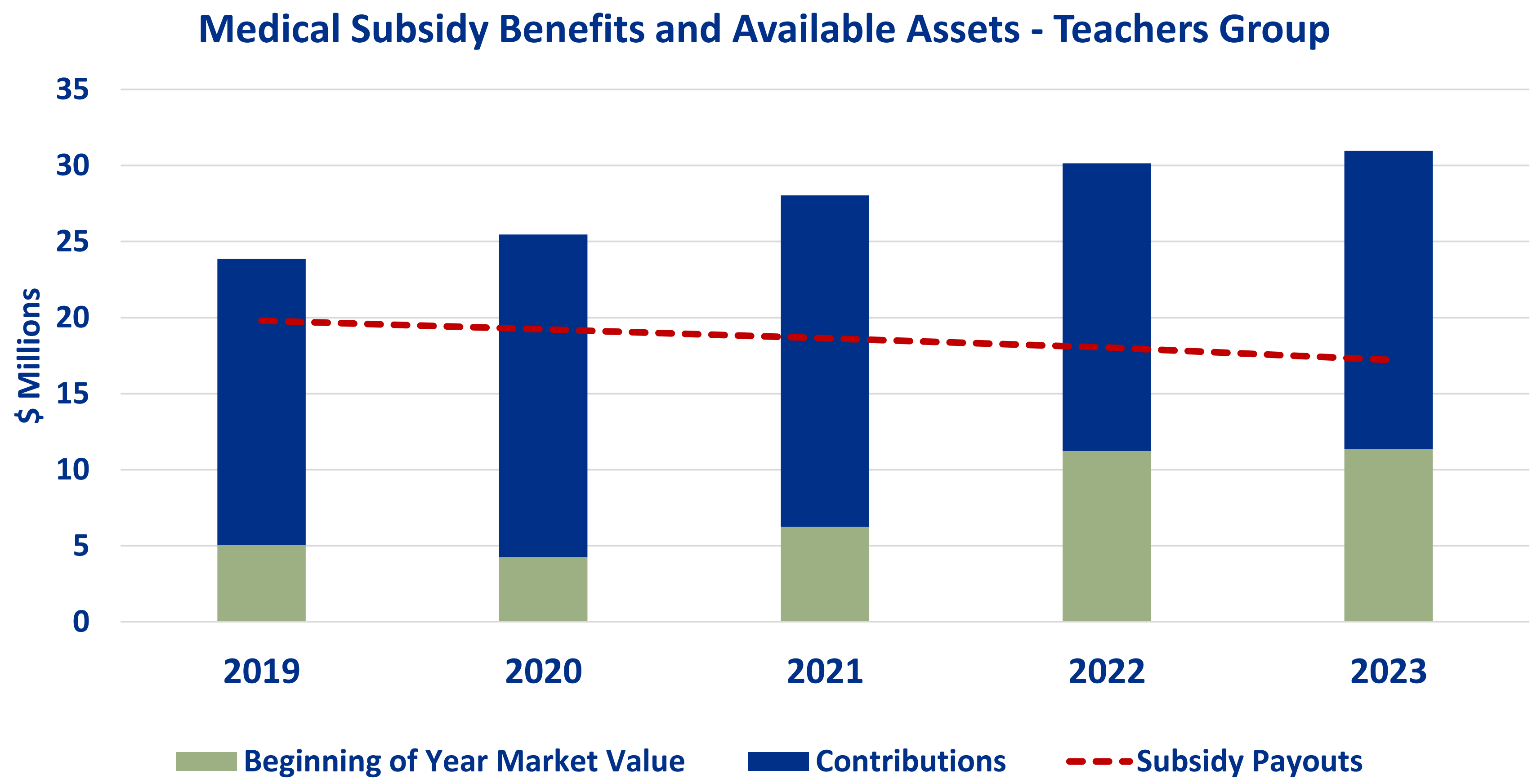
Medical Subsidy Position - Teachers



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KEY TAKEAWAYS

Key Takeaways

- Overall plan experience was unfavorable for pension and favorable for the medical subsidy over the period since the previous rate-setting valuation
- The changes in the Employer pension contribution rates since the previous rate-setting valuation is shown below:

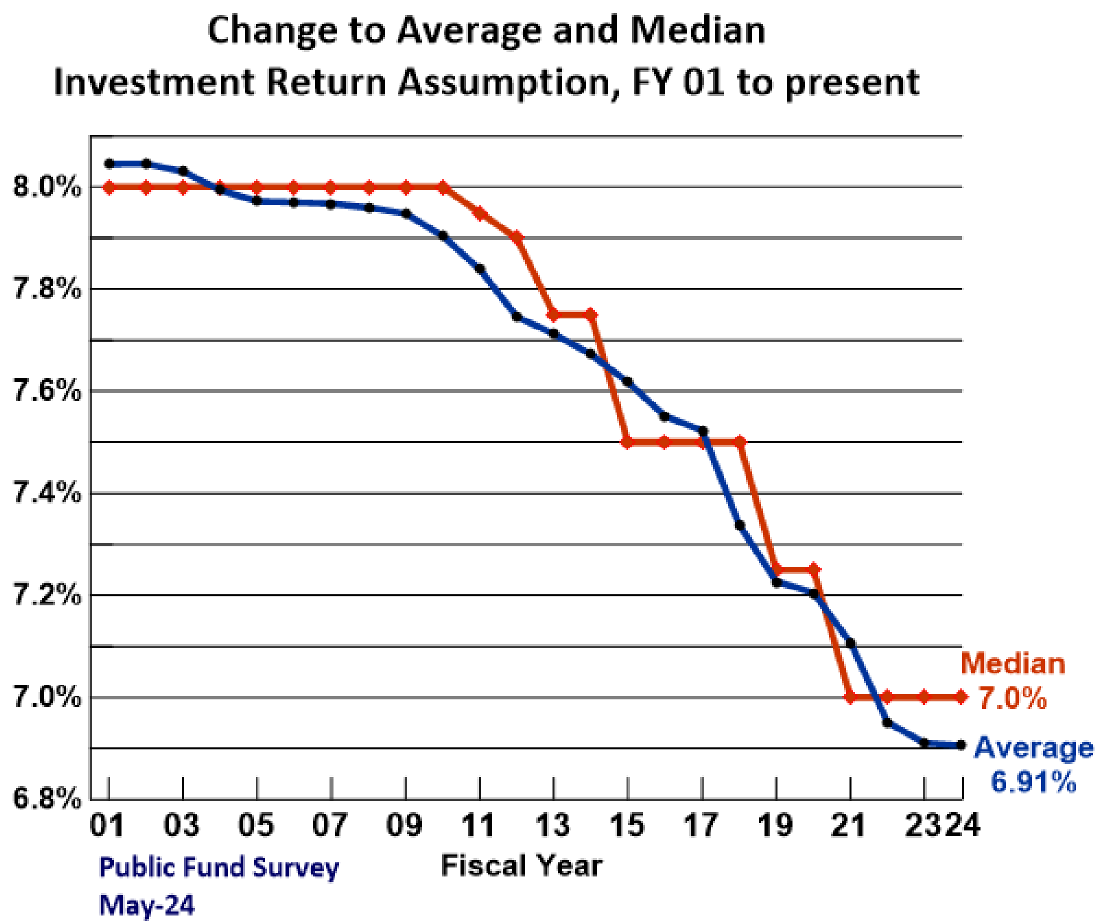
Increase (Decrease) in
Employer Pension Contribution Rates (% of Pay)

Employees	Teachers	Police	Fire
(0.74%)	(0.23%)	0.04%	(0.83%)

- Decreases to employer contribution rates were predominantly the result of the changes in actuarial assumptions.
- Increases to employer contribution rates for Police were predominantly the result of higher than expected payroll and more retirements than expected over the two-year period.

ASSUMED RATE OF RETURN

Assumed Rates of Return
NASRA Survey



Assumed Rates of Return

- The investment return assumption is the actuarial assumption that has the largest effect on the actuarial valuation results
- The current assumption is 6.75%
- NASRA conducted a survey which includes 131 Retirement Systems as of May 2024
- The average and median assumed rates of return from the survey are 6.91% and 7.0%, respectively
- NHRS has generally been ahead of its peers in lowering the assumed rate of return

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TIMELINE

Timeline

- Today – adopt final rates for the 2026-2027 biennium
- August 2024 – begin preparation for the June 30, 2024 valuation and accounting reports

Questions

Disclaimers

- This presentation is one of many documents comprising the June 30, 2023 actuarial valuation of the New Hampshire Retirement System. This presentation is intended to be used in conjunction with the funding actuarial valuation report issued July 26, 2024. This presentation should not be relied on for any purpose other than the purpose described in the valuation report.
- Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

Disclaimers

- This presentation shall not be construed to provide tax advice, legal advice or investment advice.
- Heidi Barry, Casey Ahlbrandt-Rains and Jeffrey Tebeau are independent of the plan sponsor, are Members of the American Academy of Actuaries, and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

New Hampshire Retirement System

Actuarial Valuation Report
as of June 30, 2023

800.521.0498 | P: 248.799.9000 | www.grsconsulting.com

July 26, 2024

Board of Trustees
New Hampshire Retirement System
54 Regional Drive
Concord, New Hampshire 03301-8507

Re: New Hampshire Retirement System Actuarial Valuation as of June 30, 2023

Dear Board Members:

The results of the June 30, 2023 Annual Actuarial Valuation of the New Hampshire Retirement System (NHRS) are presented in this report. The purposes of the valuation were:

- To measure the System's funding progress; and
- To calculate employer contribution rates for Fiscal Years 2026 and 2027.

This report was prepared at the request of the Board and is intended for use by the Retirement System and those designated or approved by the Board. This report may be provided to parties other than the System only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report. This report should not be relied on for any purpose other than the purposes described above.

Calculations required for compliance with the Governmental Accounting Standards Board (GASB) Statements No. 67 and No. 68, as well as No. 74 and No. 75, have been issued in separate reports.

The contribution rates in this report are determined according to Statute RSA 100-A:16, 53, 53-b, 53-c, and 53-d using the actuarial assumptions and methods disclosed in Section E of this report. This report includes risk measures on pages 33 through 36, but does not include a more robust assessment of the risks of future experience not meeting the actuarial assumptions. Additional assessment of risks was outside the scope of this assignment. We recommend that the Board consider performing an analysis to assess risk related to investment and payroll.

The valuation was based upon information, furnished by NHRS staff, concerning Retirement System benefits, financial transactions, and active members, terminated members, retirees and beneficiaries as of June 30, 2023. We checked for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the data provided by NHRS. Detailed demographic information can be found in the "ACFR Schedules and GASB Statement Nos. 67 and 74 Plan Reporting and Accounting Schedules" report dated December 1, 2023.

Board of Trustees
New Hampshire Retirement System
July 26, 2024
Page 2

The actuarial valuation results summarized in this report involve actuarial calculations that require assumptions about future events. The actuarial assumptions are established by the Board after consulting with the actuary under New Hampshire Statute RSA 100-A:14 IX. Actuarial methods and assumptions were adopted by the Board pursuant to the 4-year actuarial experience study covering the period from July 1, 2019 to June 30, 2023. We believe that the assumptions and methods used in this report are reasonable and appropriate for the purposes for which they have been used. However, other assumptions and methods could also be reasonable and could result in materially different results. In addition, because it is not possible or practical to consider every possible contingency, we may use summary information, estimates or simplifications of calculations to facilitate the modeling of future events. We may also exclude factors or data that are deemed to be immaterial. The actuarial funding method is the Individual Entry Age Actuarial Cost Method, in compliance with NHRS State Statutes. Each actuarial valuation takes into account all prior differences between actual and assumed experience in each risk area and adjusts the contribution rates as needed.

This report was prepared using our proprietary valuation model and related software which, in our professional judgment, has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

We certify that the information contained in this report is accurate and fairly presents the actuarial position of the New Hampshire Retirement System as of June 30, 2023. The combined effect of the assumptions, excluding prescribed assumptions or methods set by law, is expected to have no significant bias (i.e., not significantly optimistic or pessimistic). All calculations have been made in conformity with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board and with applicable Statutes RSA 100-A:16, 100-A:53, 100-A:53-b, 100-A:53-c, and 100-A:53-d.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as: plan experience differing from that anticipated by the economic and demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of the actuary's assignment, the actuary did not perform an analysis of the potential range of such future measurements.

If there is other information that you need in order to make an informed decision regarding the matters discussed in this report, please contact us.

Board of Trustees
New Hampshire Retirement System
July 26, 2024
Page 3

Heidi G. Barry, Jeffrey T. Tebeau and Casey T. Ahlbrandt-Rains are independent of the plan sponsors, are Members of the American Academy of Actuaries (MAAA), and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,
Gabriel, Roeder, Smith & Company

Heidi G Barry

Heidi G. Barry, ASA, FCA, MAAA

Jeffrey T. Tebeau, FSA, EA, FCA, MAAA

Casey T. Ahlbrandt-Rains, ASA, FCA, MAAA

HGB/JTT/CTA:dj

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Table of Contents

SECTION A

INTRODUCTION

Highlights of the June 30, 2023 Actuarial Valuation

Employer Contribution Rates for the 2026/2027 Biennium

	Computed Employer Contribution Rates as a Percent of Payroll*			
	State Members			
	Employees	Teachers	Police	Fire
Pension	12.53%	N/A	28.72%	26.92%
Medical Subsidy	0.34%	N/A	2.23%	2.23%
Total	12.87%	N/A	30.95%	29.15%

	Computed Employer Contribution Rates as a Percent of Payroll*			
	Political Subdivision Members			
	Employees	Teachers	Police	Fire
Pension	12.53%	18.28%	28.72%	26.92%
Medical Subsidy	0.22%	0.95%	2.23%	2.23%
Total	12.75%	19.23%	30.95%	29.15%

** The grand total contribution rates for NHRS (State and Political Subdivisions combined) are 17.27% of payroll for pension and 0.85% for the medical subsidy for a grand total of 18.12% of payroll.*

The Pension Funded Ratio (Actuarial Value of Assets divided by the Actuarial Accrued Liability) for NHRS in total is 67.5%.

Changes to the System Included in the June 30, 2023 Actuarial Valuation

1) The actuarial assumptions resulting from the July 1, 2019 through June 30, 2023 experience study were adopted by the Board and have been incorporated for actuarial valuation purposes. These changes decreased the total employer contribution rate by 0.44% of payroll (pension and medical subsidy combined), and increased the pension funded ratio by 0.03%.

2) There were several changes adopted in the 2022 and 2023 Legislative sessions.

   a. House Bill (HB) 1535 grants a one-time payment of $500 to members who retired on or before July 1, 2017, or any beneficiaries of such member who is receiving a survivorship pension benefit who has an annual retirement allowance of no more than $30,000 on June 30, 2022. The one-time payment will be made during state fiscal year 2023. An appropriation of $10,793,500 was made by the State for this benefit. HB 1535 is reflected in the GASB 67 Accounting Statements. This bill was terminally funded by the State, therefore, there is no financial impact on the NHRS for adoption of this bill.

   b. HB 2 modifies the effective date of the statutory pension recalculation for Group I (Employee and Teacher) members who retire on or after July 1, 2023. The change defers the recalculation of a Group I retiree's NHRS benefit from age 65 to his or her full retirement age under the federal Social Security system. The impact of this change was an increase in actuarial accrued liabilities of approximately $18.7 million for Employees and $25.2 million for Teachers and a decrease in the funded status of 0.2% for both Employees and Teachers.

c. HB 2 also grants a one-time payment of $500 to members who retired on or before July 1, 2018 with at least 20 years of creditable service, or any beneficiaries of such member who is receiving a survivorship pension benefit who has an annual retirement allowance of no more than $40,000 on June 30, 2023. It is our understanding that a one-time appropriation of $7.1 million was made by the State for this benefit during state fiscal year 2024. This portion of HB 2 is reflected in the GASB Statement No. 67 Accounting Statements. This portion of the bill was terminally funded by the State, therefore, there is no financial impact on the NHRS.

d. HB 1587 modifies the definition of Average Final Compensation (AFC) for Group II members who commenced service on or after July 1, 2011 or who have not attained vested status prior to January 1, 2012. The impact of this change was an increase in actuarial accrued liabilities of approximately $22.2 million for Police and $10.5 million for Fire. An appropriation of $42.9 million was made by the State for this benefit. This provision was terminally funded by the State, therefore, there is no expected financial impact on the NHRS for this bill based on the current valuation assumptions.

e. Senate Bill (SB) 363 allows members who commenced Group II service between January 1, 2002, and June 30, 2011, to purchase nonqualified service time in order to reduce certain transition provision requirements for service retirement. The member is responsible for paying the full actuarial cost of the service credit purchased.

3) There have been no changes in the actuarial methods.

Other Highlights

1) In total, plan experience between June 30, 2022 and June 30, 2023 was unfavorable for pension and favorable for the medical subsidy. The dollar weighted rate of return for the year ending June 30, 2023 was 8.0% on the market value of assets (Note: This dollar weighted measure may differ from investment manager calculations and should not be used as a measure of investment performance.) On the basis of statutory funding, the rate of return for 2023 was 6.9% on the actuarial value of assets, resulting in a recognized asset gain of $17 million (pension and medical subsidy combined). The return on the actuarial value of assets is less than the return on the market value of assets because some of this year’s market gain is deferred and losses from prior years are recognized this year. Investment experience over the two-year valuation cycle was favorable, as the recognized asset gains in 2022 of $19 million are added to the recognized asset gains from 2023 of $17 million. Plan experience as a whole was unfavorable for pension and favorable for the medical subsidy over the two-year period from July 1, 2021 through June 30, 2023. The primary source of actuarial losses over the two-year period were payroll losses offset moderately by slightly higher investment return on System assets compared to expectations. Please see page 32 for additional details.

2) Total covered payroll increased by 3.3% versus the assumed increase of 2.75% (2.25% for Teachers). Payroll growth was more than expected for all four-member classifications. We do not have sufficient information to make any adjustment to the data or liability and, therefore, used the data as reported.

	2023 Total Annual Payroll Growth	
Group	**Expected**	**Actual**
Employees	2.75%	3.29%
Teachers	2.25%	2.75%
Police	2.75%	3.85%
Fire	2.75%	6.03%

The payroll increases resulted in pension liability losses which increased the total employer contribution rate by 0.02% of pay. Please see page 41 for additional details.

3) Between the 2022 and 2023 valuation, the pension funded ratio increased by 1.6 percentage points (65.6% to 67.2%) before assumptions changes. Approximately 2.0 percentage points of the increase in the funded ratio is due to scheduled contributions, while the remaining decrease is the result of benefit provision changes and actuarial losses for the System. The funded ratio is 67.5% after reflecting the newly adopted actuarial assumptions. See page 21 for more detail on changes in the funded ratio.

4) The medical subsidy benefits are effectively pay-as-you-go with total assets in the four sub-accounts equal to a year's total benefit payments. The market value of assets available to fund medical subsidy benefits increased from $45.0 million as of June 30, 2022 to $50.2 million as of June 30, 2023. See page 13 and Comment 6 on pages 24 and 25.

Executive Summary
Pension
($ Amounts in Millions)

Valuation as of:	June 30, 2023	June 30, 2022
Membership		
Number of		
- Active members	48,589	48,687
- Retirees and Beneficiaries	43,603	42,415
- Inactive, vested	3,266	2,990
- Inactive, nonvested	18,826	16,717
Total	114,284	110,809
Assets		
Market value	$ 11,459.4	$ 10,708.4
Actuarial value	$ 11,495.6	$ 10,849.7
Return on market value	8.0%	(6.0%)
Return on actuarial value	6.9%	6.9%
Employer contributions	$ 655.1	$ 579.0
External cash flow %	(0.9%)	(1.1%)
Ratio of actuarial to market value	100.3%	101.3%
Actuarial Information		
Actuarial accrued liability (AAL)	$ 17,030.4	$ 16,543.5
Unfunded actuarial accrued liability (UAAL)	$ 5,534.8	$ 5,693.8
Funded Ratio	67.5%	65.6%
Gains/(losses) resulting from		
- Asset experience	$ 17.3	$ 18.8
- Liability experience	(100.5)	(110.7)
- Benefit changes	(33.7)	-
- Assumption/method changes	74.6	-
	$ (42.3)	$ (91.9)
GASB Information		
Total pension liability (TPL)	$ 17,057.7	$ 16,444.5
Net pension liability (NPL)	$ 5,598.3	$ 5,736.1
Plan fiduciary net position (PFNP) as a percentage of TPL	67.2%	65.1%

Executive Summary
Pension

Covered Group	Employees	Teachers	Police	Fire	Total
I. Number of Participants as of June 30, 2023					
a. Actives	24,640	18,141	4,042	1,766	48,589
b. Retirees, Disabilities, and Beneficiaries	21,302	15,607	4,764	1,930	43,603
c. Vested Terminations	1,668	1,364	185	49	3,266
d. Non-Vested Inactive Terminations	13,005	4,626	1,092	103	18,826
e. Total	60,615	39,738	10,083	3,848	114,284
f. Total Covered Annual Payroll	$ 1,412,494,283	$ 1,260,239,621	$ 349,469,309	$ 155,892,931	$ 3,178,096,144
g. Ratio of Actives to Benefit Recipients	116%	116%	85%	92%	111%
II. Statutory Funding Information					
a. Actuarial Present Value of Projected Benefits	$ 6,641,746,991	$ 7,682,270,435	$ 3,892,933,528	$ 1,826,589,794	$ 20,043,540,748
b. Actuarial Present Value of Future Normal Costs	996,689,517	1,144,270,739	576,346,719	295,792,975	3,013,099,950
c. Actuarial Accrued Liability (AAL): a. – b.	5,645,057,474	6,537,999,696	3,316,586,809	1,530,796,819	17,030,440,798
d. Actuarial Value of Assets	3,850,701,345	4,210,979,415	2,310,556,236	1,123,345,036	11,495,582,032
e. Unfunded Actuarial Accrued Liability (UAAL): c. – d.	1,794,356,129	2,327,020,281	1,006,030,573	407,451,783	5,534,858,766
f. Funded Status: d. / c.	68.2%	64.4%	69.7%	73.4%	67.5%
III. Additional Information on Payroll					
State	$ 628,330,727	$ -	$ 94,372,975	$ 2,428,519	$ 725,132,221
Political Subdivisions	784,163,556	1,260,239,621	255,096,334	153,464,412	2,452,963,923
Total	$ 1,412,494,283	$ 1,260,239,621	$ 349,469,309	$ 155,892,931	$ 3,178,096,144
IV. Contribution Rates for Fiscal Year 2026/2027 (% of Payroll)					
Member	7.00%	7.00%	11.55%	11.80%	
Employer* (Including Health Subsidy)	12.80%	19.23%	30.95%	29.15%	

** Employees employer contribution rate is weighted average of 12.87% and 12.75% for State and Political Subdivision Employees, respectively.*

Executive Summary
Medical Subsidy
($ Amounts in Millions)

Valuation as of:	June 30, 2023	June 30, 2022
Membership		
Number of		
- Active members	1,291	1,485
- Retirees and Beneficiaries	8,869	9,133
Total	10,160	10,618
Assets		
Market value	$ 50.2	$ 45.0
Actuarial value	$ 50.3	$ 45.6
Return on market value	8.0%	-6.0%
Return on actuarial value	6.9%	6.9%
Employer contributions	$ 43.6	$ 42.1
External cash flow %	-0.9%	-1.1%
Ratio of actuarial to market value	100.3%	101.3%
Actuarial Information		
Actuarial accrued liability (AAL)	$ 507.3	$ 567.2
Unfunded actuarial accrued liability (UAAL)	$ 457.0	$ 521.6
Funded Ratio	9.9%	8.0%
Gains/(losses) resulting from		
- Asset experience	$ (0.2)	$ 0.0
- Liability experience	18.5	22.6
- Benefit changes	-	-
- Assumption/method changes	17.5	-
	$ 35.8	$ 22.6
GASB Information		
Total OPEB liability (TOL)	$ 391.9	$ 422.9
Net OPEB liability (NOL)	$ 341.7	$ 377.9
Plan fiduciary net position (PFNP) as a percentage of TOL	12.8%	10.6%

Executive Summary
Medical Subsidy

Covered Group	State Employees	Political Subdivision Employees	Teachers	Police and Fire	Grand Total
I. Number of Participants Covered by Post Retirement Medical Subsidy as of June 30, 2023					
a. Actives	-	-	-	1,291	1,291
b. Retirees, Disabilities, and Beneficiaries	1,224	937	3,745	2,963	8,869
c. Vested Terminations	-	-	-	-	-
d. Total	1,224	937	3,745	4,254	10,160
e. Total NHRS Covered Annual Payroll	$ 628,330,727	$ 784,163,556	$ 1,260,239,621	$ 505,362,240	$ 3,178,096,144
II. Statutory Funding Information					
a. Actuarial Present Value of Projected Benefits	$ 36,220,162	$ 36,797,255	$ 175,793,207	$ 262,284,517	$ 511,095,141
b. Actuarial Present Value of Future Normal Costs	-	-	-	3,755,771	3,755,771
c. Actuarial Accrued Liability (AAL): a. – b.	36,220,162	36,797,255	175,793,207	258,528,746	507,339,370
d. Valuation Assets	3,787,317	9,076,989	14,703,773	22,749,215	50,317,294
e. Unfunded Actuarial Accrued Liability (UAAL): c. – d.	32,432,845	27,720,266	161,089,434	235,779,531	457,022,076
f. Funded Status: d. / c.	10.5%	24.7%	8.4%	8.8%	9.9%

Executive Summary
Contribution Rates

State Members

Covered Group	Employees	Teachers	Police	Fire	Total
Total Normal Cost (% of Payroll)	9.42%		17.35%	17.90%	10.47%
UAAL Contribution (% of Payroll)	10.11%		22.92%	20.82%	11.81%
Total Pension Contribution (% of Payroll)	19.53%		40.27%	38.72%	22.28%
Fiscal Year 2026					
Member Contributions (% of Payroll)	7.00%		11.55%	11.80%	7.61%
Employer Pension Contribution (% of Payroll)	12.53%		28.72%	26.92%	14.67%
Employer Medical Subsidy Contribution (% of Payroll)	0.34%		2.23%	2.23%	0.59%
Total Employer Contributions for Fiscal Year 2026					
1. Percent of Payroll	12.87%	N/A	30.95%	29.15%	15.26%
2. Projected Payroll for Fiscal Year	$ 686,593,950		$ 103,123,898	$ 2,653,708	$ 792,371,556
3. Projected Dollar Amount	$ 88,364,641	N/A	$ 31,916,846	$ 773,556	$ 121,055,043
Fiscal Year 2027					
Member Contributions (% of Payroll)	7.00%		11.55%	11.80%	7.61%
Employer Pension Contribution (% of Payroll)	12.53%		28.72%	26.92%	14.67%
Employer Medical Subsidy Contribution (% of Payroll)	0.34%		2.23%	2.23%	0.59%
Total Employer Contributions for Fiscal Year 2027					
1. Percent of Payroll	12.87%	N/A	30.95%	29.15%	15.26%
2. Projected Payroll for Fiscal Year	$ 707,191,769		$ 106,217,615	$ 2,733,319	$ 816,142,703
3. Projected Dollar Amount	$ 91,015,581	N/A	$ 32,874,352	$ 796,762	$ 124,686,695

Executive Summary
Contribution Rates (Concluded)

Political Subdivison Members

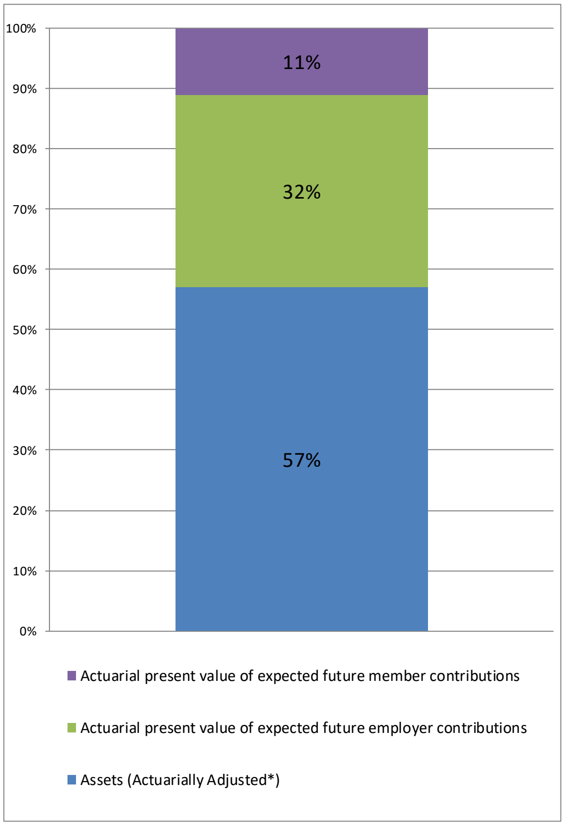
Covered Group	Employees	Teachers	Police	Fire	Total
Total Normal Cost (% of Payroll)	9.42%	9.89%	17.35%	17.90%	11.02%
UAAL Contribution (% of Payroll)	10.11%	15.39%	22.92%	20.82%	14.82%
Total Pension Contribution (% of Payroll)	19.53%	25.28%	40.27%	38.72%	25.84%
Fiscal Year 2026					
Member Contributions (% of Payroll)	7.00%	7.00%	11.55%	11.80%	7.77%
Employer Pension Contribution (% of Payroll)	12.53%	18.28%	28.72%	26.92%	18.07%
Employer Medical Subsidy Contribution (% of Payroll)	0.22%	0.95%	2.23%	2.23%	0.93%
Total Employer Contributions for Fiscal Year 2026					
1. Percent of Payroll	12.75%	19.23%	30.95%	29.15%	19.00%
2. Projected Payroll for Fiscal Year	$ 856,876,690	$ 1,357,140,233	$ 278,750,652	$ 167,694,707	$ 2,660,462,282
3. Projected Dollar Amount	$ 109,251,778	$ 260,978,067	$ 86,273,327	$ 48,883,007	$ 505,386,179
Fiscal Year 2027					
Member Contributions (% of Payroll)	7.00%	7.00%	11.55%	11.80%	7.77%
Employer Pension Contribution (% of Payroll)	12.53%	18.28%	28.72%	26.92%	18.07%
Employer Medical Subsidy Contribution (% of Payroll)	0.22%	0.95%	2.23%	2.23%	0.93%
Total Employer Contributions for Fiscal Year 2027					
1. Percent of Payroll	12.75%	19.23%	30.95%	29.15%	19.00%
2. Projected Payroll for Fiscal Year	$ 882,582,991	$ 1,391,068,739	$ 287,113,172	$ 172,725,548	$ 2,733,490,450
3. Projected Dollar Amount	$ 112,529,331	$ 267,502,519	$ 88,861,527	$ 50,349,497	$ 519,242,874

Total NHRS Members

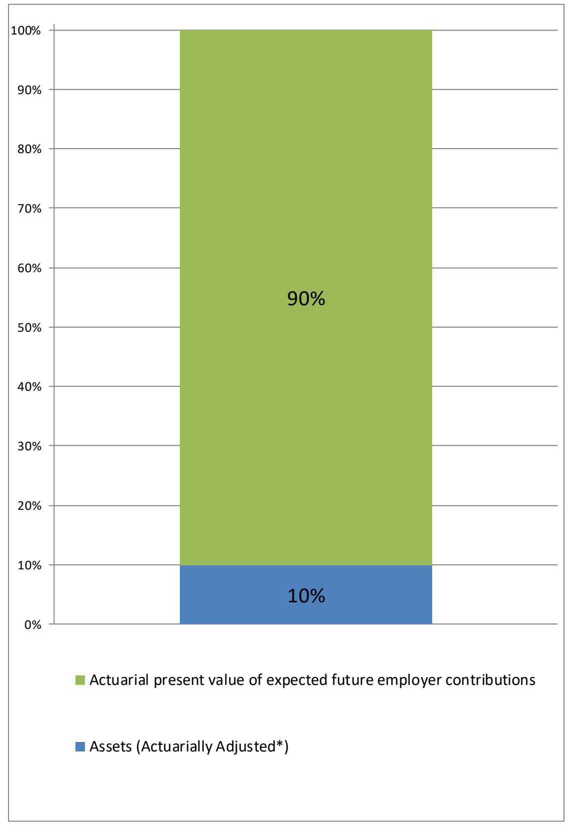
Covered Group	Employees	Teachers	Police	Fire	Total
Fiscal Year 2026					
1. Projected Payroll for Fiscal Year	$ 1,543,470,640	$ 1,357,140,233	$ 381,874,550	$ 170,348,415	$ 3,452,833,838
2. Projected Employer Dollar Amount	$ 197,616,419	$ 260,978,067	$ 118,190,173	$ 49,656,563	$ 626,441,222
Fiscal Year 2027					
1. Projected Payroll for Fiscal Year	$ 1,589,774,760	$ 1,391,068,739	$ 393,330,787	$ 175,458,867	$ 3,549,633,153
2. Projected Employer Dollar Amount	$ 203,544,912	$ 267,502,519	$ 121,735,879	$ 51,146,259	$ 643,929,569

Sources of Funds

Pension

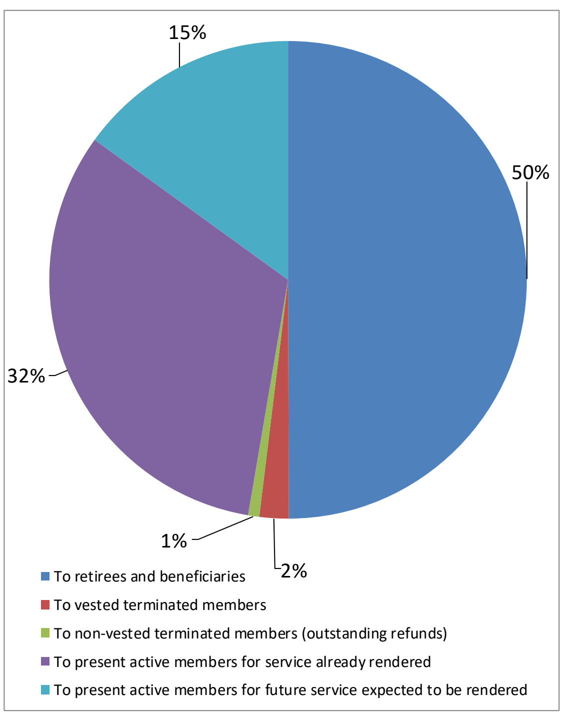


Medical Subsidy

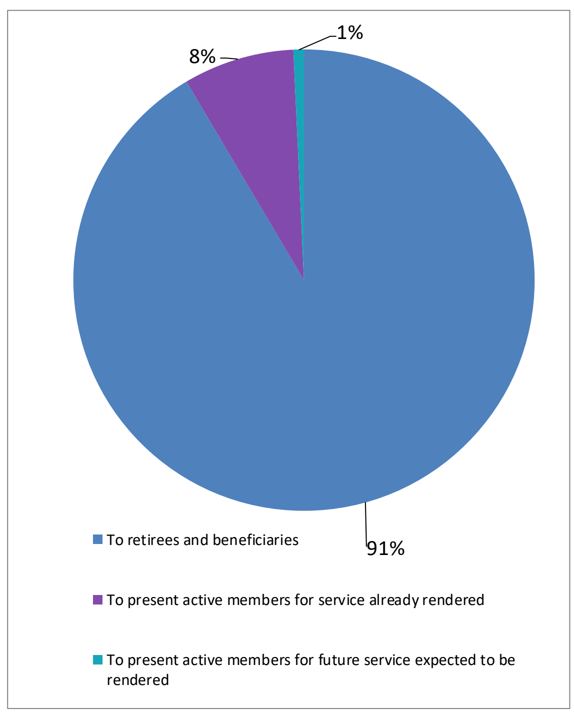


Uses of Funds

Pension

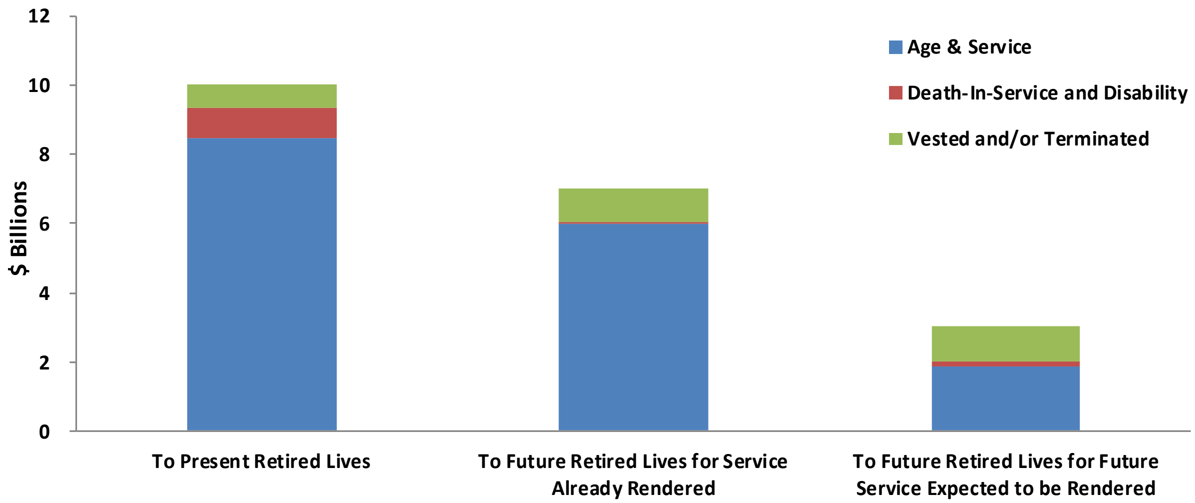


Medical Subsidy

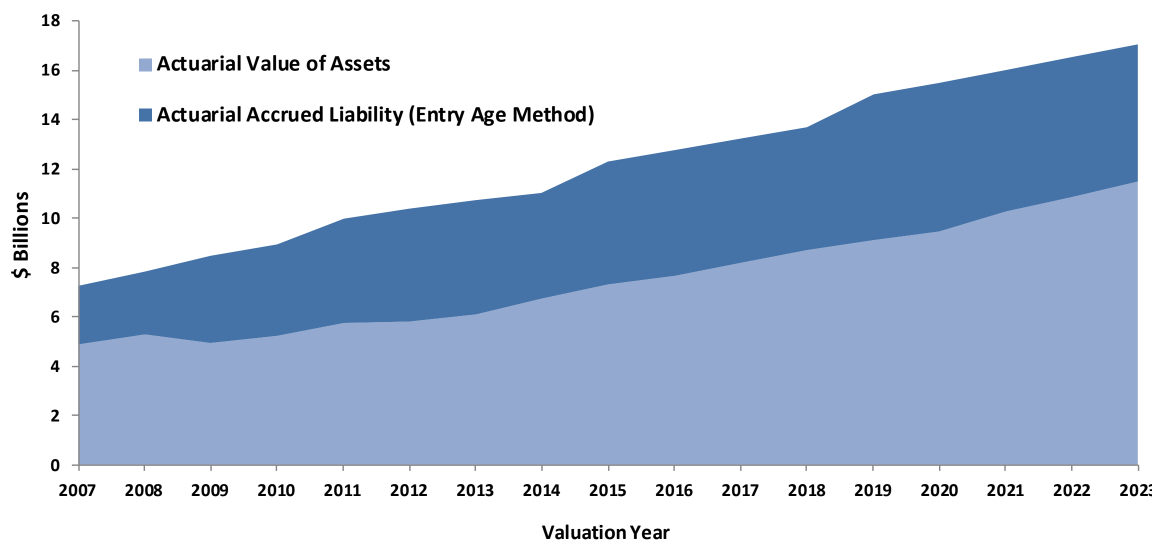


** Actuarial adjustment of market value of assets is based on the actuarial asset smoothing method.*
This adjustment will be negative when the market value of assets exceeds the actuarial value of assets.
See page 74 for further details on asset smoothing.

Comparison of Pension Liabilities by Type



Historical Pension Funding Status



Results of the Valuation

Actuarial Valuation

This is the actuarial valuation of the New Hampshire Retirement System prepared as of June 30, 2023.

The primary purposes of this valuation report are to measure the plan's liabilities, to analyze changes in NHRS' actuarial position and to determine employer contribution rates.

Valuations for certifying contribution rates are prepared biennially, as of June 30 on the odd numbered years (2023, 2025, etc.). The June 30, 2023 actuarial valuation will establish the Fiscal Year 2026 and Fiscal Year 2027 employer contribution rates.

In addition, this report provides summaries of the member data, financial data, and actuarial assumptions and methods. Detailed information regarding member data and plan provisions can be found in the "ACFR Schedules and GASB Statement Nos. 67 and 74 Plan Reporting and Accounting Schedules" report dated December 1, 2023. Calculations required for compliance with the Governmental Accounting Standards Board (GASB) Statement Nos. 68 and 75 have been issued in a separate report dated January 8, 2024.

Financing Objectives

NHRS is supported by member contributions, employer contributions, and net earnings on the investments of the fund. The member contribution rate is set by statute at 7.00% of member compensation for Group I Members (Employees and Teachers), 11.55% of member compensation for Police Members and 11.80% of member compensation for Fire Members. The employer contributions are determined in accordance with statute by an actuarial valuation. Legislation was enacted in 2007 which requires the use of the entry-age actuarial cost method and a closed 30-year amortization of unfunded actuarial accrued liability in the determination of the employer contributions. The legislature subsequently adopted the use of a layered amortization approach. The outstanding UAAL balance as of June 30, 2017 is referred to hereafter as the "Initial UAAL." The first layer will be the amortization of the Initial UAAL scheduled to be paid by 2039. New layers will be established as they occur in future biennial valuations and will be amortized over separate 20-year periods.

The Initial UAAL was projected forward and amortized over a closed period of 16 years beginning July 1, 2023, consistent with the 30-year amortization ending June 30, 2039 as established in the June 30, 2007 valuation. New layers for changes in liability are created in every rate setting valuation beginning with the June 30, 2019 valuation projected forward and amortized over a closed period of 20 years.

The closed amortization period means that the unfunded actuarial accrued liability is expected to be fully paid off by June 30, 2045 if all assumptions are met. The contribution rates set by this valuation are scheduled to come into effect beginning July 1, 2025. The total UAAL is expected to decrease each year beginning July 1, 2023, if all actuarial assumptions are met (see page 29).

Detailed amortization schedules for each member classification can be found on pages 43 through 64.

Employer Contribution Rates for the 2026/2027 Biennium

There are four pension member classifications: Employees, Teachers, Police and Fire. There are four separate 401(h) member classifications: State Employees, Political Subdivision Employees, Teachers and Police/Fire. The table below shows the pension and medical subsidy employer contribution rates for the FY 2026/2027 Biennium for each member classification.

	Computed Employer Contribution Rates as a Percent of Payroll*			
	State Members			
	Employees	Teachers	Police	Fire
Pension	12.53%	N/A	28.72%	26.92%
Medical Subsidy	0.34%	N/A	2.23%	2.23%
Total	12.87%	N/A	30.95%	29.15%

	Computed Employer Contribution Rates as a Percent of Payroll*			
	Political Subdivision Members			
	Employees	Teachers	Police	Fire
Pension	12.53%	18.28%	28.72%	26.92%
Medical Subsidy	0.22%	0.95%	2.23%	2.23%
Total	12.75%	19.23%	30.95%	29.15%

* *The grand total contribution rates for NHRS (State and Political Subdivisions combined) are 17.27% of payroll for pension and 0.85% for the medical subsidy for a grand total of 18.12% of payroll.*

Medical Subsidy

The State Employees' account is projected to reach pay-as-you-go status in the fiscal year ending June 30, 2030. This is three years later than the projection in the prior rate-setting valuation.

The Political Subdivision Employees' account is projected to reach pay-as-you-go status in the fiscal year ending June 30, 2033. This is the same as the projection in the prior rate-setting valuation.

The Teachers account is projected to reach pay-as-you-go status in the fiscal year ending June 30, 2031. This is three years later than the projection in the prior rate-setting valuation.

The Police/Fire account is projected to reach pay-as-you-go status in the fiscal year ending June 30, 2033. This is one year later than the projection in the prior rate-setting valuation.

The medical subsidy contribution rates shown above are the computed amounts needed for pay-as-you-go financing of the retiree medical subsidy with a 20% margin (50% for Teachers) for adverse experience by June 30, 2027 and to maintain that margin thereafter. It is imperative that NHRS monitor collections closely to ensure the necessary funds are collected to provide the benefit.

History of Certified Contribution Rates

Pension

Fiscal Year Ending	Employer Contribution Rates: Employees	Teachers	Police	Fire	Total
2010	9.09%	9.38%	17.34%	22.52%	10.70%
2011	9.09%	9.38%	17.34%	22.52%	10.70%
July 1, 2011 -July 30, 2011	10.71%	11.51%	22.92%	28.25%	13.11%
Aug 1, 2011 - June 30, 2012	8.48%	8.99%	15.98%	18.92%	9.97%
2013	8.48%	8.99%	15.98%	18.92%	9.97%
2014-2015#	10.44%	11.96%	21.35%	23.79%	12.79%
2016-2017	10.86%	12.72%	22.54%	25.32%	13.55%
2018-2019	11.08%	15.70%	25.33%	27.79%	15.27%
2020-2021	10.88%	15.99%	24.77%	26.43%	15.17%
2022-2023	13.75%	19.48%	30.67%	29.78%	18.67%
2024-2025	13.27%	18.51%	28.68%	27.75%	17.79%
2026-2027	12.53%	18.28%	28.72%	26.92%	17.27%

Fiscal Year Ending	Employer Dollars ($ Millions)*: Employees	Teachers	Police	Fire	Total^
2010	$101.2	$ 97.1	$ 46.4	$25.0	$269.7
2011	$103.5	$ 98.0	$ 46.9	$26.2	$274.6
2012	$ 94.4	$ 93.5	$ 44.5	$22.2	$254.6
2013	$ 91.7	$ 92.9	$ 43.2	$22.0	$249.8
2014	$115.5	$126.1	$ 58.9	$27.9	$328.4
2015	$118.3	$124.2	$ 61.1	$28.7	$332.3
2016	$124.6	$136.4	$ 65.6	$30.9	$357.5
2017	$129.1	$138.6	$ 66.9	$32.0	$366.6
2018	$134.7	$174.6	$ 77.6	$35.8	$422.7
2019	$138.5	$178.3	$ 80.6	$37.0	$434.4
2020	$139.8	$187.6	$ 81.0	$36.6	$445.0
2021	$143.0	$192.5	$ 83.9	$39.8	$459.2
2022	$185.8	$240.2	$107.3	$45.7	$579.0
2023	$202.0	$251.7	$139.7	$61.6	$655.1
2024	*$193.1*	*$239.1*	*$103.2*	*$44.6*	*$580.0*
2025	*$198.9*	*$245.1*	*$106.3*	*$45.9*	*$596.2*
2026	*$193.4*	*$248.1*	*$109.7*	*$45.9*	*$597.1*
2027	*$199.2*	*$254.3*	*$113.0*	*$47.2*	*$613.7*

** Dollar amounts for 2024 and beyond are estimated. The total rate as a percent of payroll will vary over the projection period as different payroll growth assumptions apply.*

 # Rates shown are for Political Subdivision. Rates for State are 10.51%, 21.45% and 23.90% for Employees, Police and Fire, respectively.

^ Totals may not add due to rounding.

History of Certified Contribution Rates (Continued)

Medical Subsidy

	Employer Contribution Rates				
Fiscal Year Ending	State Employees	Employees Political Sub	Teachers	Police & Fire	Total
2010	3.03%	0.00%	1.32%	2.17%	1.47%
2011	3.03%	0.00%	1.32%	2.17%	1.47%
July 1, 2011 -July 30, 2011	1.60%	0.38%	2.44%	2.65%	1.82%
Aug 1, 2011 - June 30, 2012	1.60%	0.32%	2.31%	3.97%	1.95%
2013	1.60%	0.32%	2.31%	3.97%	1.95%
2014-15	1.62%	0.33%	2.20%	3.95%	1.90%
2016-17	1.64%	0.31%	2.95%	3.84%	2.21%
2018-19	1.07%	0.30%	1.66%	4.10%	1.60%
2020-21	1.05%	0.29%	1.81%	3.66%	1.58%
2022-23	0.78%	0.31%	1.54%	3.21%	1.36%
2024-25	0.58%	0.26%	1.13%	2.60%	1.05%
2026-27	0.34%	0.22%	0.95%	2.23%	0.85%

	Employer Dollars ($ Millions)*				
Fiscal Year Ending	State Employees	Employees Political Sub	Teachers	Police & Fire	Total^
2010	$10.4	$0.4	$13.6	$8.1	$32.6
2011	$10.3	$0.4	$13.8	$8.4	$32.9
2012	$8.3	$1.9	$24.0	$14.7	$48.9
2013	$8.8	$1.9	$23.8	$15.3	$49.8
2014	$8.2	$2.0	$23.3	$15.4	$48.9
2015	$8.6	$1.8	$22.6	$16.0	$49.0
2016	$8.6	$1.9	$31.8	$15.9	$58.2
2017	$8.9	$2.0	$32.0	$16.2	$59.1
2018	$6.0	$2.0	$18.4	$17.8	$44.2
2019	$6.2	$2.0	$18.8	$18.5	$45.5
2020	$6.2	$2.0	$21.2	$17.0	$46.4
2021	$6.3	$2.1	$21.8	$17.9	$48.1
2022	$4.7	$2.3	$18.9	$16.2	$42.1
2023	$5.0	$2.4	$19.6	$16.6	$43.6
2024	*$3.8*	*$2.1*	*$14.6*	*$13.5*	*$34.0*
2025	*$3.9*	*$2.2*	*$15.0*	*$13.9*	*$35.0*
2026	*$2.3*	*$1.9*	*$12.9*	*$12.3*	*$29.4*
2027	*$2.4*	*$1.9*	*$13.2*	*$12.7*	*$30.2*

** Dollar amounts for 2024 and beyond are estimated. The total rate as a percent of payroll will vary over the projection period as different payroll growth assumptions apply.*

^ Totals may not add due to rounding.

History of Certified Contribution Rates (Concluded)

Member Contributions

Fiscal Year Ending	Member Contribution Rates				
	Employees	Teachers	Police	Fire	Total
2010	5.00%	5.00%	9.30%	9.30%	5.64%
2011	5.00%	5.00%	9.30%	9.30%	5.64%
2012	7.00%	7.00%	11.55%	11.80%	7.69%
2013	7.00%	7.00%	11.55%	11.80%	7.69%
2014-15	7.00%	7.00%	11.55%	11.80%	7.69%
2016-17	7.00%	7.00%	11.55%	11.80%	7.71%
2018-19	7.00%	7.00%	11.55%	11.80%	7.71%
2020-21	7.00%	7.00%	11.55%	11.80%	7.72%
2022-23	7.00%	7.00%	11.55%	11.80%	7.73%
2024-25	7.00%	7.00%	11.55%	11.80%	7.74%
2026-27	7.00%	7.00%	11.55%	11.80%	7.74%

Fiscal Year Ending	Member Dollars ($ Millions)*				
	Employees	Teachers	Police	Fire	Total^
2010	$59.6	$54.2	$25.4	$10.2	$149.5
2011	$59.3	$56.2	$26.2	$10.7	$152.4
2012	$80.5	$75.0	$30.7	$13.4	$199.6
2013	$77.8	$74.1	$31.0	$13.7	$196.5
2014	$78.9	$74.7	$31.8	$13.7	$199.0
2015	$81.7	$74.8	$33.4	$14.2	$204.1
2016	$82.7	$76.7	$34.0	$14.6	$208.0
2017	$85.4	$78.0	$34.7	$15.0	$213.1
2018	$87.1	$79.3	$35.9	$15.2	$217.5
2019	$89.8	$81.1	$37.2	$15.9	$224.0
2020	$91.2	$83.3	$38.6	$16.5	$229.7
2021	$93.5	$85.3	$40.0	$18.1	$236.9
2022	$96.8	$87.8	$41.2	$18.2	$244.0
2023	$101.3	$90.9	$43.3	$19.2	$254.7
2024	*$101.8*	*$90.4*	*$41.6*	*$18.9*	*$252.7*
2025	*$104.9*	*$92.7*	*$42.8*	*$19.5*	*$259.9*
2026	*$108.0*	*$95.0*	*$44.1*	*$20.1*	*$267.2*
2027	*$111.3*	*$97.4*	*$45.4*	*$20.7*	*$274.8*

** Dollar amounts for 2024 and beyond are estimated. The total rate as a percent of payroll will vary over the projection period as different payroll growth assumptions apply.*

^ Totals may not add due to rounding.

Funded Status

As of the valuation date, the Unfunded Actuarial Accrued Liability (UAAL) is $5,534.9 million (pension only), and the funded ratio (the ratio of the Actuarial Value of Assets to the Actuarial Accrued Liability) is 67.5% (pension only). This valuation was prepared using the Entry-Age Actuarial Cost Method. For comparison, the funded ratio as of June 30, 2022 was 65.6% (pension only).

The funded status measure is not appropriate for assessing the sufficiency of assets to cover the estimated cost of settling the Plan's benefit obligation. The funded status is appropriate for assessing the need for additional UAAL contributions. The funded status on the basis of the market value of assets would be 67.3%.

Variability of Future Contribution Rates

The Actuarial Cost Method used to determine the contribution rate is intended to produce contribution rates which are generally level as a percent of payroll. Even so, when experience differs from the assumptions, as it often does, the employer's contribution rate can vary from year-to-year.

The level percent of payroll amortization of the UAAL assumes that the plan will remain open to new hires, that the size of the covered active population will remain constant, and that the covered payroll will grow at 3.00% per year (2.50% for Teachers). To the extent that this does not occur, there may be variability in future contribution rates.

Headcount growth for Teachers was analyzed as part of the review process in the experience study. The continued assumption of (0.50)% per year was recommended. The headcount over a 10-year period **increased** at an average annual rate of 0.03%. Observing the most recent 3-year period shows an average annual **increase** of 0.42%. Despite this increase, the expected student population in New Hampshire is continuing to decline. We believe it is still reasonable to assume a decline in the Teacher population. This assumption will continue to be monitored in future valuations and changes, if necessary, will be recommended as part of the next experience study.

Actuarial Value of Assets

The Market Value of Assets of the System totaling approximately $11.51 billion is less than the Actuarial Value of Assets of $11.55 billion by about $36 million as of the valuation date (see page 74). This difference will be gradually recognized over the next four years.

The dollar-weighted rate of return for the year ending June 30, 2023 was 8.0% on the market value of assets. (Note: This dollar-weighted measure may differ from investment manager calculations and should not be used as a measure of investment performance.) The recognized dollar-weighted rate of return on the actuarial value of assets was 6.9% for the year ending June 30, 2023.

Please see Section C for additional asset information.

Actuarial Assumptions

The actuarial assumptions were revised in accordance with the July 1, 2019 through June 30, 2023 experience study. In addition to changes in demographic assumptions, interest rate and wage inflation assumptions were changed from 6.75%/2.75% to 6.75%/3.00%, respectively. The changes in actuarial assumptions decreased the total employer contribution rate by 0.44% of payroll (pension and medical subsidy combined).

Normal cost rates from the first year of the rate setting biennium are projected forward to better reflect the impact of the changing benefit tiers and generational mortality. This method for determining the normal cost was first used for the June 30, 2015 valuation.

A summary of the changes to the major assumptions follows:

Mortality rates
The most recent tables published by The Society of Actuaries (SOA) for U.S. public pension plans are called the Pub-2010 tables, published in February 2019. The SOA also published the MP-2021 projection scales to reflect mortality improvements after 2021. These tables were used for the corresponding employee groups with partial credibility adjustments to healthy retiree mortality rates. Changing this assumption resulted in a marginal decrease in employer contribution rates for Employees, Police and Fire. The change in healthy post-retirement mortality tables for the Teachers resulted in a marginal increase to contribution rates, which was slightly offset by the marginal decreases resulting from changes to disabled post-retirement and pre-retirement mortality tables.

Rates of Withdrawal
Overall rates of termination were increased and male and female rates were combined for all groups. This change caused a marginal decrease in employer contribution rates.

Rates of Disability
There was a slight decrease in the overall rates of disability for the Employees group, increases in the assumed rates for Group II members, while the current rates for the Teachers group remain unchanged. The change resulted in a marginal decrease in employer contribution rates for Employees and a marginal increase in employer contribution rates for Police and Fire.

Rates of Retirement
Male and female experience was updated separately for Group I and Group II. In general, rates of retirement were lowered for Group I, were increased for Police and decreased for Fire. This change caused a marginal decrease in employer contribution rates for Group I and Fire, and a marginal increase for Police.

Merit and Longevity Salary Increases
Rates of merit and longevity pay increases were updated for all member classifications resulting in a moderate increase in employer contribution rates.

Medical Subsidy Margin for Adverse Experience
There were no changes to the medical subsidy margin. The margin for adverse experience for the Teachers group remains at 50%, while 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.

Additional information regarding the assumption changes may be found in the experience study report.

A complete description of the assumptions used in the valuation is in Section E.

We believe that the actuarial assumptions contained in this report are reasonable under the Actuarial Standards of Practice and in compliance with the NHRS Statutes.

The results of the actuarial valuation are dependent on the actuarial assumptions used. Actual results can, and almost certainly will, differ as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution rates, and amortization periods.

Actuarial Funding Methods

The method for determining the UAAL contribution was updated to include layers of increases or decreases in liability to be amortized over a closed period of no more than 20 years. The Initial UAAL was projected forward and amortized over a closed period of 16 years beginning July 1, 2023. New layers for changes in liability are created in every rate setting valuation beginning with the June 30, 2019 valuation projected forward and amortized over a closed period of 20 years.

Solvency rates for medical subsidy benefits are set such that a specified margin is established by the end of the biennium and for all future years thereafter. The margin is intended to mitigate the risk of insolvency due to adverse experience. No change to the margin requirement of 20% (50% for Teachers) was made in this valuation.

Benefit Changes

House Bill (HB) 1535 grants a one-time payment of $500 to members who retired on or before July 1, 2017, or any beneficiaries of such member who is receiving a survivorship pension benefit who has an annual retirement allowance of no more than $30,000 on June 30, 2022. The one-time payment will be made during state fiscal year 2023. An appropriation of $10,793,500 was made by the State for this benefit. HB 1535 is reflected in the GASB Statement No. 67 Accounting Statements. This bill was terminally funded by the State, therefore, there is no financial impact on the NHRS for adoption of this bill.

House Bill (HB) 1587 modifies the definition of Average Final Compensation (AFC) for Group II members who commenced service on or after July 1, 2011 or who have not attained vested status prior to January 1, 2012. The impact of this change was an increase in actuarial accrued liabilities of approximately $22.2 million for Police and $10.5 million for Fire. An appropriation of $42.9 million was made by the State for this benefit. This provision was terminally funded by the State, therefore, there is no expected financial impact on the NHRS for this bill based on the current valuation assumptions.

House Bill (HB) 2 modifies the effective date of the statutory pension recalculation for Group I (Employee and Teacher) members who retire on or after July 1, 2023. The change defers the recalculation of a

Group I retiree's NHRS benefit from age 65 to his or her full retirement age under the federal Social Security system. The impact of this change was an increase in actuarial accrued liabilities of approximately $18.7 million for Employees and $25.2 million for Teachers and a decrease in the funded status of 0.2% for both Employees and Teachers.

HB 2 also grants a one-time payment of $500 to members who retired on or before July 1, 2018 with at least 20 years of creditable service, or any beneficiaries of such member who is receiving a survivorship pension benefit who has an annual retirement allowance of no more than $40,000 on June 30, 2023. It is our understanding that a one-time appropriation of $7.1 million was made by the State for this benefit during state fiscal year 2024. This portion of HB 2 is reflected in the GASB Statement No. 67 Accounting Statements. This portion of the bill was terminally funded by the State, therefore, there is no financial impact on the NHRS.

Senate Bill (SB) 363 allows members who commenced Group II service between January 1, 2002, and June 30, 2011, to purchase nonqualified service time in order to reduce certain transition provision requirements for service retirement. The member is responsible for paying the full actuarial cost of the service credit purchased.

Summary of Changes from June 30, 2022 to June 30, 2023
($ in Millions)

	Pension				
	Employees	Teachers	Police	Fire	Total
Reconciliation of UAAL					
Expected	**$1,848.6**	**$2,303.9**	**$ 959.0**	**$381.1**	**$5,492.6**
Impact of Asset (Gain)Loss	(6.5)	(5.7)	(3.5)	(1.5)	(17.3)
Impact of Liability (Gain)Loss	(0.1)	14.6	51.8	34.1	100.5
Impact of Plan Change	18.7	25.2	(6.4)	(3.8)	33.7
Impact of Method Change	0.0	0.0	0.0	0.0	0.0
Impact of Assumption Change	(66.3)	(11.0)	5.1	(2.4)	(74.6)
Total	**$1,794.4**	**$2,327.0**	**$1,006.0**	**$407.5**	**$5,534.9**
Funded %					
Prior Valuation	**65.8 %**	**62.6 %**	**68.1 %**	**72.1 %**	**65.6 %**
Expected Change	1.7 %	2.0 %	2.3 %	2.3 %	2.0 %
Impact of Gain(Loss)	0.1 %	(0.1)%	(1.0)%	(1.6)%	(0.3)%
Impact of Plan Change	(0.2)%	(0.2)%	0.4 %	0.5 %	(0.1)%
Impact of Method Change	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
Impact of Assumption Change	0.8 %	0.1 %	(0.1)%	0.1 %	0.3 %
Total	**68.2 %**	**64.4 %**	**69.7 %**	**73.4 %**	**67.5 %**
Reconciliation of Employer Contribution Rate *					
State Employees					
Prior Rate-Setting Valuation	**13.27 %**		**28.68 %**	**27.75 %**	**15.44 %**
Impact of (Gain)Loss	(0.23)%		0.18 %	(0.58)%	(0.22)%
Impact of Plan Change	0.16 %		0.00 %	0.00 %	0.11 %
Impact of Method Change	0.00 %		0.00 %	0.00 %	0.00 %
Impact of Assumption Change	(0.67)%		(0.14)%	(0.25)%	(0.66)%
Total	**12.53 %**		**28.72 %**	**26.92 %**	**14.67 %**
Political Subdivision Employees					
Prior Rate Setting Valuation	**13.27 %**	**18.51 %**	**28.68 %**	**27.75 %**	**18.47 %**
Impact of (Gain)Loss	(0.23)%	(0.26)%	0.18 %	(0.58)%	(0.22)%
Impact of Plan Change	0.16 %	0.24 %	0.00 %	0.00 %	0.17 %
Impact of Method Change	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %
Impact of Assumption Change	(0.67)%	(0.21)%	(0.14)%	(0.25)%	(0.35)%
Total	**12.53 %**	**18.28 %**	**28.72 %**	**26.92 %**	**18.07 %**

	Medical Subsidy				
	State Employees	Political Subdivision Employees	Teachers	Police & Fire	Total
Reconciliation of UAAL					
Expected	**$35.0**	**$31.0**	**$172.7**	**$254.1**	**$492.8**
Impact of Asset (Gain)Loss	(0.0)	0.1	0.1	0.0	0.2
Impact of Liability (Gain)Loss	(1.3)	(1.9)	(6.1)	(9.2)	(18.5)
Impact of Plan Change	0.0	0.0	0.0	0.0	0.0
Impact of Method Change	0.0	0.0	0.0	0.0	0.0
Impact of Assumption Change	(1.3)	(1.5)	(5.6)	(9.1)	(17.5)
Total	**$32.4**	**$27.7**	**$161.1**	**$235.8**	**$457.0**
Reconciliation of Employer Contribution Rate *					
Prior Rate Setting Valuation	**0.58 %**	**0.26 %**	**1.13 %**	**2.60 %**	**1.05 %**
Impact of (Gain)Loss	(0.23)%	(0.03)%	(0.16)%	(0.36)%	(0.18)%
Impact of Method Change	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %
Impact of Assumption Change	(0.01)%	(0.01)%	(0.02)%	(0.01)%	(0.02)%
Total	**0.34 %**	**0.22 %**	**0.95 %**	**2.23 %**	**0.85 %**

** Reconciliation of employer rates is from the prior rate-setting actuarial valuation as of June 30, 2021.*

The pension funded percent of 67.5% is the ratio of the actuarial value of assets to the actuarial accrued liability for NHRS in total. That ratio is 67.3% based on market value of assets.

The funded percent is appropriate for assessing the need for future contributions, but does not give an indication for the amount of such contributions. The funded percent is not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the Plan's benefit obligations.

Comments

Comment 1

In total, plan experience between June 30, 2022 and June 30, 2023 was unfavorable for pension and favorable for the medical subsidy on the basis of statutory funding. The dollar-weighted rate of return for the year ending June 30, 2023 was 8.0% on the market value of assets. (Note: This dollar weighted measure may differ from investment manager calculations and should not be used as a measure of investment performance.) On the basis of statutory funding, the rate of return was 6.9% on the actuarial value of assets, resulting in a recognized asset gain of $17 million (pension and medical subsidy combined). The return on the actuarial value of assets is less than the return on the market value of assets because some of this year's market gain is deferred and losses from prior years are recognized this year.

Overall, the System had a loss of $65 million comprised of an asset gain of $17 million and a liability loss of $82 million. Additional information on gains and losses is on pages 21 and 32.

Between the 2022 and 2023 valuations, the pension funded ratio increased by 1.6 percentage points (65.6% to 67.2%) before changes in actuarial assumptions. Note that the funded ratio is expected to increase each year with the receipt of contributions to fund the UAAL. Approximately 2.0% of the increase in the funded ratio is due to scheduled contributions, while the remaining decrease is the result of benefit provision changes and actuarial losses for the System. The funded ratio is 67.5% after reflecting the newly adopted actuarial assumptions.

The contribution for the unfunded actuarial accrued liability is designed to be a level percent of payroll with closed layered amortization periods ranging from 14-20 years in the 2026 Fiscal Year. Medical Subsidy contribution rates are expected to decline as the covered population diminishes. There are currently unrecognized asset losses which will put additional upward pressure on the rates to the extent that future market experience meets expectations.

Comment 2

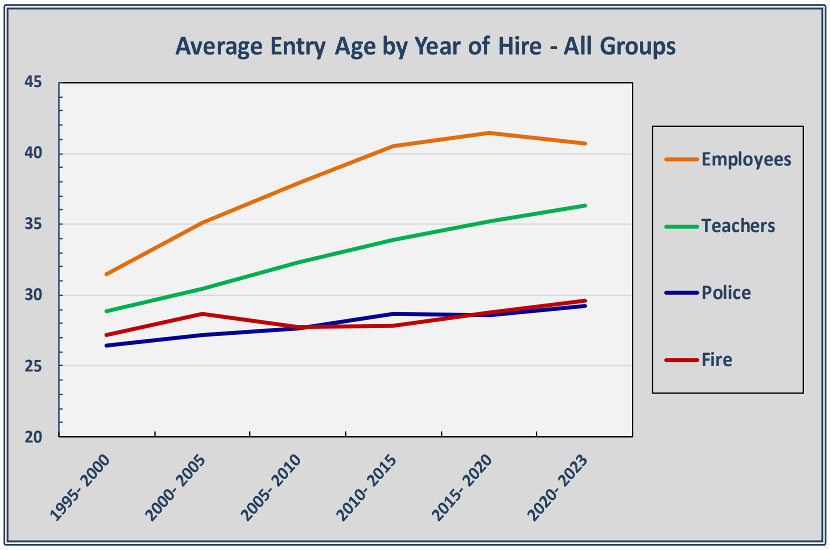
The System underwent an experience study for the 4-year period ending June 30, 2023. At the June 11, 2024 Board meeting, the Board adopted the use of a 6.75% investment return assumption, a 3.00% wage inflation assumption and the demographic package of assumptions proposed in the experience study. The impact of the assumption and method changes can be found on pages 21 and 32. A brief summary of the assumption and method changes can be found on pages 18 and 19.

Comment 3

Prior to June 30, 2007, the statutory funding method did not report a funded status nor did it report that assets were below the retiree liability. As of June 30, 2023, there were 84% of assets needed to cover retiree pension liabilities, as shown in the table on page 39. The assets in the plan are not sufficient to cover current retiree liabilities and the ratio of retiree benefit payroll to the market value of assets is 11.8; this means that approximately 12 years of current retiree benefit payments can be paid from current assets if all assumptions are met and ignoring future contributions. The ability to make such payments beyond that period is heavily dependent upon future contributions and future investment return.

Comment 4

The general expectation, if all assumptions are met, is that future pension contribution rates will decline as new hires with lower normal cost replace those hired before July 1, 2011 with higher normal cost. An exception to this expectation can be seen in the Employee group, where the post-2011 hires' average entry age is higher than pre-2011 hires, resulting in a slightly higher normal cost, given current demographics. Historically observed average entry ages for each valuation group are shown in the chart below.



Rates of employer normal cost by tier for each valuation group are discussed below.

Members hired before or after July 1, 2011 will have varying rates of normal cost depending on applicable benefit provisions and varying demographics among the groups. The average normal cost rates as of June 30, 2023 for members in various tiers are shown below:

Employer Normal Cost by Tier

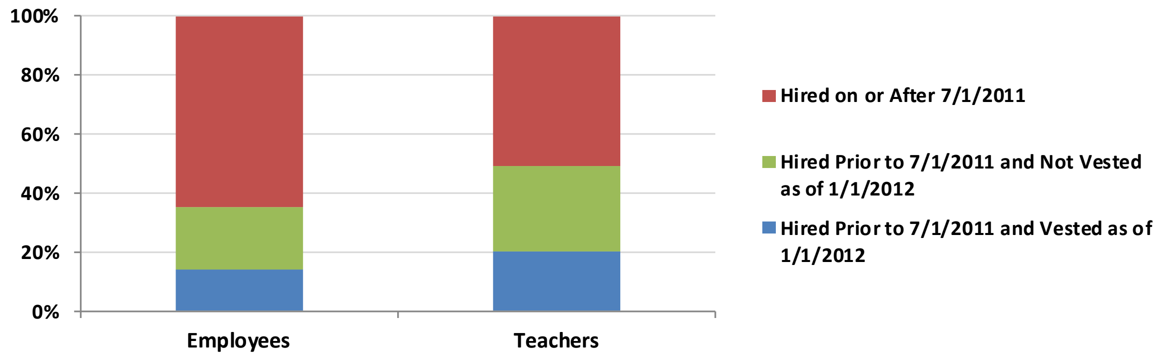
Group I			Group II		
Tier	**Employees**	**Teachers**	**Tier**	**Police**	**Fire**
Vested	2.43%	3.13%	Vested at 1/1/12	13.56%	13.13%
Non-Vested Pre-2011	2.62%	3.12%	Pre-2011 <10 years 1/1/12	9.93%	8.91%
Post-2011	2.28%	2.54%	Pre-2011 <8 years 1/1/12	9.14%	8.15%
Total	**2.42%**	**2.89%**	Pre-2011 <6 years 1/1/12	8.14%	7.33%
			Pre-2011 <4 years 1/1/12	7.16%	6.54%
			Post-2011	4.21%	3.71%
			Total	**5.80%**	**6.10%**

The total normal cost for the active populations of the four member classifications is expected to trend each year towards the rates for new hires. Normal cost is expected to increase each year with generational mortality. Note that the group of those hired on and after July 1, 2011 is approximately 58% of the total active population. There may be fluctuations in the normal cost rate for these members over the next few years which should level out over time as the group grows.

The tables and charts on the following page show the proportion of the active member population by benefit structure for each of the four member classifications.

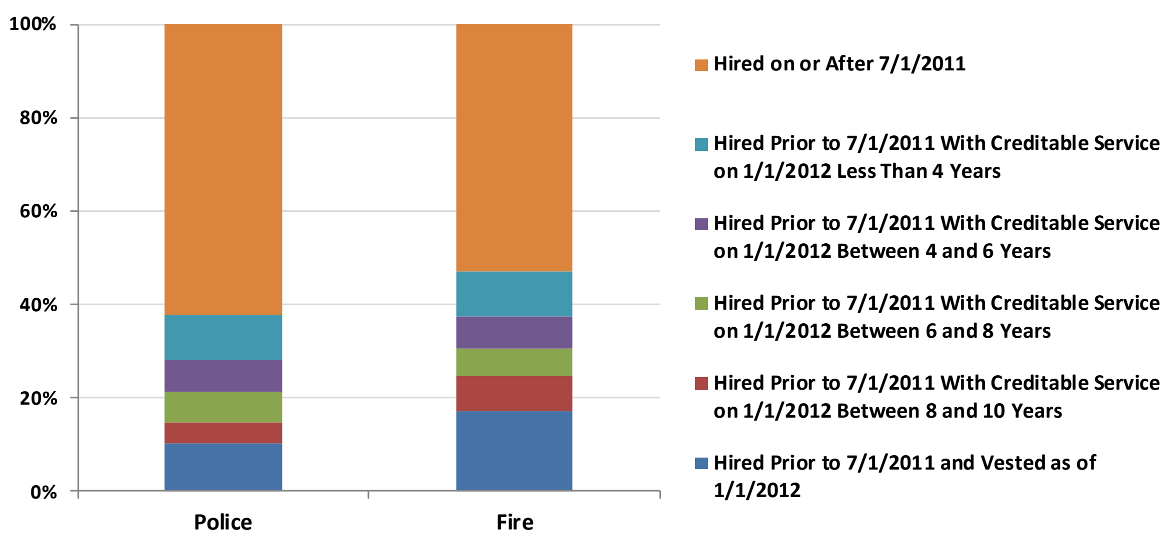
Proportion of Active Population by Benefit Structure as of June 30, 2023 – Group I

	Employees	Teachers
Hired Prior to 7/1/2011 and Vested as of 1/1/2012	3,525	3,694
Hired Prior to 7/1/2011 and Not Vested as of 1/1/2012	5,220	5,265
Hired on or After 7/1/2011	15,895	9,182
Total	24,640	18,141



Proportion of Active Population by Benefit Structure as of June 30, 2023 – Group II

	Police	Fire
Hired Prior to 7/1/2011 and Vested as of 1/1/2012	417	300
Hired Prior to 7/1/2011 With Creditable Service on 1/1/2012 Between 8 and 10 Years	181	139
Hired Prior to 7/1/2011 With Creditable Service on 1/1/2012 Between 6 and 8 Years	259	99
Hired Prior to 7/1/2011 With Creditable Service on 1/1/2012 Between 4 and 6 Years	281	125
Hired Prior to 7/1/2011 With Creditable Service on 1/1/2012 Less Than 4 Years	387	171
Hired on or After 7/1/2011	2,517	932
Total	4,042	1,766



Comment 5

Recognition of Experience Gains and Losses in Layered Amortization of UAAL

The UAAL layers projected to June 30, 2023 were determined in the June 30, 2021 actuarial funding valuation. These projected amounts are used to calculate the change in UAAL resulting from System experience for the purposes of determining the layered UAAL contributions (pages 43, 46, 51, 56 and 61), and deviates slightly from year-to-year calculations of expected UAAL used to measure gains and losses. Gains and losses established for the basis of this calculation will, in total, differ from the sum of the 2022 and 2023 aggregate gains and losses shown on page 32.

Comment 6

June 30, 2023 Medical Subsidy Contribution Rates

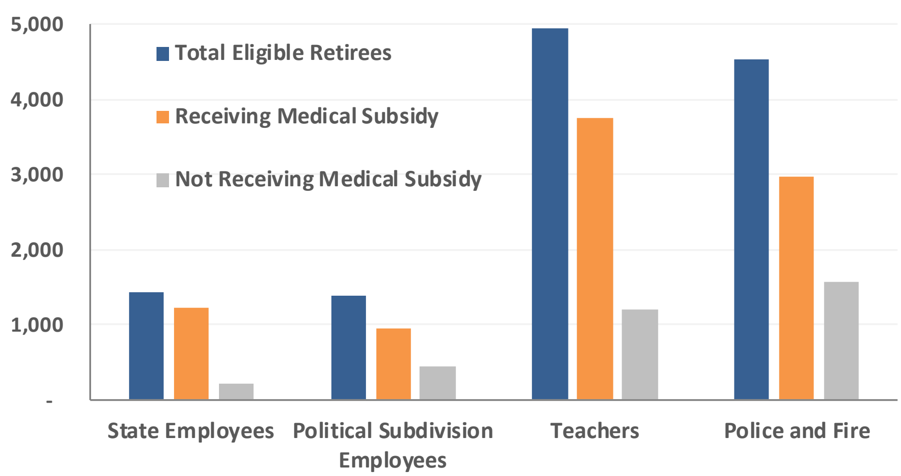
Medical Subsidy benefits continue to warrant close monitoring. As required by the statutes, the objective is to contribute the minimum amount necessary to maintain assets sufficient to pay medical subsidy benefits in each of the four sub-accounts. Given the absence of assets from prior pre-funding (as exists for pension benefits), medical subsidy benefits payable in the future will be largely funded by future employer contributions. However, employer contributions toward medical subsidy benefits are subject to certain limitations as defined in IRC Section 401(h), which are administered by the System.

In addition, year-to-year deviations between actual 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.

Contributions are determined assuming that each subaccount maintains at least a 20% margin (50% for Teachers) for every future year, starting at the end of the 2026-2027 biennium.

For purposes of determining the contribution rates for the 2026-2027 biennium as shown on page 1, we have assumed that benefits for all members receiving a benefit on the valuation date and those Group I eligible members not yet age 60 get paid. In addition, there is a significant number of eligible members who are not receiving benefits, particularly for Group I. 25% of those who opted-out of receiving benefits are assumed to opt-back in on the valuation date. The utilization of medical subsidy benefits among current eligible retirees is shown in the graph below.

Counts of Current Retirees Eligible for Medical Subsidy



SECTION B

FUNDING RESULTS

Development of Employer Contribution Rates
State Employees

Division:	Employees	Teachers	Police	Fire	Total
Normal Cost					
Age and Service Retirement	5.19%		10.74%	13.98%	5.94%
Termination	3.36%		4.47%	1.88%	3.50%
Death-in-Service	0.17%		0.28%	0.32%	0.18%
Disability	0.35%		1.51%	1.37%	0.50%
Expenses	0.35%		0.35%	0.35%	0.35%
Total	9.42%		17.35%	17.90%	10.47%
UAAL Payment*	10.11%		22.92%	20.82%	11.81%
Total Pension Contribution	19.53%		40.27%	38.72%	22.28%
Fiscal Year 2026					
Member Contributions	7.00%		11.55%	11.80%	7.61%
Employer Pension Contribution	12.53%		28.72%	26.92%	14.67%
Employer Medical Subsidy Contribution	0.34%		2.23%	2.23%	0.59%
Total Employer Contribution	**12.87%**	N/A	**30.95%**	**29.15%**	**15.26%**
Projected Payroll for Fiscal Year	$ 686,593,950		$ 103,123,898	$ 2,653,708	$ 792,371,556
Estimated Employer Dollar Contribution	$ 88,364,641	N/A	$ 31,916,846	$ 773,556	$ 121,055,043
Fiscal Year 2027					
Member Contributions	7.00%		11.55%	11.80%	7.61%
Employer Pension Contribution	12.53%		28.72%	26.92%	14.67%
Employer Medical Subsidy Contribution	0.34%		2.23%	2.23%	0.59%
Total Employer Contribution	**12.87%**	N/A	**30.95%**	**29.15%**	**15.26%**
Projected Payroll for Fiscal Year	$ 707,191,769		$ 106,217,615	$ 2,733,319	$ 816,142,703
Estimated Employer Dollar Contribution	$ 91,015,581	N/A	$ 32,874,352	$ 796,762	$ 124,686,695
Contribution Rates from Prior Valuation					
FY 2024#	**13.85%**		**31.28%**	**30.35%**	**16.30%**
FY 2025#	**13.85%**		**31.28%**	**30.35%**	**16.30%**

* *Unfunded Actuarial Accrued Liability - Please refer to pages 43-64 for more detail regarding the development of UAAL amortization payments, and page 19 for description of the UAAL amortization policy.*

\# *Computed in June 30, 2021 Actuarial Valuation.*

Development of Employer Contribution Rates
Political Subdivision Members

Division:	Employees	Teachers	Police	Fire	Total
Normal Cost					
Age and Service Retirement	5.19%	6.20%	10.74%	13.98%	6.84%
Termination	3.36%	3.13%	4.47%	1.88%	3.26%
Death-in-Service	0.17%	0.09%	0.28%	0.32%	0.15%
Disability	0.35%	0.12%	1.51%	1.37%	0.42%
Expenses	0.35%	0.35%	0.35%	0.35%	0.35%
Total	9.42%	9.89%	17.35%	17.90%	11.02%
UAAL Payment*	10.11%	15.39%	22.92%	20.82%	14.82%
Total Pension Contribution	19.53%	25.28%	40.27%	38.72%	25.84%
Fiscal Year 2026					
Member Contributions	7.00%	7.00%	11.55%	11.80%	7.77%
Employer Pension Contribution	12.53%	18.28%	28.72%	26.92%	18.07%
Employer Medical Subsidy Contribution	0.22%	0.95%	2.23%	2.23%	0.93%
Total Employer Contribution	**12.75%**	**19.23%**	**30.95%**	**29.15%**	**19.00%**
Projected Payroll for Fiscal Year	$ 856,876,690	$ 1,357,140,233	$ 278,750,652	$ 167,694,707	$ 2,660,462,282
Estimated Employer Dollar Contribution	$ 109,251,778	$ 260,978,067	$ 86,273,327	$ 48,883,007	$ 505,386,179
Fiscal Year 2027					
Member Contributions	7.00%	7.00%	11.55%	11.80%	7.77%
Employer Pension Contribution	12.53%	18.28%	28.72%	26.92%	18.07%
Employer Medical Subsidy Contribution	0.22%	0.95%	2.23%	2.23%	0.93%
Total Employer Contribution	**12.75%**	**19.23%**	**30.95%**	**29.15%**	**19.00%**
Projected Payroll for Fiscal Year	$ 882,582,991	$ 1,391,068,739	$ 287,113,172	$ 172,725,548	$ 2,733,490,450
Estimated Employer Dollar Contribution	$ 112,529,331	$ 267,502,519	$ 88,861,527	$ 50,349,497	$ 519,242,874
Employer Contribution Rates from Prior Valuation					
FY 2024#	**13.53%**	**19.64%**	**31.28%**	**30.35%**	**19.57%**
FY 2025#	**13.53%**	**19.64%**	**31.28%**	**30.35%**	**19.57%**

** Unfunded Actuarial Accrued Liability - Please refer to pages 43-64 for more detail regarding the development of UAAL amortization payments, and page 19 for description of the UAAL amortization policy.*

 # Computed in June 30, 2021 Actuarial Valuation.

Development of Pension Actuarial Liabilities
June 30, 2023

Actuarial Present Value of	Total Present Value (1)	Portion Covered by Future Normal Cost Contributions (2)	Actuarial Accrued Liabilities (1) - (2)
Age and service allowances based on total service likely to be rendered by present active members	$ 7,843,463,544	$ 1,864,531,199	$ 5,978,932,345
Disability benefits likely to be paid to present active members	172,616,229	122,655,301	49,960,928
Death-in-service benefits likely to be paid on behalf of present active members (employer financed portion)	78,361,862	43,048,454	35,313,408
Separation benefits (refunds of contributions and deferred allowances) likely to be paid to present active members	1,389,331,662	982,864,996	406,466,666
Benefits likely to be paid to current inactive and vested deferred members	548,168,347	-	548,168,347
Benefits to be paid to current retirees, beneficiaries, and future beneficiaries of current retirees	10,011,599,104	-	10,011,599,104
Total	$ 20,043,540,748	$ 3,013,099,950	$ 17,030,440,798
Actuarial Value of Assets	$ 11,495,582,032	$ -	$ 11,495,582,032
Liabilities to be Covered by Future Contributions	$ 8,547,958,716	$ 3,013,099,950	$ 5,534,858,766
Funded Ratio			67.5%

NHRS Total Pension
Unfunded Actuarial Accrued Liability Payoff Projection
($ in Millions)

Level Percent Amortization

Year	Fiscal Year Ending June 30,	Employer Contribution Rates UAAL Payment*	Projected Payroll	UAAL Beginning of Year	UAAL Payment	UAAL End of Year	End of Year Funded Ratio
	2024	15.32%	$ 3,267	$ 5,535	$ 477	$ 5,415	69.0%
	2025	15.32%	3,359	5,415	491	5,273	70.6%
1	2026	N/A	3,453	5,273	488	5,125	72.1%
2	2027	N/A	3,550	5,125	502	4,952	73.7%
3	2028	N/A	3,650	4,952	516	4,752	75.3%
4	2029	N/A	3,752	4,752	531	4,524	77.0%
5	2030	N/A	3,857	4,524	545	4,266	78.8%
6	2031	N/A	3,965	4,266	559	3,976	80.7%
7	2032	N/A	4,076	3,976	574	3,651	82.7%
8	2033	N/A	4,190	3,651	591	3,287	84.8%
9	2034	N/A	4,308	3,287	609	2,880	87.0%
10	2035	N/A	4,429	2,880	625	2,428	89.3%
11	2036	N/A	4,553	2,428	643	1,928	91.7%
12	2037	N/A	4,681	1,928	660	1,377	94.2%
13	2038	N/A	4,812	1,377	679	768	96.8%
14	2039	N/A	4,948	768	698	99	99.6%
15	2040	N/A	5,088	99	87	17	99.9%
16	2041	N/A	5,230	17	89	(37)	100.1%
17	2042	N/A	5,378	(37)	-	(39)	100.1%
18	2043	N/A	5,529	(39)	-	(42)	100.2%
19	2044	N/A	5,684	(42)	6	(53)	100.2%
20	2045	N/A	5,844	(53)	7	(64)	100.0%

* *The payroll projections for Teachers is assumed to be at a different rate than the other member classifications. Therefore, each member classification has a level percentage of payroll, but the aggregate rate will vary.*

The funded ratio is projected in this amortization schedule assuming all actuarial assumptions are exactly met. Projections are not predictions of specific future events and do not provide numeric precision in absolute terms. It is important to understand that actual experience will differ from the projections shown on this page. When experience differs from the assumptions, as it often does, the employer's contribution rate can vary from year-to-year.

NHRS Total Pension
Unfunded Actuarial Accrued Liability Payoff Projection
($ in Millions)

Level Dollar Amortization

(Not the Statutory Method – Hypothetical Illustration)

Year	Fiscal Year Ending June 30,	UAAL Beginning of Year	UAAL Payment	UAAL End of Year	End of Year Funded Ratio
	2024	$ 5,535	$ 477	$ 5,458	68.9%
	2025	5,458	491	5,542	69.6%
1	2026	5,608	551	5,418	71.0%
2	2027	5,418	551	5,214	72.7%
3	2028	5,214	551	4,996	74.4%
4	2029	4,996	551	4,764	76.1%
5	2030	4,764	551	4,517	77.9%
6	2031	4,517	551	4,252	79.7%
7	2032	4,252	551	3,970	81.5%
8	2033	3,970	551	3,668	83.3%
9	2034	3,668	551	3,347	85.2%
10	2035	3,347	551	3,003	87.1%
11	2036	3,003	551	2,636	89.0%
12	2037	2,636	551	2,245	90.9%
13	2038	2,245	551	1,827	92.8%
14	2039	1,827	551	1,381	94.7%
15	2040	1,381	551	1,030	96.2%
16	2041	1,030	551	1,032	96.4%
17	2042	1,032	65	1,038	96.6%
18	2043	1,038	65	1,136	96.5%
19	2044	1,136	-	1,212	96.5%
20	2045	1,212	-	1,294	96.4%

The funded ratio is projected in this amortization schedule assuming all actuarial assumptions are exactly met. Projections are not predictions of specific future events and do not provide numeric precision in absolute terms. It is important to understand that actual experience will differ from the projections shown on this page. When experience differs from the assumptions, as it often does, the employer's contribution rate can vary from year to year.

Actuarial Balance Sheet as of June 30, 2023

Assets and Present Value of Expected Future Contributions

	Pension	Medical Subsidy
A. Present valuation assets		
1. Net assets from system financial statements	$ 11,459,384,732	$ 50,158,855
2. Actuarial value adjustment	36,197,300	158,439
3. Actuarial valuation assets	11,495,582,032	50,317,294
B. Actuarial present value of expected future employer contributions		
1. For normal costs	754,446,345	3,755,771
2. For unfunded actuarial accrued liability	5,534,858,766	457,022,076
3. Total	6,289,305,111	460,777,847
C. Actuarial present value of expected future member contributions	2,258,653,605	-
D. Total Present and Expected Future Resources	$ 20,043,540,748	$ 511,095,141

Present Value of Expected Future Benefit Payments

	Pension	Medical Subsidy
A. To retirees and beneficiaries	$ 10,011,599,104	$ 467,609,237
B. To vested terminated members	396,538,577	-
C. To non-vested terminated members (outstanding refunds)	151,629,770	-
D. To present active members		
1. Allocated to service rendered prior to valuation date - actuarial accrued liability	6,470,673,347	39,730,133
2. Allocated to service likely to be rendered after valuation date	3,013,099,950	3,755,771
3. Total	9,483,773,297	43,485,904
E. Total Actuarial Present Value of Expected Future Benefit Payments	$ 20,043,540,748	$ 511,095,141

Experience Gain/(Loss) – June 30, 2022 and June 30, 2023

	Pension	Medical Subsidy
(1) Actual UAAL* as of June 30, 2022	$ 5,693,792,702	$ 521,643,030
(2) Normal cost from 2022 valuation	343,321,918	1,043,340
(3) Actual contributions (employer and employee)	909,771,922	43,619,351
(4) Interest accrual: [(1)+1/2 [(2)-(3)]] x {.0675 for pension; .0275 for medical subsidy}	365,213,320	13,759,763
(5) Expected UAAL end of year: (1)+(2)-(3)+(4)	5,492,556,018	492,826,782
(6) Change from legislation	33,728,190	-
(7) Change from revised actuarial assumptions	(74,603,637)	(17,515,096)
(8) Expected UAAL after changes: (5)+(6)+(7)	5,451,680,571	475,311,686
(9) Actual UAAL* as of June 30, 2023	**5,534,858,766**	**457,022,076**
(10) Gain/(loss) for year: (8)-(9)	**(83,178,195)**	**18,289,610**
(11) Gain/(loss) as percent of actuarial accrued liabilities at start of year	(0.5)%	3.2 %

	Pension	Medical Subsidy
(1) Actual UAAL* as of June 30, 2021	$ 5,722,902,159	$ 569,824,165
(2) Normal cost from 2021 valuation	332,259,571	1,411,825
(3) Actual contributions (employer and employee)	823,009,765	42,064,183
(4) Interest accrual: [(1)+1/2 [(2)-(3)]] x {.0675 for pension; .0275 for medical subsidy}	369,733,077	15,111,195
(5) Expected UAAL end of year: (1)+(2)-(3)+(4)	5,601,885,042	544,283,002
(6) Change from legislation	-	-
(7) Change from revised actuarial assumptions	-	-
(8) Expected UAAL after changes: (5)+(6)+(7)	5,601,885,042	544,283,002
(9) Actual UAAL* as of June 30, 2022	**5,693,792,702**	**521,643,030**
(10) Gain/(loss) for year: (8)-(9)	**(91,907,660)**	**22,639,972**
(11) Gain/(loss) as percent of actuarial accrued liabilities at start of year	(0.6)%	3.7 %

** Unfunded Actuarial Accrued Liabilities.*

Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

The determination of the accrued liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the Plan's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

1. **Investment Risk** – actual investment returns may differ from the expected returns;
2. **Asset/Liability Mismatch** – changes in asset values may not match changes in liabilities, thereby altering the gap between the accrued liability and assets and consequently altering the funded status and contribution requirements;
3. **Contribution Risk** – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
4. **Salary and Payroll Risk** – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
5. **Longevity Risk** – members may live longer or shorter than expected and receive pensions for a period of time other than assumed; and
6. **Other Demographic Risks** – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

The timely receipt of the actuarially determined contributions is critical to support the financial health of the plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.

Plan Maturity Measures

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Generally accepted plan maturity measures are discussed in the following pages. A historical summary of these plan maturity measures can be found on page 36.

Funded Ratio

The ratio of actuarial value of assets to actuarial accrued liabilities is expected to trend toward 100% by June 30, 2045. Each subsequent change in liability as calculated in odd-numbered years shall be separately amortized over a fixed period of no longer than 20 years.

Ratio of Actual Total Payroll to Expected Total Payroll

This ratio is expected to remain near 100% each year.

Ratio of Net Cash Flow to Market Value of Assets

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.

Ratio of Actives to Retirees and Beneficiaries

A young plan with many active members and few retirees will have a high ratio of actives to retirees. A mature open plan may have close to the same number of actives to retirees resulting in a ratio near 1.0. A super-mature or closed plan may have significantly more retirees than actives resulting in a ratio below 1.0.

Ratio of Unfunded Actuarial Accrued Liability to Payroll

The ratio of the unfunded actuarial accrued liability to payroll is expected to trend toward 0% by June 30, 2045.

Ratio of Actuarial Value of Assets to Payroll

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. For example, if the actuarial value of assets is 2.0 times the payroll, a return on assets 5% different than assumed would equal 10% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in plan sponsor contributions as a percentage of payroll.

Plan Maturity Measures (Concluded)

Ratio of Actuarial Accrued Liability to Payroll

The relationship between actuarial accrued liability and payroll is a useful indicator of the potential volatility of contributions for a fully funded plan. A funding policy that targets a funded ratio of 100% is expected to result in the ratio of assets to payroll and the ratio of liability to payroll converging over time. Total AAL / Total Payroll is expected to grow as the System matures. The rate of growth may slow down as members hired on or after July 1, 2011 replace current members.

The ratio of liability to payroll may also be used as a measure of sensitivity of the liability itself. For example, if the actuarial accrued liability is 2.5 times the payroll, a change in liability 2% other than assumed would equal 5% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in liability (and also plan sponsor contributions) as a percentage of payroll.

Standard Deviation of Investment Return to Payroll

This measure illustrates the impact of a one standard deviation change in investment return as a percent of payroll. Investment return experience other than expected ultimately affects the employer contribution rates. The higher the ratio of this risk metric, the greater the expected volatility in employer contribution rates. Absent changes in investment policy, this metric is expected to increase as the assets grow to 100% of the AAL.

Standard Deviation of Contribution Rate

This measure illustrates the impact of a one standard deviation change in investment return on the annual contribution rate. Absent a change in amortization policy, this rate is expected to increase substantially as the amortization period decreases.

Additional Risk Assessment

Additional risk assessment is outside the scope of the annual actuarial valuation. Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability.

Summary of Risk Measures
Pension

Valuation Year	Funded Ratio: NHRS in Total	Percentage of AAL Covered by Net Actuarial Value of Assets Available: Aggregate Member Contributions	Current Retirees & Beneficiaries	Active & Inactive Members	Actual Total Payroll / Expected Total Payroll	Net Cash Flow as a Percent of MVA	Ratio of Actives to Retirees[1]	UAAL Amortization Period	Ratio to Payroll: UAAL	AVA	AAL	Standard Deviation of Investment Return	Standard Deviation of Contribution Rate
June 30, 2008	67.8%	100%	83%	0%	101%	(1.2)%	2.2	30	109%	230%	339%	***	***
June 30, 2009*	58.3	100	63	0	103	(2.3)	2.1	30	145	202	346	23%	0.3%
June 30, 2010	58.5	100	61	0	98	(2.8)	2.0	30	150	211	361	23	0.3%
June 30, 2011#*	57.4	100	63	0	98	(3.1)	1.8	29	169	228	397	26	0.3%
June 30, 2012	56.1	100	58	0	96	(2.3)	1.7	28	183	234	417	28	0.3%
June 30, 2013	56.7	100	59	0	97	(2.9)	1.6	27	185	243	428	29	0.3%
June 30, 2014	60.7	100	67	0	97	(1.7)	1.6	26	173	267	440	32	0.4%
June 30, 2015#^	59.2	100	66	0	99	(1.8)	1.5	25	195	283	478	33	0.4%
June 30, 2016	60.0	100	67	0	98	(1.7)	1.5	24	196	294	489	34	0.4%
June 30, 2017#	61.8	100	72	0	99	(2.0)	1.3	23	189	306	495	36	0.5%
June 30, 2018	63.6	100	75	0	100	(1.7)	1.3	22	181	317	498	37	0.5%
June 30, 2019#*@^	60.8	100	73	0	100	(1.8)	1.3	21	209	323	531	40	0.6%
June 30, 2020	61.0	100	72	0	100	(1.9)	1.3	20	209	326	535	40	0.6%
June 30, 2021	64.2	100	78	0	100	(2.1)	1.3	19	193	345	538	42	0.6%
June 30, 2022	65.6	100	81	0	101	(1.1)	1.2	18-20	185	353	538	43	0.7%
June 30, 2023#*	67.5	100	84	0	101	(0.9)	1.2	17-20	174	362	536	43	0.7%

\# *After reflection of changes in assumptions.*
* *After reflection of changes in legislation.*
@ *After reflection of changes in methodology.*
*** *Unavailable.*
^ *The standard deviation of investment return was updated in these years as the result of an experience study.*
[1] *Beginning with the valuation year ended June 30, 2019, the ratio of actives to retirees excludes additional data records which have resulted from additional annuities, survivor benefits, or members having benefits in more than one valuation group. There were 4,014 such records in 2023.*

These risk measures are provided in accordance with the System's Actuarial Funding Policy. Short-term fluctuations will occur due to experience, plan changes, and assumption and method changes. Long-term expectations are described on the prior pages.

UAAL Amortization Period: The initial unfunded liability as of June 30, 2017 shall be amortized through 2039 (a 16-year period beginning on July 1, 2023). Each subsequent change in liability as calculated in odd-numbered years shall be separately amortized over a fixed period of no longer than 20 years.

Low-Default-Risk Obligation Measure

INTRODUCTION

In December 2021, the Actuarial Standards Board (ASB) adopted a revision to Actuarial Standard of Practice (ASOP) No. 4, *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*. The revised ASOP No. 4 requires the calculation and disclosure of a liability referred to by the ASOP as the "Low-Default-Risk Obligation Measure" (LDROM). The rationale that the ASB cited for the calculation and disclosure of the LDROM was included in the Transmittal Memorandum of ASOP No. 4 and is presented below (emphasis added):

"The ASB believes that the calculation and disclosure of this measure provides **appropriate, useful information for the intended user regarding the funded status of a pension plan**. The calculation and disclosure of this additional measure is **not intended to suggest that this is the "right" liability measure** for a pension plan. However, the ASB does believe that **this additional disclosure provides a more complete assessment of a plan's funded status and provides additional information regarding the security of benefits that members have earned as of the measurement date.**"

COMPARING THE ACCRUED LIABILITIES AND THE LDROM

One of the fundamental financial objectives of NHRS is to finance each member's retirement benefits over the period from the member's date of hire until the member's projected date of retirement (entry age actuarial cost method) as a level percentage of payroll. To fulfill this objective, the discount rate that is used to value the accrued liabilities of NHRS is set equal to the **expected return** on the System's diversified portfolio of assets (referred to sometimes as the investment return assumption). For NHRS, the investment return assumption is 6.75%.

The LDROM is meant to approximately represent the lump sum cost to a plan to purchase low-default-risk fixed income securities whose resulting cash flows essentially replicate in timing and amount the benefits earned (or the costs accrued) as of the measurement date. The LDROM is very dependent upon market interest rates at the time of the LDROM measurement. The lower the market interest rates, the higher the LDROM, and vice versa. The LDROM results presented in this report are based on the entry age actuarial cost method and discount rates based upon the June 2023 Treasury Yield Curve Spot Rates (monthly average). The 1-, 5-, 10- and 30-year rates follow: 5.29%, 3.99%, 3.61% and 3.84%.

Presented below are the actuarial accrued liability and the LDROM as of June 30, 2023 for NHRS.

Type of Member	Valuation Accrued Liabilities	LDROM
Retirees	$ 10,011,599,104	$12,892,065,612
Deferreds/Inactives	548,168,347	749,019,160
Actives	6,470,673,347	10,644,954,873
Totals	**$ 17,030,440,798**	**$24,286,039,645**

Low-Default-Risk Obligation Measure

COMMENTARY REGARDING THE LDROM

Some ways in which the LDROM can assist the NHRS Board of Trustees in a decision-making process include:

(1) It provides information to potentially allow for better risk management for NHRS.
(2) It places the appropriateness of potential employer contribution rate reductions or benefit enhancements in a better context.
(3) It provides more complete information regarding the benefit security of the membership's benefits earned as of the measurement date.
(4) It brings into consideration a potential value for a "withdrawal liability" for employers that may want to leave NHRS.

Potentially Allows for Better Risk Management: A very useful risk metric to exhibit potential contribution rate volatility (or amortization period volatility for fixed rate plans) is the ratio of assets to payroll or AAL to payroll. How could we reduce that potential contribution rate volatility (or amortization period volatility for fixed rate plans)? The LDROM and liability driven investing (LDI) are closely related concepts.

Other than reducing benefits, all other things being equal, the only way to reduce that volatility is to immunize (i.e., LDI) a portion of the System's liability. This does not mean that the System needs to immunize all of the liability. For example, if they could immunize half of it, they could reduce the contribution rate volatility in half. This would require the actuary to use a cash flow matching method to value that portion of the liabilities. This means that the actuary would not use the System's investment return assumption for this portion of the liability, but the yield curve resulting from the fixed income portfolio that is being used to immunize the liability. The value of the assets (i.e., fixed income portfolio) and the value of the immunized liability would move in tandem with any changes (up or down) in future interest rates. The result being that the immunized portion of the System's liability would reduce the potential of producing new unfunded actuarial accrued liabilities. However, the fixed income portfolio would still have the minor potential for credit default risk.

Places the Appropriateness of Potential Employer Contribution Rate Reductions or Benefit Enhancements in a Better Context: Many public employee retirement systems have adopted a funding policy. Many funding policies already take into account the System's funded ratio (based upon the AAL) when considering whether to allow for benefit enhancements or contribution rate reductions. For example, a System may not allow for a benefit enhancement if the funded ratio does not exceed a certain threshold. Similarly, a System may not allow for an employer contribution rate reduction in some circumstances. For example, a reduction to the employer normal cost contribution may not be allowed until the System reaches a funded ratio of 120%. Given the fact that most criteria are based upon the <u>expectation</u> of earning the investment return assumption, a System may want to consider extending these criteria to a funded ratio based upon the LDROM in addition to the AAL.

Provides more Complete Information Regarding the Benefit Security of the Membership's Benefits Earned as of the Measurement Date: Too often a high funded ratio (i.e., 100% funded) on an AAL basis is interpreted as benefit security for the participants. The fact that this funded ratio is based upon an expected measure is many times overlooked. If the AAL and LDROM measures are relatively close, then the System at least has the opportunity to make benefits payable in the future more secure.

Brings into consideration a potential value for a "withdrawal liability" for employers that may want to leave the System: The current withdrawal policy allows an employer to leave the System in return for payment of a "withdrawal liability". The System retains the liabilities of the participants currently in receipt of a benefit from the employer. A System may wish to consider alternate assumptions such as market-based interest rates for bearing the full risk of retaining the liabilities of the withdrawing employers.

Pension Solvency Test

The New Hampshire Retirement System funding objective is to meet long-term benefit promises through contributions that remain approximately level from year to year as a percent of member payroll. If the contributions to the System are level in concept and soundly executed, the System will pay all promised benefits when due -- the ultimate test of financial soundness.

A solvency test is one means of checking a system's progress under its funding program. In a solvency test, the plan's present assets (cash and investments) are compared with:

1) Active member contributions on deposit;
2) The liabilities for future benefits to present retired lives; and
3) The liabilities for service already rendered by active and inactive members.

In a system that has been following the discipline of level percent-of-payroll financing, with assumptions and benefits unchanged and all assumptions met, the liabilities for active member contributions on deposit (liability 1) and the liabilities for future benefits to present retired lives (liability 2) will be fully covered by present assets (except in rare circumstances). In addition, the liabilities for service already rendered by active members (liability 3) will be partially covered by the remainder of present assets. The larger the funded portion of liability 3, the stronger the condition of the System.

As of June 30, 2023, there were 84% of assets needed to cover retiree liabilities, as shown in the table below.

Prior to June 30, 2007, the statutory funding method did not report a funded status nor did it report that assets were below the retiree liability. The assets in the plan are not sufficient to cover current retiree liabilities and the ratio of retiree benefit payroll to the market value of assets is 11.8. Approximately 12 years of current retiree benefit payments can be paid from current assets if all assumptions are met and ignoring future contributions. The ability to make such payments beyond that period is heavily dependent upon future contributions and future investment return.

Total of all Groups
($ in Thousands)

	Projected Pension Liabilities for				Percentage of Accrued Liabilities Covered by Net Assets Available		
Fiscal Year	(1) Aggregate Member Contributions	(2) Current Retirees & Beneficiaries	(3) Active & Inactive Members (Employer Financed Portion)	Net Assets Available for Benefits	(1)	(2)	(3)
2014	$2,842,340	$ 5,789,052	$2,413,782	$ 6,700,553	100%	67%	0%
2015 #	2,949,169	6,098,512	2,440,932	7,280,761	100%	72%	0%
2016	2,978,817	6,964,227	2,789,822	7,636,066	100%	67%	0%
2017 #	2,915,811	7,315,440	2,977,198	8,165,684	100%	72%	0%
2018	2,927,793	7,667,448	3,107,908	8,710,939	100%	75%	0%
2019 #*@	3,019,358	8,392,790	3,602,017	9,121,933	100%	73%	0%
2020	3,119,450	8,739,587	3,628,978	9,447,838	100%	72%	0%
2021	3,087,943	9,151,819	3,751,453	10,268,313	100%	78%	0%
2022	3,036,430	9,678,163	3,828,894	10,849,694	100%	81%	0%
2023 #*	3,043,329	10,011,599	3,975,513	11,495,582	100%	84%	0%

 # After reflection of changes in assumptions.
** After reflection of changes in legislation.*
@ After reflection of changes in methodology.

Pension Solvency Test -- Comparative Statement
($ in Thousands)

Group	Fiscal Year		Projected Pension Liabilities for: (1) Aggregate Member Contributions	(2) Current Retirees & Beneficiaries	(3) Active & Inactive Members (Employer Financed Portion)	Net Assets Available for Benefits	Percentage of Accrued Liabilities Covered by Net Assets Available: (1)	(2)	(3)
Employees	2014		$ 1,083,878	$ 1,823,517	$ 784,437	$ 2,195,284	100%	61%	0%
Teachers	2014		1,113,650	2,198,892	966,511	2,482,496	100%	62%	0%
Police	2014		422,972	1,209,741	454,133	1,361,280	100%	78%	0%
Fire	2014		221,840	556,902	208,701	661,493	100%	79%	0%
Employees	2015	#	1,137,601	2,007,299	863,247	2,403,294	100%	63%	0%
Teachers	2015	#	1,155,922	2,555,611	1,141,245	2,682,083	100%	60%	0%
Police	2015	#	433,215	1,364,908	543,229	1,477,517	100%	77%	0%
Fire	2015	#	222,431	637,704	241,223	717,867	100%	78%	0%
Employees	2016		1,152,928	2,139,549	857,347	2,538,563	100%	65%	0%
Teachers	2016		1,171,831	2,692,037	1,156,821	2,799,863	100%	60%	0%
Police	2016		430,490	1,460,840	535,225	1,546,665	100%	76%	0%
Fire	2016		223,568	671,801	240,428	750,975	100%	79%	0%
Employees	2017		1,133,071	2,272,436	934,564	2,734,558	100%	70%	0%
Teachers	2017	#	1,132,876	2,819,228	1,211,560	2,979,005	100%	65%	0%
Police	2017		426,606	1,526,761	570,755	1,650,908	100%	80%	0%
Fire	2017		223,258	697,015	260,320	801,214	100%	83%	0%
Employees	2018		1,128,180	2,391,404	974,131	2,922,358	100%	75%	0%
Teachers	2018		1,142,455	2,956,675	1,268,903	3,176,932	100%	69%	0%
Police	2018		428,859	1,596,512	591,281	1,758,301	100%	83%	0%
Fire	2018		228,299	722,857	273,593	853,348	100%	86%	0%
Employees	2019	#*@	1,160,917	2,646,257	1,181,832	3,063,967	100%	72%	0%
Teachers	2019	#*@	1,181,186	3,195,041	1,461,286	3,326,088	100%	67%	0%
Police	2019	#*@	441,940	1,768,684	666,606	1,838,868	100%	79%	0%
Fire	2019	#*@	235,315	782,808	292,293	893,010	100%	84%	0%
Employees	2020		1,194,410	2,766,799	1,202,228	3,173,612	100%	72%	0%
Teachers	2020		1,225,030	3,310,020	1,470,570	3,450,798	100%	67%	0%
Police	2020		458,081	1,847,135	658,558	1,900,199	100%	78%	0%
Fire	2020		241,928	815,632	297,625	923,229	100%	84%	0%
Employees	2021		1,187,629	2,892,159	1,246,883	3,449,619	100%	78%	0%
Teachers	2021		1,220,158	3,429,767	1,532,995	3,752,083	100%	74%	0%
Police	2021		445,546	1,958,854	649,018	2,062,170	100%	83%	0%
Fire	2021		234,610	871,038	322,557	1,004,441	100%	88%	0%
Employees	2022		1,170,371	3,071,698	1,300,176	3,645,813	100%	81%	0%
Teachers	2022		1,210,287	3,552,414	1,585,896	3,976,505	100%	78%	0%
Police	2022		424,441	2,129,277	633,839	2,171,111	100%	82%	0%
Fire	2022		231,331	924,774	308,983	1,056,265	100%	89%	0%
Employees	2023	#*	1,174,827	3,168,474	1,301,756	3,850,701	100%	84%	0%
Teachers	2023	#*	1,210,843	3,654,105	1,673,052	4,210,979	100%	82%	0%
Police	2023	#*	428,186	2,214,443	673,958	2,310,556	100%	85%	0%
Fire	2023	#*	229,473	974,577	326,747	1,123,345	100%	92%	0%

 # After reflection of changes in assumptions.
** After reflection of changes in legislation.*
@ After reflection of changes in methodology.

Impact of Payroll Growth Experience on Contribution Rates

Year ending: **June 30, 2023**

Prior to any assumption changes

Member Classification	**Employees**	**Teachers**	**Police**	**Fire**	**Total**
2022 Valuation Payroll	$ 1,367,483	$ 1,226,570	$ 336,500	$ 147,032	$ 3,077,584
Payroll Increase Assumption	2.75%	2.25%	2.75%	2.75%	
2023 Expected Valuation Payroll	$ 1,405,089	$ 1,254,167	$ 345,753	$ 151,075	$ 3,156,085
2023 Actual Valuation Payroll	$ 1,412,494	$ 1,260,240	$ 349,469	$ 155,893	$ 3,178,096
All dollar amounts in thousands					
Actual/Expected Payroll	100.5%	100.5%	101.1%	103.2%	100.7%
Active Actuarial Accrued Liability	$ 2,254,629	$ 2,644,858	$ 1,038,473	$ 549,294	$ 6,487,256
Estimated pay gain/(loss) on liability	$ (11,820)	$ (12,744)	$ (11,042)	$ (16,976)	$ (52,582)
Total Contribution Rate in Effect (EE+ER)	20.75%	26.48%	42.22%	41.58%	
Estimated excess/(shortfall) contributions (w/interest)	$ 1,588	$ 1,662	$ 1,621	$ 2,070	$ 6,941
Estimated Increase/(Decrease) on UAL as of June, 30, 2023	$ 10,233	$ 11,082	$ 9,421	$ 14,906	$ 45,642
Total UAL as of June, 30, 2023	$ 1,860,602	$ 2,338,031	$ 1,000,949	$ 409,881	$ 5,609,462
UAL contribution rate for FY 2026	10.69%	15.76%	23.29%	21.34%	14.60%
Estimated UAL contribution rate on expected payroll	10.69%	15.76%	23.32%	21.22%	14.58%
Estimated Impact of change in payroll on contribution rate	0.00%	0.00%	-0.03%	0.12%	0.02%

Schedule of Pension Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b)-(a)	Funded Ratio (a)/(b)	Covered Payroll (c)	UAAL as a Percent of Covered Payroll [(b)-(a)]/(c)
June 30, 2008	$ 5,302,034,006	$ 7,821,316,352	$ 2,519,282,346	67.8%	$ 2,308,320,669	109.1 %
June 30, 2009*	4,937,319,506	8,475,051,817	3,537,732,311	58.3%	2,448,287,042	144.5 %
June 30, 2010	5,233,838,359	8,953,932,346	3,720,093,987	58.5%	2,481,383,620	149.9 %
June 30, 2011#*	5,740,516,293	9,998,251,218	4,257,734,925	57.4%	2,517,779,470	169.1 %
June 30, 2012	5,817,881,588	10,361,600,451	4,543,718,863	56.1%	2,487,757,437	182.6 %
June 30, 2013	6,070,681,258	10,708,768,437	4,638,087,179	56.7%	2,501,741,708	185.4 %
June 30, 2014	6,700,553,435	11,045,173,866	4,344,620,431	60.7%	2,507,898,809	173.2 %
June 30, 2015	7,280,760,612	11,488,613,381	4,207,852,769	63.4%	2,575,031,210	163.4 %
June 30, 2016	7,636,066,231	12,732,865,722	5,096,799,491	60.0%	2,601,403,606	195.9 %
June 30, 2017#	8,165,684,152	13,208,449,374	5,042,765,222	61.8%	2,667,611,532	189.0 %
June 30, 2018	8,710,939,332	13,703,148,691	4,992,209,359	63.6%	2,752,235,069	181.4 %
June 30, 2019#*@	9,121,932,914	15,014,165,392	5,892,232,478	60.8%	2,825,006,022	208.6 %
June 30, 2020	9,447,838,321	15,488,015,283	6,040,176,962	61.0%	2,894,708,279	208.7 %
June 30, 2021	10,268,312,657	15,991,214,816	5,722,902,159	64.2%	2,972,968,504	192.5 %
June 30, 2022	10,849,693,955	16,543,486,657	5,693,792,702	65.6%	3,077,583,995	185.0 %
June 30, 2023^	**11,452,682,032**	**17,028,416,245**	**5,575,734,213**	**67.3%**	**3,178,096,144**	**175.4 %**
June 30, 2023*	**11,495,582,032**	**17,105,044,435**	**5,609,462,403**	**67.2%**	**3,178,096,144**	**176.5 %**
June 30, 2023#*	**11,495,582,032**	**17,030,440,798**	**5,534,858,766**	**67.5%**	**3,178,096,144**	**174.2 %**

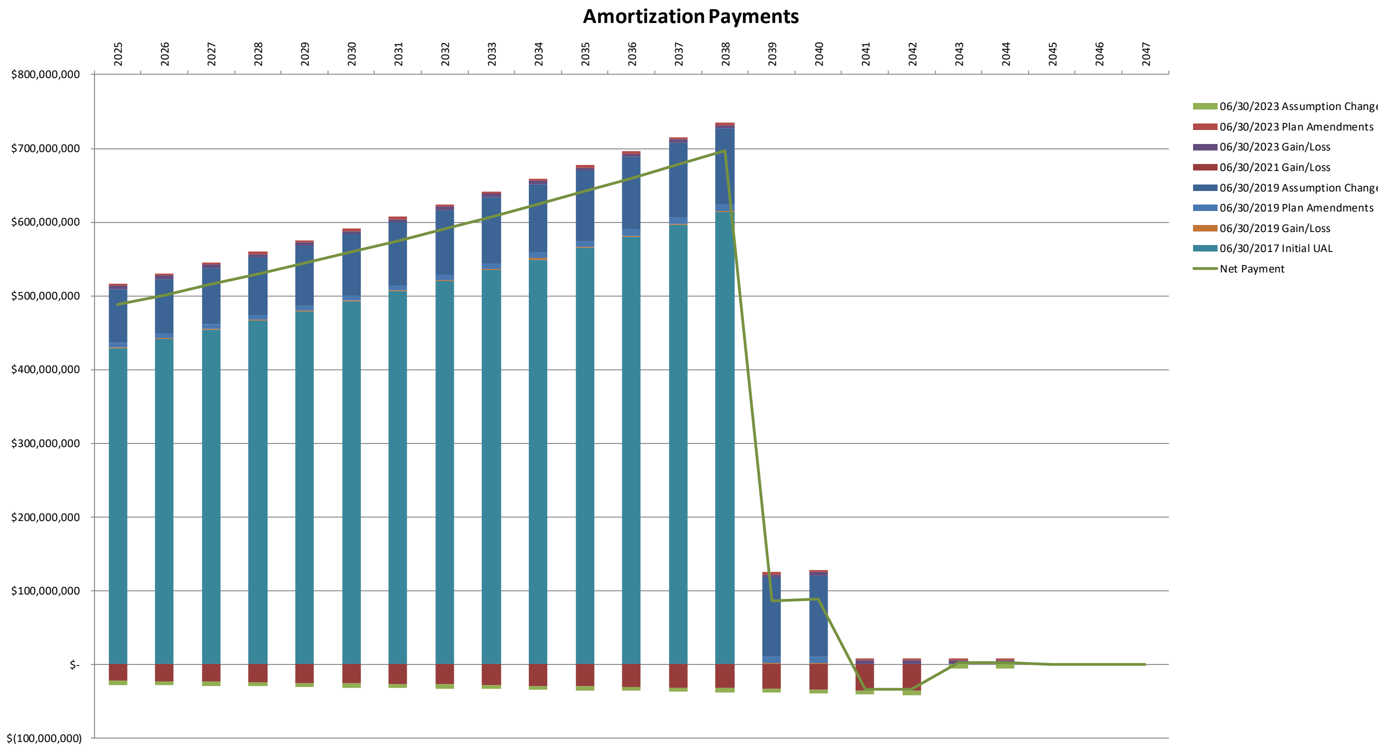
\# *After reflection of changes in assumptions.*
* *After reflection of changes in legislation.*
@ *After reflection of changes in methodology.*
^ *Actuarial Value of Assets were reduced in the baseline by the $42.9 million appropriation for the adoption of House Bill 1587.*

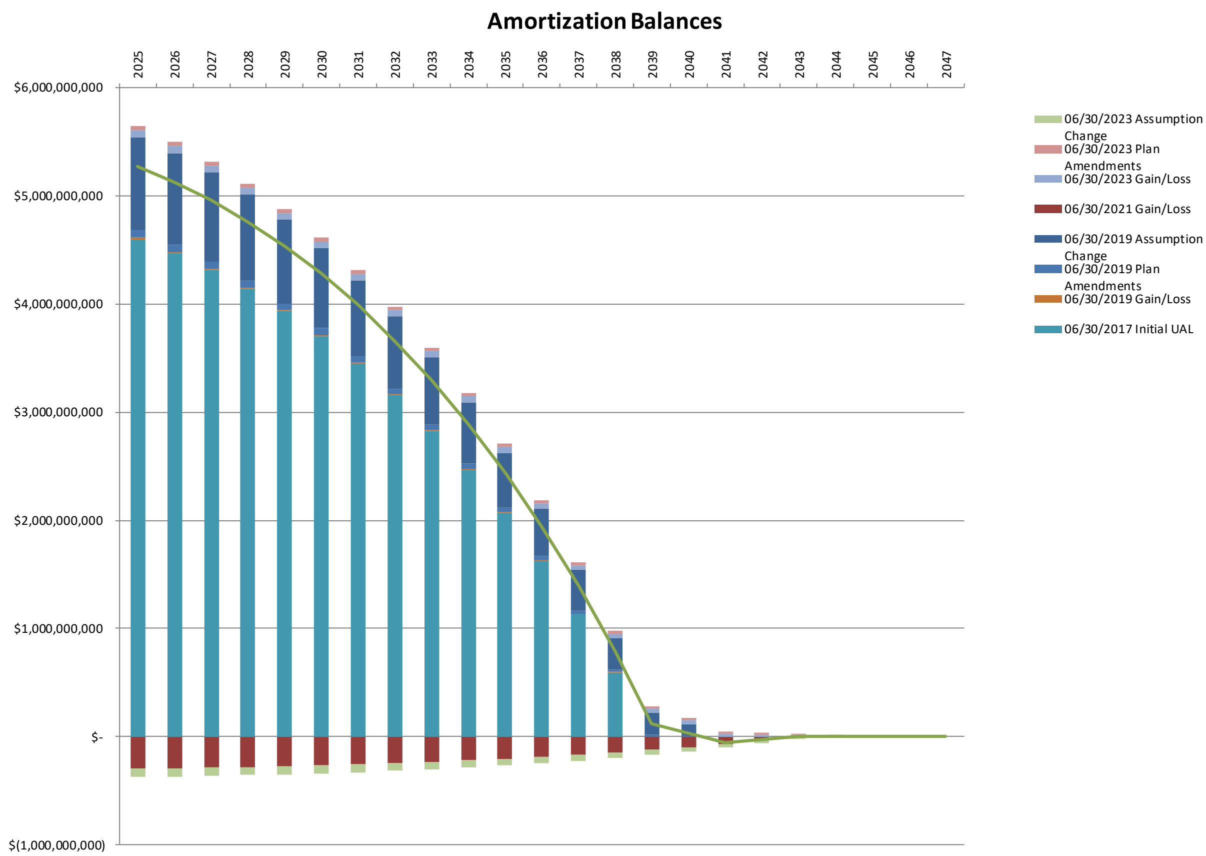
Development of Employer Contribution Rates
Total System Amortization of Unfunded Actuarial Accrued Liability Schedule

Source of UAAL For Year Ending	Projected 6/30/2025 UAAL Amount	Remaining Financing Period 6/30/2025	FY 2026 Contribution* Dollar	FY 2026 Contribution* % of Payroll
Initial Unfunded Actuarial Accrued Liability				
6/30/2017	$ 4,599,661,666	14 yrs.	$ 429,068,981	**12.43%**
(Gain) Loss From Experience				
6/30/2019	13,016,047	16 yrs.	1,156,174	**0.03%**
6/30/2021	(293,655,947)	18 yrs.	(22,787,578)	**(0.66%)**
6/30/2023	66,372,477	20 yrs.	4,658,620	**0.13%**
Changes From Updated Actuarial Assumptions and Methods				
6/30/2019	859,438,913	16 yrs.	72,419,317	**2.10%**
6/30/2023	(78,063,106)	20 yrs.	(5,566,255)	**(0.16%)**
Changes From Updated Benefits				
6/30/2019	69,950,154	16 yrs.	5,905,772	**0.17%**
6/30/2023	38,435,170	20 yrs.	2,813,244	**0.08%**
Totals	$ 5,275,155,374		$ 487,668,275	**14.12%**

** Total dollars shown are the sum of all four-member classifications. Percentages of payroll shown are the weighted average over all of NHRS.*

Total System
Remaining Amortization Payments and Balances





Employees Pension
Development of Pension Actuarial Liabilities
June 30, 2023

Actuarial Present Value of	Total Present Value (1)	Portion Covered by Future Normal Cost Contributions (2)	Actuarial Accrued Liabilities (1) - (2)
Age and service allowances based on total service likely to be rendered by present active members	$ 2,585,047,863	$ 540,128,196	$ 2,044,919,667
Disability benefits likely to be paid to present active members	59,124,280	37,841,792	21,282,488
Death-in-service benefits likely to be paid on behalf of present active members (employer financed portion)	33,061,133	17,316,727	15,744,406
Separation benefits (refunds of contributions and deferred allowances) likely to be paid to present active members	545,900,651	401,402,802	144,497,849
Benefits likely to be paid to current inactive and vested deferred members	250,139,429	-	250,139,429
Benefits to be paid to current retirees, beneficiaries, and future beneficiaries of current retirees	3,168,473,635	-	3,168,473,635
Total	$ 6,641,746,991	$ 996,689,517	$ 5,645,057,474
Actuarial Value of Assets	$ 3,850,701,345	$ -	$ 3,850,701,345
Liabilities to be Covered by Future Contributions	$ 2,791,045,646	$ 996,689,517	$ 1,794,356,129
Funded Ratio			68.2%

Development of Employer Contribution Rates
Employees Amortization of Unfunded Actuarial Accrued Liability Schedule

Source of UAAL For Year Ending		Projected 6/30/2025 UAAL Amount	Remaining Financing Period 6/30/2025	Amort. Factor		FY 2026 Contribution Dollar	FY 2026 Contribution % of Payroll
Initial Unfunded Actuarial Accrued Liability							
6/30/2017	$	1,476,879,430	14 yrs.	10.853632	$	136,072,369	**8.82%**
(Gain) Loss From Experience							
6/30/2019		1,909,125	16 yrs.	12.006549		159,007	**0.01%**
6/30/2021		(96,671,293)	18 yrs.	13.079888		(7,390,835)	**(0.48%)**
6/30/2023		22,903,278	20 yrs.	14.079141		1,626,753	**0.11%**
Changes From Updated Actuarial Assumptions and Methods							
6/30/2019		333,581,984	16 yrs.	12.006549		27,783,335	**1.80%**
6/30/2023		(77,670,296)	20 yrs.	14.079141		(5,516,693)	**(0.36%)**
Changes From Updated Benefits							
6/30/2019		20,420,792	16 yrs.	12.006549		1,700,804	**0.11%**
6/30/2023		21,327,356	20 yrs.	14.079141		1,514,819	**0.10%**
Totals	$	1,702,680,376			$	155,949,559	**10.11%**

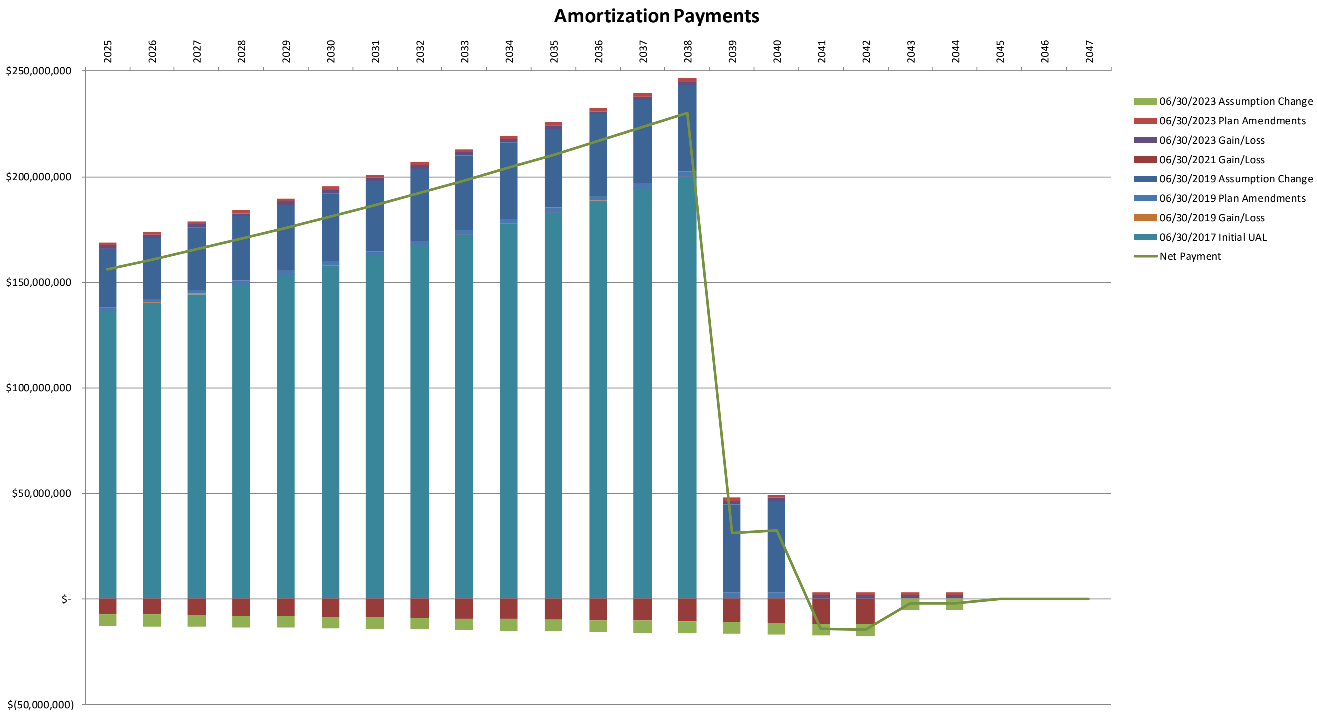
Employees Pension
Unfunded Actuarial Accrued Liability Payoff Projection
($ in Millions)

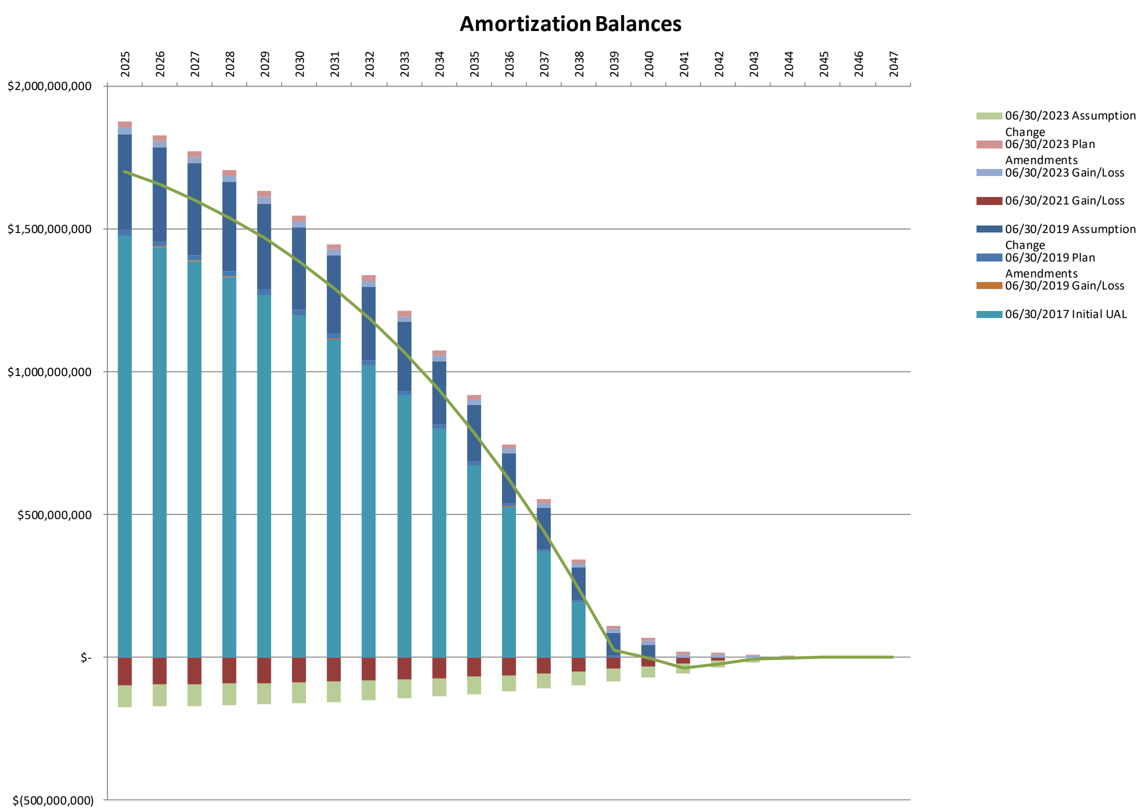
Year	Fiscal Year Ending June 30,	Employer Contribution Rates UAAL Payment*	Projected Payroll	UAAL Beginning of Year	UAAL Payment	UAAL End of Year	End of Year Funded Ratio
	2024	10.85%	$ 1,455	$ 1,794	$ 158	$ 1,752	69.7%
	2025	10.85%	1,499	1,752	163	1,702	71.3%
1	2026	10.11%	1,543	1,702	156	1,656	72.8%
2	2027	10.11%	1,590	1,656	161	1,601	74.3%
3	2028	10.11%	1,638	1,601	166	1,538	75.9%
4	2029	10.11%	1,687	1,538	171	1,465	77.6%
5	2030	10.11%	1,737	1,465	176	1,382	79.3%
6	2031	10.11%	1,789	1,382	181	1,288	81.2%
7	2032	10.11%	1,843	1,288	186	1,183	83.1%
8	2033	10.11%	1,898	1,183	192	1,065	85.1%
9	2034	10.11%	1,955	1,065	198	932	87.3%
10	2035	10.11%	2,014	932	204	784	89.6%
11	2036	10.11%	2,074	784	210	620	91.9%
12	2037	10.11%	2,136	620	216	439	94.4%
13	2038	10.11%	2,200	439	222	239	97.1%
14	2039	10.11%	2,266	239	229	18	99.8%
15	2040	1.29%	2,334	18	30	(12)	100.1%
16	2041	1.29%	2,404	(12)	31	(45)	100.5%
17	2042	-0.63%	2,476	(45)	-	(48)	100.5%
18	2043	-0.63%	2,550	(48)	-	(51)	100.5%
19	2044	-0.15%	2,627	(51)	-	(55)	100.5%
20	2045	-0.15%	2,706	(55)	-	(58)	100.0%

** UAAL rates for the first biennium are based on the adopted rates from the previous rate setting valuation less the employer normal cost from this valuation.*

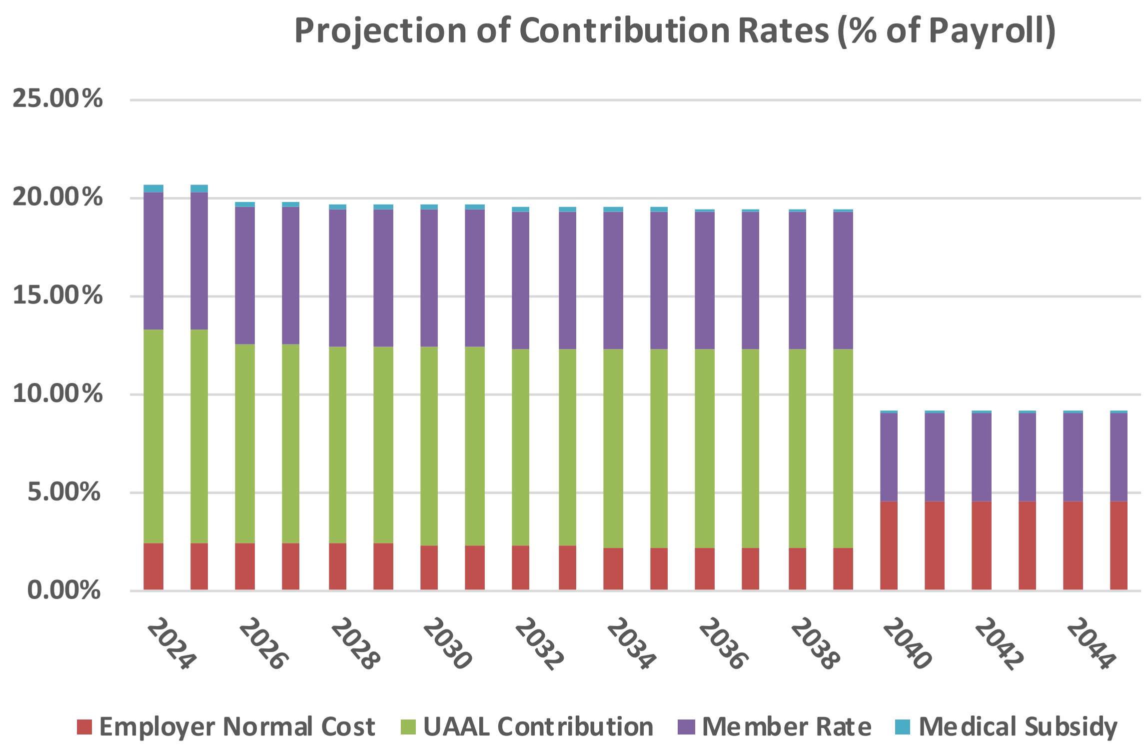
The funded ratio is projected in this amortization schedule assuming all actuarial assumptions are exactly met. Projections are not predictions of specific future events and do not provide numeric precision in absolute terms. It is important to understand that actual experience will differ from the projections shown on this page. When experience differs from the assumptions, as it often does, the employer's contribution rate can vary from year to year.

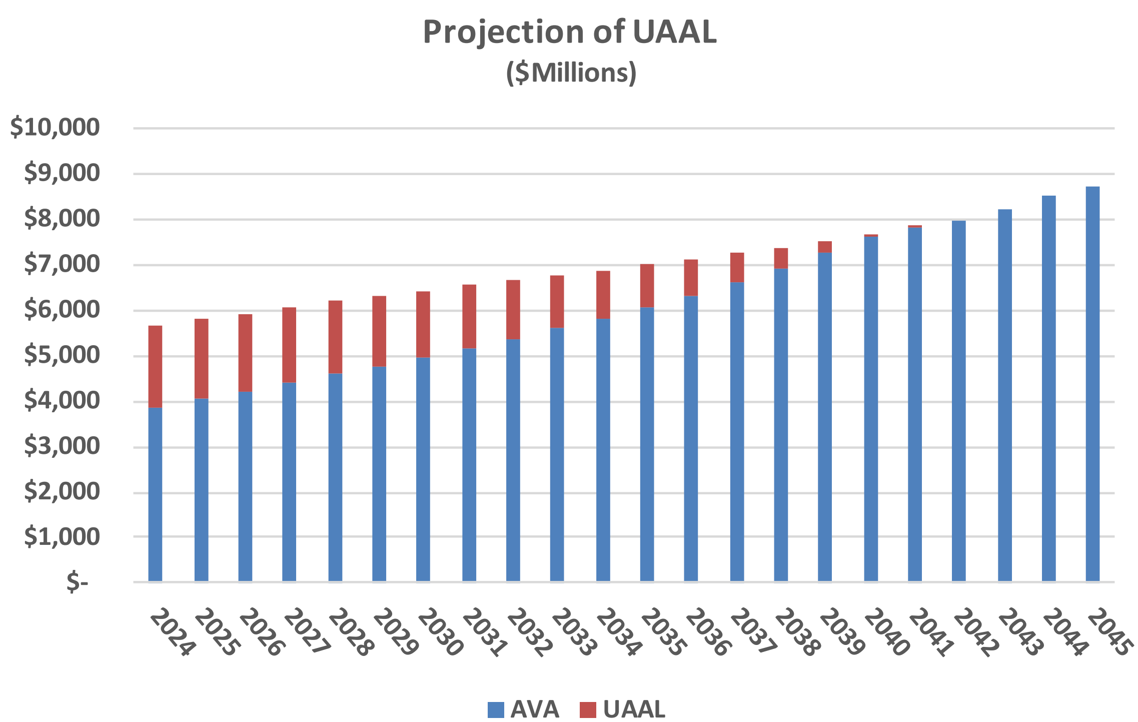
Employees Pension
Remaining Amortization Payments and Balances





Contribution Projections – Employees





Teachers Pension
Development of Pension Actuarial Liabilities
June 30, 2023

Actuarial Present Value of	Total Present Value (1)	Portion Covered by Future Normal Cost Contributions (2)	Actuarial Accrued Liabilities (1) - (2)
Age and service allowances based on total service likely to be rendered by present active members	$ 3,132,196,347	$ 723,445,961	$ 2,408,750,386
Disability benefits likely to be paid to present active members	28,549,203	14,206,443	14,342,760
Death-in-service benefits likely to be paid on behalf of present active members (employer financed portion)	22,266,835	10,816,948	11,449,887
Separation benefits (refunds of contributions and deferred allowances) likely to be paid to present active members	614,414,261	395,801,387	218,612,874
Benefits likely to be paid to current inactive and vested deferred members	230,738,887	-	230,738,887
Benefits to be paid to current retirees, beneficiaries, and future beneficiaries of current retirees	3,654,104,902	-	3,654,104,902
Total	$ 7,682,270,435	$ 1,144,270,739	$ 6,537,999,696
Actuarial Value of Assets	$ 4,210,979,415	$ -	$ 4,210,979,415
Liabilities to be Covered by Future Contributions	$ 3,471,291,020	$ 1,144,270,739	$ 2,327,020,281
Funded Ratio			64.4%

Development of Employer Contribution Rates
Teachers Amortization of Unfunded Actuarial Accrued Liability Schedule

Source of UAAL For Year Ending		Projected 6/30/2025 UAAL Amount	Remaining Financing Period 6/30/2025	Amort. Factor	FY 2026 Contribution Dollar	FY 2026 Contribution % of Payroll
Initial Unfunded Actuarial Accrued Liability						
6/30/2017	$	1,973,105,108	14 yrs.	10.547357	$ 187,071,045	**13.78%**
(Gain) Loss From Experience						
6/30/2019		26,145,398	16 yrs.	11.621778	2,249,690	**0.17%**
6/30/2021		(118,776,640)	18 yrs.	12.612351	(9,417,486)	**(0.69%)**
6/30/2023		(19,136,013)	20 yrs.	13.525620	(1,414,797)	**(0.10%)**
Changes From Updated Actuarial Assumptions and Methods						
6/30/2019		304,073,503	16 yrs.	11.621778	26,164,111	**1.93%**
6/30/2023		(7,452,690)	20 yrs.	13.525620	(551,005)	**(0.04%)**
Changes From Updated Benefits						
6/30/2019		28,929,484	16 yrs.	11.621778	2,489,248	**0.18%**
6/30/2023		28,660,487	20 yrs.	13.525620	2,118,978	**0.16%**
Totals	$	2,215,548,637			$ 208,709,784	**15.39%**

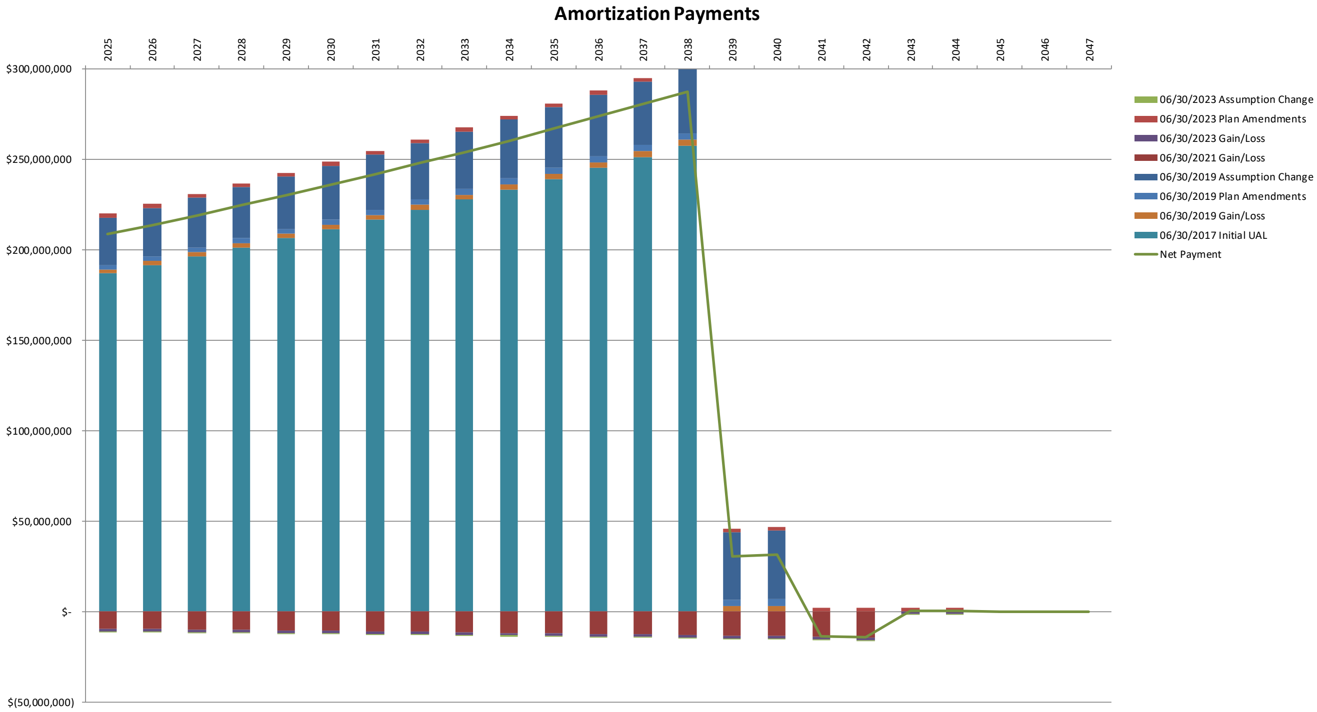
Teachers Pension
Unfunded Actuarial Accrued Liability Payoff Projection
($ in Millions)

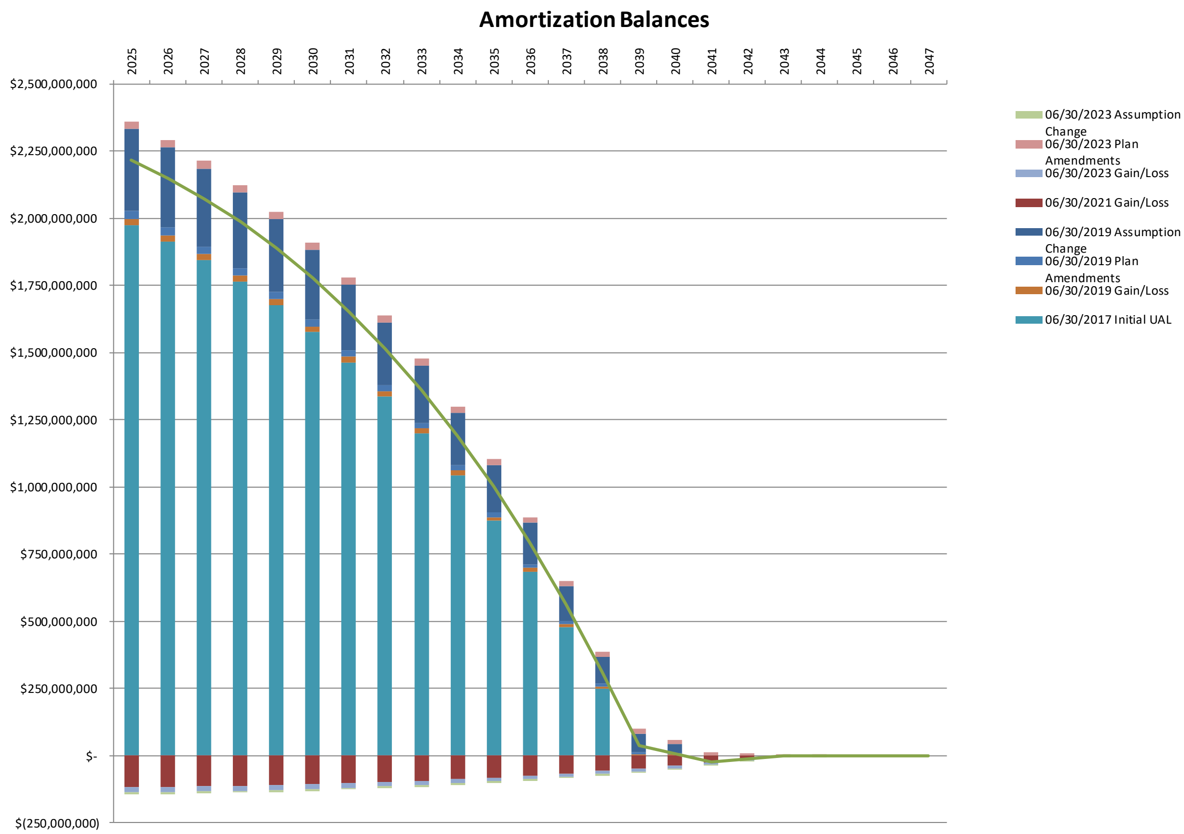
Year	Fiscal Year Ending June 30,	Employer Contribution Rates UAAL Payment*	Projected Payroll	UAAL Beginning of Year	UAAL Payment	UAAL End of Year	End of Year Funded Ratio
	2024	15.62%	$ 1,292	$ 2,327	$ 202	$ 2,275	66.0%
	2025	15.62%	1,324	2,275	207	2,214	67.7%
1	2026	15.39%	1,357	2,214	209	2,148	69.4%
2	2027	15.39%	1,391	2,148	214	2,072	71.2%
3	2028	15.39%	1,426	2,072	220	1,985	73.1%
4	2029	15.39%	1,462	1,985	225	1,886	75.0%
5	2030	15.39%	1,499	1,886	231	1,775	77.0%
6	2031	15.39%	1,536	1,775	236	1,651	79.1%
7	2032	15.39%	1,574	1,651	242	1,512	81.3%
8	2033	15.39%	1,613	1,512	248	1,358	83.6%
9	2034	15.39%	1,654	1,358	255	1,187	86.0%
10	2035	15.39%	1,695	1,187	261	997	88.5%
11	2036	15.39%	1,737	997	267	788	91.1%
12	2037	15.39%	1,780	788	274	558	93.9%
13	2038	15.39%	1,825	558	281	306	96.7%
14	2039	15.39%	1,871	306	288	29	99.7%
15	2040	1.61%	1,918	29	31	-	100.0%
16	2041	1.61%	1,966	-	32	-	100.0%
17	2042	-0.67%	2,015	-	-	-	100.0%
18	2043	-0.67%	2,065	-	-	-	100.0%
19	2044	0.02%	2,117	-	0.4	(0.4)	100.0%
20	2045	0.02%	2,170	(0.4)	0.4	(0.8)	100.0%

* *UAAL rates for the first biennium are based on the adopted rates from the previous rate setting valuation less the employer normal cost from this valuation.*

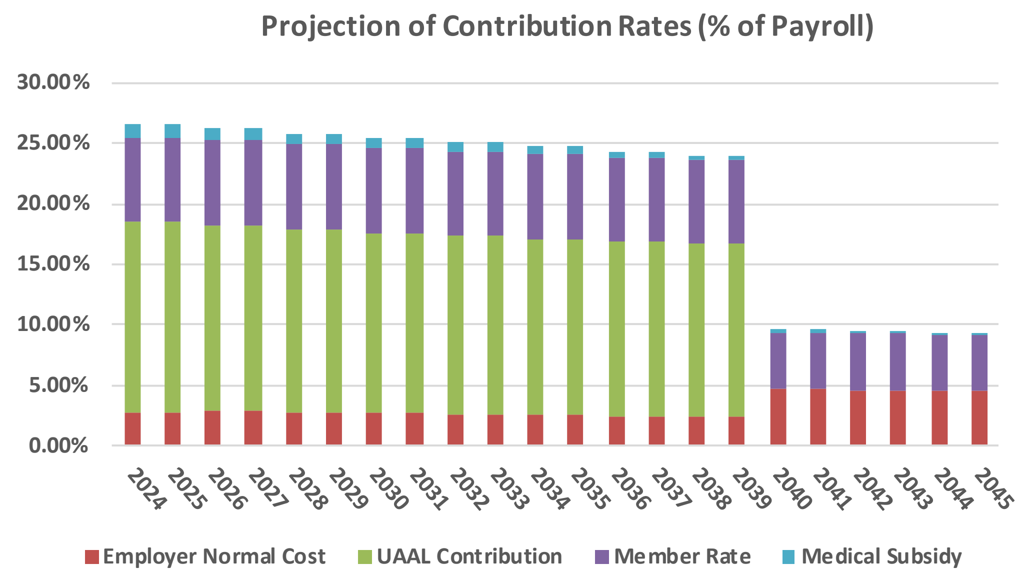
The funded ratio is projected in this amortization schedule assuming all actuarial assumptions are exactly met. Projections are not predictions of specific future events and do not provide numeric precision in absolute terms. It is important to understand that actual experience will differ from the projections shown on this page. When experience differs from the assumptions, as it often does, the employer's contribution rate can vary from year-to-year.

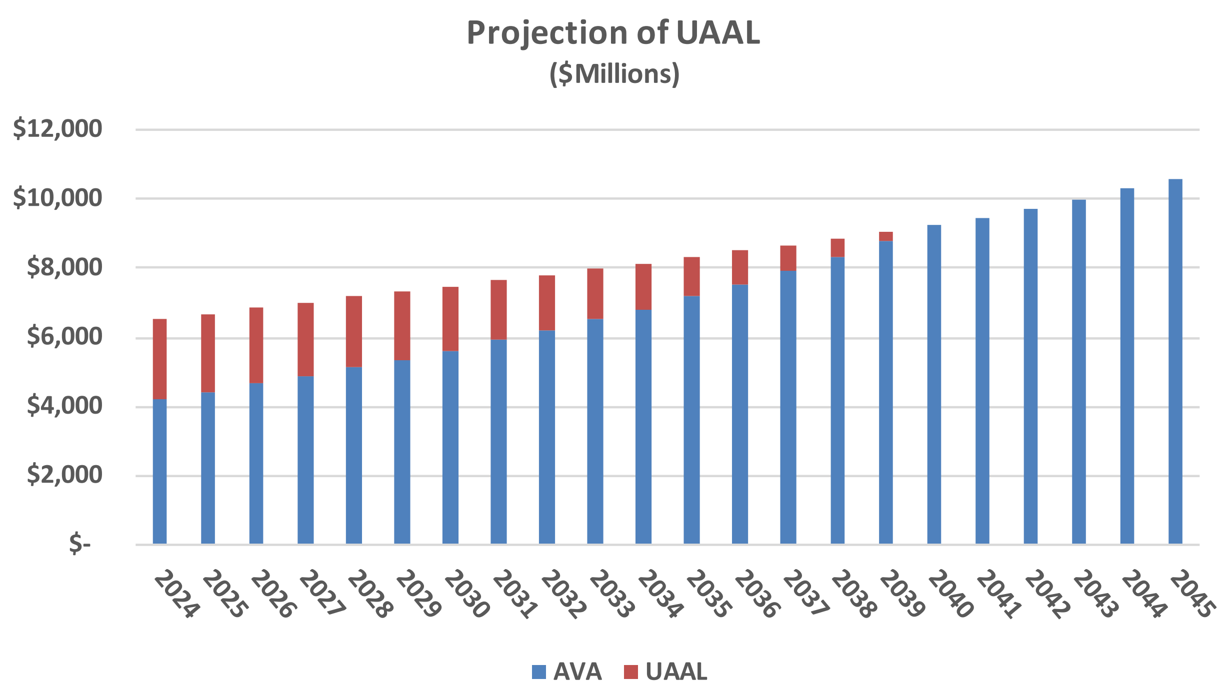
Teachers Pension
Remaining Amortization Payments and Balances





Contribution Projections – Teachers





Police Pension
Development of Pension Actuarial Liabilities
June 30, 2023

Actuarial Present Value of	Total Present Value (1)	Portion Covered by Future Normal Cost Contributions (2)	Actuarial Accrued Liabilities (1) - (2)
Age and service allowances based on total service likely to be rendered by present active members	$ 1,354,057,610	$ 365,751,550	$ 988,306,060
Disability benefits likely to be paid to present active members	62,724,854	47,709,092	15,015,762
Death-in-service benefits likely to be paid on behalf of present active members (employer financed portion)	14,419,508	9,435,326	4,984,182
Separation benefits (refunds of contributions and deferred allowances) likely to be paid to present active members	193,265,249	153,450,751	39,814,498
Benefits likely to be paid to current inactive and vested deferred members	54,022,941	-	54,022,941
Benefits to be paid to current retirees, beneficiaries, and future beneficiaries of current retirees	2,214,443,366	-	2,214,443,366
Total	$ 3,892,933,528	$ 576,346,719	$ 3,316,586,809
Actuarial Value of Assets	$ 2,310,556,236	$ -	$ 2,310,556,236
Liabilities to be Covered by Future Contributions	$ 1,582,377,292	$ 576,346,719	$ 1,006,030,573
Funded Ratio			69.7%

Development of Employer Contribution Rates
Police Amortization of Unfunded Actuarial Accrued Liability Schedule

Source of UAAL For Year Ending		Projected 6/30/2025 UAAL Amount	Remaining Financing Period 6/30/2025		Amort. Factor	FY 2026 Contribution	
						Dollar	% of Payroll
Initial Unfunded Actuarial Accrued Liability							
6/30/2017	$	802,722,080	14	yrs.	10.853632	$ 73,958,844	**19.37%**
(Gain) Loss From Experience							
6/30/2019		1,266,945	16	yrs.	12.006549	105,521	**0.03%**
6/30/2021		(77,137,350)	18	yrs.	13.079888	(5,897,401)	**(1.54%)**
6/30/2023		57,210,145	20	yrs.	14.079141	4,063,468	**1.06%**
Changes From Updated Actuarial Assumptions and Methods							
6/30/2019		168,627,673	16	yrs.	12.006549	14,044,641	**3.68%**
6/30/2023		8,332,453	20	yrs.	14.079141	591,830	**0.15%**
Changes From Updated Benefits							
6/30/2019		14,198,404	16	yrs.	12.006549	1,182,555	**0.31%**
6/30/2023		(7,271,364)	20	yrs.	14.079141	(516,464)	**(0.14%)**
Totals	$	967,948,986				$ 87,532,994	$\boxed{\textbf{22.92\%}}$

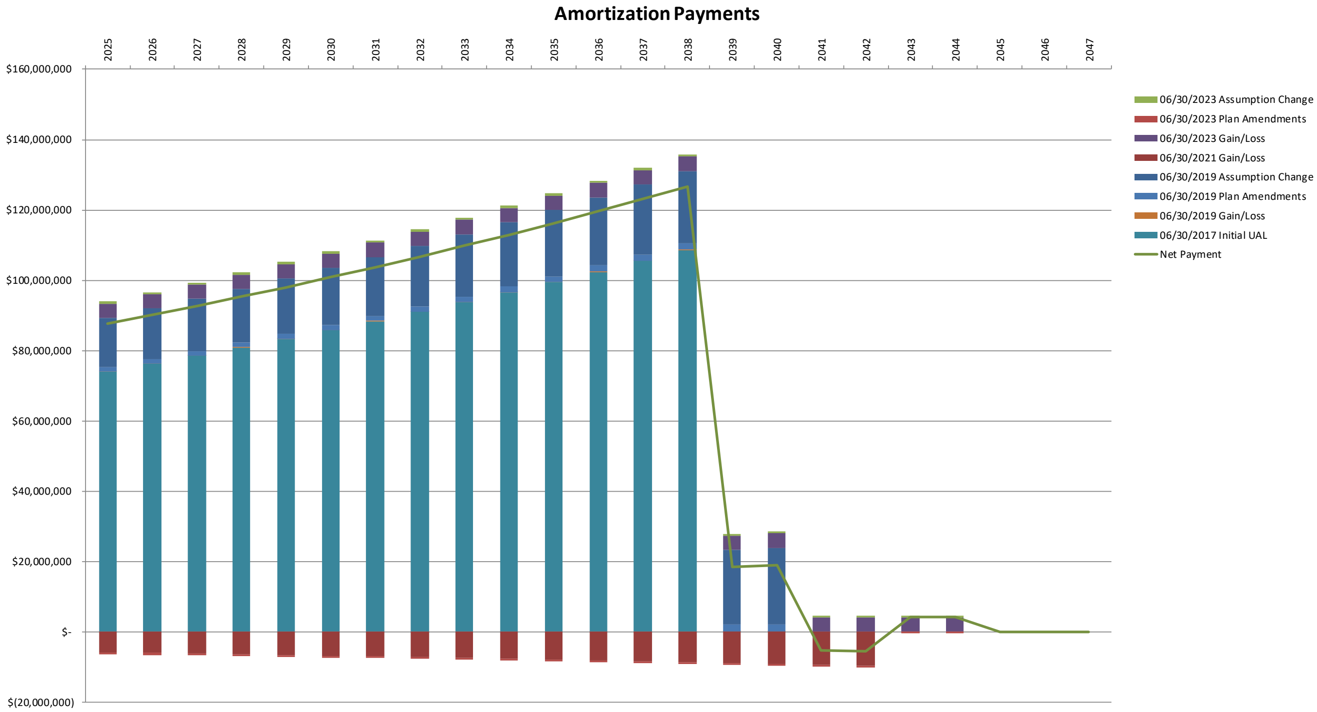
Police Pension
Unfunded Actuarial Accrued Liability Payoff Projection
($ in Millions)

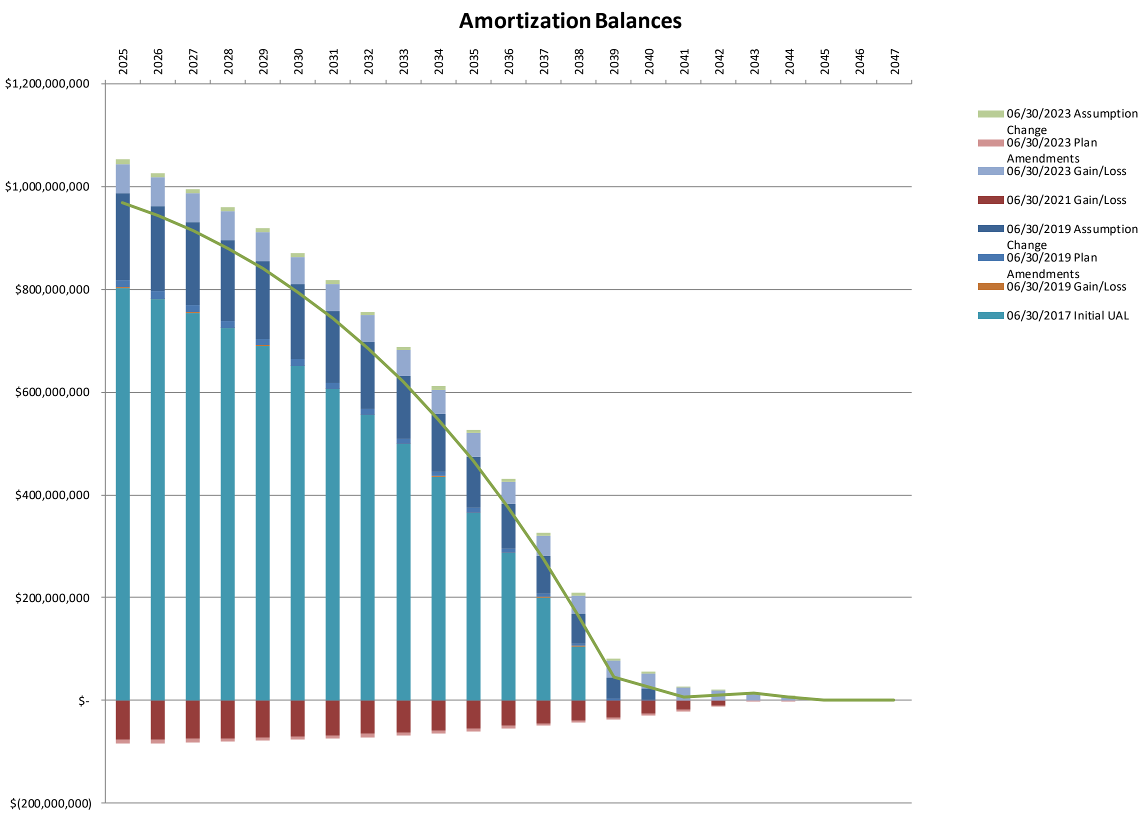
Year	Fiscal Year Ending June 30,	Employer Contribution Rates UAAL Payment*	Projected Payroll	UAAL Beginning of Year	UAAL Payment	UAAL End of Year	End of Year Funded Ratio
	2024	22.88%	$ 360	$ 1,006	$ 82	$ 989	70.9%
	2025	22.88%	371	989	85	968	72.2%
1	2026	22.92%	382	968	88	942	73.5%
2	2027	22.92%	394	942	90	913	74.9%
3	2028	22.92%	405	913	93	879	76.4%
4	2029	22.92%	417	879	96	839	77.9%
5	2030	22.92%	430	839	98	794	79.5%
6	2031	22.92%	442	794	101	743	81.3%
7	2032	22.92%	455	743	104	686	83.1%
8	2033	22.92%	469	686	108	621	85.0%
9	2034	22.92%	483	621	111	548	87.0%
10	2035	22.92%	498	548	114	467	89.2%
11	2036	22.92%	513	467	118	377	91.4%
12	2037	22.92%	528	377	121	278	93.8%
13	2038	22.92%	544	278	125	168	96.4%
14	2039	22.92%	561	168	129	46	99.0%
15	2040	3.55%	578	46	21	28	99.4%
16	2041	3.55%	595	28	21	8	99.8%
17	2042	-0.47%	613	8	-	9	99.8%
18	2043	-0.47%	631	9	-	9	99.8%
19	2044	1.07%	650	9	7	3	100.0%
20	2045	1.07%	670	3	7	(5)	100.0%

** UAAL rates for the first biennium are based on the adopted rates from the previous rate setting valuation less the employer normal cost from this valuation.*

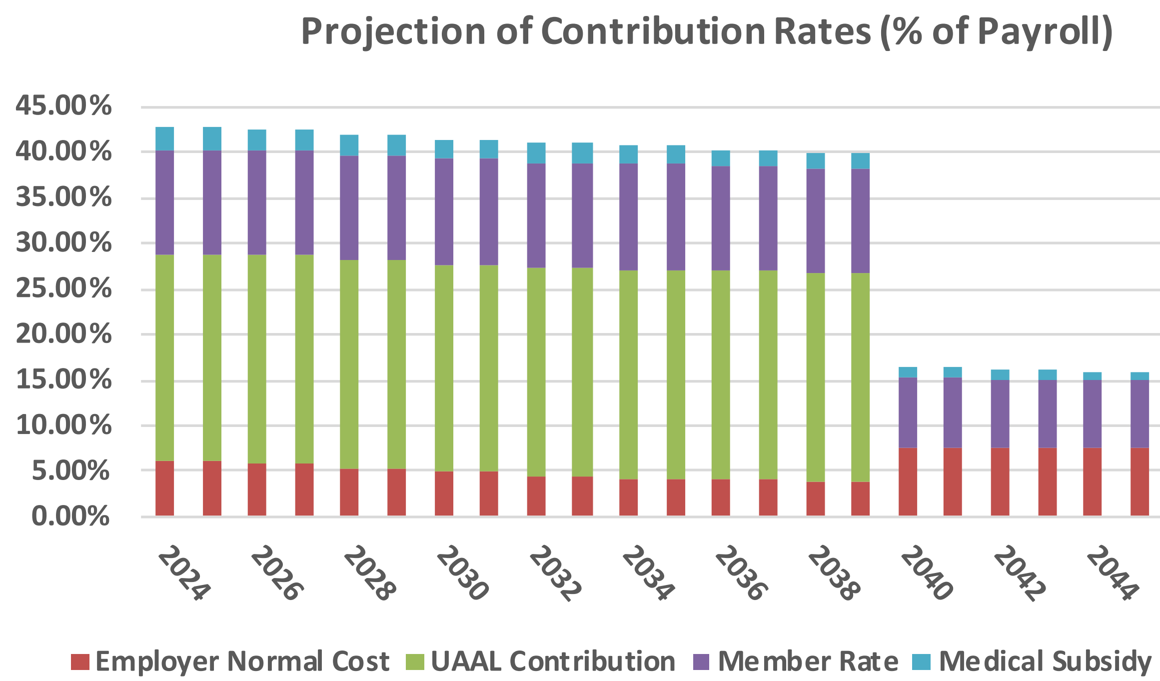
The funded ratio is projected in this amortization schedule assuming all actuarial assumptions are exactly met. Projections are not predictions of specific future events and do not provide numeric precision in absolute terms. It is important to understand that actual experience will differ from the projections shown on this page. When experience differs from the assumptions, as it often does, the employer's contribution rate can vary from year-to-year.

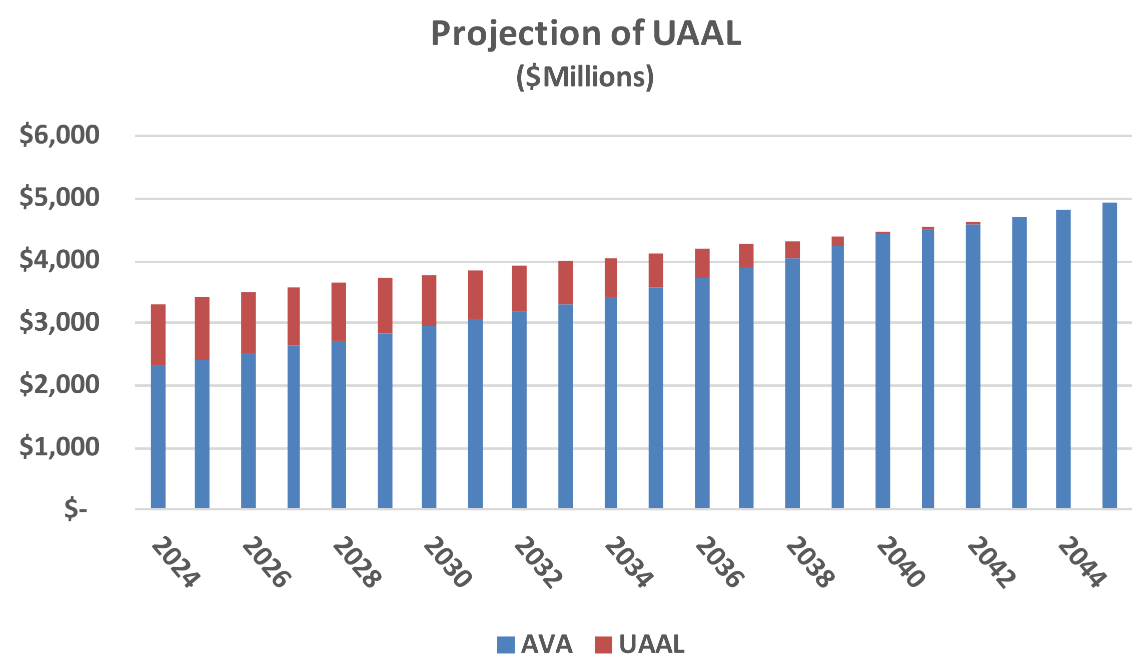
Police Pension
Remaining Amortization Payments and Balances





Contribution Projections – Police





Fire Pension
Development of Pension Actuarial Liabilities
June 30, 2023

Actuarial Present Value of	Total Present Value (1)	Portion Covered by Future Normal Cost Contributions (2)	Actuarial Accrued Liabilities (1) - (2)
Age and service allowances based on total service likely to be rendered by present active members	$ 772,161,724	$ 235,205,492	$ 536,956,232
Disability benefits likely to be paid to present active members	22,217,892	22,897,974	(680,082)
Death-in-service benefits likely to be paid on behalf of present active members (employer financed portion)	8,614,386	5,479,453	3,134,933
Separation benefits (refunds of contributions and deferred allowances) likely to be paid to present active members	35,751,501	32,210,056	3,541,445
Benefits likely to be paid to current inactive and vested deferred members	13,267,090	-	13,267,090
Benefits to be paid to current retirees, beneficiaries, and future beneficiaries of current retirees	974,577,201	-	974,577,201
Total	$ 1,826,589,794	$ 295,792,975	$ 1,530,796,819
Actuarial Value of Assets	$ 1,123,345,036	$ -	$ 1,123,345,036
Liabilities to be Covered by Future Contributions	$ 703,244,758	$ 295,792,975	$ 407,451,783
Funded Ratio			73.4%

Development of Employer Contribution Rates
Fire Amortization of Unfunded Actuarial Accrued Liability Schedule

Source of UAAL For Year Ending		Projected 6/30/2025 UAAL Amount	Remaining Financing Period 6/30/2025	Amort. Factor	FY 2026 Contribution Dollar		FY 2026 Contribution % of Payroll
Initial Unfunded Actuarial Accrued Liability							
6/30/2017	$	346,955,048	14 yrs.	10.853632	$	31,966,723	**18.77%**
(Gain) Loss From Experience							
6/30/2019		(16,305,421)	16 yrs.	12.006549		(1,358,044)	**(0.80%)**
6/30/2021		(1,070,664)	18 yrs.	13.079888		(81,856)	**(0.05%)**
6/30/2023		5,395,067	20 yrs.	14.079141		383,196	**0.22%**
Changes From Updated Actuarial Assumptions and Methods							
6/30/2019		53,155,753	16 yrs.	12.006549		4,427,230	**2.60%**
6/30/2023		(1,272,573)	20 yrs.	14.079141		(90,387)	**(0.05%)**
Changes From Updated Benefits							
6/30/2019		6,401,474	16 yrs.	12.006549		533,165	**0.31%**
6/30/2023		(4,281,309)	20 yrs.	14.079141		(304,089)	**(0.18%)**
Totals	$	388,977,375			$	35,475,938	**20.82%**

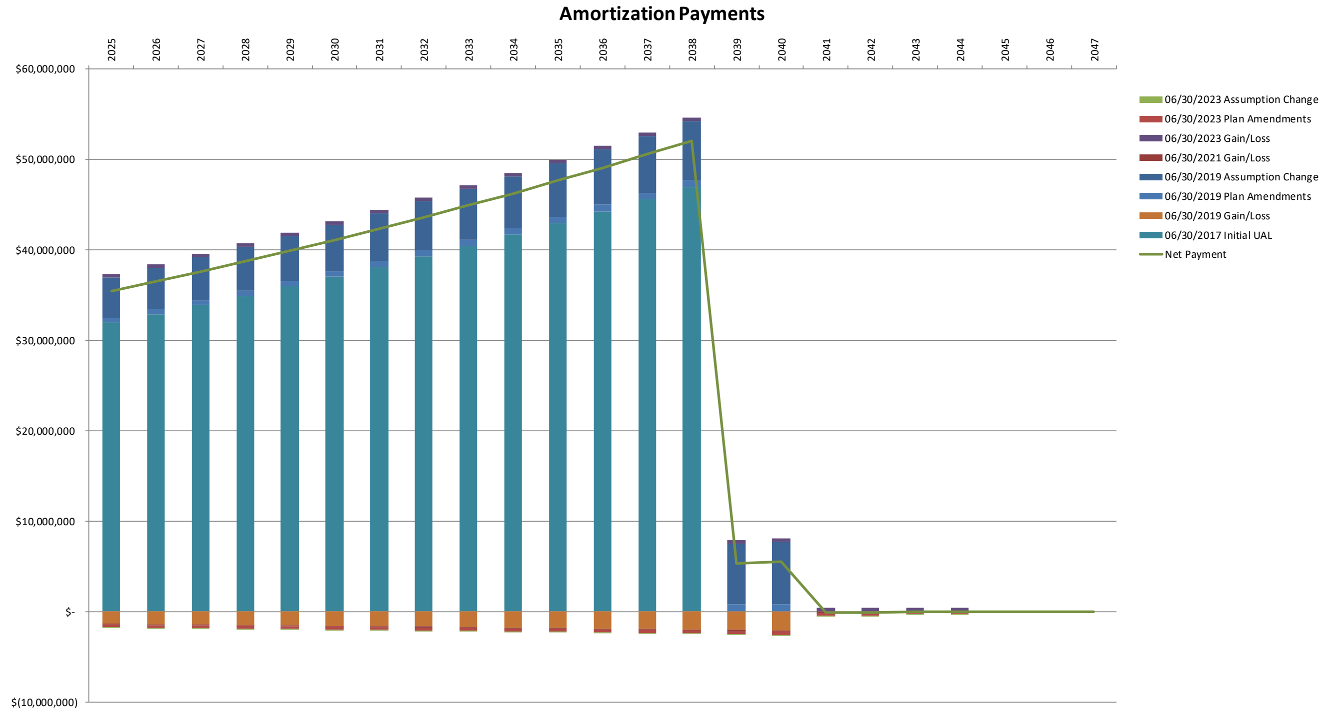
Fire Pension
Unfunded Actuarial Accrued Liability Payoff Projection
($ in Millions)

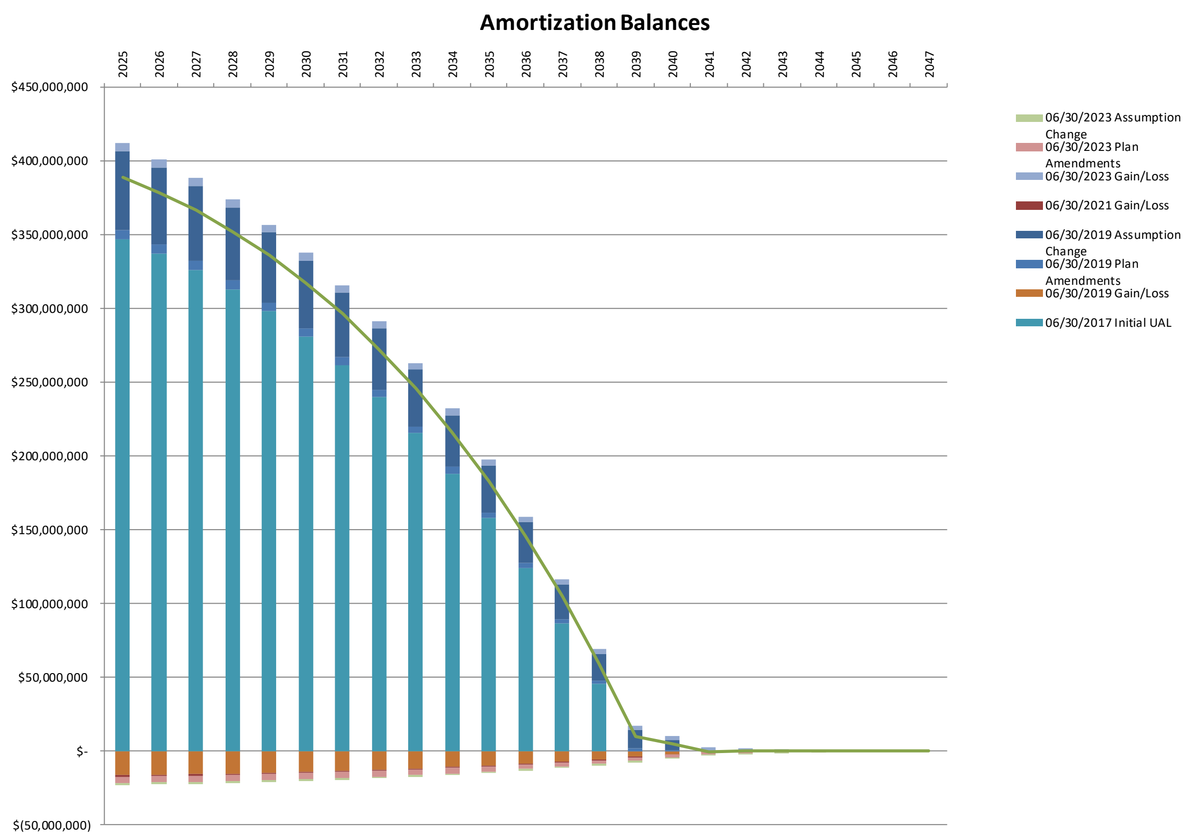
Year	Fiscal Year Ending June 30,	Employer Contribution Rates UAAL Payment*	Projected Payroll	UAAL Beginning of Year	UAAL Payment	UAAL End of Year	End of Year Funded Ratio
	2024	21.65%	$ 161	$ 407	$ 35	$ 399	74.6%
	2025	21.65%	165	399	36	389	75.9%
1	2026	20.82%	170	389	35	379	77.1%
2	2027	20.82%	176	379	37	366	78.4%
3	2028	20.82%	181	366	38	351	79.7%
4	2029	20.82%	186	351	39	334	81.1%
5	2030	20.82%	192	334	40	315	82.6%
6	2031	20.82%	198	315	41	294	84.1%
7	2032	20.82%	204	294	42	271	85.7%
8	2033	20.82%	210	271	44	243	87.3%
9	2034	20.82%	216	243	45	213	89.1%
10	2035	20.82%	222	213	46	180	91.0%
11	2036	20.82%	229	180	48	143	93.0%
12	2037	20.82%	236	143	49	102	95.1%
13	2038	20.82%	243	102	51	56	97.4%
14	2039	20.82%	250	56	52	6	99.7%
15	2040	2.05%	258	6	5	1	100.0%
16	2041	2.05%	266	1	5	-	100.0%
17	2042	-0.06%	274	-	-	-	100.0%
18	2043	-0.06%	282	-	-	-	100.0%
19	2044	-0.01%	290	-	-	-	100.0%
20	2045	-0.01%	299	-	-	-	100.0%

** UAAL rates for the first biennium are based on the adopted rates from the previous rate setting valuation less the employer normal cost from this valuation.*

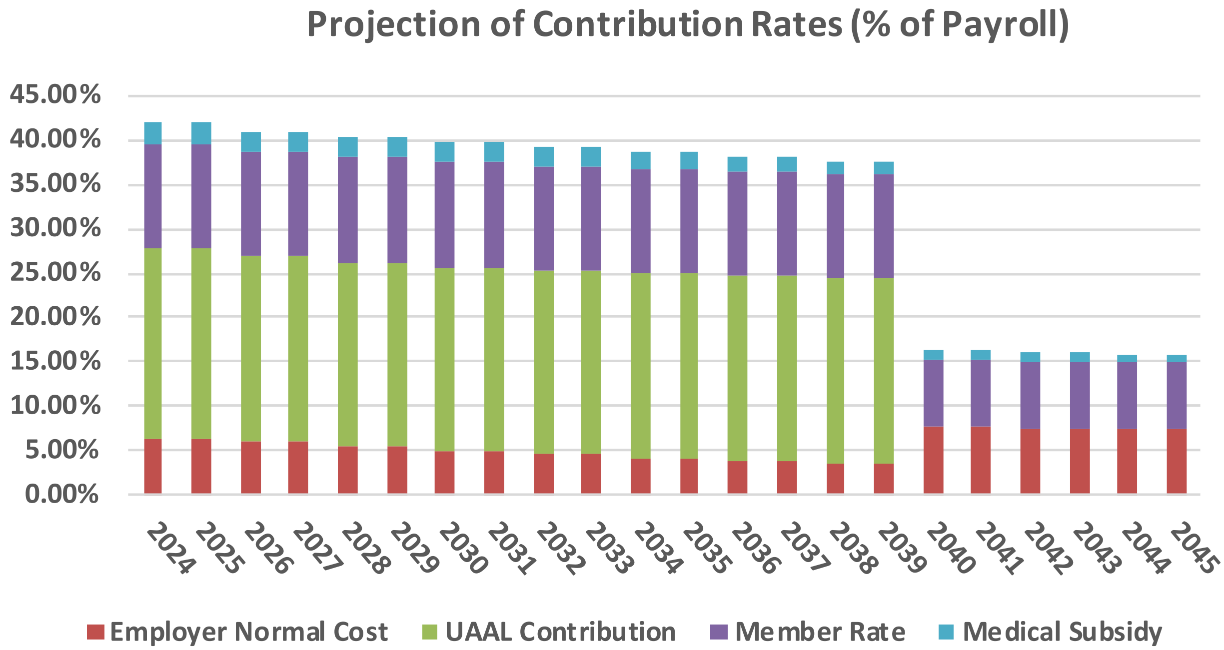
The funded ratio is projected in this amortization schedule assuming all actuarial assumptions are exactly met. Projections are not predictions of specific future events and do not provide numeric precision in absolute terms. It is important to understand that actual experience will differ from the projections shown on this page. When experience differs from the assumptions, as it often does, the employer's contribution rate can vary from year-to-year.

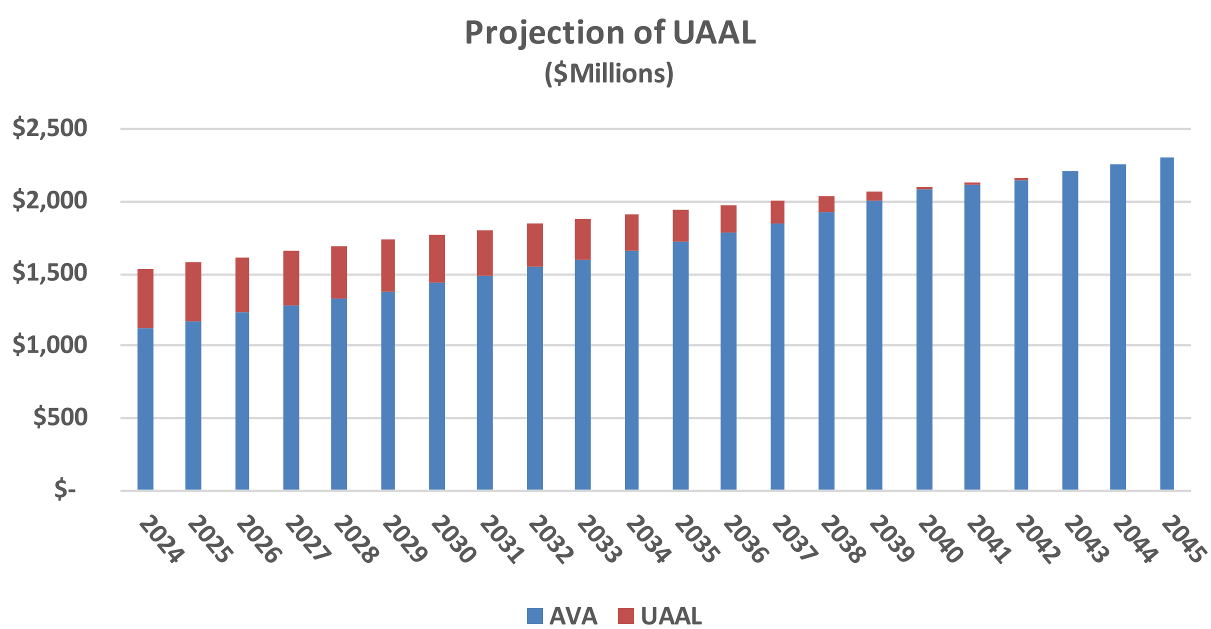
Fire Pension
Remaining Amortization Payments and Balances





Contribution Projections – Fire





Contribution Projections – Discussion

Projection results are useful in demonstrating changing relationships among key elements affecting system financial activity. For example, it demonstrates how benefits and system assets will grow in future decades. Projections are not predictions of specific future events and do not provide numeric precision in absolute terms. For instance, cash flows projected to occur 10 years in the future will not be exact (except by coincidence), but understanding the changing relationships between future benefit payouts and future investment return can be very useful. It is important to understand that actual experience will differ from the projections.

The actuarial projections of retirement and medical subsidy benefits are based on the regular valuation assumptions of NHRS including an open active group with constant population (Teachers' active population is assumed to decline 0.50% per year). The projections lead to some general observations:

1. Employer contribution rates are projected to be stable and gradually decline throughout the projection period. The expected gradual decline is due to the lower normal cost for post-July 1, 2011 hires and declining medical subsidy contributions as a percent of payroll. Normal cost is expected to increase each year with generational mortality. Note that for the current valuation, the determination of the UAAL amortization assumes no future asset gains or losses.

2. The funded ratio is projected to increase steadily to 100% by the end of the projection period. The statutory amortization period is projected to fully fund the initial UAAL by June 30, 2039, in the absence of future gains and losses. The June 30, 2019 gains and losses, assumptions and method changes are projected to be fully amortized by June 30, 2041. The June 30, 2021 gains and losses, assumptions and method changes are projected to be fully amortized by June 30, 2043. The June 30, 2023 gains and losses, assumptions and benefit changes are projected to be fully amortized by June 30, 2045.

3. The projections of the unfunded actuarial accrued liability payoff do not reflect certain factors that are reflected in the contribution projections. For example, the contribution projections reflect the phase-in of unrecognized investment gains and losses as of June 30, 2023.

4. The projection is highly sensitive to the actual and expected profile of new hires. As the group of those hired on or after July 1, 2011 grows, the projection results may fluctuate from one year to the next until the population stabilizes.

Medical Subsidy
Determination of Unfunded Actuarial Accrued Liability
as of June 30, 2023

	State Employees	Political Subdivision Employees	Teachers	Police & Fire	Total
A. Present Value of Future Medical Benefits					
1. Retirees and Beneficiaries	$ 36,220,162	$ 36,797,255	$ 175,793,207	$ 218,798,613	$ 467,609,237
2. Vested Terminated Members	-	-	-	-	-
3. Active Members	-	-	-	43,485,904	43,485,904
Total Present Value of Future Medical Benefits	36,220,162	36,797,255	175,793,207	262,284,517	511,095,141
B. Present Value of Future Employer Normal Costs	-	-	-	3,755,771	3,755,771
C. Present Value of Future Contributions from Current Active Members	-	-	-	-	-
D. Actuarial Medical Accrued Liability (A.-B.-C.)	36,220,162	36,797,255	175,793,207	258,528,746	507,339,370
E. 401(h) Subtrust Actuarial Value of Assets	3,787,317	9,076,989	14,703,773	22,749,215	50,317,294
F. Unfunded Actuarial Accrued Liability (D.-E.)	$ 32,432,845	$ 27,720,266	$ 161,089,434	$ 235,779,531	$ 457,022,076

The Unfunded Actuarial Accrued Liability (UAAL) shown here is for funding purposes using a discount rate of 3.00% per year. This differs from the Net OPEB Liability reported under GASB Statement No. 74 for accounting and reporting purposes.

Determination of Medical Subsidy Contribution Rates

There are four separate 401(h) member classifications: State Employees, Political Subdivision Employees, Teachers and Police/Fire.

Under New Hampshire Statute, contribution rates to the 401(h) sub-trust are determined as the lesser of 25% of the employers' total contributions or the actuarial required contribution rate that keeps the medical subsidy sub-trust solvent (the "solvency rate"). Under IRS Regulations, 401(h) sub-trust contributions are limited by 25% of the total contributions to the plan (other than contributions to fund past service credits). NHRS maintains the historical information for determining compliance with IRC Section 401(h). A test for compliance with IRC Section 401(h) was outside the scope of this valuation.

The 401(h) cash flow projections on the following pages are used to develop the employer contribution rates for the medical subsidy. The medical subsidy contribution rates are the computed amounts needed for pay-as-you-go financing of the retiree medical subsidy with a 20% margin for adverse experience (50% for Teachers) by June 30, 2027 and to maintain that margin thereafter.

For purposes of determining the contribution rates for the 2026-2027 biennium, we have assumed that benefits for all members receiving a benefit on the valuation date and those Group I eligible members not yet age 60 get paid. In addition, there are a significant number of eligible members who are not receiving benefits, particularly for Group I. 25% of those who opted-out of receiving benefits are assumed to opt-back in on the valuation date.

It is imperative that NHRS monitor collections closely to ensure the necessary funds are collected to provide the benefit.

NHRS – 401(h) Cash Flow Projections
June 30, 2023

State Employees

Year Ending	Valuation Pay	Employer Contributions Rate -- Total	Employer Contributions Rate -- Health	Employer Contributions Dollars -- Health	Benefits and Expenses Paid	Solvency Assets	Projected Margin
6/30/2023	$ 628,330,727					$ 3,775,392	
6/30/2024	647,180,649	13.85%	0.58%	$ 3,753,648	$ 4,182,291	3,587,121	87%
6/30/2025	666,596,068	13.85%	0.58%	3,866,257	3,933,812	3,759,417	97%
6/30/2026	686,593,950	12.87%	**0.34%**	2,334,419	3,677,172	2,625,107	72%
6/30/2027	707,191,769	12.87%	**0.34%**	2,404,452	3,426,141	1,746,130	52%
6/30/2028	728,407,522	12.87%	0.34%	2,476,586	3,184,396		
6/30/2029	750,259,748	12.87%	0.34%	2,550,883	2,955,013		
6/30/2030	772,767,540	12.87%	0.34%	2,627,410	2,723,942		
6/30/2031	795,950,566	12.84%	0.31%	2,497,675	2,497,675		
6/30/2032	819,829,083	12.81%	0.28%	2,279,848	2,279,848		
6/30/2033	844,423,955	12.77%	0.24%	2,068,785	2,068,785		
6/30/2034	869,756,674	12.75%	0.22%	1,872,244	1,872,244		
6/30/2035	895,849,374	12.72%	0.19%	1,685,865	1,685,865		
6/30/2036	922,724,855	12.69%	0.16%	1,514,040	1,514,040		
6/30/2037	950,406,601	12.67%	0.14%	1,348,635	1,348,635		
6/30/2038	978,918,799	12.65%	0.12%	1,197,165	1,197,165		
6/30/2039	1,008,286,363	12.63%	0.10%	1,056,797	1,056,797		
6/30/2040	1,038,534,954	12.62%	0.09%	926,999	926,999		
6/30/2041	1,069,691,003	12.61%	0.08%	808,326	808,326		
6/30/2042	1,101,781,733	12.59%	0.06%	703,171	703,171		
6/30/2043	1,134,835,185	12.58%	0.05%	608,537	608,537		
6/30/2044	1,168,880,241	12.57%	0.04%	524,665	524,665		
6/30/2045	1,203,946,648	12.57%	0.04%	451,323	451,323		

NHRS – 401(h) Cash Flow Projections
June 30, 2023

Political Subdivision Employees

Year Ending	Valuation Pay	Employer Contribution Rate -- Total	Employer Contribution Rate -- Health	Employer Contribution Dollars -- Health	Benefits and Expenses Paid	Solvency Assets	Projected Margin
6/30/2023	$ 784,163,556					$ 9,048,407	
6/30/2024	807,688,463	13.53%	0.26%	$ 2,099,990	$4,050,188	7,643,157	192%
6/30/2025	831,919,117	13.53%	0.26%	2,162,990	3,855,183	6,409,766	169%
6/30/2026	856,876,691	12.75%	**0.22%**	1,885,129	3,660,432	5,007,206	139%
6/30/2027	882,582,992	12.75%	**0.22%**	1,941,683	3,465,475	3,769,973	110%
6/30/2028	909,060,482	12.75%	0.22%	1,999,933	3,260,589		
6/30/2029	936,332,296	12.75%	0.22%	2,059,931	3,053,928		
6/30/2030	964,422,265	12.75%	0.22%	2,121,729	2,849,352		
6/30/2031	993,354,933	12.75%	0.22%	2,185,381	2,639,393		
6/30/2032	1,023,155,581	12.75%	0.22%	2,250,942	2,431,019		
6/30/2033	1,053,850,248	12.74%	0.21%	2,231,947	2,231,947		
6/30/2034	1,085,465,755	12.72%	0.19%	2,034,489	2,034,489		
6/30/2035	1,118,029,728	12.69%	0.16%	1,840,319	1,840,319		
6/30/2036	1,151,570,620	12.67%	0.14%	1,650,099	1,650,099		
6/30/2037	1,186,117,739	12.65%	0.12%	1,467,526	1,467,526		
6/30/2038	1,221,701,271	12.64%	0.11%	1,292,719	1,292,719		
6/30/2039	1,258,352,309	12.62%	0.09%	1,129,348	1,129,348		
6/30/2040	1,296,102,878	12.61%	0.08%	977,968	977,968		
6/30/2041	1,334,985,964	12.59%	0.06%	840,526	840,526		
6/30/2042	1,375,035,543	12.58%	0.05%	715,956	715,956		
6/30/2043	1,416,286,609	12.57%	0.04%	604,409	604,409		
6/30/2044	1,458,775,207	12.56%	0.03%	505,734	505,734		
6/30/2045	1,502,538,463	12.56%	0.03%	419,513	419,513		

NHRS – 401(h) Cash Flow Projections
June 30, 2023

Teachers

Year Ending	Valuation Pay	Employer Contributions Rate -- Total	Employer Contributions Rate -- Health	Employer Contributions Dollars -- Health	Benefits and Expenses Paid	Solvency Assets	Projected Margin
6/30/2023	$ 1,260,239,621					$ 14,657,474	
6/30/2024	1,291,745,612	19.64%	1.13%	$ 14,596,725	$17,225,405	12,929,455	75%
6/30/2025	1,324,039,252	19.64%	1.13%	14,961,644	16,636,677	12,070,628	73%
6/30/2026	1,357,140,233	19.23%	**0.95%**	12,892,832	16,018,051	9,654,700	60%
6/30/2027	1,391,068,739	19.23%	**0.95%**	13,215,153	15,370,628	8,078,170	53%
6/30/2028	1,425,845,457	19.23%	0.95%	13,545,532	14,694,318		
6/30/2029	1,461,491,593	19.23%	0.95%	13,884,170	13,990,255		
6/30/2030	1,498,028,883	19.17%	0.89%	13,261,648	13,261,648		
6/30/2031	1,535,479,605	19.09%	0.81%	12,511,810	12,511,810		
6/30/2032	1,573,866,595	19.03%	0.75%	11,742,605	11,742,605		
6/30/2033	1,613,213,260	18.96%	0.68%	10,956,470	10,956,470		
6/30/2034	1,653,543,592	18.89%	0.61%	10,160,604	10,160,604		
6/30/2035	1,694,882,182	18.83%	0.55%	9,359,225	9,359,225		
6/30/2036	1,737,254,237	18.77%	0.49%	8,558,045	8,558,045		
6/30/2037	1,780,685,593	18.72%	0.44%	7,763,581	7,763,581		
6/30/2038	1,825,202,733	18.66%	0.38%	6,987,048	6,987,048		
6/30/2039	1,870,832,801	18.61%	0.33%	6,227,276	6,227,276		
6/30/2040	1,917,603,621	18.57%	0.29%	5,495,313	5,495,313		
6/30/2041	1,965,543,712	18.52%	0.24%	4,798,345	4,798,345		
6/30/2042	2,014,682,305	18.49%	0.21%	4,142,928	4,142,928		
6/30/2043	2,065,049,363	18.45%	0.17%	3,533,277	3,533,277		
6/30/2044	2,116,675,597	18.42%	0.14%	2,977,060	2,977,060		
6/30/2045	2,169,592,487	18.39%	0.11%	2,476,129	2,476,129		

NHRS – 401(h) Cash Flow Projections
June 30, 2023

Police and Fire

Year Ending	Valuation Pay	Employer Contributions Rate -- Total	Employer Contributions Rate -- Health	Employer Contributions Dollars -- Health	Benefits and Expenses Paid	Solvency Assets	Projected Margin
6/30/2023	$ 505,362,240					$ 22,677,582	
6/30/2024	520,523,107	N/A	2.60%	$ 13,533,601	$16,919,680	20,707,959	123%
6/30/2025	536,138,800	N/A	2.60%	13,939,609	17,032,117	18,908,867	111%
6/30/2026	552,222,964	N/A	**2.23%**	12,314,572	17,009,354	15,331,984	90%
6/30/2027	568,789,653	N/A	**2.23%**	12,684,009	16,915,428	11,992,663	71%
6/30/2028	585,853,343	N/A	2.23%	13,064,530	16,708,911		
6/30/2029	603,428,943	N/A	2.23%	13,456,465	16,414,307		
6/30/2030	621,531,811	N/A	2.23%	13,860,159	16,052,164		
6/30/2031	640,177,765	N/A	2.23%	14,275,964	15,628,484		
6/30/2032	659,383,098	N/A	2.23%	14,704,243	15,172,450		
6/30/2033	679,164,591	N/A	2.16%	14,664,890	14,664,890		
6/30/2034	699,539,529	N/A	2.02%	14,165,566	14,165,566		
6/30/2035	720,525,715	N/A	1.89%	13,639,403	13,639,403		
6/30/2036	742,141,486	N/A	1.77%	13,101,930	13,101,930		
6/30/2037	764,405,731	N/A	1.64%	12,520,381	12,520,381		
6/30/2038	787,337,903	N/A	1.52%	11,956,663	11,956,663		
6/30/2039	810,958,040	N/A	1.40%	11,370,433	11,370,433		
6/30/2040	835,286,781	N/A	1.29%	10,799,599	10,799,599		
6/30/2041	860,345,384	N/A	1.19%	10,269,228	10,269,228		
6/30/2042	886,155,746	N/A	1.10%	9,727,995	9,727,995		
6/30/2043	912,740,418	N/A	1.01%	9,216,758	9,216,758		
6/30/2044	940,122,631	N/A	0.93%	8,721,032	8,721,032		
6/30/2045	968,326,310	N/A	0.85%	8,239,095	8,239,095		

SECTION C

FUND ASSETS

Comparative Balance Sheet at Market Value^

	June 30, 2023	June 30, 2022#
ASSETS		
Cash & Cash Equivalents	$ 253,724,424	$ 264,640,000
RECEIVABLES		
Due from Employers	$ 73,796,428	$ 62,408,000
Due from Plan Members	27,286,235	23,361,000
Due from Brokers for Securities Sold	13,601,963	11,060,000
Interest & Dividends	16,825,394	13,604,000
Other	10,452,728	8,857,000
Total Receivables	$ 141,962,748	$ 119,290,000
INVESTMENTS		
Equity Investments		
Domestic	$ 3,708,214,136	$ 4,080,839,000
International	1,715,841,789	670,459,000
Fixed Income Investments		
Domestic	2,116,842,815	1,891,773,000
International	96,435,892	103,081,000
Real Estate	1,281,585,653	1,431,776,000
Alternative Investments	2,228,343,876	2,212,722,000
Total Investments	$ 11,147,264,161	$ 10,390,650,000
Other Assets	11,621,079	9,518,000
TOTAL ASSETS	$ 11,554,572,412	$ 10,784,098,000
LIABILITIES		
Management Fees & Other Payables	$ 15,456,907	$ 14,442,000
Due to Brokers for Securities Purchased	29,573,180	16,307,000
TOTAL LIABILITIES	$ 45,030,087	$ 30,749,000
NET ASSETS HELD IN TRUST FOR BENEFITS	$ 11,509,543,587	$ 10,753,348,857

^ *Totals may not add due to rounding*
# *Detailed breakdown provided in thousands. Total is the actual amount on the balance sheet.*

Reconciliation of System Assets^
(in Millions)

Item	Employees	Teachers	Police#	Fire#	Total
	June 30, 2023				
A. Market Value of Assets at Beginning of Year	$ 3,611,117	$ 3,936,077	$ 2,162,288	$ 1,043,867	$ 10,753,349
B. Revenues and Expenditures					
1. Contributions					
a. Employee Contributions	$ 101,292	$ 90,907	$ 43,289	$ 19,191	$ 254,679
b. Employer Contributions	209,513	271,279	151,241	66,680	698,713
c. Total	$ 310,805	$ 362,186	$ 194,530	$ 85,871	$ 953,392
2. Investment Return					
a. Interest, Dividends, and Other Income	$ 69,075	$ 74,908	$ 41,394	$ 19,921	$ 205,298
b. Net Realized and Unrealized Gains/(Losses)	233,931	254,706	140,342	67,594	696,573
c. Investment Expenses	(15,658)	(17,327)	(9,475)	(4,606)	(47,066)
d. Net Investment Income	$ 287,348	$ 312,287	$ 172,261	$ 82,909	$ 854,805
3. Benefits and Refunds					
a. Refunds	$ (14,395)	$ (5,762)	$ (5,982)	$ (1,248)	$ (27,387)
b. Regular Monthly Benefits	(328,921)	(370,466)	(184,001)	(83,780)	(967,168)
c. Partial Lump-Sum Benefits Paid	(2,253)	(489)	(934)	(277)	(3,953)
d. Medical Premium Subsidy Payments	(8,320)	(17,218)	(10,520)	(5,804)	(41,862)
e. Total	$ (353,889)	$ (393,935)	$ (201,437)	$ (91,109)	$ (1,040,370)
4. Administrative Expenses*	$ (3,388)	$ (3,597)	$ (1,980)	$ (910)	$ (9,875)
5. Miscellaneous Expenses	$ (593)	$ (640)	$ (354)	$ (170)	$ (1,757)
6. Interest Expense on OPEB Deficit	$ -	$ -	$ -	$ -	$ -
7. Interest Income on OPEB Deficit	$ -	$ -	$ -	$ -	$ -
8. Transfers	$ -	$ -	$ -	$ -	$ -
C. Market Value of Assets at End of Year	$ 3,851,400	$ 4,212,378	$ 2,325,308	$ 1,120,458	$ 11,509,544

 # 401(h) subsidy income and expense reported by NHRS in total for Police and Fire was allocated by staff to be approximately 96% to Police and 4% to Fire for purposes of this schedule.

** Information regarding net cash flows for funding purposes is provided separately from the GASB Statement Nos. 67 and 74 information and may differ.*

^ Totals may not add due to rounding. System assets were rounded in millions due to insufficient data available for member classifications.

Development of Actuarial Value of Assets

Year Ended June 30:	2021	2022	2023	2024	2025	2026	2027
A. Actuarial Value Beginning of Year	$ 9,485,963,700	$ 10,312,682,279	**$ 10,895,279,638**				
B. Market Value End of Year	11,573,674,295	10,753,348,857	**11,509,543,587**				
C. Market Value Beginning of Year	9,134,075,534	11,573,674,295	**10,753,348,857**				
D. Non-Investment Net Cash Flow*	(189,334,651)	(127,984,808)	**(98,613,371)**				
E. Investment Income							
E1. Market Total: B - C - D	2,628,933,412	(692,340,630)	**854,808,101**				
E2. Assumed Rate	6.75%	6.75%	**6.75%**				
E3. Amount for Immediate Recognition	633,912,505	691,786,567	**732,103,174**				
E4. Amount for Phased-In Recognition: E1-E3	1,995,020,907	(1,384,127,197)	**122,704,927**				
F. Phased-In Recognition of Investment Income							
F1. Current Year: 0.20 x E4	399,004,181	(276,825,439)	**24,540,985**				
F2. First Prior Year	(102,051,727)	399,004,181	**(276,825,439)**	$ 24,540,985			
F3. Second Prior Year	(27,538,113)	(102,051,727)	**399,004,181**	(276,825,439)	$ 24,540,985		
F4. Third Prior Year	26,206,697	(27,538,113)	**(102,051,727)**	399,004,181	(276,825,439)	$ 24,540,985	
F5. Fourth Prior Year	86,519,687	26,206,698	**(27,538,115)**	(102,051,726)	399,004,183	(276,825,441)	$ 24,540,987
F6. Total Recognized Investment Gain	382,140,725	18,795,600	**17,129,885**	44,668,001	146,719,729	(252,284,456)	24,540,987
G. Preliminary Actuarial Value End of Year: A + D + E3 + F6	$ 10,312,682,279	$ 10,895,279,638	**$ 11,545,899,326**				
H. Additional Recognized G/L due to Corridor	-	-	**-**				
I. Final Actuarial Value after 20% Corridor	$ 10,312,682,279	$ 10,895,279,638	**$ 11,545,899,326**				
J. Difference between Market & Actuarial Value: B-I	$ 1,260,992,016	$ (141,930,781)	**$ (36,355,739)**				
K. Recognized Rate of Return	10.82%	6.93%	**6.91%**				
L. Market Rate of Return	29.08%	(6.02%)	**7.99%**				
M. Ratio of Actuarial Value to Market Value	89.10%	101.32%	**100.32%**				

* *Information regarding net cash flows for funding purposes is provided separately from the GASB Statement Nos. 67 and 74 information and may differ. Total non-investment net cash flow includes $681,061 in expenses that were unallocated in the GASB accounting statements. Additionally, the non-investment net cash flow excludes $2,600 in contributions that were reported for GASB accounting statements.*

The Actuarial Value of Assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased-in over a closed five-year period. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Actuarial Value of Assets will tend to be greater than market value. The Actuarial Value of Assets is unbiased with respect to Market Value. At any time, it may be either greater or less than Market Value. If assumed rates are exactly realized for four consecutive years, it will become equal to Market Value. Final Actuarial Value of Assets may not be less than 80% nor more than 120% of Market Value of Assets.

Allocation of Assets
June 30, 2023

	Employees	Teachers	Police	Fire	Total
Allocated Fund Assets (Actuarial Value)	$ 3,863,565,651	$ 4,225,683,188	$ 2,332,653,172	$ 1,123,997,315	$ 11,545,899,326
Less Reserve for TSAs	0	0	0	0	0
Less 401(h) Account	12,864,306	14,703,773	22,096,936	652,279	50,317,294
Net Pension Valuation Assets	$ 3,850,701,345	$ 4,210,979,415	$ 2,310,556,236	$ 1,123,345,036	$ 11,495,582,032

The Actuarial Value of Assets was allocated to the pension and medical subsidy plans based on the Market Value of those plans. The Actuarial Value of Assets was then further allocated to each fund (either pension or medical subsidy) based on the Market Value of those funds. The 401(h) account for Police and Fire is combined. The allocation between Police and Fire is based on the percentage of the medical subsidy market value of assets, as reported by the System.

SECTION D

PARTICIPANT DATA

Active Members by Valuation Division

Valuation Group	Active Members	Valuation Payroll	Average		
			Age	Service*	Pay
Employees:					
Male	9,812	$ 617,985,150	48.0	10.3	$62,983
Female	14,828	794,509,133	49.1	10.0	53,582
Total	24,640	1,412,494,283	48.7	10.1	57,325
Teachers:					
Male	3,740	275,512,225	46.1	14.3	73,666
Female	14,401	984,727,396	45.4	12.6	68,379
Total	18,141	1,260,239,621	45.5	13.0	69,469
Police:					
Male	3,422	301,989,841	38.4	10.7	88,250
Female	620	47,479,468	37.8	8.2	76,580
Total	4,042	349,469,309	38.3	10.3	86,460
Fire:					
Male	1,687	150,392,790	40.6	12.4	89,148
Female	79	5,500,141	34.0	6.9	69,622
Total	1,766	155,892,931	40.4	12.1	88,275
Total:					
Male	18,661	1,345,880,006	45.2	11.3	72,123
Female	29,928	1,832,216,138	47.0	11.2	61,221
Grand Total	48,589	$3,178,096,144	46.3	11.3	$65,408

** One month of service was added to the reported service for all active participants in consideration of potential subsidized service purchases in the future.*

Valuation Group	Active Members	Valuation Payroll
Employees:		
State	9,870	$ 628,330,727
Political Subdivisions	14,770	784,163,556
Subtotal	24,640	1,412,494,283
Teachers:	18,141	1,260,239,621
Police:		
State	1,008	94,372,975
Political Subdivisions	3,034	255,096,334
Subtotal	4,042	349,469,309
Fire:		
State	30	2,428,519
Political Subdivisions	1,736	153,464,412
Subtotal	1,766	155,892,931
Total	48,589	$ 3,178,096,144

Summary of Membership Data by Category

	June 30									
	2023	2022	2021	2020	2019	2018	2017	2016	2015	2014
Active Members										
Number	48,589	48,687	48,582	48,479	48,288	48,121	47,886	48,069	47,812	48,307
Average age (years)	46.3	46.3	46.5	46.7	46.7	46.8	46.9	46.9	47.0	47.1
Average service* (years)	11.3	11.4	11.7	11.8	11.9	12.0	12.1	12.1	12.2	12.1
Average salary	$ 65,408	$ 63,212	$ 61,195	$ 59,711	$ 58,503	$ 57,194	$ 55,708	$ 54,118	$ 53,857	$ 51,916
Total payroll supplied, annualized	$ 3,178,096,144	$ 3,077,583,995	$ 2,972,968,504	$ 2,894,708,279	$ 2,825,006,022	$ 2,752,235,069	$ 2,667,611,532	$ 2,601,403,606	$ 2,575,031,210	$ 2,507,898,809
Vested Inactive Members										
Number	3,266	2,990	2,730	2,661	2,552	2,420	2,281	1,785	1,999	1,297
Average age (years)	52.2	52.3	52.3	52.2	52.1	52.2	51.8	52.1	51.7	52.3
Non-Vested Inactive Members										
Number	18,826	16,717	14,946	13,760	12,530	11,454	10,477	9,528	8,690	8,102
Service Retirees										
Number	38,186	37,151	35,896	34,683	33,573	32,385	31,186	28,403	27,114	26,958
Average age (years)	71.4	71.1	71.4	71.1	70.8	70.0	70.0	70.0	69.0	69.0
Total annual benefits	$ 870,908,795	$ 834,215,845	$ 785,424,661	$ 742,125,367	$ 708,597,132	$ 673,359,556	$ 639,679,378	$ 608,332,888	$ 570,043,185	$ 537,980,513
Average annual benefit	$ 22,807	$ 22,455	$ 21,881	$ 21,397	$ 21,106	$ 20,792	$ 20,512	$ 21,418	$ 21,024	$ 19,956
Disability Retirees										
Number	1,669	1,660	1,641	1,637	1,627	1,616	1,600	1,600	1,586	1,561
Average age (years)	65.0	64.9	65.2	65.0	64.5	64.2	64.0	63.7	63.4	62.0
Total annual benefits	$ 37,280,563	$ 35,830,123	$ 34,495,906	$ 33,711,570	$ 33,041,012	$ 32,273,693	$ 31,739,977	$ 31,124,304	$ 30,483,173	$ 30,088,288
Average annual benefit	$ 22,337	$ 21,584	$ 21,021	$ 20,594	$ 20,308	$ 19,971	$ 19,837	$ 19,453	$ 19,220	$ 19,275
Beneficiaries										
Number	3,748	3,604	3,437	3,292	3,152	3,011	2,908	2,773	2,650	2,535
Average age (years)	75.0	74.8	75.1	74.9	74.5	74.2	73.9	73.9	73.6	73.4
Total annual benefits	$ 60,579,985	$ 57,250,840	$ 53,064,561	$ 49,706,039	$ 46,998,152	$ 43,797,864	$ 41,692,950	$ 38,818,283	$ 36,495,210	$ 34,600,022
Average annual benefit	$ 16,163	$ 15,885	$ 15,439	$ 15,099	$ 14,911	$ 14,546	$ 14,337	$ 13,999	$ 13,772	$ 13,649
Total Covered Lives	114,284	110,809	107,232	104,512	101,722	99,007	96,338	92,158	89,851	88,760

** Beginning in 2017, one month of service was added to the reported service for all active participants in consideration of potential subsidized service purchases in the future.*

SECTION E

METHODS AND ASSUMPTIONS

Valuation Methods

Pension

Actuarial Cost Method - Normal cost and the allocation of benefit values between service rendered before and after the valuation date were determined using an **Individual Entry-Age Actuarial Cost Method** having the following characteristics:

(i) The annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement; and

(ii) Each annual normal cost is a constant percentage of the member's year by year projected covered pay.

Actuarial gain/(losses), as they occur, reduce (increase) the Unfunded Actuarial Accrued Liability.

Financing of Unfunded Actuarial Accrued Liabilities - Unfunded Actuarial Accrued Liabilities are amortized by level (principal & interest combined) percent-of-payroll contributions from the contribution effective date. The unfunded liability as of June 30, 2017 shall be amortized through 2039. Each subsequent change in liability as calculated in odd-numbered years shall be separately amortized over a fixed period of no longer than 20 years.

The rate-setting valuations project the unfunded actuarial accrued liability to the beginning of the applicable biennium to determine the unfunded amortization rate. We projected the normal cost rates from the first year of the rate setting biennium to better reflect the impact of the changing benefit tiers and generational mortality. We developed projected normal cost rates based on a new entrant profile determined by the current active population with 3-8 years of service.

Medical Subsidy

Liabilities are determined under the entry-age actuarial cost method.

Under New Hampshire Statute, contribution rates to the 401(h) sub-trust are determined as the lesser of 25% of the employers' total contributions or the actuarial required contribution rate that keeps the medical subsidy sub-trust solvent (the "solvency rate"). Under IRS Regulations, 401(h) sub-trust contributions are limited by 25% of the total contributions to the plan (other than contributions to fund past service credits). NHRS maintains the historical information for determining compliance with IRC Section 401(h). A test for compliance with IRC Section 401(h) was outside the scope of this valuation.

Solvency rates for medical subsidy benefits are set such that a specified margin is established by the end of the biennium and for all future years thereafter. The margin is intended to mitigate the risk of insolvency due to adverse experience.

At the November 12, 2013 Board meeting, the Board elected to incorporate a 20% margin requirement for all four-member classifications.

At the June 9, 2020 Board meeting, the Board elected to increase the margin for the Teachers group from 20% to 50%. No change to the margin requirement of 20% was made for the other groups.

Valuation Methods

Actuarial Value of Assets - The Actuarial Value of Assets recognizes assumed investment return fully each year. Differences between actual return on the Market Value of assets and assumed return on the Actuarial Value of Assets are phased-in over a closed five-year period. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than Market Value. During periods when investment performance is less than the assumed rate, Actuarial Value of Assets will tend to be greater than Market Value. The Actuarial Value of Assets is unbiased with respect to Market Value. At any time, it may be either greater or less than Market Value. If assumed rates are exactly realized for four consecutive years, it will become equal to Market Value. Actuarial Value is limited to a 20% corridor around the Market Value.

The Actuarial Value of Assets was allocated to the pension and medical subsidy plans based on the Market Value of those plans. The Actuarial Value of Assets was then further allocated to each fund (either pension or medical subsidy) based on the Market Value of those funds.

For purposes of determining the medical subsidy solvency rates, the Market Value of Assets was used for all group funds due to the short time horizon before these closed group funds are expected to become pay-as-you-go.

Development of Amortization Payment

The employer contribution rates determined by the 2023 valuation are for the 2026-2027 biennium. The Unfunded Actuarial Accrued Liability (UAAL) was determined using the Actuarial Value of Assets and Actuarial Accrued Liability calculated as of the valuation date. The UAAL amortization payment (one component of the contribution requirement), is the level percent of pay required to fully amortize the UAAL over multiple periods beginning on July 1, 2023. This UAAL payment reflects any payments expected to be made and interest to be accrued between the valuation date and the date contributions determined by this report are scheduled to begin. It was assumed that the entire pension contribution as determined by the June 30, 2021 valuation effective from July 1, 2023 to June 30, 2025 would be contributed to the net pension assets. The unfunded liability as of June 30, 2017 shall be amortized through 2039. Each subsequent change in liability as calculated in odd-numbered years shall be separately amortized over a fixed period of no longer than 20 years.

Valuation Assumptions

The actuarial assumptions used in the valuation are shown in this section. All actuarial assumptions and the rationale for the assumptions are based on the July 1, 2019 to June 30, 2023 experience study.

All actuarial assumptions are expectations of future experience, not market measures. Under RSA 100-A:14 IX, the Board of Trustees sets the actuarial assumptions after consulting with the actuary.

Economic Assumptions

The investment return rate assumed in the valuations is 6.75% per year, compounded annually (net after investment expenses). ***The investment return rate*** assumed in the medical subsidy valuations is 3.00% per year, compounded annually (net after investment expenses) for purposes of computing accrued liabilities. However, for determining the solvency contribution rate for the medical subsidy account and GASB 74, the investment return rate assumption was 6.75% on the market value of assets.

The ***Wage Inflation Rate*** assumed in this valuation was 3.00% per year. The wage inflation rate is defined to be the portion of total pay increases for an individual that are due to macroeconomic forces including productivity, price inflation, and labor market conditions. The wage inflation rate does not include pay changes related to individual merit and seniority effects.

The ***Price Inflation*** assumption is 2.25% per year.

The assumed ***Real Rate of Return*** over wage inflation is defined to be the portion of total investment return that is more than the assumed total wage growth rate. Considering other economic assumptions, the 6.75% investment return rate translates to an assumed real rate of return over wage inflation of 3.75%. The assumed real rate of return over price inflation would be higher – at 4.50%, with a 2.25% price inflation assumption.

The active member population for Employees, Police and Fire is assumed to remain constant. For purposes of financing the unfunded liabilities, total payroll is assumed to grow at the wage inflation rate – 3.00% per year. For Teachers, the active member population is assumed to decline by 0.50% per year. For purposes of financing the unfunded liabilities, total payroll for Teachers is assumed to grow at the wage inflation rate minus 0.50% which is 2.50% per year.

Pay increase assumptions for individual active members are shown for sample ages on the following pages. Part of the assumption for each age is for merit and/or seniority increase, and the other 3.00% recognizes wage inflation, including price inflation, productivity increases, and other macroeconomic forces.

Valuation Assumptions

Employees

The rates of salary increase used for individual members are in accordance with the following table. This assumption is used to project a member's current salary to the salaries upon which benefits will be based.

	Salary Increase Assumptions for an Individual Member		
Service Index	Merit & Seniority	Base (Economy)	Increase Next Year
1	13.00%	3.00%	16.00%
2	6.50%	3.00%	9.50%
3	3.25%	3.00%	6.25%
4	3.00%	3.00%	6.00%
5	2.60%	3.00%	5.60%
6	2.40%	3.00%	5.40%
7	2.00%	3.00%	5.00%
8	1.75%	3.00%	4.75%
9	1.60%	3.00%	4.60%
10	1.50%	3.00%	4.50%
11	1.50%	3.00%	4.50%
12	1.00%	3.00%	4.00%
13	1.00%	3.00%	4.00%
14	1.00%	3.00%	4.00%
15	0.75%	3.00%	3.75%
16	0.75%	3.00%	3.75%
17	0.75%	3.00%	3.75%
18	0.75%	3.00%	3.75%
19	0.75%	3.00%	3.75%
20	0.75%	3.00%	3.75%
21	0.75%	3.00%	3.75%
22	0.75%	3.00%	3.75%
23	0.75%	3.00%	3.75%
24	0.75%	3.00%	3.75%
25	0.75%	3.00%	3.75%

Valuation Assumptions

Employees (Continued)

The rates of retirement used to measure the probability of eligible members retiring during the next year were as follows:

For Members Hired Prior to July 1, 2011

Retirement	% of Active Members Retiring within Next Year					
	Male			Female		
Ages	Normal	Early	Early Rule of 70	Normal	Early	Early Rule of 70
45			0.60%			0.60%
46			0.60%			0.60%
47			0.70%			0.70%
48			0.90%			0.90%
49			1.10%			1.10%
50		0.50%	1.80%		0.50%	1.80%
51		0.50%	2.10%		0.50%	2.10%
52		0.60%	2.40%		0.60%	2.40%
53		0.70%	3.50%		0.70%	3.50%
54		0.90%	3.00%		0.90%	3.00%
55		1.50%	6.30%		1.50%	6.30%
56		1.90%	6.90%		1.90%	6.90%
57		2.10%	8.00%		2.10%	8.00%
58		2.60%	11.10%		2.60%	11.10%
59		2.50%	11.00%		2.50%	11.00%
60	10.00%			10.00%		
61	10.50%			10.50%		
62	15.50%			13.50%		
63	15.00%			13.60%		
64	13.00%			14.50%		
65	25.00%			22.00%		
66	25.00%			25.00%		
67	25.00%			25.00%		
68	25.00%			25.00%		
69	25.00%			25.00%		
70	25.00%			25.00%		
71	25.00%			25.00%		
72	25.00%			25.00%		
73	25.00%			25.00%		
74	25.00%			25.00%		
75	100.00%			100.00%		

Valuation Assumptions

Employees (Continued)

The rates of retirement used to measure the probability of eligible members retiring during the next year were as follows:

For Members Hired on or After July 1, 2011

Retirement	% of Active Members Retiring within Next Year			
	Male		Female	
Ages	Normal	Early	Normal	Early
60		10.0%		10.0%
61		10.5%		10.5%
62		15.5%		13.5%
63		15.0%		13.6%
64		13.0%		14.5%
65	30.0%		30.0%	
66	25.0%		25.0%	
67	20.0%		15.0%	
68	15.0%		15.0%	
69	15.0%		15.0%	
70	15.0%		15.0%	
71	15.0%		15.0%	
72	15.0%		15.0%	
73	15.0%		15.0%	
74	15.0%		15.0%	
75	100.0%		100.0%	

Valuation Assumptions

Employees (Concluded)

Rates of separation from active membership were as shown below (rates do not apply to members eligible for normal retirement and do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment.

Sample Ages	Years of Service	% of Active Members Separating within Next Year	
		Male	Female
	0	27.50%	27.50%
	1	21.50%	21.50%
	2	15.30%	15.30%
	3	12.50%	12.50%
	4	10.00%	10.00%
25	5+	8.70%	8.70%
30		7.21%	7.21%
35		6.05%	6.05%
40		5.24%	5.24%
45		4.62%	4.62%
50		4.01%	4.01%
55		3.67%	3.67%
60		3.40%	3.40%

Rates of disability among active members. 60% are assumed to be ordinary disability and 40% are assumed to be accidental disability.

Sample Ages	% of Active Members Becoming Disabled within Next Year	
	Male	Female
20	0.000%	0.000%
25	0.009%	0.009%
30	0.012%	0.012%
35	0.015%	0.015%
40	0.032%	0.032%
45	0.060%	0.060%
50	0.125%	0.125%
55	0.235%	0.235%

Valuation Assumptions

Teachers

The rates of salary increase used for individual members are in accordance with the following table. This assumption is used to project a member's current salary to the salaries upon which benefits will be based.

	Salary Increase Assumptions for an Individual Member		
Service Index	Merit & Seniority	Base (Economy)	Increase Next Year
1	9.00%	3.00%	12.00%
2	8.50%	3.00%	11.50%
3	4.00%	3.00%	7.00%
4	3.50%	3.00%	6.50%
5	3.25%	3.00%	6.25%
6	3.00%	3.00%	6.00%
7	2.75%	3.00%	5.75%
8	2.50%	3.00%	5.50%
9	2.50%	3.00%	5.50%
10	2.25%	3.00%	5.25%
11	2.00%	3.00%	5.00%
12	1.75%	3.00%	4.75%
13	1.50%	3.00%	4.50%
14	1.25%	3.00%	4.25%
15	1.00%	3.00%	4.00%
16	1.00%	3.00%	4.00%
17	1.00%	3.00%	4.00%
18	1.00%	3.00%	4.00%
19	1.00%	3.00%	4.00%
20	1.00%	3.00%	4.00%
21	1.00%	3.00%	4.00%
22	1.00%	3.00%	4.00%
23	1.00%	3.00%	4.00%
24	1.00%	3.00%	4.00%
25	1.00%	3.00%	4.00%

The Teachers' active head count is assumed to decline 0.50% per year. The open group payroll growth assumption is consequently 2.50% per year (3.00 - 0.50%).

Valuation Assumptions

Teachers (Continued)

The rates of retirement used to measure the probability of eligible members retiring during the next year were as follows:

For Members Hired Prior to July 1, 2011

	% of Active Members Retiring within Next Year					
Retirement	Male			Female		
Ages	Normal	Early	Early Rule of 70	Normal	Early	Early Rule of 70
45			0.60%			0.60%
46			0.60%			0.60%
47			0.60%			0.60%
48			0.60%			0.60%
49			0.60%			0.60%
50		0.30%	0.80%		0.30%	0.80%
51		0.40%	1.00%		0.40%	1.00%
52		0.50%	1.20%		0.50%	1.20%
53		0.60%	0.90%		0.60%	0.90%
54		0.70%	1.90%		0.70%	1.90%
55		1.50%	4.00%		1.50%	4.00%
56		2.00%	5.00%		2.00%	5.00%
57		2.90%	8.00%		2.90%	8.00%
58		3.90%	10.50%		3.90%	10.50%
59		6.00%	15.90%		6.00%	15.90%
60	16.00%			13.00%		
61	16.00%			14.00%		
62	16.00%			18.00%		
63	16.00%			19.00%		
64	20.00%			19.00%		
65	28.00%			35.00%		
66	28.00%			35.00%		
67	28.00%			35.00%		
68	28.00%			35.00%		
69	28.00%			35.00%		
70	28.00%			35.00%		
71	28.00%			35.00%		
72	28.00%			35.00%		
73	28.00%			35.00%		
74	28.00%			35.00%		
75	100.00%			100.00%		

Valuation Assumptions

Teachers (Continued)

The rates of retirement used to measure the probability of eligible members retiring during the next year were as follows:

For Members Hired on or After July 1, 2011

Retirement Ages	% of Active Members Retiring within Next Year Male Normal	Male Early	Female Normal	Female Early
60		16%		13%
61		16%		14%
62		16%		18%
63		16%		19%
64		20%		19%
65	50%		50%	
66	50%		50%	
67	25%		25%	
68	25%		25%	
69	25%		25%	
70	25%		25%	
71	25%		25%	
72	25%		25%	
73	25%		25%	
74	25%		25%	
75	100%		100%	

Valuation Assumptions

Teachers (Concluded)

Rates of separation from active membership were as shown below (rates do not apply to members eligible for normal retirement and do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment.

Sample Ages	Years of Service	% of Active Members Separating within Next Year Male	Female
	0	25.0%	25.0%
	1	13.0%	13.0%
	2	11.0%	11.0%
	3	10.0%	10.0%
	4	8.0%	8.0%
25	5+	7.8%	7.8%
30		5.9%	5.9%
35		4.7%	4.7%
40		3.3%	3.3%
45		2.6%	2.6%
50		2.6%	2.6%
55		2.6%	2.6%
60		2.6%	2.6%

Rates of disability among active members. 80% percent are assumed to be ordinary disability and 20% percent are assumed to be accidental disability.

Sample Ages	% of Active Members Becoming Disabled within Next Year Male	Female
20	0.000%	0.000%
25	0.004%	0.004%
30	0.005%	0.005%
35	0.006%	0.006%
40	0.013%	0.013%
45	0.024%	0.024%
50	0.050%	0.050%
55	0.094%	0.094%

Valuation Assumptions

Police

The rates of salary increase used for individual members are in accordance with the following table. This assumption is used to project a member's current salary to the salaries upon which benefits will be based.

	Salary Increase Assumptions for an Individual Member		
Service Index	Merit & Seniority	Base (Economy)	Increase Next Year
1	30.00%	3.00%	33.00%
2	22.00%	3.00%	25.00%
3	6.00%	3.00%	9.00%
4	4.75%	3.00%	7.75%
5	4.00%	3.00%	7.00%
6	3.00%	3.00%	6.00%
7	3.00%	3.00%	6.00%
8	3.00%	3.00%	6.00%
9	1.75%	3.00%	4.75%
10	1.75%	3.00%	4.75%
11	1.75%	3.00%	4.75%
12	1.75%	3.00%	4.75%
13	1.75%	3.00%	4.75%
14	1.75%	3.00%	4.75%
15	1.75%	3.00%	4.75%
16	1.75%	3.00%	4.75%
17	1.75%	3.00%	4.75%
18	1.75%	3.00%	4.75%
19	1.75%	3.00%	4.75%
20	1.75%	3.00%	4.75%
21	1.75%	3.00%	4.75%
22	1.75%	3.00%	4.75%
23	1.75%	3.00%	4.75%
24	1.75%	3.00%	4.75%
25	1.75%	3.00%	4.75%

Valuation Assumptions

Police (Continued)

The rates of retirement used to measure the probability of eligible members retiring during the next year were as follows:

For Members Hired Prior to July 1, 2011
Who Attained Vested Status as of January 1, 2012

Service-Based Rates		Age-Based Rates	
Service	**% of Active Members Retiring Within Next Year**	**Age**	**% of Active Members Retiring Within Next Year**
20	25%	60	21%
21	25%	61	17%
22	20%	62	17%
23	20%	63	17%
24	20%	64	20%
25	25%	65	20%
26	25%	66	30%
27	25%	67	25%
28	25%	68	23%
29	25%	69	20%
30	25%	70	20%
31	25%	71	20%
32	25%	72	20%
33	25%	73	20%
34	25%	74	20%
35	25%	75	100%
36	25%		
37	25%		
38	25%		
39	25%		
40	100%		

Year of Retirement Eligibility	For Members Hired on or After July 1, 2011 and for Members Hired Prior to July 1, 2011 Who Have Non-Vested Status as of January 1, 2012				
	Age 46 with 21 years	**Age 47 with 22 years**	**Age 48 with 23 years**	**Age 49 with 24 years**	**Age 52.5* with 25 years**
1	26%	27%	28%	29%	30%
2	26%	27%	28%	29%	30%
3	20%	20%	20%	20%	20%
4	20%	20%	20%	20%	20%
5	20%	20%	20%	20%	20%
6 & Over	25%	25%	25%	25%	25%

**Members Hired on or After July 1, 2011 are eligible for a reduced early retirement benefit at age 50 with 25 years of service. Rates applied to retirement under these conditions are set equal to the applicable Service-Based rates minus 10 percentage points.*

Age-based retirement assumption for these members is equal to that applied to members hired prior to July 1, 2011.

Valuation Assumptions

Police (Concluded)

Rates of separation from active membership were as shown below (rates do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment.

Sample Ages	Years of Service	% of Active Members Separating within Next Year Male	Female
	0	26.00%	26.00%
	1	16.00%	16.00%
	2	11.00%	11.00%
	3	8.00%	8.00%
	4	7.00%	7.00%
25	5+	7.00%	7.00%
30		5.00%	5.00%
35		4.20%	4.20%
40		3.30%	3.30%
45		2.95%	2.95%
50		2.78%	2.78%
55		2.65%	2.65%

Rates of disability among active members. 25% percent are assumed to be ordinary disability and 75% percent are assumed to be accidental disability.

Sample Ages	% of Active Members Becoming Disabled within Next Year Ordinary	Accidental
20	0.013%	0.039%
25	0.013%	0.039%
30	0.013%	0.039%
35	0.029%	0.088%
40	0.066%	0.199%
45	0.136%	0.408%
50	0.209%	0.628%
55	0.322%	0.967%

Valuation Assumptions

Fire

The rates of salary increase used for individual members are in accordance with the following table. This assumption is used to project a member's current salary to the salaries upon which benefits will be based.

	Salary Increase Assumptions for an Individual Member		
Service Index	Merit & Seniority	Base (Economy)	Increase Next Year
1	30.00%	3.00%	33.00%
2	17.00%	3.00%	20.00%
3	7.25%	3.00%	10.25%
4	5.00%	3.00%	8.00%
5	4.25%	3.00%	7.25%
6	2.50%	3.00%	5.50%
7	2.50%	3.00%	5.50%
8	1.75%	3.00%	4.75%
9	1.50%	3.00%	4.50%
10	1.20%	3.00%	4.20%
11	1.20%	3.00%	4.20%
12	1.20%	3.00%	4.20%
13	1.20%	3.00%	4.20%
14	1.20%	3.00%	4.20%
15	1.20%	3.00%	4.20%
16	1.20%	3.00%	4.20%
17	1.20%	3.00%	4.20%
18	1.20%	3.00%	4.20%
19	1.20%	3.00%	4.20%
20	1.20%	3.00%	4.20%
21	1.20%	3.00%	4.20%
22	1.20%	3.00%	4.20%
23	1.20%	3.00%	4.20%
24	1.20%	3.00%	4.20%
25	1.20%	3.00%	4.20%

Valuation Assumptions

Fire (Continued)

The rates of retirement used to measure the probability of eligible members retiring during the next year were as follows:

For Members Hired Prior to July 1, 2011
Who Attained Vested Status as of January 1, 2012

Service-Based Rates		Age-Based Rates	
Service	% of Active Members Retiring Within Next Year	Age	% of Active Members Retiring Within Next Year
20	10%	60	20%
21	10%	61	23%
22	10%	62	18%
23	10%	63	18%
24	10%	64	18%
25	10%	65	29%
26	12%	66	25%
27	14%	67	30%
28	15%	68	30%
29	18%	69	30%
30	25%	70	40%
31	20%	71	40%
32	22%	72	40%
33	24%	73	40%
34	26%	74	40%
35	35%	75	100%
36	35%		
37	35%		
38	35%		
39	35%		
40	100%		

For Members Hired on or After July 1, 2011 and for Members Hired Prior to July 1, 2011 Who Have Non-Vested Status as of January 1, 2012

Service	Age 46 with 21 years	Age 47 with 22 years	Age 48 with 23 years	Age 49 with 24 years	Age 52.5* with 25 years
20	11%	12%	13%	14%	15%
21	11%	12%	13%	14%	15%

**Members Hired on or After July 1, 2011 are eligible for a reduced early retirement benefit at age 50 with 25 years of service. Rates applied to retirement under these conditions are set equal to the applicable Service-Based rates minus 10 percentage points.*

Retirement rates for eligible members with 22 years of service or more, as well as age-based retirement rates for these members are equal to those applied to members hired prior to July 1, 2011.

Valuation Assumptions

Fire (Concluded)

Rates of separation from active membership were as shown below (rates do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment.

Sample Ages	Years of Service	% of Active Members Separating within Next Year Male	Female
	0	9.00%	9.00%
	1	7.00%	7.00%
	2	3.00%	3.00%
	3	3.00%	3.00%
	4	3.00%	3.00%
25	5 & Over	1.15%	1.15%
30		1.75%	1.75%
35		1.50%	1.50%
40		1.15%	1.15%
45		1.15%	1.15%
50		1.15%	1.15%
55		1.15%	1.15%
60		1.15%	1.15%

Rates of disability among active members. 30% percent are assumed to be ordinary disability and 70% percent are assumed to be accidental disability.

Sample Ages	% of Active Members Becoming Disabled within Next Year Ordinary	Accidental
20	0.025%	0.059%
25	0.037%	0.085%
30	0.044%	0.104%
35	0.054%	0.126%
40	0.074%	0.173%
45	0.109%	0.255%
50	0.160%	0.372%
55	0.241%	0.562%

Valuation Assumptions

Healthy Mortality

The standard mortality tables for death after retirement are the Pub-2010 Healthy Retiree Mortality Tables with credibility adjustments for each group (Police and Fire combined) and projected fully generational mortality improvements using Scale MP-2021.

The applicable published healthy mortality tables for each valuation group are shown below.

Employees: *PubG-2010 amount-weighted Healthy Retiree General Mortality Table for Males and PubG-2010 amount-weighted Healthy Below-Median Retiree General Mortality Table for Females adjusted for credibility by 102% for males and 107% for females.*

Teachers: *PubT-2010 amount-weighted Healthy Retiree Teachers Mortality Tables adjusted for credibility by 106% for males and 104% for females.*

Police and Fire: *PubS-2010 amount-weighted Healthy Retiree Safety Mortality Tables adjusted for credibility by 101% for males and females.*

This assumption is used to measure the probabilities of each benefit payment being made after retirement.

Sample rates of mortality and future life expectancy years are shown in the following tables.

Employees

Sample Attained	Probability of Dying Next Year*		Future Life Expectancy (Years)*	
Ages	Male	Female	Male	Female
35	0.073%	0.045%	50.93	52.30
40	0.092%	0.060%	45.67	46.98
45	0.122%	0.094%	40.44	41.69
50	0.286%	0.409%	35.34	36.60
55	0.418%	0.495%	30.46	31.93
60	0.642%	0.590%	25.74	27.32
65	0.936%	0.708%	21.26	22.76
70	1.437%	1.110%	17.01	18.34
75	2.407%	1.942%	13.10	14.21
80	4.334%	3.554%	9.64	10.52

** Applicable to calendar year 2023. Rates and life expectancy in future years are determined by the MP-2021 projection scale. The rates shown include the credibility adjustment for each member classification.*

Valuation Assumptions

Teachers

Sample Attained Ages	Probability of Dying Next Year*		Future Life Expectancy (Years)*	
	Male	Female	Male	Female
35	0.048%	0.029%	53.03	55.48
40	0.061%	0.039%	47.78	50.22
45	0.077%	0.049%	42.56	44.98
50	0.114%	0.077%	37.36	39.75
55	0.225%	0.198%	32.25	34.62
60	0.387%	0.309%	27.30	29.66
65	0.631%	0.441%	22.56	24.84
70	1.047%	0.699%	18.05	20.16
75	1.902%	1.327%	13.88	15.72
80	3.628%	2.662%	10.18	11.72

Police and Fire

Sample Attained Ages	Probability of Dying Next Year*		Future Life Expectancy (Years)*	
	Male	Female	Male	Female
35	0.072%	0.051%	51.06	53.26
40	0.088%	0.062%	45.81	47.98
45	0.134%	0.085%	40.61	42.73
50	0.183%	0.137%	35.48	37.52
55	0.294%	0.256%	30.43	32.41
60	0.525%	0.466%	25.54	27.50
65	0.895%	0.740%	20.94	22.85
70	1.462%	1.171%	16.66	18.46
75	2.521%	2.024%	12.76	14.40
80	4.587%	3.634%	9.34	10.79

** Applicable to calendar year 2023. Rates and life expectancy in future years are determined by the MP-2021 projection scale. The rates shown include the credibility adjustment for each member classification.*

Valuation Assumptions

Disabled Mortality

Disabled pension mortality is based on the Pub-2010 Disabled Retiree Mortality Tables for males and females with fully generational mortality improvements using Scale MP-2021. Due to limited disabled mortality experience, credibility adjustments were not applied.

The applicable published disabled mortality tables for each valuation group are shown below.

Employees: *PubG-2010 amount-weighted Disabled Retiree General Mortality Tables*
Teachers: *PubT-2010 amount-weighted Disabled Retiree Teachers Mortality Tables*
Police and Fire: *PubS-2010 amount-weighted Disabled Retiree Safety Mortality Tables*

The probabilities of disabled mortality at sample attained ages are as follows:

Employees

	Probability of Occurrence Next Year*	
Sample	Disabled Death	
Ages	Male	Female
20	0.426%	0.254%
25	0.328%	0.201%
30	0.499%	0.357%
35	0.697%	0.565%
40	0.878%	0.751%
45	1.095%	0.958%
50	1.512%	1.349%
55	2.012%	1.714%

** Applicable to calendar year 2023. Rates and life expectancy in future years are determined by the MP-2021 projection scale.*

Valuation Assumptions

Teachers

Sample Ages	Probability of Occurrence Next Year* Disabled Death Male	Female
20	0.426%	0.254%
25	0.328%	0.201%
30	0.499%	0.357%
35	0.697%	0.565%
40	0.878%	0.751%
45	1.095%	0.958%
50	1.512%	1.349%
55	2.012%	1.714%

Police and Fire

Sample Ages	Probability of Occurrence Next Year* Disabled Death Male	Female
20	0.125%	0.058%
25	0.126%	0.080%
30	0.172%	0.124%
35	0.210%	0.170%
40	0.237%	0.196%
45	0.263%	0.217%
50	0.333%	0.277%
55	0.457%	0.454%

** Applicable to calendar year 2023. Rates and life expectancy in future years are determined by the MP-2021 projection scale.*

Valuation Assumptions

Pre-Retirement Mortality

For active members dying before retirement, the Pub-2010 Employee Mortality Tables for males and females with fully generational mortality improvements using Scale MP-2021. Due to limited active member mortality experience, credibility adjustments were not applied.

The applicable published disabled mortality tables for each valuation group are shown below.

Employees: *PubG-2010 amount-weighted Employee General Mortality Tables*
Teachers: *PubT-2010 amount-weighted Employee Teachers Mortality Tables*
Police and Fire: *PubS-2010 amount-weighted Employee Safety Mortality Tables*

The probabilities of dying prior to retirement at sample attained ages are as follows:

Employees

	Probability of Occurrence Next Year*	
Sample	Death Before Retirement	
Ages	Male	Female
20	0.038%	0.014%
25	0.033%	0.011%
30	0.051%	0.021%
35	0.072%	0.032%
40	0.090%	0.043%
45	0.107%	0.055%
50	0.140%	0.076%
55	0.208%	0.121%

** Applicable to calendar year 2023. Rates and life expectancy in future years are determined by the MP-2021 projection scale.*

Valuation Assumptions

Teachers

Sample Ages	Probability of Occurrence Next Year* Death Before Retirement Male	Female
20	0.035%	0.014%
25	0.019%	0.011%
30	0.031%	0.019%
35	0.046%	0.028%
40	0.057%	0.037%
45	0.073%	0.047%
50	0.105%	0.066%
55	0.164%	0.105%

Police and Fire

Sample Ages	Probability of Occurrence Next Year* Death Before Retirement Male	Female
20	0.042%	0.017%
25	0.043%	0.025%
30	0.058%	0.038%
35	0.072%	0.051%
40	0.080%	0.059%
45	0.089%	0.065%
50	0.113%	0.083%
55	0.167%	0.121%

** Applicable to calendar year 2023. Rates and life expectancy in future years are determined by the MP-2021 projection scale.*

Weighting of Mortality

The weighting of ordinary and accidental deaths by member classification is as follows:

	Employees	Teachers	Police	Fire
Ordinary	98%	98%	50%	50%
Accidental	2%	2%	50%	50%

Miscellaneous and Technical Assumptions

Administrative & Investment Expenses	The investment return assumption is intended to be the return net of investment expenses. Assumed administrative expenses are added to the Normal Cost, and were 0.35% of payroll.
Benefit Service	Exact Fractional service is used to determine the amount of benefit payable.
COLA	None assumed.
Data Adjustments	**Active Data** - New active member pays were annualized. - 160 active records were excluded due to reported pays being $0. - 2 active records were excluded due to reported employment service being less than 0. - 6 active members reported as being vested as of 12/31/2011 were also reported as being hired on or after 7/1/2011. For the purposes of retirement eligibility, it was assumed these members were not hired on or after 7/1/2011. **Deferred Data** - 121 deferred members had a reported accrued benefit of $0. These members were assumed to receive a refund of member contributions equal to the accumulated member contributions reported in the data. **Retiree Data** - 1,133 payee records were excluded due to non-blank Benefit Termination Dates. **Medical Subsidy Data** - 463 records were excluded due to non-blank Benefit Termination Dates.
Decrement Operation	Disability and turnover decrements do not operate during normal retirement eligibility for Group I and Group II members. They do operate for early retirement for Group I members.
Decrement Timing	Normal and early retirement decrements for the Teachers group are assumed to occur at the beginning of the year. All other decrements for all groups were assumed to occur mid-year.
Eligibility Testing	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
Incidence of Contributions	Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.

IRC Sections 415(b) and 401(a)(17)

For purposes of the valuation, the limitations under IRC Sections 401(a)(17) and 415(b) were not reflected due to immateriality.

Liability Adjustments

Normal, early and vesting retirement liabilities are increased by 8.0%, 5.0%, 9.5% and 10.5% for Employees, Teachers, Police and Fire respectively to account for end of career pay increases. Group I members hired after July 1, 2011 or who have non-vested status as of January 1, 2012 are assumed to have no adjustment for end of career payments. Normal, early and vesting retirement liabilities are increased by 4.75% and 5.25% for Police and Fire respectively for Group II members hired before July 1, 2011 and who have non-vested status as of January 1, 2012 to account for end of career pay increases.

Marriage Assumption

Group I: 50% of males and 50% of females are assumed to be married for purposes of death-in-service benefits. Group II: 65% of males and 65% of females are assumed to be married for purposes of death-in-service and death after retirement benefits. Male spouses are assumed to be three years older than female spouses for active member valuation purposes.

Medical Subsidy

Actual medical subsidy recipients are included in the valuation plus 25% of those who opted-out. For those members reported as eligible in the future but not currently receiving, we assumed that members would commence benefits at age eligibility.

The solvency rates for the medical subsidy benefits were determined to provide an estimated margin of 20% of the benefits (50% for Teachers) by the end of the first year of the biennium and thereafter. The margin is intended to mitigate the risk of insolvency due to adverse experience.

A retired member's medical subsidy amount is provided by System staff. If the member is under the age of 65, the pre-65 subsidy amount used is the amount reported by System staff, and the post-65 subsidy amount is assumed to be at the post-65 rates.

It is assumed that 80% of active married members will have their spouses continue to receive a medical subsidy under the plan.

Normal Form of Benefit

This valuation assumes that members will elect the normal form of payment. Alternate forms of payment are available and are actuarially adjusted based on the valuation interest and mortality.

Group I: The assumed normal form of benefit is a straight life benefit.

Group II: The assumed normal form of benefit is straight life for single members and joint and 50% survivor for married members.

Option Factors	Annuity values and factors are based on a 6.75% interest rate and the Pub-2010 Healthy Retiree mortality tables for males and females, adjusted for improvements using Scale MP-2021. While the tables used in the valuations are based on generational mortality, a static model with five years of projection was used for purposes of determining the option factors. Unisex mortality was used based on active male/female blends observed in the June 30, 2023 valuation of 39%/61%, 22%/78%, 87%/13% and 97%/3% for Employees, Teachers, Police and Fire, respectively. Disabled mortality is based on the Pub-2010 Disabled Retiree mortality tables using a static model with five years of mortality improvement projection. For the Group I Straight Life factors, the current practice of not reflecting the changing benefit at age 67 is in the factor. Each option factor is determined on an actuarial equivalent basis using valuation assumptions. No adjustment for optional forms of payment are reflected in the valuation.
Pay Increase Timing	Beginning of (Fiscal) year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.
New Entrant Profile	For purposes of projecting the normal cost to the beginning of the rate setting biennium, the new entrant profile is based on actual members with 3-8 years of service on the valuation date.
Service Credit Accruals	It is assumed that members accrue one year of service credit per year.
Service Purchases	One month of service was added to the reported service for all active participants in consideration of potential subsidized service purchases in the future.
Split Benefits	Active members with service in more than one plan are valued as if all service accrued is in their current plan. Split benefits are valued upon retirement, as reported in the data.

SECTION F

GLOSSARY

Glossary

Actuarial Accrued Liability (AAL)	The difference between the Actuarial Present Value of Future Benefits, and the Actuarial Present Value of Future Normal Costs.
Actuarial Assumptions	Assumptions about future plan experience that affect costs or liabilities, such as: mortality, withdrawal, disablement, and retirement; future increases in salary; future rates of investment earnings; future investment and administrative expenses; characteristics of members not specified in the data, such as marital status; characteristics of future members; future elections made by members; and other items.
Actuarial Cost Method	A procedure for allocating the Actuarial Present Value of Future Benefits between the Actuarial Present Value of future Normal Costs and the Actuarial Accrued Liability.
Actuarial Equivalent	Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions.
Actuarial Present Value (APV)	The amount of funds required to provide a payment or series of payments in the future. It is determined by discounting the future payments with an assumed interest rate and with the assumed probability each payment will be made.
Actuarial Present Value of Future Benefits (APVFB)	The Actuarial Present Value of amounts which are expected to be paid at various future times to active members, retired members, beneficiaries receiving benefits, and inactive, nonretired members entitled to either a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.
Actuarial Valuation	The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan.
Actuarial Value of Assets	The value of the assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets or a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the Annual Required Contribution (ARC).

Glossary

Amortization Method	A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the rate at which total covered payroll of all active members is assumed to increase.
Amortization Payment	That portion of the plan contribution or ARC which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.
Amortization Period	The period used in calculating the Amortization Payment.
Annual Required Contribution (ARC)	The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation. The ARC consists of the Employer Normal Cost and Amortization Payment.
Closed Amortization Period	A specific number of years that is reduced by one each year, and declines to zero with the passage of time. For example if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc.
Employer Normal Cost	The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.
Equivalent Single Amortization Period	For plans that do not establish separate amortization bases (separate components of the UAAL), this is the same as the Amortization Period. For plans that do establish separate amortization bases, this is the period over which the UAAL would be amortized if all amortization bases were combined upon the current UAAL payment.
Experience Gain/Loss	A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two actuarial valuations. To the extent that actual experience differs from that assumed, Unfunded Actuarial Accrued Liabilities emerge which may be larger or smaller than projected. Gains are due to favorable experience, i.e., the assets earn more than projected, salaries do not increase as fast as assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, losses are the result of unfavorable experience, i.e., actual results that produce Unfunded Actuarial Accrued Liabilities which are larger than projected.

Glossary

Funded Ratio	The ratio of the Actuarial Value of Assets to the Actuarial Accrued Liability.
GASB	Governmental Accounting Standards Board.
Normal Cost	The annual cost assigned, under the Actuarial Cost Method, to the current plan year.
Open Amortization Period	An open amortization period is one which is used to determine the amortization payment but which does not change over time. In other words, if the initial period is set as 30 years, the same 30-year period is used in determining the amortization period each year. In theory, if an open amortization period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount or in relation to covered payroll.
Unfunded Actuarial Accrued Liability	The difference between the Actuarial Accrued Liability and Actuarial Value of Assets.
Solvency Rate	The minimum contribution necessary to prevent insolvency (a fund balance less than $0) during or after the biennium in which contributions are being calculated. If fund balances are projected to be less than $0 prior to the beginning of the biennium (due to the lag between the valuation date and contribution certification), then the solvency rate is the minimum contribution necessary to bring the balance back to $0 by the end of the biennium. After the fund balance reaches $0, the solvency rate becomes the pay-as-you-go rate.
Valuation Date	The date as of which the Actuarial Present Value of Future Benefits are determined. The benefits expected to be paid in the future are discounted to this date.

SECTION G

SUMMARY OF PLAN PROVISIONS

Pension Plan Provisions – Group I

Statute	Amended and Restated under New Hampshire Revised Statutes Annotated (RSA) Chapter 100-A. Most recently amended under legislation passed in the year ending June 30, 2023.
Effective Date	July 1, 1967
Plan Year	July 1 through June 30
Type of Plan	Qualified, governmental defined benefit retirement plan; it is a single plan for financial reporting purposes.
Eligibility Requirements	Any employee or teacher becomes a Group I member as a condition of employment. Membership is optional for elected officials, officials appointed for fixed terms, unclassified state employees or employees of the general court.
Creditable Service	Service measured from date of employment to date of retirement or prior termination plus service credited under one or more of the predecessor systems.
Earnable Compensation	For members who have attained vested status prior to January 1, 2012, full base rate of compensation paid plus any overtime pay, holiday and vacation pay, sick pay, longevity or severance pay, cost of living bonus, additional pay for extracurricular and instructional activities or any military differential pay, plus the fair market value of non-cash compensation such as meals or living quarters if subject to federal income tax. Earnable compensation in the final 12 months prior to termination shall be limited to 1 ½ times the higher of the earnable compensation in the 12-month period preceding the final 12 months or the highest compensation year excluding the final 12 months. Earnable compensation is subject to IRC Section 401(a)(17) limits. For members who have not attained vested status prior to January 1, 2012, full base rate of compensation paid plus any overtime pay, longevity pay, cost of living bonus, additional pay for extracurricular and instructional activities, and any military differential pay, plus the fair market value of non-cash compensation such as meals or living quarters if subject to federal income tax, but excluding other compensation except supplemental pay paid by the employer while the member is receiving workers' compensation and teacher development pay that is not part of the contracted annual salary. Earnable compensation is subject to IRC section 401(a)(17) limits. Earnable compensation shall not include incentives to encourage members to retire, severance pay, or end-of-career longevity payments and pay for unused sick or vacation time. Earnable compensation in the final 12 months prior to termination shall be limited to 1 ½ times the higher of the earnable compensation in the 12-month period preceding the final 12 months or the highest compensation year excluding the final 12 months.

Pension Plan Provisions – Group I

The new definition of earnable compensation is applicable January 1, 2012 for members who have not attained vested status prior to January 1, 2012 and immediately for members who commence service on or after July 1, 2011.

***Average Final Compensation* (AFC)**

For members who have attained vested status prior to January 1, 2012 – Average annual earnable compensation during the highest 3 years of creditable service.

For members who commence service on or after July 1, 2011 or who have not attained vested status prior to January 1, 2012 – Average annual earnable compensation during the highest 5 years of creditable service.

Service Retirement

Eligibility: Age 60 years (age 65 for members who commence service on or after July 1, 2011).

Benefit: A member annuity that is the actuarial equivalent of the member's accumulated contributions plus a state annuity.

Prior to full retirement age for Social Security, the state annuity, together with the member annuity, shall be equal to 1/60th of AFC times creditable service (1/66th of AFC times creditable service for members who commence service on or after July 1, 2011).

After full retirement age for Social Security full retirement age for Social Security, the state annuity, together with the member annuity, shall be equal to 1/66th of AFC times creditable service.

Normal Form: Straight life annuity.

Early Retirement

Eligibility: Completion of 20 years of creditable service and age plus service at least 70, or attainment of age 50. (Age 60 with 30 years of creditable service for members who commence service on or after July 1, 2011.)

Benefit: Service Retirement Benefit accrued to date of retirement, reduced for each month prior to age 60 by 1/8 of 1% if the member has 35 years or more of creditable service, by 1/4 of 1% if the member has 30 years but less than 35, by 1/3 of 1% if the member has at least 25 years but not 30, by 5/12 of 1% if the member has at least 20 years but not 25, and by 5/9 of 1% if the member has less than 20 years of creditable service.

For members who commence service on or after July 1, 2011, normal retirement benefit is reduced 1/4 of 1% for each month prior to age 65.

Pension Plan Provisions – Group I

Ordinary Disability

Eligibility: 10 or more years of creditable service.

Benefit: If age 60 or older, the Service Retirement Benefit at attained normal retirement eligibility age as calculated under benefit provisions for members hired prior to July 1, 2011. Under age 60, a member annuity plus state annuity that shall be equal to 1.5% times AFC times years of creditable service. The disability retirement allowance shall not be less than 25% of AFC.

Accidental Disability

Eligibility: Permanently disabled in the performance of duty.

Benefit: Service Retirement Benefit if at least age 60, not less than 50% of AFC. Under age 60, a member annuity plus state annuity that shall be equal to 50% times AFC.

Accidental Death Benefits

Eligibility: Accidental death in the performance of duty.

Benefit: 50% times AFC.

Ordinary Death Benefits

Eligibility: Death other than accidental death.

Benefit: If 10 years creditable service or eligible for service retirement, surviving spouse receives 50% of the service retirement benefit until death or remarriage. If no surviving spouse, designated beneficiary receives a lump sum equal to the greater of $3,600 or the member's annual compensation.

If less than 10 years creditable service and not eligible for service retirement, the member's spouse or designated beneficiary receives a lump sum equal to the greater of $3,600 or the member's annual compensation.

Post Retirement Death

Not applicable.

Optional Forms

Each of the following options shall be of equivalent actuarial value to the allowance payable in the absence of election of an option.

Option 1. Full cash refund.
Option 2. 100% Joint and Survivor.
Option 3. 50% Joint and Survivor.
Option 4. Other Joint and Survivor.

Vested Termination

If a member terminates with less than 10 years of service, the member's accumulated contributions are refunded. If a member terminates with 10 or more years of service, the member either receives a service retirement benefit beginning at any age after age 60 (age 65 for members who commence service on or after July 1, 2011) or a reduced early service retirement benefit beginning at any age after age 50 (age 60 for members who commence service on or after July 1, 2011 and have at least 30 years of creditable service) or the member may apply for a refund of the member's accumulated contributions.

Pension Plan Provisions – Group I

Maximum Benefit	For members who commenced service prior to July 1, 2009 or have attained vested status prior to January 1, 2012, a member's retirement benefit shall not exceed 100% of the member's highest year of earnable compensation. For members who commenced service on or after July 1, 2009 and have not attained vested status prior to January 1, 2012, a member's retirement benefit shall not exceed the lesser of 85% of the member's highest average final compensation or $120,000.
Refunds	1. Termination for reasons other than retirement or death and the member has not elected a vested deferred retirement benefit. 2. Upon death in service other than accidental death described above, the member's accumulated contributions are payable to the beneficiary or estate if, at the time of death, the member is not eligible for a service retirement. 3. Upon death prior to age 60 of a member electing vested deferred retirement, the member's accumulated contributions at the time of death are payable to the beneficiary or estate. 4. Upon death of a retired member prior to electing an optional allowance, any excess of the member's accumulated contributions at retirement over the sum of retirement allowance payments received.
Member Contributions	7.0% of earnable compensation. Interest on member contributions shall be 2 percentage points less than either the most recent board of trustees approved assumed rate of return determined under RSA 100-A:16, II(g) or the actual rate of return, whichever is lower.
Employer Contributions	As prescribed in RSA 100-A:16.
Temporary Supplemental Allowances	All System members who retired on or before July 1, 2014, or any beneficiaries of such members receiving a survivorship pension benefit shall receive a one-time 1.5% COLA on the first $50,000 of an annual pension benefit. The COLA will take effect on the retired member's first anniversary date of retirement occurring after July 1, 2020. The adjustment shall become a permanent addition to the member's base retirement allowance.
Other Ancillary Benefits	There are no ancillary benefits - retirement type benefits not required by statutes but which might be deemed a liability if continued beyond the availability of funding by the current funding source.

Pension Plan Provisions – Group II

Statute	Amended and Restated under New Hampshire Revised Statutes Annotated (RSA) Chapter 100-A. Most recently amended under legislation passed in the year ending June 30, 2011.
Effective Date	July 1, 1967
Plan Year	July 1 through June 30
Type of Plan	Qualified, governmental defined benefit retirement plan; it is a single plan for financial reporting purposes.
Eligibility Requirements	Any permanent policeman or permanent fireman becomes a Group II member as a condition of employment.
Creditable Service	Service measured from date of employment to date of retirement or prior termination plus service credited under one or more of the predecessor systems.
Earnable Compensation	For members who have attained vested status prior to January 1, 2012, full base rate of compensation paid plus any overtime pay, holiday and vacation pay, sick pay, longevity or severance pay, cost of living bonus, additional pay for extra or special duty, and other compensation paid to the member by the employer, plus the fair market value of non-cash compensation such as meals or living quarters if subject to federal income tax. Earnable compensation in the final 12 months prior to termination shall be limited to 1 ½ times the higher of the earnable compensation in the 12-month period preceding the final 12 months or the highest compensation year excluding the final 12 months. Earnable compensation is subject to IRC section 401(a)(17) limits. Compensation for extra and special duty, as determined by the employer, shall be included but limited during the highest 3 years of creditable service as provided in paragraph RSA 100-A:1 XVIII as amended. For members who have not attained vested status prior to January 1, 2012, full base rate of compensation paid plus any overtime pay, longevity pay, cost of living bonus, and any military differential pay, plus the fair market value of non-cash compensation such as meals or living quarters if subject to federal income tax, but excluding other compensation except supplemental pay paid by the employer while the member is receiving workers' compensation and teacher development pay that is not part of the contracted annual salary. Earnable compensation is subject to IRC section 401(a)(17) limits. Compensation for extra and special duty, as determined by the employer, shall be included but limited during the highest 5 years of creditable service as provided in paragraph RSA 100-A:1 XVIII as amended. Compensation for extra and special duty shall be eliminated for members who commence service on or after July 1, 2011.

Pension Plan Provisions – Group II

Earnable compensation shall not include incentives to encourage members to retire, severance pay, or end-of-career longevity payments and pay for unused sick or vacation time. Earnable compensation in the final 12 months prior to termination shall be limited to 1 ½ times the higher of the earnable compensation in the 12-month period preceding the final 12 months or the highest compensation year excluding the final 12 months.

The new definition of earnable compensation is applicable January 1, 2012 for members who have not attained vested status prior to January 1, 2012 and immediately for members who commence service on or after July 1, 2011.

Average Final Compensation (AFC)

For members who have attained vested status prior to January 1, 2012 – Average annual earnable compensation during the highest 3 years of creditable service.

For members who commence service on or after July 1, 2011 or who have not attained vested status prior to January 1, 2012 – Average annual earnable compensation during the highest 5 years of creditable service.

Service Retirement

Eligibility: Age 45 and 20 years of creditable service or age 60 (age 50 with 25 years of creditable service or age 60 for members who commence service on or after July 1, 2011).

Benefit: A member annuity that is the actuarial equivalent of the member's accumulated contributions plus a state annuity.

The state annuity, together with the member annuity, shall be equal to 2-1/2% of AFC times creditable service up to 40 years (2% of AFC times creditable service up to 42.5 years for members who commence service on or after July 1, 2011. However, a member who commenced service on or after July 1, 2011 shall not receive a service retirement allowance until attaining the age of 52.5, but may receive a reduced allowance after age 50 if the member has at least 25 years of creditable service where the allowance shall be reduced, for each month by which the benefit commencement date precedes the month after which the member attains 52.5 years of age, by ¼ of 1%).

Members hired prior to July 1, 2011 who have not attained vested status prior to January 1, 2012 shall be subject to transition provisions for years of service required for regular service retirement, the minimum age for regular service retirement, and the multiplier used to calculate the retirement annuity, which shall be applicable on January 1, 2012. The state annuity, together with the member annuity, shall be equal to the multiplier times AFC times creditable service up to 40.5 years. The transition provisions are provided in the following table.

Pension Plan Provisions – Group II

Creditable Service on January 1, 2012	Minimum Years of Service	Minimum Age Attained	Annuity Multiplier
(1) Less than 4 years	24 Years	Age 49	2.1%
(2) At least 4 years but less than 6 years	23 Years	Age 48	2.2%
(3) At least 6 years but less than 8 years	22 Years	Age 47	2.3%
(4) At least 8 years but less than 10 years	21 Years	Age 46	2.4%

Members who have attained vested status prior to January 1, 2012 who have attained the age of 45 with at least 20 years of creditable service, members who commenced service on or after July 1, 2011 who have attained the age of 50 with at least 25 years of creditable service, and members hired prior to July 1, 2011 who have not attained vested status prior to January 1, 2012 who qualify as provided in the transition provisions shall receive a minimum annual service retirement allowance of $10,000.

Normal Form: Straight life annuity (with surviving spouse's benefit payable as described under post-retirement death benefit).

Ordinary Disability

Eligibility: 10 or more years of creditable service.

Benefit: Service Retirement Benefit. The disability retirement allowance shall not be less than 25% of the member's final compensation at the date of the member's disability.

Accidental Disability

Eligibility: Permanently disabled in the performance of duty.

Benefit: Members who have attained vested status prior to January 1, 2012 are eligible for an accidental disability benefit and shall receive a benefit equal to 2/3 of AFC. If a member has more than 26-2/3 years of service, the member will receive a supplemental disability benefit equal to 2-1/2% of AFC times years of creditable service in excess of 26-2/3 years but not in excess of 40 years.

Members hired prior to July 1, 2011 who have not attained vested status prior to January 1, 2012 are eligible for an accidental disability benefit and shall receive a benefit equal to 2/3 of AFC. The calculation of the supplemental allowance shall be as provided in the transition provisions with the number of years for the supplement adjusted proportionally.

Members who commence service on or after July 1, 2011 are eligible for an accidental disability benefit and shall receive a benefit equal to 2/3 of AFC. If a member has more than 33-1/3 years of service, the member will receive a supplemental disability benefit equal to 2% of AFC times years of creditable service in excess of 33-1/3 years but not in excess of 42.5 years.

Pension Plan Provisions – Group II

Accidental Death Benefits

Eligibility: Accidental death in the performance of duty.

Benefit: 50% times the member's annual rate of earnable compensation at the date of the member's death.

Post Retirement Death

Retired prior to April 1, 1987, benefit payable to surviving spouse until death or remarriage equal to 50% of the member's service (if the member had at least 20 years of creditable service), ordinary disability or accidental disability retirement allowance. Upon the death of a member receiving a service or ordinary disability retirement, a lump sum of $3,600 is payable also.

Retired on or after April 1, 1987, benefit payable to surviving spouse until death or remarriage equal to 50% of the member's service, ordinary disability or accidental disability retirement allowance plus a lump sum as defined below.

Retired on or after April 1, 1987, but before July 1, 1988, hired before July 1, 1988, lump sum of $3,600.

Retired on or after July 1, 1988, hired before July 1, 1988, lump sum of $10,000.

Retired on or after July 1, 1988, hired on or after July 1, 1988 but before July 1, 1993, lump sum of $3,600.

Optional Forms

Each of the following options shall be of equivalent actuarial value to the straight life allowance payable in the absence of election of an option.

Option 1. Full cash refund.
Option 2. 100% Joint and Survivor.
Option 3. 50% Joint and Survivor.
Option 4. Other Joint and Survivor.

Vested Termination

If a member terminates with less than 10 years of service, the member's accumulated contributions are refunded. If a member terminates with 10 or more years of service, the member either receives his service retirement at the age the member would have attained service or reduced early service retirement eligibility requirement, or age 60 or the member may apply for a refund of accumulated contributions.

Pension Plan Provisions – Group II

Maximum Benefit	For members who commenced service prior to July 1, 2009 or have attained vested status prior to January 1, 2012, a member's retirement benefit shall not exceed 100% of the member's highest year of earnable compensation. For members who commenced service on or after July 1, 2009 and have not attained vested status prior to January 1, 2012, a member's retirement benefit shall not exceed the lesser of 85% of the member's highest average final compensation or $120,000.
Refunds	1. Termination for reasons other than retirement or death and the member has not elected a vested deferred retirement benefit. 2. Upon death in service other than accidental death described above, the member's accumulated contributions are payable to the beneficiary or estate, if at the time of death, the member is not eligible for a service retirement. 3. Upon death prior to commencement of benefits of a member electing vested deferred retirement, the member's accumulated contributions are payable to the beneficiary or estate at the time of death. 4. Upon death of a survivor of a member retired on accidental disability with spouse receiving accidental disability survivor benefits, the excess of the member's accumulated contributions at retirement over the sum of payments received. 5. Upon death of a retired member prior to electing an optional allowance, any excess of the member's accumulated contributions at retirement over the sum of retirement allowance payments received.
Member Contributions	Fire members: 11.80% of earnable compensation. Police members: 11.55% of earnable compensation. Member contributions cease for members who have attained vested status prior to January 1, 2012 with creditable service in excess of 40 years. Member contributions cease for all other Group II members with creditable service in excess of 42.5 years. Interest on member contributions shall be 2 percentage points less than either the most recent board of trustees approved assumed rate of return determined under RSA 100-A:16, II(g) or the actual rate of return, whichever is lower.
Employer Contributions	As prescribed in RSA 100-A:16.
Temporary Supplemental Allowances	All System members who retired on or before July 1, 2014, or any beneficiaries of such members receiving a survivorship pension benefit shall receive a one-time 1.5% COLA on the first $50,000 of an annual pension benefit. The COLA will take effect on the retired member's first anniversary date of retirement occurring after July 1, 2020. The adjustment shall become a permanent addition to the member's base retirement allowance.
Other Ancillary Benefits	There are no ancillary benefits - retirement type benefits not required by statutes but which might be deemed a liability if continued beyond the availability of funding by the current funding source.

History of Recent Changes in Plan Provisions

2023 Legislative Session

House Bill No. 2:

This bill modifies the effective date of the statutory pension recalculation for Group I (Employee and Teacher) members who retire on or after July 1, 2023. The change defers the recalculation of a Group I retiree's NHRS benefit to his or her full retirement age under the federal Social Security system.

This bill grants a one-time payment of $500 to members who retired on or before July 1, 2018 with at least 20 years of creditable service, or any beneficiaries of such member who is receiving a survivorship pension benefit who has an annual retirement allowance of no more than $40,000 on June 30, 2023. The one-time payment will be made during state fiscal year 2024.

2022 Legislative Session

House Bill No. 1535:

This bill grants a one-time payment of $500 to members who retired on or before July 1, 2017, or any beneficiaries of such member who is receiving a survivorship pension benefit who has an annual retirement allowance of no more than $30,000 on June 30, 2022. The one-time payment will be made during state fiscal year 2023.

House Bill No. 1587:

This bill modifies the calculation of compensation paid in excess of the full base rate of pay under the definition of Average Final Compensation (AFC) for Group II members hired prior to July 1, 2011, who had not attained vested status prior to January 1, 2012. The projected cost increase associated with this bill will be pre-funded by the state.

Senate Bill No. 363:

This bill allows members who commenced Group II service between January 1, 2002, and June 30, 2011, to purchase nonqualified service time in order to reduce certain transition provision requirements for service retirement. The member is responsible for paying the full actuarial cost of the service credit purchased.

2019 Legislative Session

House Bill No. 616:

This bill grants a one-time, 1.5% COLA on the first $50,000 of an annual pension benefit to members who retired on or before July 1, 2014, or any beneficiaries of such member who is receiving a survivorship pension benefit. The COLA will take effect on the retired member's first anniversary date of retirement occurring after July 1, 2020. The adjustment shall become a permanent addition to the member's base retirement allowance.

History of Recent Changes in Plan Provisions (Continued)

2014 Legislative Session

House Bill No. 1494:

This bill: (1) adds definitions of terms used in RSA 100-A and clarifies existing definitions; (2) revises the procedure for calculating the cost of purchasing credit for certain types of prior service; (3) clarifies the ability to earn service credit while on a salary continuance plan; (4) corrects an inconsistency in the statute regarding the approval date of the Annual Comprehensive Financial Report; (5) adds penalties for employers who fail to remit correct data in a timely manner; and (6) repeals obsolete provisions.

2012 Legislative Session

(a) Modifies the calculation of Average Final Compensation (AFC) for members not vested prior to January 1, 2012, by changing the "compensation over base pay" factor used in the AFC formula from a dollar average to a percentage average.

(b) Clarifies the date from which NHRS must begin calculating a 7-year average of Extra or Special Duty Pay for Group II (Police and Fire) members vested prior to January 1, 2012. This change excludes from the calculation any months prior to July 1, 2009, which is when ESDP began to be separately reported to NHRS.

(c) Clarifies the number of years of creditable service Group II (Police and Fire) members in service prior to July 1, 2011, but not vested prior to January 1, 2012, must have in order to qualify for the supplemental disability benefit available to eligible Accidental Disability retirees.

(d) Changes the annual effective date of changes to the member interest rate from a fiscal year to a calendar year.

(e) Clarifies the definition of "compensation over base pay" for members not vested prior to January 1, 2012.

(f) Clarifies that the maximum benefit limit for members hired before July 1, 2009, is 100 percent of Earnable Compensation and the maximum benefit limit for members hired after that date, and not vested by January 1, 2012, is the lesser of 85 percent of AFC or $120,000 per year.

(g) Modifies the definition of "part-time" for NHRS retirees employed by NHRS-participating employers.

(h) Changes the date by which NHRS Trustees must approve the retirement system's Annual Comprehensive Financial Report from December 1 to December 31 of each year.

(i) RSA 100-A:53, II; RSA 100-A:53-e, II; RSA 100-A:16, II(h); and RSA 100-A:16, II(j), relative to the Special Account, are repealed.

(j) RSA 100-A:16, III-a, commonly known as the employer "spiking" assessment, is repealed.

History of Recent Changes in Plan Provisions (Continued)

2011 Legislative Session

Legislation enacted in the 2011 legislative session is summarized below:

House Bill No. 2 as Amended by 2011-2513-CofC:

(a) Change the definition of Earnable Compensation for active members who begin service on or after July 1, 2011 or who are not in vested status on and after January 1, 2012.

(b) For active members who commenced service on or after July 1, 2011 or who have non-vested status on or after January 1, 2012 AFC equals the average annual earnable compensation during the highest 5 years of creditable service.

(c) For members who commenced service on or after July 1, 2009 or are non-vested as of January 1, 2012, a member's retirement benefit shall not exceed the lesser of 85% of the member's highest average final compensation or $120,000.

(d) Group I members commencing service on or after July 1, 2011 are eligible to retire at age 65 and are eligible for a reduced annuity at age 60 with 30 years of creditable service. Prior to age 65, the state annuity, together with the member annuity, shall be equal to 1/66th of AFC times creditable service reduced for each month prior to the month after the member attains age 65 by 1/4 of 1%. After age 65, the state annuity, together with the member annuity, shall be equal to 1/66th of AFC times creditable service, reduced for each month prior to the month after the member attains age 65 by 1/4 of 1%.

(e) Group II members commencing service on or after July 1, 2011 are eligible to retire at age 50 with 25 years of creditable service or age 60. The benefit shall be equal to 2% of AFC times creditable service up to 42.5 years. However, a member who commenced service on or after July 1, 2011 shall not receive a service retirement allowance until attaining the age of 52.5, but may receive a reduced allowance after age 50 if the member has at least 25 years of creditable service where the allowance shall be reduced, for each month by which the benefit commencement date precedes the month after which the member attains 52.5 years of age, by ¼ of 1%.

(f) Group II members hired prior to July 1, 2011 who have non-vested status as of January 1, 2012 shall be subject to transition provisions for years of service required for regular service retirement, the minimum age for regular service retirement, and the multiplier used to calculate the retirement annuity, which shall be applicable on January 1, 2012.

(g) Group II members commencing service on or after July 1, 2011 are eligible for an accidental disability benefit and shall receive a benefit equal to 2/3 of AFC. If a member has more than 33-1/3 years of service, the member will receive a supplemental disability benefit equal to 2% of AFC times years of creditable service in excess of 33-1/3 years but not in excess of 42.5 years.

History of Recent Changes in Plan Provisions (Concluded)

(h) *Member Contributions*
Group I members: 7.0% of earnable compensation.
Group II fire members: 11.80% of earnable compensation.
Group II police members: 11.55% of earnable compensation.
Group II member contributions cease for members who are in vested status before January 1, 2012 with creditable service in excess of 40 years. Member contributions cease for all other Group II members with creditable service in excess of 42.5 years.

(i) *Medical Subsidy* – After July 1, 2007 and including each July 1, thereafter, the rate payable shall not be increased.

(j) Interest on the individual accounts of members in the member annuity savings fund shall be credited interest at 2 percentage points less than either the most recent board of trustees approved assumed rate of return determined under RSA 100-A:16, II(h) or the actual rate of return, whichever is lower for the immediately preceding fiscal year as reported in the ACFR as approved and accepted by the board of trustees by December 1, of each year, provided the rate shall not be less than zero.

(k) Any retired member who is receiving a medical subsidy under RSA 100-A:52 or RSA 100-A:52-a shall be entitled to receive an additional supplemental allowance. The amount of the additional temporary supplemental allowance shall be $500 for retirees taking a one-person medical benefit and $1,000 for retirees taking a 2-person medical benefit, paid from the respective component of the reserve for TSAs. The supplemental allowance shall apply only for the fiscal years beginning July 1, 2008 up to and including the fiscal year beginning July 1, 2012.

(l) Transfer the balance in each special account component (Employees, Teachers, Police and Fire) to the corresponding components of the State annuity accumulation fund except for funds necessary to comply with RSA 100-A:41-d, III as amended.

2010 Legislative Session

Legislation enacted in the 2010 legislative session is summarized below:

(a) **Special Session House Bill No. 1: COLA, TSA approved -** Provides cost-of-living adjustments (COLAs) and temporary supplemental allowances (TSAs) for eligible retirees or beneficiaries;
(b) **Senate Bill 504: "Spiking" provision deferred** - Extends the effective date of the 2008 legislation creating the so-called "spiking" provision (125% assessment) from July 1, 2010 to July 1, 2011. A study commission continues to evaluate proposals for the assessment methodology; and
(c) **House Bill 1668: State medical subsidy insurance for Group II members** [RSA 21-I30] **-** Requires Group II (Police and Fire) members whose service with a state agency or department began on or after July 1, 2010, complete at least 20 years of creditable service with the state in order to qualify for post-retirement state medical subsidy insurance coverage.

Medical Subsidy Plan Provisions

Subsidy Benefits as of July 1, 2007 and thereafter are as follows:

	Monthly Amounts	
	Pre-65	Post-65
Single	$375.56	$236.84
Couple	$751.12	$473.68

The above amounts will not increase.

The following Group I members and their qualified spouses are eligible for coverage under the postretirement medical plan:

- Employee and Teacher members of political subdivisions who are eligible to retire as of July 1, 2008, on Service, Early Service or Ordinary Disability, have at least 20 years of credited service as of July 1, 2008 and who actually retire on or before July 1, 2009 would become eligible for the medical subsidy at age 60 with at least 20 years of creditable service; or as early as age 55 with at least 30 years of creditable service.
- Employee and Teacher members of political subdivisions who are eligible to retire as of July 1, 2008, on Vested Deferred retirement and who actually retire on or before July 1, 2009 would become eligible for the medical subsidy at age 60 with at least 20 years of creditable service; or as early as age 55 with at least 30 years of creditable service.
- Employee and Teacher members of political subdivisions who retired on Accidental Disability Retirement on or before July 1, 2004.
- Employee members of the State who retired on or before July 1, 2004, on Service, Ordinary Disability or Vested Deferred Retirement would become eligible for the medical subsidy at age 60 with at least 20 years of creditable service; or as early as age 55 with at least 30 years of creditable service.
- Employee and Teacher members of political subdivisions who are eligible to retire as of July 1, 2008 and who actually retire on or before July 1, 2009, on Service, Early Service, Vested Deferred or Ordinary Disability retirement after completing at least 20 years of creditable service and who subsequently attain age 60 or after completing at least 30 years of creditable service and who subsequently attain age 55.
- Surviving spouses of deceased Employee and Teacher members of political subdivisions who die while in service and would otherwise have been eligible for a medical subsidy benefit, provided that such surviving spouse was covered as the member's spouse in the employer-sponsored plan before the member's death and is entitled to a monthly allowance under Accidental Death, Ordinary Death, or an Optional Allowance.
- Surviving spouses and children of Employee and Teacher members of political subdivisions who die as the natural and proximate result of injuries suffered while in the performance of duty. Eligibility for the medical subsidy ceases when the dependent child attains age 18, or age 23 if attending school on a full-time basis.

Medical Subsidy Plan Provisions (Concluded)

- Surviving spouses and children of Employee members of the State who died as the natural and proximate result of injuries suffered while in the performance of duty. Payment of the subsidy ceases when the dependent child attains age 18 or age 23, if attending school on a full-time basis.
- Vested terminated Employee members of the State (and spouses) who completed at least 20 years of creditable service and prior to July 1, 2004 receives an allowance and who subsequently attains age 60.
- Employee members of the State (and spouses) who retire after completing at least 20 years of creditable service and who subsequently attains age 60 before July 1, 2004 or after completing at least 30 years of creditable service and who subsequently attains age 55 before July 1, 2004.
- Surviving spouses of deceased Employee members of the State who died while in service on or before July 1, 2004, provided that such surviving spouse was covered as the member's spouse in the employer-sponsored plan before the member's death and is entitled to a monthly allowance under Accidental Death, Ordinary Death, or an Optional Allowance.
- Any certifiably dependent child with a disability living in the household and being cared for by the qualified retired member, member's spouse, or qualified surviving spouse would also qualify.

The following Group II members are eligible for the postretirement medical premium subsidy:

- Active or Retired Group II police officer members (or beneficiaries) as of June 30, 2000.
- Active or Retired Group II firefighter members (or beneficiaries) as of June 30, 2000.
- Persons who prior to July 1, 1988 had completed at least 20 years of Group II service and are eligible as of July 1, 1993 for a vested deferred retirement benefit.
- Group II members retired as of July 1, 1991 with a split benefit under RSA 100-A:19-c who have at least 10 years of Group II service.
- Group II members as of June 30, 2005 who subsequently became disabled while in the performance of duty at any time in the future.
- Surviving spouses of deceased Group II members who retired prior to April 1, 1987 and who are not receiving a monthly allowance.

The System subsidy covers the retired member's spouse and any of the retired member's certifiably dependent and disabled children.

It is the legislative intent that future members shall be included only to the extent that the total cost can be terminally funded.

SECTION H

FUNDING POLICY

New Hampshire Retirement System
Actuarial Funding Policy
(Adopted: March 11, 2014
Revised: March 10, 2020)

FUNDING OBJECTIVES

The main financial objective of the New Hampshire Retirement System (NHRS) is to receive employer and member contributions to fund the long-term costs of benefits provided by statute to plan members and beneficiaries. From the perspective of the members and beneficiaries, a funding policy based on actuarially determined contributions is one which will pay all benefits provided by statute when due. From the perspective of the contributing plan sponsors and taxpayers, the actuarially determined contributions have the additional objectives of keeping contribution rates relatively stable as a percentage of active member payroll and equitably allocating the costs over the active members' period of active service. For pension funding, the payment of benefits is supported in part by income earned on investment assets. This funding policy meets those criteria. It is stipulated by state law and implemented through the application of Board adopted governance policies.

Statutory Pension Funding Policy for NHRS

The statute that establishes the pension funding policy for NHRS is RSA 100-A:16.

RSA 100-A:16 Excerpts:

> **100-A:16 Method of Financing** – All of the assets of the Retirement System shall be credited, according to the purpose for which they are held, between 2 funds, namely, the member annuity savings fund and the state annuity accumulation fund. Each of the funds shall be subdivided on account of the various member classifications. In making the determinations required under this section for financing the Retirement System, the Board of Trustees shall use the entry age normal funding methodology. The Board of Trustees shall direct the System's actuary to prepare biennial valuations of the System's assets and liabilities commencing with the valuation prepared as of June 30, 2007. Such biennial valuation shall be the basis for determining the annual contribution requirements of the System until the next following biennial valuation.
>
> II(b) The contributions of each employer for benefits under the retirement system on account of group II members shall consist of a percentage of the earnable compensation of its members to be known as the "normal contribution,'' and an additional amount to be known as the "accrued liability contribution;'' provided that beginning with state fiscal year 2013 and for each state fiscal year thereafter, any employer shall pay the full amount of such total contributions. The rate percent of such normal contribution, including contributions on behalf of group II members whose group II creditable service is in excess of 40 years, in each instance shall be fixed on the basis of the liabilities of the system with respect to the particular members of the various member classifications as shown by actuarial valuations,
>
> II(c) The contributions of each employer for benefits under the retirement system on account of group I members shall consist of a percentage of the earnable compensation of its members to be known as the "normal contribution,'' and an additional amount to be known as the "accrued liability contribution;'' provided that beginning with state fiscal year 2013 and for each state fiscal

year thereafter, any employer shall pay both normal and accrued liability contributions. The rate percent of such normal contribution in each instance shall be fixed on the basis of the liabilities of the system with respect to the particular members of the various member classifications as shown by actuarial valuation,

...

II(e)(1) Immediately following the actuarial valuation prepared as of June 30 of each fiscal year, the Board shall have an actuary determine the amount of the unfunded accrued liability for each member classification as the amount of the total liabilities of the state annuity accumulation fund on account of such classification which is not dischargeable by the total of the funds in hand to the credit of the state annuity accumulation fund on account of such classification, and the aforesaid normal contributions to be made on account of the members in such classification during the remainder of their active service. The amount so determined with respect to each member classification shall be known as the "unfunded accrued liability'' with respect to such classification.

(2) On the basis of each such unfunded accrued liability, the board shall have an actuary determine the level annual contribution required to discharge such amount as provided in subparagraph (3).

(3) The unfunded liability as of June 30, 2017 shall be amortized through 2039. Each subsequent change in liability as calculated in odd-numbered years shall be separately amortized over a fixed period of no longer than 20 years.

Board Established Policy Associated with Funding:

Actuarial Cost Method

The law stipulates under RSA 100-A:16 the use of the entry age normal actuarial cost method for each of the four member classifications. The purpose of this method is to determine the annual Normal Cost for each individual active member, payable from the date of employment to the date of retirement, that is:

Sufficient to accumulate to the value of the member's benefit at the time of retirement, and a constant percentage of the member's year by year projected covered pay.

The Actuarial Accrued Liability under this cost method is the accumulation of normal costs accrued prior to the actuarial valuation date. The Actuarial Accrued Liability represents the theoretical amount of assets required to fund benefits earned on members' past service. The Normal Cost represents the cost required to fund benefits accruing during the current year.

Under RSA 100-A:16, II (i), if the actuarially determined normal contribution rate as set forth in subparagraphs (b) and (c) on account of any of the various member classifications shall be negative in any fiscal year, then the excess amount resulting from the difference between zero and the negative actuarially determined normal contribution rate shall be used to reduce the member contribution rate for that member classification in that fiscal year.

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Under RSA 100-A:16, II-a(a), if within a member classification the employer rates have lowered to require them to be equal to the member rates, then for all subsequent years the employer rates and the members' rates for such member classification shall continue to be equal whether the system liabilities increase or decrease.

Asset Valuation Method

The Actuarial Value of Assets is based on the market value with investment gains and losses smoothed over 5 years. The Actuarial Value of Assets will not consistently be above or below the Market Value and is expected to converge to the Market Value in a relatively short period of time. At any time, it may be either greater or less than Market Value. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than Market Value. During periods when investment performance is less than the assumed rate, Actuarial Value of Assets will tend to be greater than Market Value. If assumed rates are exactly realized for 4 consecutive years, the Actuarial Value will become equal to Market Value.

Actuarial Value is limited to a 20% corridor around the Market Value. This means that if the preliminary development of the Actuarial Value results in an amount that is greater than 120% of the Market Value (or less than 80% of the Market Value), the final Actuarial Value is limited to 120% (or 80%) of the Market Value. Any gains or losses on the Market Value outside of the 20% corridor are therefore recognized immediately.

Amortization Method

Pursuant to the Laws of 2018, Chapter 48, RSA 100-A:16, II(e), was revised in June 2018 and stipulates that the Unfunded Accrued Actuarial Liability as of June 30, 2017 shall be amortized through 2039. It further states that each subsequent change in liability as calculated in odd-years will be amortized as a level percentage of pay for no longer than 20 years. For each Actuarial Valuation in the subsequent odd years, a new 20-year amortization, as a level percentage of payroll, of the actuarial gain or loss will be created in that actuarial valuation. This Actuarial Funding Policy implements the intent of the statute.

Beginning with the June 30, 2007 actuarial valuation which determined the employer contribution rates beginning with the fiscal year ending June 30, 2010, the 30-year period is a closed period ending June 30, 2039.

The amortization method is a level percentage of payroll, consistent with RSA 100-A:16, II(b) and (c).

Funding Target

The funding objective is to achieve 100% funding. For this purpose, 100% funding means that the Actuarial Value of Assets equals the Actuarial Accrued Liability. The amortization objective is to reach 100% funding by June 30, 2039 for the Unfunded Accrued Actuarial Liability as of June 30, 2017.

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Risk Management

The main financial objective of this funding policy is to fund the long-term costs of benefits provided by statute to plan members and beneficiaries. There are numerous risks that NHRS faces in trying to achieve this objective including funding risk, demographic risk, investment risk, and benefit risk. The Board policies for managing these risks are outlined in this section.

<u>*Funding Risk*</u>

Frequency of Actuarial Valuations

Regular valuations manage funding risk by allowing employer contribution rates to reflect actual experience as it emerges. Funding valuations are required by RSA 100- A:16, III, as of June 30 every other year on the odd years to determine employer contribution rates for the biennium beginning two years after the valuation date.

Interim funding valuations on June 30 of the even years are required for financial reporting. Funding calculations from interim valuations may be used as additional information for budgeting contributions in anticipation of the next rate setting valuation.

<u>*Demographic and Investment Risk*</u>

Process for Reviewing and Updating Actuarial Assumptions

The Board adopts actuarial assumptions based on recommendations of the actuary. Demographic and investment risks may be managed in part by having regular reviews of the actuarial assumptions. The law stipulates that the Board shall have the actuary make an actuarial investigation into the experience of the System at least every 5 years (RSA 100-A:14, IX) and shall adopt actuarial assumptions as necessary. The Board shall have the actuary make an actuarial investigation into the experience of the System every 4 years and shall adopt actuarial assumptions as necessary. If circumstances warrant, the Board may undertake an experience study or change assumptions more frequently based on the recommendation of the actuary.

The experience study report shall include, but not necessarily be limited to analysis of and recommendations regarding the following assumptions.

i. Pre-retirement withdrawal rates
ii. Retirement rates
iii. Disability rates
iv. Pay increase rates
v. Mortality rates both before and after retirement
vi. Investment returns considering both real return and inflation, which must be consistent with the investment policy

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The actuary shall assume no change in the active member population unless there is compelling evidence to support the expectation of a significant increase or decrease in the workforce covered by the System.

The experience study report will serve as the basis for determinations by the Board regarding whether or not demographic or economic assumptions should be modified for future valuations.

In the interim years, the actuary shall issue a written opinion in regard to the reasonableness of the assumed rate of return that shall address any difference between the assumed rate of return and the expected rate of return as determined by the investment committee (RSA 100-A:15, VII(c)(1)).

Responding to Favorable/Unfavorable Investment Experience

Investment risk is addressed in the System's Investment Manual. Annual investment experience other than assumed is reflected in the valuation asset method described above.

Asset Liability Studies

The Board adopts an asset allocation based on recommendations from the Independent Investment Committee (IIC), which relies upon the advice from the Director of Investments and the Investment Consultant to formulate its recommendations to the Board. The asset allocation approved by the Board will reflect the results of an Asset Liability Study performed at least once in every five-year period, or more often, as recommended by the IIC, System staff, and Investment Consultant.

Risk Measures

In order to quantify the risks outlined in this actuarial funding policy, the following metrics will be included in annual valuation reports. These metrics provide quantifiable measurements of risk and its movement over time:

i. Funded ratio (Actuarial Value of Assets divided by Actuarial Accrued Liability).
   - Measures progress towards the funding objective of the 100% target funded ratio.

ii. Actual Total Payroll versus expected Total Payroll for each member classification.
   - Measures the funding risk associated with receiving contributions as a level percent of payroll.

iii. Dollar standard deviation of investment return divided by Total Payroll
   - Measures the risk associated with negative asset returns relative impact on the funded status of the plan. A decrease in this measure indicates a decrease in investment risk.

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iv. Total Unfunded Actuarial Accrued Liability (UAAL) divided by Total Payroll

- Measures the risk associated with contribution decreases relative impact on the ability to fund the UAAL. A decrease in this measure indicates a decrease in contribution risk.

v. Total Actuarial Accrued Liability (AAL) divided by Total Payroll

- Measures the risk associated with the ability to respond to liability experience through adjustments in contributions. A decrease in this measure indicates a decrease in experience risk. This also provides a long-term measure of the asset risk in situations where the System has a funded ratio below 100%.

vi. Total Actuarial Value of Assets divided by Total Payroll

- Measures the risk associated with the ability to respond to asset experience through adjustments in contributions. A decrease in this measure indicates a decrease in asset risk.

vii. Dollar standard deviation of contribution rate divided by Total Payroll

- Measures the impact of a one standard deviation change in investment return on the annual contribution rate. This rate is expected to stabilize with the introduction of layered amortization.

viii. Net Cash Flow as a Percent of Market Value of Assets

- Measures money coming in less money going out. This ratio is expected to be negative and trend toward the negative of the real return assumption.

ix. Ratio of Actives to Retirees

- Fully mature plans may have ratios near 1.0.

<u>Benefit Risk</u>

Responding to Legislative Proposals and Changes

Benefit risk may be managed as follows:

1. The NHRS shall review legislative proposals and changes for the potential legal, administrative, IRC compliance, and funding impact on the System. If a legislative proposal has the potential for a meaningful impact on plan funding, the Board shall consult with the actuary to estimate the actuarial impact to the System.

2. Under RSA 100-A:15 VII (d), the NHRS may request or recommend legislative proposals to comply with other state or federal regulations, improve administration, or secure funding for benefits provided by statute.

The NHRS does not determine the eligibility requirements for benefits nor the level of benefits.

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Statutory Medical Subsidy Funding Policy for NHRS

The statutes that establish the medical subsidy funding policy for NHRS are RSA 100-A:53, 53-b, 53-c, and 53-d.

RSA 100-A:53, 53-b, 53-c, and 53-d Excerpts:

Medical Subsidy Funding Policy

Medical Subsidy benefits provided through NHRS are funded on a pay-as-you-go basis. The medical subsidy benefits provided by statute are fixed amounts for a declining population and therefore pay-as-you-go is a reasonable funding method.

The four sections of the statute refer to four separate member classifications for funding Medical Subsidy benefits provided through the NHRS. These member classifications differ from the pension member classifications and are RSA 100-A:53, Group II; 100-A:53-b, Group I Teachers; 100-A:53-c, Group I Political Subdivision Employees; 100-A:53-d, Group I State Employees.

The comparable funding provisions of the four sections of the statute are as follows:

The benefits provided under RSA 100-A:52, 52-a, and 52-b shall be provided by a 401(h) subtrust of the New Hampshire Retirement System. Beginning July 1, 2009, the 401(h) subtrust shall be funded by allocating to the subtrust the lesser of:

(a) 25 percent of member classification employer contributions; or

(b) The percentage of employer contributions made for the member classification determined by the actuary to be the minimum rate necessary to maintain the benefits provided under RSA 100-A:52, 52-a, and 52-b.

All contributions made to the Retirement System to provide medical benefits under RSA 100-A:52, 52-a, and 52-b shall be maintained in a separate account, the 401(h) subtrust. All funds and accumulated interest shall not be used for or diverted to any purpose other than to provide said medical benefits. Similarly, none of the funds accumulated to provide the retirement benefits set forth in this chapter, may be used or diverted to provide medical benefits under RSA 100-A:52, 52-a, and 52-b. The funds, if any, providing medical benefits under RSA 100-A:52, 52-a, and 52-b may be invested pursuant to the provisions of RSA 100-A:15.

<u>Board Established Policy Associated with Funding:</u>

The law stipulates under RSA 100-A:53, 53-b, 53-c, and 53-d the minimum rate necessary to maintain benefits. For purposes of this determination, the contribution rate calculations are made with respect to

New Hampshire Retirement System Actuarial Funding Policy (Adopted: March 11, 2014 Revised: March 10, 2020)

the market value of assets for each member classification separately. Any shortfall in assets for a member classification is to be made up through funding in the nearest rate setting biennium.

Risk Management

There are fewer risks in a pay-as-you-go medical subsidy arrangement than for pension pre-funding.

Solvency Risk

The greatest risk facing the pay-as-you-go financing of the statutory medical subsidy benefits is maintaining solvency of the four IRC Section 401(h) subtrusts. The contribution rate setting based on the June 30th valuation in the odd years determines the rates for the biennium beginning two years after the valuation and ending four years after the valuation date.

In order to mitigate the financing risk, the Board has adopted a policy of determining the employer contribution rate such that the expected assets in each of the four subtrusts will exceed the expected benefit payments for the year by at least 20% (50% for Teachers) each year. This is referred to as a solvency margin. The Board may review the sufficiency of the margin and make changes based upon the recommendation of the actuary.

Risk Measures

In order to quantify the risks outlined in this actuarial funding policy, the following metrics will be included in annual valuation reports. These metrics provide quantifiable measurements of risk and its movement over time:

i. 20-year projections of contributions and benefit payments.
   - Measures progress towards the funding objective of solvency with a 20% margin (50% for Teachers).

ii. Actual Total Payroll versus expected Total Payroll for each member classification.
   - Measures the funding risk associated with receiving contributions as a level percent of payroll.

Miscellaneous Matters Associated with Funding:

Overall Conformance with Professional Standards of Practice

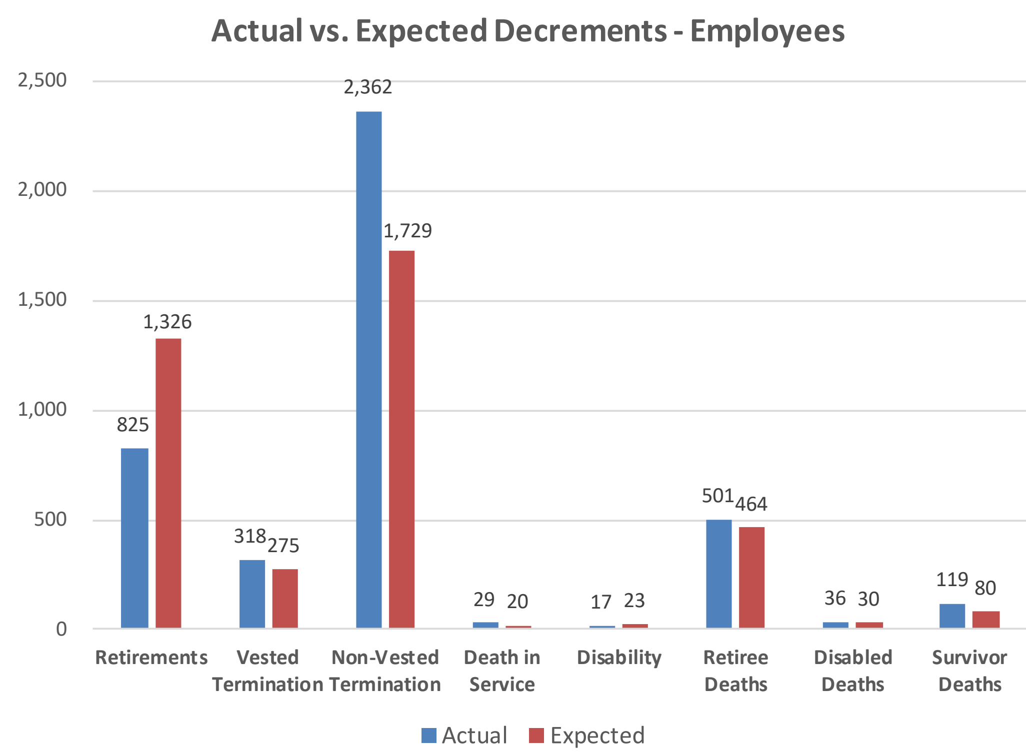
By law, the actuary shall be a member of the American Academy of Actuaries and have at least 7 years of actuarial experience (RSA 100-A:1, XXIX). The actuary shall meet the Qualification Standards of the American Academy of Actuaries and the work of the actuary in connection with this policy shall conform to Actuarial Standards of Practice for public employee retirement plans promulgated by the Actuarial Standards Board and shall satisfy the requirements of the Governmental Accounting Standards Board with respect to the development of information needed by the system and by employers for financial reporting purposes.

APPENDIX

SUPPLEMENTAL DATA SCHEDULES

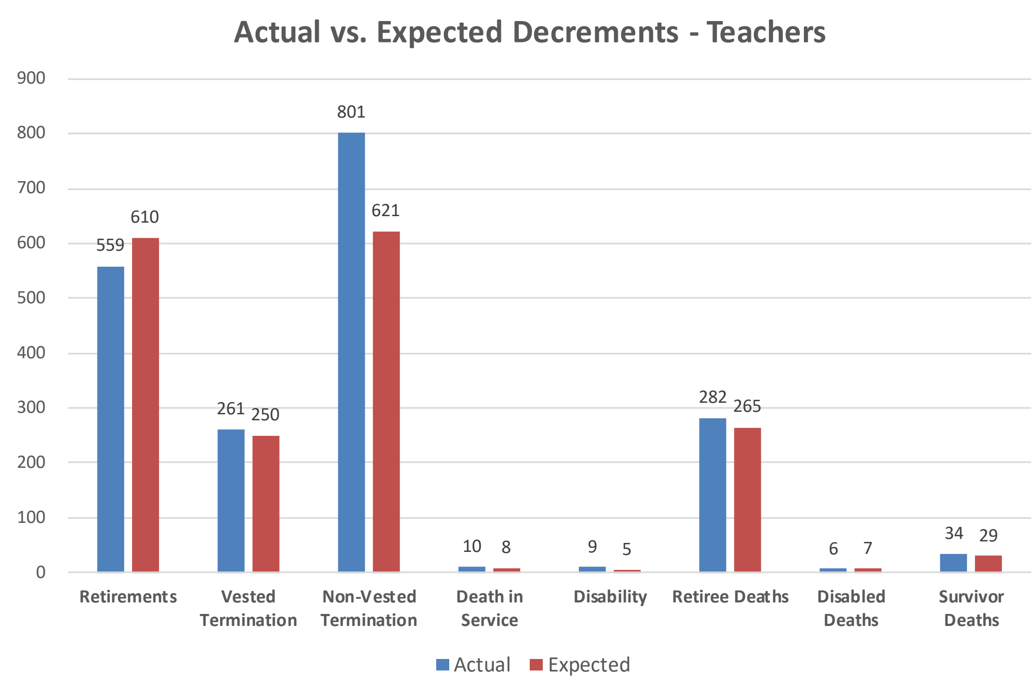
Reconciliation of Member Record Counts – Employees

		Inactive, Nonretired Members		Annuitants		
	Active Members	Vested	Non Vested	Service Retirees	Disabled Retirees	Survivors
Participants 6/30/2022	24,644	1,530	11,488	18,029	934	1,788
Terminations - Refund paid	(482)	(24)	(236)			
Terminations - Refund due	(1,880)	0	1,880			
Vested Termination	(318)	318				
Retirement	(825)	(115)		974	1	
Disability	(17)				17	
Death before retirement - refund	(27)	(4)	(7)			
Death before retirement - annuity	(2)					2
Death of annuitant - survivor benefit due				(110)	(9)	122
Death of annuitant - no further benefits due				(391)	(27)	(119)
New Entrants	3,314					
Transfers to Other Member Group	(163)					
Transfers from Other Member Group	129					
Reemployments	267	(41)	(214)	(12)	0	
Data adjustments and corrections	0	4	94	65	6	32
Participants 6/30/2023	**24,640**	**1,668**	**13,005**	**18,555**	**922**	**1,825**



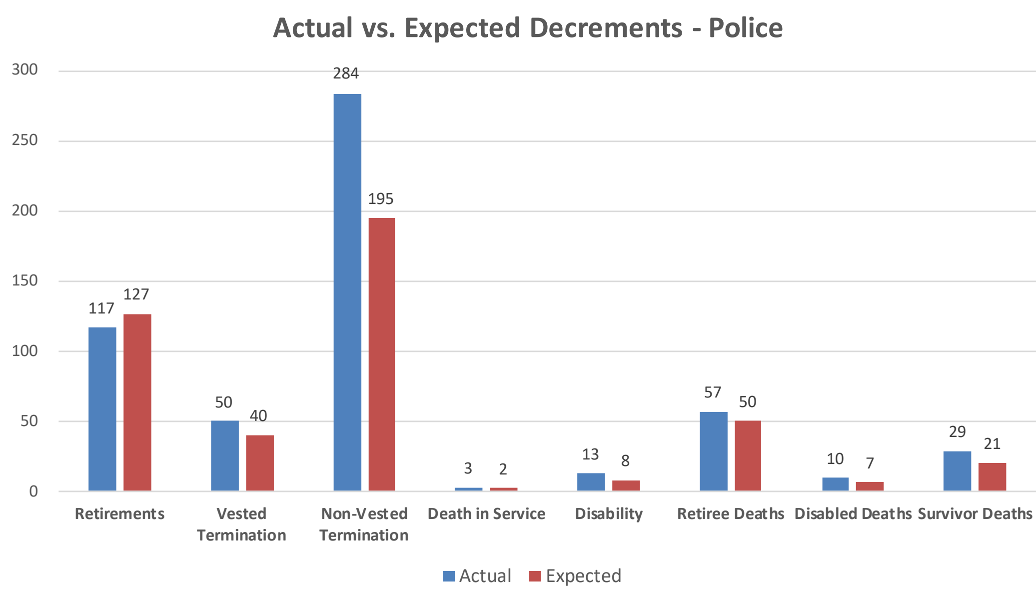
Reconciliation of Member Record Counts – Teachers

		Inactive, Nonretired Members		Annuitants		
	Active Members	Vested	Non Vested	Service Retirees	Disabled Retirees	Survivors
Participants 6/30/2022	18,217	1,263	4,174	14,069	193	892
Terminations - Refund paid	(77)	(24)	(99)			
Terminations - Refund due	(724)	0	724			
Vested Termination	(261)	261				
Retirement	(559)	(89)		671	1	
Disability	(9)				9	
Death before retirement - refund	(8)	0	(3)			
Death before retirement - annuity	(2)					3
Death of annuitant - survivor benefit due				(70)	0	70
Death of annuitant - no further benefits due				(212)	(6)	(34)
New Entrants	1,287					
Transfers to Other Member Group	(107)					
Transfers from Other Member Group	133					
Reemployments	251	(54)	(186)	(11)	0	
Data adjustments and corrections	0	7	16	14	1	17
Participants 6/30/2023	**18,141**	**1,364**	**4,626**	**14,461**	**198**	**948**



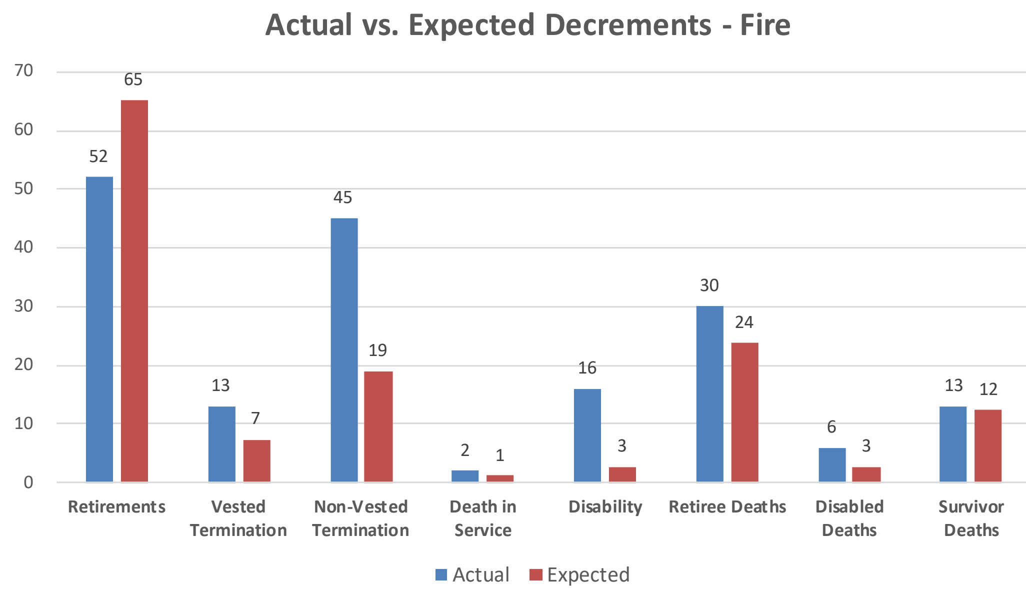
Reconciliation of Member Record Counts – Police

		Inactive, Nonretired Members		Annuitants		
	Active Members	Vested	Non Vested	Service Retirees	Disabled Retirees	Survivors
Participants 6/30/2022	4,103	160	964	3,622	411	611
Terminations - Refund paid	(102)	(8)	(46)			
Terminations - Refund due	(182)	0	182			
Vested Termination	(50)	50				
Retirement	(117)	(15)		140	0	
Disability	(13)				13	
Death before retirement - refund	(2)	0	0			
Death before retirement - annuity	(1)					2
Death of annuitant - survivor benefit due				(27)	(6)	48
Death of annuitant - no further benefits due				(30)	(4)	(29)
New Entrants	382					
Transfers to Other Member Group	(23)					
Transfers from Other Member Group	22					
Reemployments	25	(2)	(16)	(7)	0	
Data adjustments and corrections	0	0	8	11	3	6
Participants 6/30/2023	**4,042**	**185**	**1,092**	**3,709**	**417**	**638**



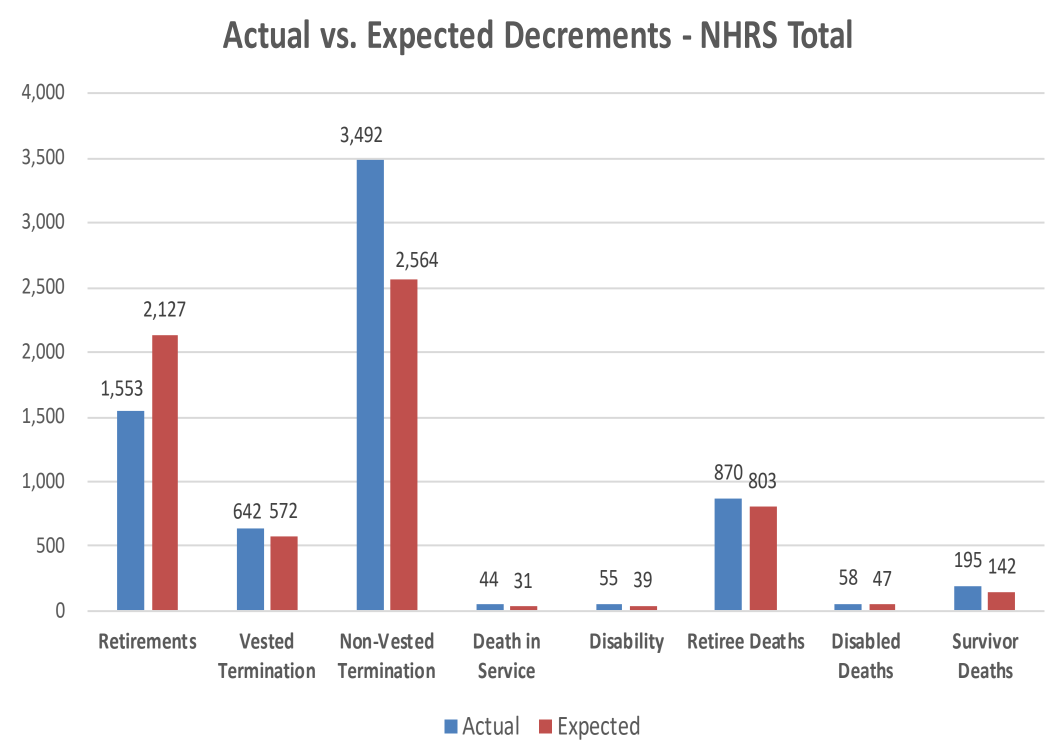
Reconciliation of Member Record Counts – Fire

	Active Members	Inactive, Nonretired Members: Vested	Inactive, Nonretired Members: Non Vested	Annuitants: Service Retirees	Annuitants: Disabled Retirees	Annuitants: Survivors
Participants 6/30/2022	1,723	37	91	1,431	122	313
Terminations - Refund paid	(17)	0	(7)			
Terminations - Refund due	(28)	0	28			
Vested Termination	(13)	13				
Retirement	(52)	(1)		56	0	
Disability	(16)				16	
Death before retirement - refund	(2)	0	0			
Death before retirement - annuity	0					0
Death of annuitant - survivor benefit due				(15)	(4)	28
Death of annuitant - no further benefits due				(15)	(2)	(13)
New Entrants	153					
Transfers to Other Member Group	(4)					
Transfers from Other Member Group	13					
Reemployments	9	(1)	(7)	(1)	0	
Data adjustments and corrections	0	1	(2)	5	0	9
Participants 6/30/2023	**1,766**	**49**	**103**	**1,461**	**132**	**337**



Reconciliation of Member Record Counts – NHRS Total

		Inactive, Nonretired Members		Annuitants		
	Active Members	**Vested**	**Non Vested**	**Service Retirees**	**Disabled Retirees**	**Survivors**
Participants 6/30/2022	48,687	2,990	16,717	37,151	1,660	3,604
Terminations - Refund paid	(678)	(56)	(388)			
Terminations - Refund due	(2,814)		2,814			
Vested Termination	(642)	642				
Retirement	(1,553)	(220)		1,841	2	
Disability	(55)				55	
Death before retirement - refund	(39)	(4)	(10)			
Death before retirement - annuity	(5)					7
Death of annuitant - survivor benefit due				(222)	(19)	268
Death of annuitant - no further benefits due				(648)	(39)	(195)
New Entrants	5,136					
Reemployments	552	(98)	(423)	(31)		
Data adjustments and corrections	0	12	116	95	10	64
Participants 6/30/2023	**48,589**	**3,266**	**18,826**	**38,186**	**1,669**	**3,748**



Historical Member Data – Actives

Employees

Fiscal Year	Active Members: Number	Active Members: Percent Change	Valuation Payroll: Amount in $ Thousands	Valuation Payroll: Percent Change	Average Salary: $ Amount	Average Salary: Percent Change	Average Age	Average Service
2023	24,640	0.3%	$ 1,412,494	3.3%	$ 57,325	3.3%	48.7	10.1
2022	24,644	0.4%	1,367,483	5.1%	55,489	4.7%	48.7	10.3
2021	24,558	-0.2%	1,300,926	2.1%	52,974	2.2%	48.9	10.7
2020	24,602	-0.2%	1,274,597	2.4%	51,809	2.6%	49.0	10.8
2019	24,654	0.6%	1,244,930	3.3%	50,496	2.7%	49.0	10.8
2018	24,511	0.1%	1,205,121	2.2%	49,167	2.0%	49.1	11.0
2017	24,478	-0.2%	1,179,518	3.8%	48,187	4.0%	49.2	11.1
2016	24,520	0.9%	1,136,451	0.8%	46,348	-0.1%	49.2	11.2
2015	24,298	-1.0%	1,127,766	3.6%	46,414	4.7%	49.2	11.2
2014	24,545	-1.1%	1,088,508	0.9%	44,347	1.9%	49.2	11.2
2013	24,809	0.3%	1,079,245	0.2%	43,502	0.0%		
2012	24,747	-3.1%	1,076,831	-3.3%	43,514	-0.2%		
2011	25,539	-1.7%	1,113,867	1.9%	43,614	3.7%		
2010	25,987	-1.4%	1,093,147	1.3%	42,065	2.7%		
2009	26,352	-0.6%	1,079,157	6.8%	40,952	7.5%		
2008	26,507	0.1%	1,010,032	7.2%	38,104	7.1%		
2007	26,474	0.2%	942,319	7.2%	35,594	6.9%		
2005	26,414	0.2%	879,419	10.2%	33,294	10.0%		
2003	26,371	8.0%	798,241	18.0%	30,270	9.2%		
2001	24,413	8.4%	676,536	15.0%	27,712	6.1%		

Teachers

Fiscal Year	Active Members: Number	Active Members: Percent Change	Valuation Payroll: Amount in $ Thousands	Valuation Payroll: Percent Change	Average Salary: $ Amount	Average Salary: Percent Change	Average Age	Average Service
2023	18,141	0.1%	$ 1,260,240	2.7%	$ 69,469	3.2%	45.5	13.0
2022	18,217	0.5%	1,226,570	2.4%	67,331	1.9%	45.5	13.1
2021	18,131	1.2%	1,198,236	3.2%	66,088	2.0%	45.6	13.2
2020	17,917	1.1%	1,160,884	2.2%	64,792	1.2%	45.8	13.3
2019	17,730	-0.1%	1,135,607	1.7%	64,050	1.9%	46.0	13.4
2018	17,752	0.8%	1,116,218	4.0%	62,878	3.2%	46.0	13.4
2017	17,617	-0.9%	1,073,447	0.7%	60,932	1.7%	46.1	13.5
2016	17,784	0.3%	1,065,621	1.4%	59,920	1.1%	46.2	13.5
2015	17,732	-1.4%	1,050,447	1.6%	59,240	3.1%	46.3	13.4
2014	17,986	-0.5%	1,033,867	-0.6%	57,482	0.0%	46.3	13.4
2013	18,084	-0.4%	1,039,933	0.3%	57,506	0.7%		
2012	18,161	-1.7%	1,036,605	0.0%	57,079	1.7%		
2011	18,466	-0.7%	1,036,376	1.5%	56,123	2.3%		
2010	18,603	-0.6%	1,020,745	1.7%	54,870	2.3%		
2009	18,709	1.1%	1,003,514	4.9%	53,638	3.7%		
2008	18,509	0.2%	957,068	3.8%	51,708	3.6%		
2007	18,477	0.0%	922,308	8.3%	49,917	8.3%		
2005	18,474	-1.3%	851,664	6.5%	46,101	7.9%		
2003	18,710	5.6%	799,544	14.2%	42,734	8.1%		
2001	17,718	10.5%	700,361	14.9%	39,528	4.0%		

Historical Member Data – Actives

Police

Fiscal Year	Active Members Number	Active Members Percent Change	Valuation Payroll Amount in $ Thousands	Valuation Payroll Percent Change	Average Salary $ Amount	Average Salary Percent Change	Average Age	Average Service
2023	4,042	-3.4%	$ 349,469	3.9%	$ 86,460	5.4%	38.3	10.3
2022	4,103	-1.9%	336,500	2.8%	82,013	4.8%	38.3	10.3
2021	4,184	-1.7%	327,342	1.3%	78,237	3.1%	38.8	10.6
2020	4,256	0.9%	322,994	3.2%	75,891	2.2%	39.0	10.8
2019	4,216	0.5%	313,016	3.6%	74,245	3.1%	38.9	10.8
2018	4,197	1.1%	302,199	3.8%	72,004	2.7%	38.9	10.8
2017	4,151	0.3%	291,004	3.7%	70,104	3.4%	39.1	11.0
2016	4,139	-0.8%	280,577	0.4%	67,789	1.2%	39.2	11.0
2015	4,174	0.2%	279,555	3.3%	66,975	3.1%	39.2	10.9
2014	4,166	-0.5%	270,497	1.4%	64,930	1.9%	39.3	11.1
2013	4,187	1.7%	266,775	1.9%	63,715	0.2%		
2012	4,118	-0.3%	261,865	0.9%	63,590	1.2%		
2011	4,130	-2.4%	259,509	0.4%	62,835	2.9%		
2010	4,231	-2.0%	258,472	0.2%	61,090	2.3%		
2009	4,318	-0.3%	257,934	5.6%	59,735	5.9%		
2008	4,332	1.6%	244,314	4.7%	56,398	3.0%		
2007	4,263	-6.8%	233,348	5.4%	54,738	13.0%		
2005	4,573	6.2%	221,456	13.0%	48,427	6.4%		
2003	4,305	4.4%	196,022	14.3%	45,534	9.5%		
2001	4,124	14.6%	171,489	24.3%	41,583	8.5%		

Fire

Fiscal Year	Active Members Number	Active Members Percent Change	Valuation Payroll Amount in $ Thousands	Valuation Payroll Percent Change	Average Salary $ Amount	Average Salary Percent Change	Average Age	Average Service
2023	1,766	3.3%	$ 155,893	6.0%	$ 88,275	3.4%	40.4	12.1
2022	1,723	0.8%	147,032	0.4%	85,335	-0.4%	40.8	12.5
2021	1,709	0.3%	146,464	7.5%	85,702	7.2%	41.1	12.8
2020	1,704	0.9%	136,234	3.6%	79,949	2.7%	41.3	13.1
2019	1,688	1.6%	131,453	2.1%	77,875	0.5%	41.3	13.1
2018	1,661	1.3%	128,697	4.1%	77,481	2.8%	41.4	13.2
2017	1,640	0.9%	123,643	4.1%	75,392	3.2%	41.3	13.2
2016	1,626	1.1%	118,754	1.3%	73,034	0.1%	41.4	13.2
2015	1,608	-0.1%	117,263	1.9%	72,925	2.1%	41.3	13.2
2014	1,610	0.1%	115,027	-0.7%	71,445	-0.8%	41.5	13.3
2013	1,608	0.6%	115,788	3.0%	72,007	2.4%		
2012	1,599	-0.2%	112,456	4.1%	70,329	4.4%		
2011	1,603	-2.6%	108,028	-0.9%	67,391	1.7%		
2010	1,646	-0.4%	109,020	1.2%	66,233	1.7%		
2009	1,653	0.8%	107,682	11.1%	65,144	10.2%		
2008	1,640	3.3%	96,907	-0.5%	59,090	-3.6%		
2007	1,588	-0.7%	97,365	7.0%	61,313	7.7%		
2005	1,599	4.9%	91,029	15.1%	56,929	9.7%		
2003	1,524	6.4%	79,072	17.2%	51,885	10.2%		
2001	1,433	7.0%	67,485	16.2%	47,094	8.6%		

Historical Member Data – Benefit Recipients

Year Ending June 30,	Employees Number of Recipients	Employees Average Monthly Benefit	Teachers Number of Recipients	Teachers Average Monthly Benefit	Police Number of Recipients	Police Average Monthly Benefit	Fire Number of Recipients	Fire Average Monthly Benefit
2023	21,302	$ 1,277	15,607	$ 1,953	4,764	$ 3,318	1,930	$ 3,747
2022	20,751	1,250	15,154	1,931	4,644	3,266	1,866	3,696
2021	20,046	1,214	14,685	1,894	4,427	3,183	1,816	3,579
2020	19,434	1,184	14,198	1,872	4,227	3,113	1,753	3,447
2019	18,824	1,165	13,740	1,853	4,082	3,076	1,706	3,384
2018	18,193	1,141	13,223	1,836	3,923	3,027	1,673	3,314
2017	17,573	1,121	12,696	1,817	3,786	2,992	1,639	3,253
2016	16,142	1,152	11,410	1,928	3,629	2,978	1,595	3,213
2015	15,483	1,122	10,859	1,913	3,457	2,917	1,551	3,130
2014	15,314	1,078	10,965	1,783	3,282	2,930	1,493	3,047
2013	14,712	1,063	10,407	1,780	3,163	2,905	1,447	3,050

Historical Retirement System Cash Flows

June 30	Contributions[1]	Expenditures: Benefit Payments	Refunds	Administrative Expenses	Other[2]	Total	External Cash Flow for the Year[3]	Market Value of Assets	External Cash Flow as a Percent of Market Value
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
2023	$909,771,922	$ (971,121,035)	$ (27,386,598)	$ (9,637,702)	$ (1,072,273)	$ (1,009,217,608)	$ (99,445,686)	$ 11,459,384,732	(0.9)%
2022	823,009,765	(913,994,579)	(23,726,778)	(9,523,523)	(1,109,775)	(948,354,655)	(125,344,890)	10,708,357,010	(1.2)%
2021	696,156,378	(858,210,462)	(19,883,792)	(8,417,146)	(790,708)	(887,302,108)	(191,145,730)	11,523,879,340	(1.7)%
2020	674,747,435	(816,708,118)	(23,312,151)	(8,281,785)	(892,659)	(849,194,713)	(174,447,278)	9,097,364,441	(1.9)%
2019	658,402,312	(780,906,714)	(23,464,493)	(7,436,447)	(958,942)	(812,766,596)	(154,364,284)	9,170,772,530	(1.7)%
2018	640,230,909	(741,752,669)	(24,010,459)	(7,767,254)	(911,824)	(774,442,206)	(134,211,297)	8,836,866,976	(1.5)%
2017	579,713,841	(706,303,846)	(23,408,460)	(7,670,827)	(1,254,518)	(738,637,651)	(158,923,810)	8,253,987,979	(1.9)%
2016	565,431,123	(670,359,868)	(24,233,277)	(7,061,317)	(1,263,550)	(702,918,012)	(137,486,889)	7,434,317,371	(1.8)%
2015	536,357,394	(631,310,997)	(26,344,739)	(7,581,315)	(1,626,866)	(666,863,917)	(130,506,523)	7,509,926,452	(1.7)%
2014	527,477,252	(599,475,606)	(26,119,759)	(7,376,270)	(1,446,882)	(634,418,517)	(106,941,265)	7,390,628,021	(1.4)%

[1] *Column (2) includes employee and employer contributions.*

[2] *Includes other custodial, professional and non-investment expenses, and contributions other than for contribution effort.*

[3] *Column (8) = Column (2) + Column (7).*

Based on financial statements provided to the actuary by NHRS staff.

Historical Rates of Investment Return

Plan Year Ending June 30 of	Market*	Actuarial
2014	17.23%	12.28%
2015	3.41%	10.72%
2016	0.83%	6.83%
2017	13.31%	9.11%
2018	8.77%	8.40%
2019	5.58%	6.55%
2020	1.12%	5.54%
2021	29.08%	10.82%
2022	-6.02%	6.93%
2023	7.99%	6.91%
Average Returns		
Last 5 Years	6.94%	7.33%
Last 10 Years	7.74%	8.39%

** Annual market rate of return calculated by the actuary is determined on a simplified money-weighted basis, using market value of assets at beginning and end of year and reported cashflows during the year. The rates of return shown above will differ from calculations of investment return on a time-weighted basis, and may differ slightly from rates of return calculated on a dollar-weighted basis by investment professionals.*