

Called Board Meeting

Schedule	Tuesday, August 25, 2026 4:00 PM — 5:00 PM CDT
Venue	ATRS Board room
Description	Called Board Meeting - ZOOM
Notes for Participants	ATRS Host is inviting you to a scheduled Zoom meeting. Topic: ATRS Called Board Meeting Time: Aug 25, 2026 03:45 PM Central Time (US and Canada) Join Zoom Meeting https://us02web.zoom.us/j/86400608251?pwd=O0BJspsw4zlrcKa5aP6uS7gxbSJlbb.1 Meeting chat link https://us02web.zoom.us/launch/jc/86400608251 Meeting ID: 864 0060 8251 Passcode: 222037
Organizer	Tammy Porter

Agenda

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2. Motion to Excuse Absences	2
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Presented by Dr. Mike Hernandez	
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For Approval - Presented by Dr. Mike Hernandez	

1. Call to Order/Roll Call

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For Discussion

Presented by Mark White

5. GRS Proposed Actuarial Assumption Changes

Presented by Judy Kermans, Heidi Berry and
Derek Henning



August 5, 2026

Mr. Mark White
Executive Director
Arkansas Teacher Retirement System
1400 West Third Street
Little Rock, Arkansas 72201

Re: Assumed Rate of Investment Return Supplemental

Dear Mr. White:

Enclosed is a supplemental actuarial valuation to measure the financial effect of changing the assumed rate of investment return of the Arkansas Teacher Retirement System.

If you have any questions regarding our calculations, please contact us.

Sincerely,
Gabriel, Roeder, Smith & Company

A handwritten signature in black ink that reads "Judith A. Kermans". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Judith A. Kermans, EA, MAAA, FCA

JAK/dj
Enclosure

Arkansas Teacher Retirement System

Supplemental Actuarial Valuation

as of June 30, 2025

Requested By: Mr. Mark White, Executive Director

Date: August 5, 2026

Submitted By: Judith A. Kermans, EA, MAAA, FCA
Heidi G. Barry, ASA, MAAA, FCA
Derek Henning, ASA, EA, MAAA, FCA
Gabriel, Roeder, Smith & Company

This report contains a supplemental actuarial valuation of lowering the assumed rate of investment return such that the resulting amortization period is approximately 30 years as of June 30, 2025. The purpose of this report is to measure the financial impact of the change for the Arkansas Teacher Retirement System.

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

The date of this valuation was June 30, 2025. Supplemental valuations do not predict the result of future actuarial valuations. (Future activities can affect future valuation results in an unpredictable manner.) Rather, supplemental valuations give an indication of the probable effect of **only the assumption or benefit change** on future valuations without comment on the complete end result of the future valuations.

The valuation was based on actuarial data submitted for the June 30, 2025 annual actuarial valuation. The actuarial assumptions and methods used are those adopted by the Board in conjunction with the 2020-2025 Experience Study at the July 20, 2026 meeting. Unless otherwise noted, assumptions are based on the aforementioned Experience Study. In particular:

- The assumed rate of interest of 7.25%.
- The assumed rate of wage inflation was 3.00%.
- The valuation method was the entry age actuarial cost method.
- The demographic assumptions are those recommended by the actuary and adopted by the Board (at the July 20, 2026 meeting).

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.

Judith A. Kermans, Heidi G. Barry, and Derek Henning are independent of the plan sponsor, 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.



Arkansas Teacher Retirement System

Supplemental Actuarial Valuation

as of June 30, 2025

A brief summary of the member data provided by the System, as of June 30, 2025, used in this valuation is presented below:

Group	Number	Covered Payroll	Average in Years	
			Age	Service
Actives*	68,219	\$3,277,873,136	44.0	10.1

Group	Number	T-Drop Account Balance	Pay
T-DROP	2,992	\$291,723,898	\$217,205,742

Group	Number	Estimated Annual Benefits	Contribution Balance
Deferred	15,308	\$102,140,882	\$224,552,611

Group	Number	Current Annual Annuities
Retirees	57,492	\$1,456,260,237

* *Data Adjustments: A number of active records were excluded from the June 30, 2025 valuation for various reasons, including missing pay or reported pay below \$100. As part of the valuation process, System Staff receives a list of these excluded records in our letter describing the data used for the annual valuation. Some of these records appear to reflect members rehired from deferred or leave-of-absence status, with low or zero pay reported in the year of rehire and more typical pay reported the following year. As part of the experience study, GRS recommended the inclusion of these records in the valuation with an assumption that the pays for these members would be equivalent to the group's average pay for Education or Support members. Therefore, the active member count includes these additional members in our analyses.*

Arkansas Teacher Retirement System

Supplemental Actuarial Valuation

as of June 30, 2025

Study Objective

This study evaluates the assumed rate of return that, if adopted, would result in an amortization period of approximately 30 years as of June 30, 2025. The analysis measures the impact as of the most recent valuation date (June 30, 2025), and estimates the corresponding amortization period as of June 30, 2026.

The analysis reflects the actuarial assumptions adopted by the Board in conjunction with the five-year experience study covering the period from July 1, 2020, through June 30, 2025. Projected amortization periods assume that all actuarial assumptions are realized unless otherwise noted. Actual future amortization periods will reflect the System's experience and data as of each valuation date.

Summary Findings

Our analysis identified two potential assumed rates of return, 7.15% and 7.10%, that are expected to produce amortization periods of approximately 30 years or less in the near term. The actuarial statement on page 4 presents results under the current assumed rate of return and the two alternative rates.

June 30, 2025 Valuation Results with updated demographic assumptions and 3.0% wage inflation assumption:

- **Current return assumption – 7.25%:** The amortization period is 25 years using the funding value of assets and 17 years using the market value of assets.
- **Alternate 1 – 7.15%:** The amortization period is 31 years using the funding value of assets and 21 years using the market value of assets.
- **Alternate 2 – 7.10%:** The amortization period is 35 years using the funding value of assets and 23 years using the market value of assets.

Although the June 30, 2025 amortization periods based on the funding value of assets exceed 30 years under both alternatives, they are projected to fall below 30 years by the June 30, 2026 valuation if all actuarial assumptions are realized. Estimated amortization periods for future valuations are presented on page 5.

Projected Results:

- **Alternate 1 – 7.15%:** If the fiscal year 2026 investment return equals the assumed return of 7.15%, the amortization period is projected to be 27 years. If the investment return is 10.00%, the projected amortization period would be 25 years.
- **Alternate 2 – 7.10%:** If the fiscal year 2026 investment return equals the assumed return of 7.10%, the amortization period is projected to be 30 years. If the investment return is 10.00%, the projected amortization period would be 28 years.

Arkansas Teacher Retirement System

Supplemental Actuarial Valuation

as of June 30, 2025

Actuarial Statement

Computed Contributions for	Assumed Rate of Investment Return		
	Current - 7.25%	Alternate 1 - 7.15%	Scenario 2 - 7.10%
Normal Cost	14.50%	14.87%	15.05%
Average Member Contributions	6.38%	6.38%	6.38%
Net Employer Normal Cost	8.12%	8.49%	8.67%
Unfunded Actuarial Accrued Liabilities	6.88%	6.51%	6.33%
Employer Contribution Rate	15.00%	15.00%	15.00%
\$ Millions			
Actuarial Accrued Liability (AAL)	\$ 27,067.2	\$ 27,370.7	\$ 27,524.6
Funding Value of Assets (FVA)	\$ 22,806.6	\$ 22,806.6	\$ 22,806.6
Unfunded Accrued Liability (AAL-FVA)	\$ 4,260.6	\$ 4,564.1	\$ 4,718.0
Funded Ratio	84.3%	83.3%	82.9%
Amortization Years	25.4	31.0	34.5
Funded Ratio - MVA	87.7%	86.7%	86.3%
Amortization Years - MVA	17.2	20.9	23.1

MVA = Market Value of Assets

All of the alternates above are based on the updated demographic assumptions and 3.0% wage inflation adopted by the Board at their July 20th meeting.

Arkansas Teacher Retirement System

Supplemental Actuarial Valuation

as of June 30, 2025

Projected Amortization Periods for Alternate 1

Valuation Year	Actual	Projection			
	2025	2026	2027	2028	2029
Projection A					
Investment Return	9.80%	7.15%	7.15%	7.15%	7.15%
Amortization Years	31	27	21	18	17
Projection B					
Investment Return	9.80%	10.00%	7.15%	7.15%	7.15%
Amortization Years	31	25	18	14	12

Projected Amortization Periods for Alternate 2

Valuation Year	Actual	Projection			
	2025	2026	2027	2028	2029
Projection A					
Investment Return	9.80%	7.10%	7.10%	7.10%	7.10%
Amortization Years	35	30	23	20	19
Projection B					
Investment Return	9.80%	10.00%	7.10%	7.10%	7.10%
Amortization Years	35	28	20	16	13

Notes regarding the projections:

- 1) The above projections show the projected amortization periods for Alternate 1 and Alternate 2 based on different rates of investment return for 2026 (Projection A – 7.15%/7.10% and Projection B – 10.00%).
- 2) **For purposes of the projections, it was assumed that all actuarial assumptions (except as noted) would be realized.** In particular, it was assumed that the actuarial value of assets would earn 7.15%/7.10% in each year after 2026.
- 3) Deferred asset gains/losses are reflected in these projections. The market value of assets was higher than the actuarial value of assets as of June 30, 2025. This puts downward pressure on the future amortization years as deferred asset gains are realized.
- 4) Estimated projected payroll is based upon the valuation payroll, increased each future year by 3.00%.
- 5) The current statutory contribution rate of 15% of payroll was assumed for all future years.
- 6) The actual amortization years for future valuation dates will be based upon actual experience as of the future valuation date.

Please see important comments on the following pages.

Arkansas Teacher Retirement System

Supplemental Actuarial Valuation

as of June 30, 2025

Comments

Comment 1 - For purposes of budgeting contributions as a level percentage of payroll, the assumed rate of investment return is used as the discount rate to determine the present value of the System's pension obligations. It is important to note that an actuarial investment return assumption based on expected future experience is a single estimate for all years and therefore implicitly assumes that returns above and below expectations will "average out" over time. In other words, the expected risk premium is reflected in the assumed rate of investment return in advance of being earned, while the investment risk is not reflected until actual experience emerges with each valuation.

Comment 2 - The calculations are also based upon present plan provisions that are outlined in the report. If you have reason to believe that the assumptions that were used are unreasonable, that the plan provisions are incorrectly described, that important plan provisions relevant to this supplemental are not described, or that conditions have changed since the calculations were made, you should contact the authors of this report prior to relying on information in the report.

Comment 3 - 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. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

Comment 4 - If you have reason to believe that the information provided in this report is inaccurate, or is in any way incomplete, or if you need further information in order to make an informed decision on the subject matter of this report, please contact the authors of this report prior to making such decision.

Comment 5 - ATRS could consider an investment return assumption of either 7.10% or 7.15% depending on tolerance for risk and fluctuations in the amortization period. The actuary must certify the reasonableness of all actuarial assumptions each valuation year. We review the investment return assumption on an annual basis to determine whether it remains reasonable for use in the actuarial valuation. The higher the selected investment return assumption by the Board, the less margin that would exist for actuarial standards reasonability purposes in future years if capital market assumptions are lowered from their current levels.

Comment 6 - This report is intended to describe the financial effect of the changes to the investment return assumption of the System. Except as otherwise noted, potential effects on other changes to the plan were not considered.

Comment 7 - In the event that more than one plan change is being considered, it is important to remember that the results of separate actuarial valuations cannot generally be added together to produce a correct estimate of the combined effect of all of the changes. The total can be considerably greater than the sum of the parts due to the interaction of various plan provisions with each other, and with the assumptions that must be used.

Arkansas Teacher Retirement System

Supplemental Actuarial Valuation

as of June 30, 2025

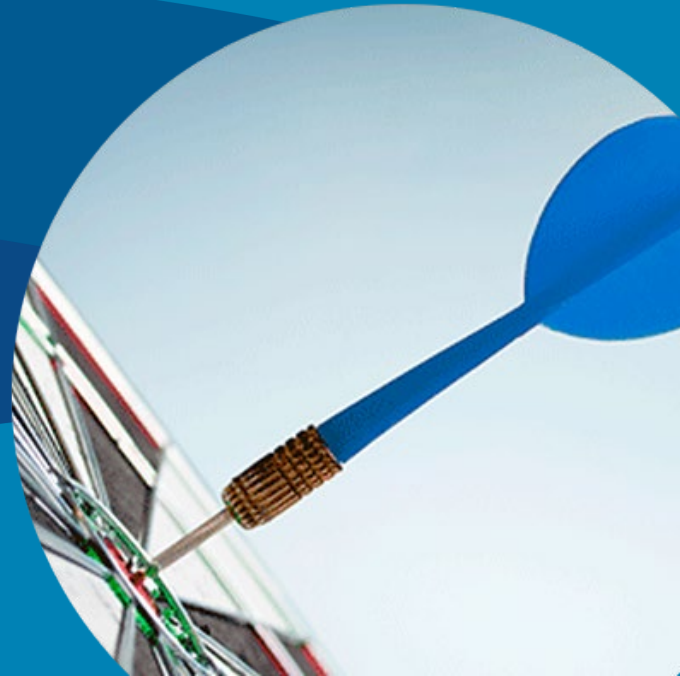
Comments

Comment 8 - The reader of this report should keep in mind that actuarial calculations are mathematical estimates based on current data and assumptions about future events (which may or may not materialize). Please note that actuarial calculations can and do vary from one valuation year to the next, sometimes significantly. As a result, the cost impact of a change may fluctuate over time, as the demographics of the group changes.

Arkansas Teacher Retirement System

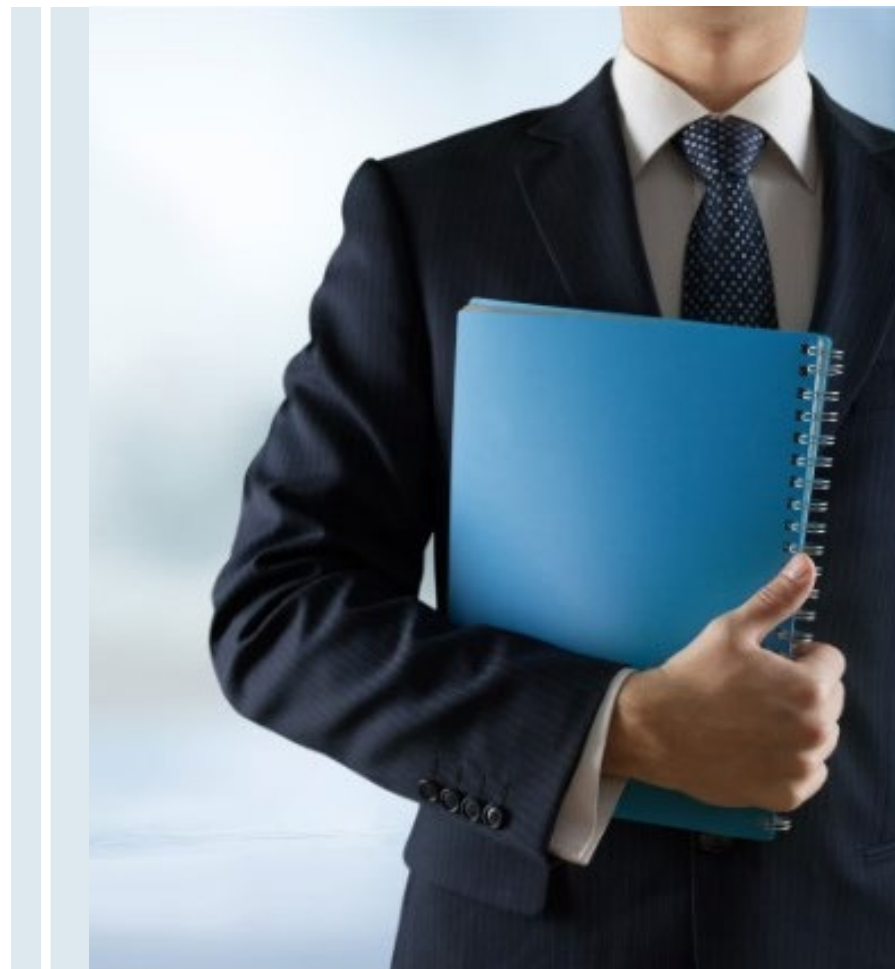
5-Year Experience Study:
August 25, 2026 Board Meeting

Presented by:
Gabriel, Roeder, Smith & Company



Agenda

- 1 Introduction
- 2 Demographic Assumptions
- 3 Economic Assumptions
- 4 Effects on Pension Valuation Results
- 5 Summary and Next Steps



Introduction

- Each year the actuarial liabilities of ATRS are calculated as part of the June 30th valuation
- In order to perform the valuation, we must make assumptions about the future experience of the System with regard to various risk areas
- The results of the liability calculations depend upon those assumptions



Introduction – Key Risk Areas

- Economic Risk Areas
 - Investment return
 - Inflation
 - Patterns of salary increases
- Demographic Risk Areas
 - Rates of withdrawal
 - Rates of retirement
 - Rates of disability
 - Rates of mortality



Introduction

- Assumptions should be carefully chosen and continually monitored
 - Continued use of outdated assumptions can lead to ...

Introduction

- Understated measurements resulting in:
 - An overly optimistic representation of the amortization period required to amortize the unfunded actuarial accrued liability
 - Sharp increases in required contributions at some point in the future leading to a large burden on future taxpayers
 - In extreme cases, an inability to pay benefits when due and benefit reductions



Introduction

- Overstated measurements resulting in:
 - An overly pessimistic representation of the amortization period required to amortize the unfunded actuarial accrued liability
 - Benefit levels that are kept below the level that could be supported by the employer and member contribution rates
 - An unnecessarily large burden on the current generation of members, employers and taxpayers



Introduction

- No single set of assumptions will be suitable indefinitely
- Things change, and our understanding of things (whether or not they are changing) also changes
- The suggested time period for reviewing assumptions is every 5 years
- A systematic review of assumptions is called an “Experience Study”

Introduction - Actuary's Responsibility

- To present a package of reasonable demographic and economic assumptions that meet the Actuarial Standards of Practice (ASOPs)



Introduction

- An actuarial assumption is reasonable if:
 - It is appropriate for the purpose of the measurement being taken
 - It reflects the actuary's professional judgment
 - It takes into account relevant historical and current economic or demographic data
 - **It reflects the actuary's estimate of future experience and/or observation of the estimates inherent in market data**
 - It has no significant bias



Demographic Assumptions



Demographic Experience Study

- We tabulated results from 5 annual gain/loss analyses (2020–2025).
- We compared trends with those observed in prior Experience Studies.
- Generally, we give confirming trends more credibility than non-confirming trends.
- **Philosophy:** Do not overreact to results from any single experience period. It is better to make a series of small changes in the right direction, rather than a single large change that could turn out with hindsight to be in the wrong direction, except possibly for a margin for adverse deviation.



Retiree Mortality

- Post-retirement mortality is an important ingredient in the set of assumptions
- This assumption should be updated from time to time to reflect longevity improvements
- Mortality assumption consists of two components:
 - Base table – reflects expected mortality rates as of a base year
 - Mortality improvement – reflects anticipated improvements in mortality depending on birth year
 - E.g., a member born in 1970 is anticipated to have greater mortality improvement and live longer than a member born in 1950



Retiree Mortality

- New mortality tables (Pub-2016) were recently developed by the Society of Actuaries (SOA)
 - Based upon public sector retirement system mortality experience
 - The SOA examined mortality for Teachers, Public Safety, and General employment categories
 - Successor tables to the Pub-2010 mortality tables, also based on public sector retirement system mortality experience



Retiree Mortality

- The current and proposed rates assume that future mortality rates will continue to decline with each generation
- This means that next year's 65-year-old will have a slightly longer life expectancy than this year's, etc.



Retiree Mortality

- For post-retirement mortality, data from fiscal years 2021 and 2022 were excluded from the experience study and only a 50% weight was assigned to data from fiscal year 2023 due to COVID-19
- We compared the experience of healthy retirees to the Pub-2016 Amount-Weighted General Healthy Retiree mortality tables



Retiree Mortality

- We have used the Pub-2016 Amount-Weighted General Healthy Retiree mortality tables, scaled by 106% for males and females to better reflect ATRS experience
- A mortality improvement scale is then applied
- The improvement scales we used were the 2-dimensional MP-2021 mortality improvement scales, the most recent scales released by the SOA



Retiree Life Expectancy

Age	Current Assumptions		New Mortality Assumptions					
	Version of PubG-2010 Projected with MP-2020		106% of the PubG-2016 Retiree Mortality					
	Year 2025		Life Expectancy Determined by Age in Given Future Years Using MP-2021					
	Year 2025		Year 2025		Year 2035		Year 2045	
	Male	Female	Male	Female	Male	Female	Male	Female
50	35.19	38.07	35.07	37.87	35.94	38.65	36.80	39.41
55	30.31	33.11	30.21	32.96	31.05	33.71	31.87	34.44
60	25.61	28.26	25.50	28.10	26.29	28.81	27.07	29.50
65	21.11	23.54	21.01	23.34	21.73	24.01	22.43	24.66
70	16.85	19.01	16.73	18.77	17.35	19.36	17.98	19.96
75	12.94	14.78	12.76	14.50	13.27	15.01	13.81	15.53
80	9.50	11.00	9.28	10.69	9.67	11.10	10.09	11.52

- Under the new assumptions, life expectancies are slightly lower in 2025 than under the current assumptions
- However, life expectancies are projected to improve in later years, such as 2035 and 2045

Withdrawal (Quits)

- Withdrawal assumptions for members with less than five years of service (service based) and withdrawal assumptions for members with more than five years of service (age based) were studied separately
- Considered “net withdrawals” after accounting for rehires (quit to rehired from one year to next)
- Liability-weighted and population-weighted rates are included with our withdrawal results



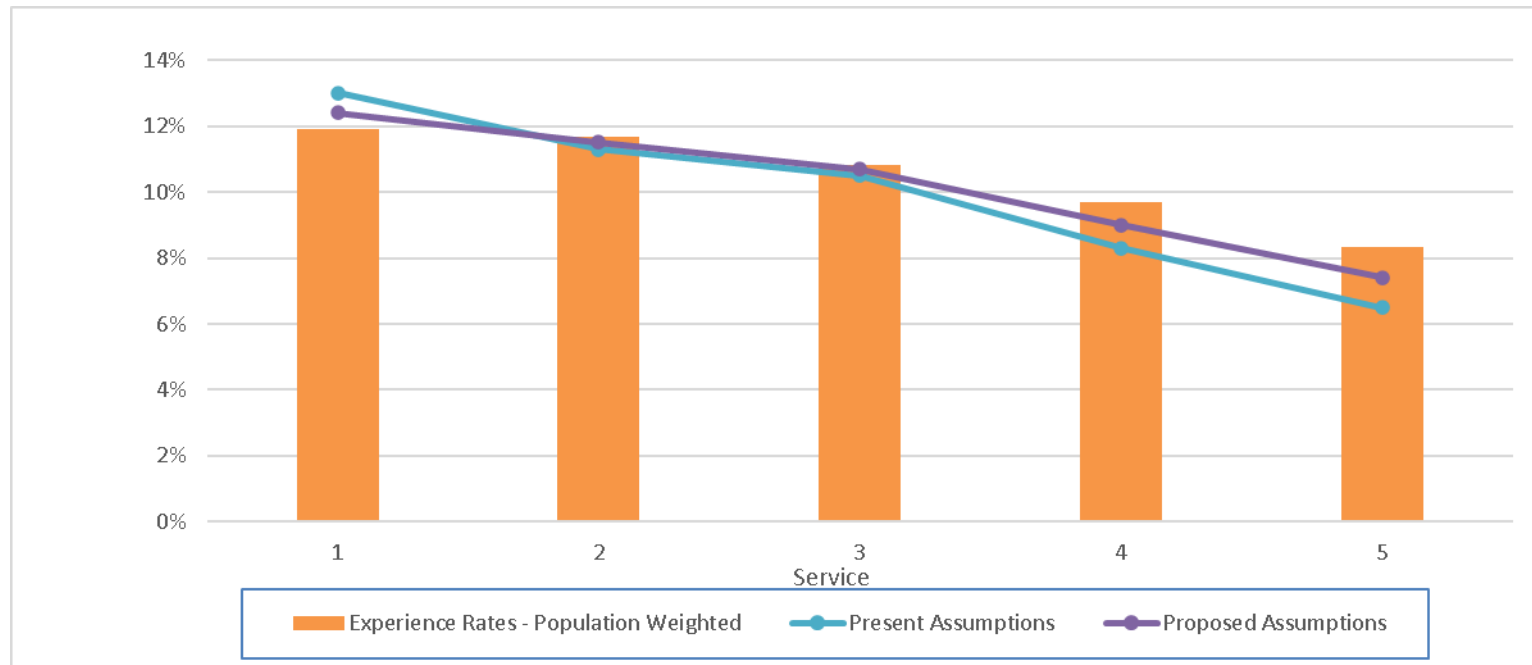
Withdrawal (Quits)

Members with Less Than 5 Years of Service

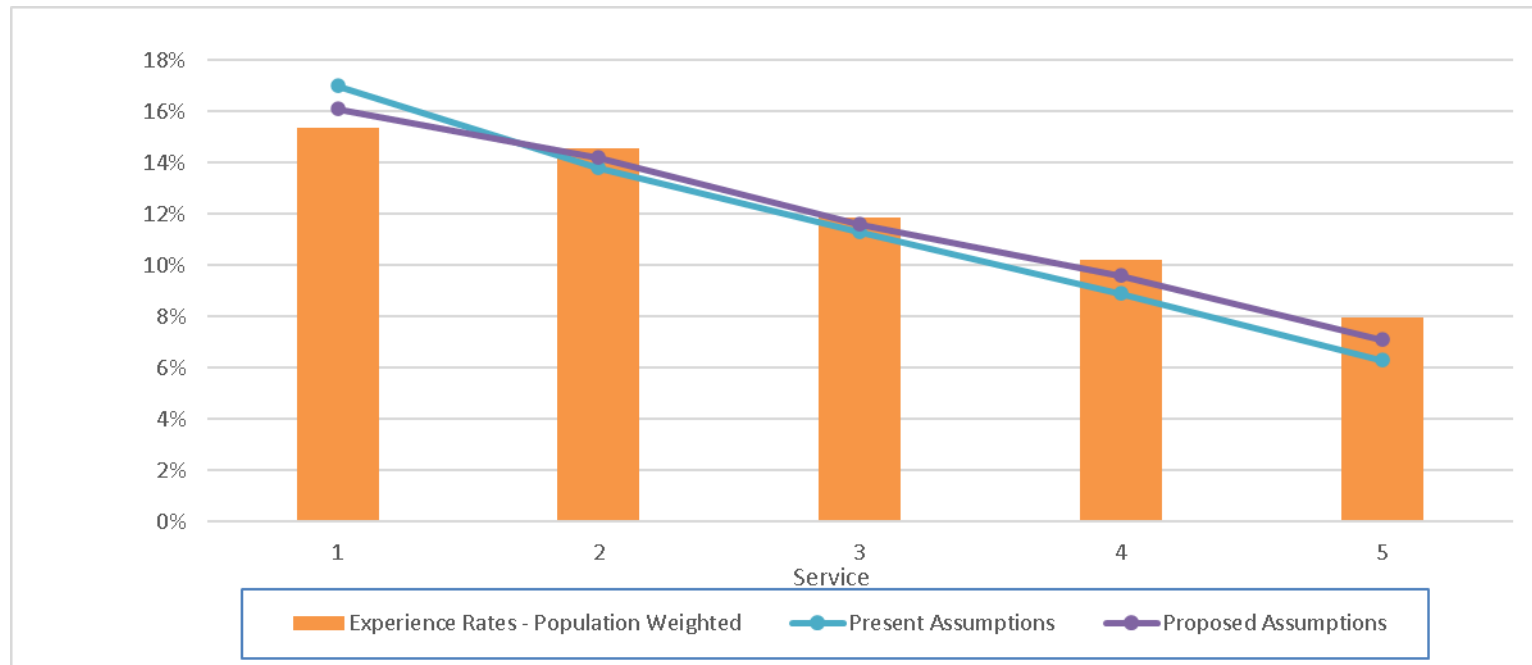
- Overall, Education members experienced **more** service-based withdrawals than expected
- Overall, Support members experienced **fewer** service-based withdrawals than expected
- We recommend adjustments to the current service-based tables to partially reflect observed experience



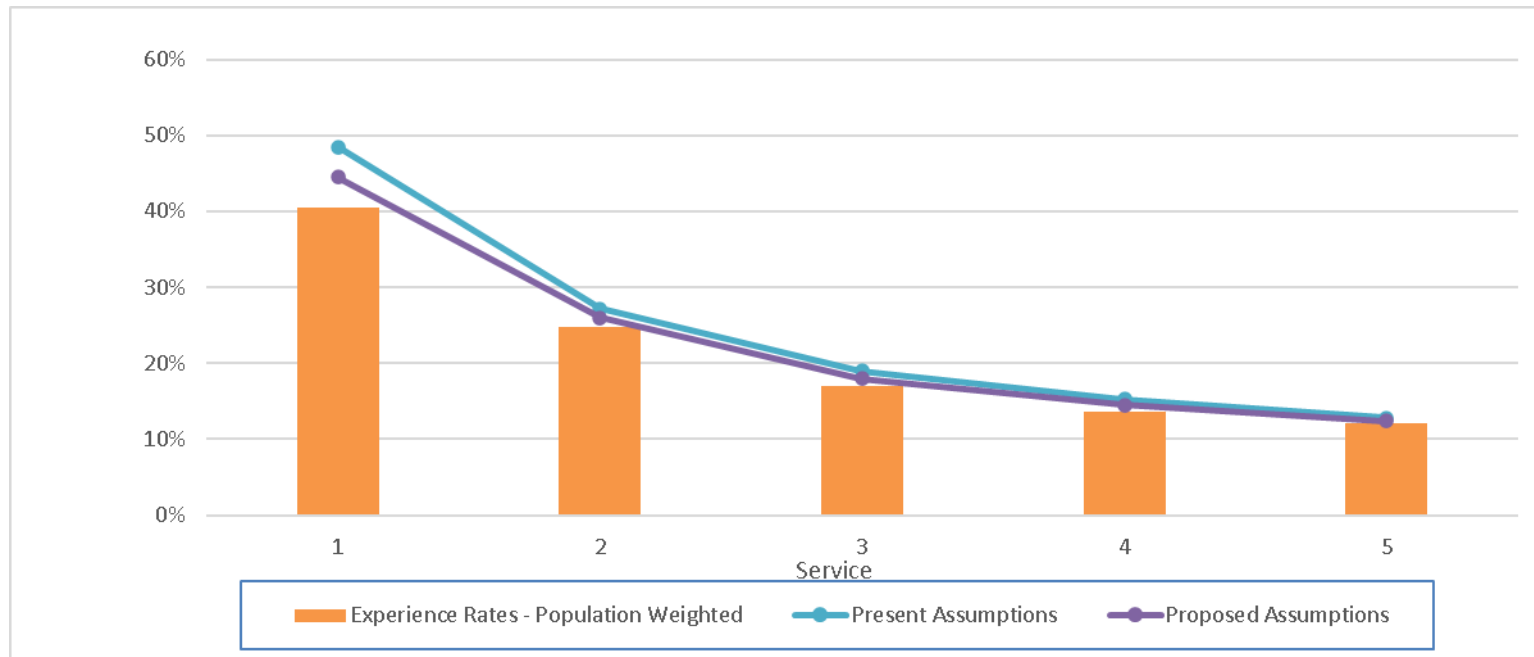
Withdrawal (Quits) – Education Females Members with Less Than 5 Years of Service



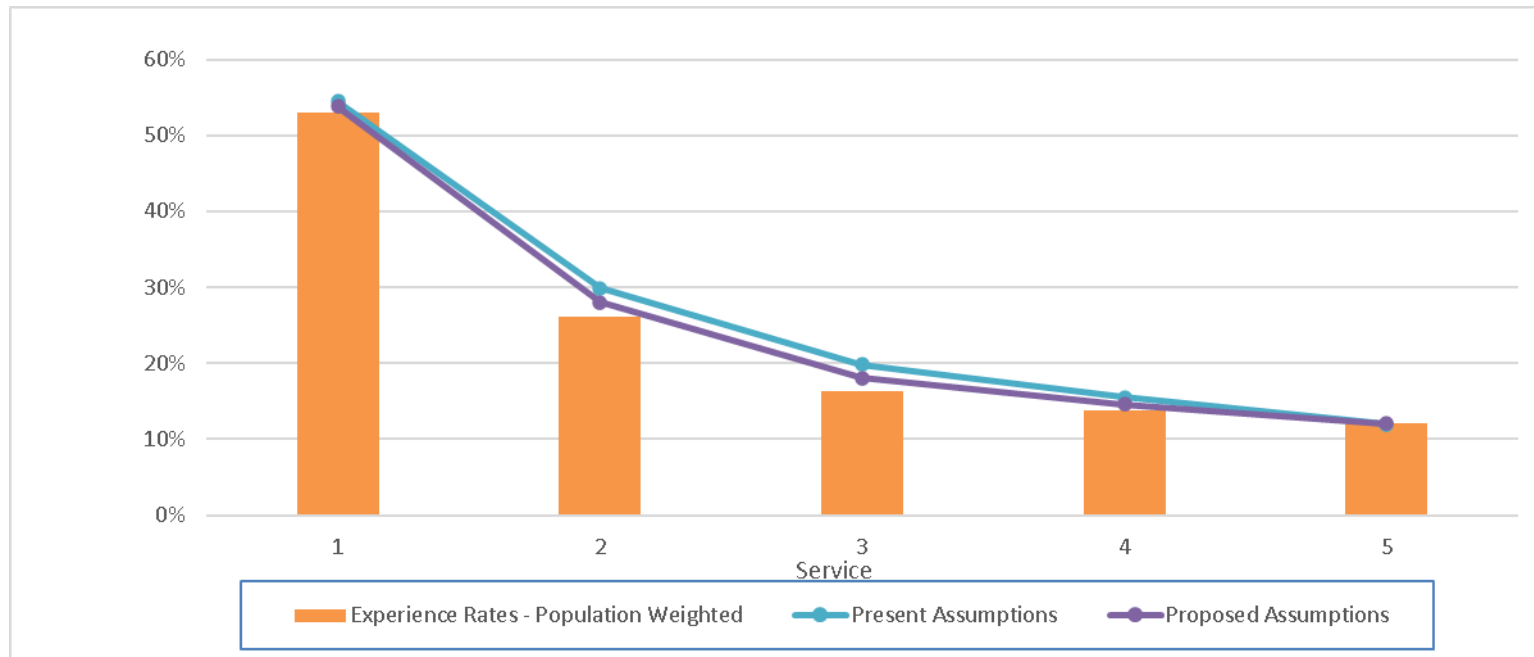
Withdrawal (Quits) – Education Males Members with Less Than 5 Years of Service



Withdrawal (Quits) – Support Females Members with Less Than 5 Years of Service



Withdrawal (Quits) – Support Males Members with Less Than 5 Years of Service



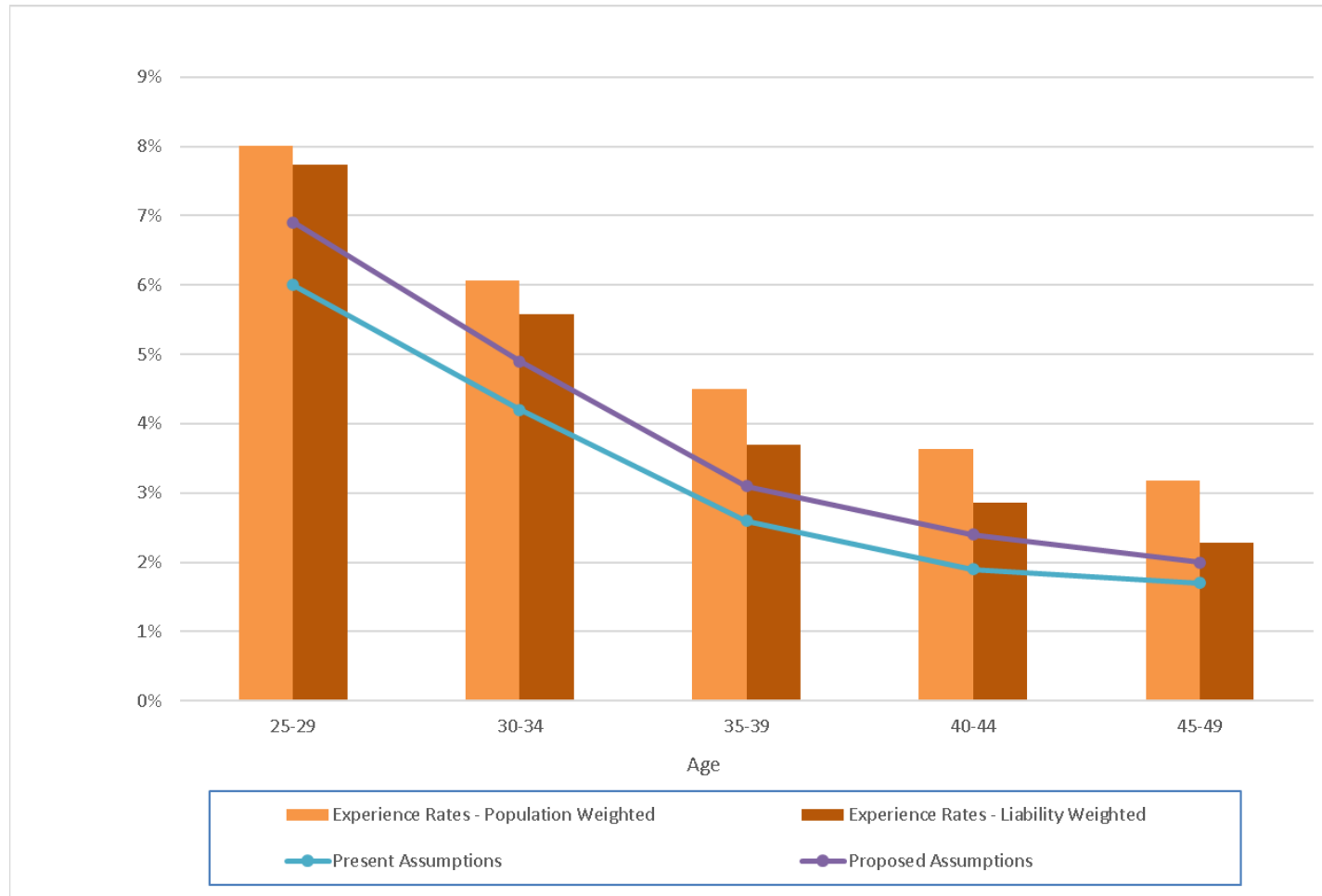
Withdrawal (Quits)

Members with More Than 5 Years of Service

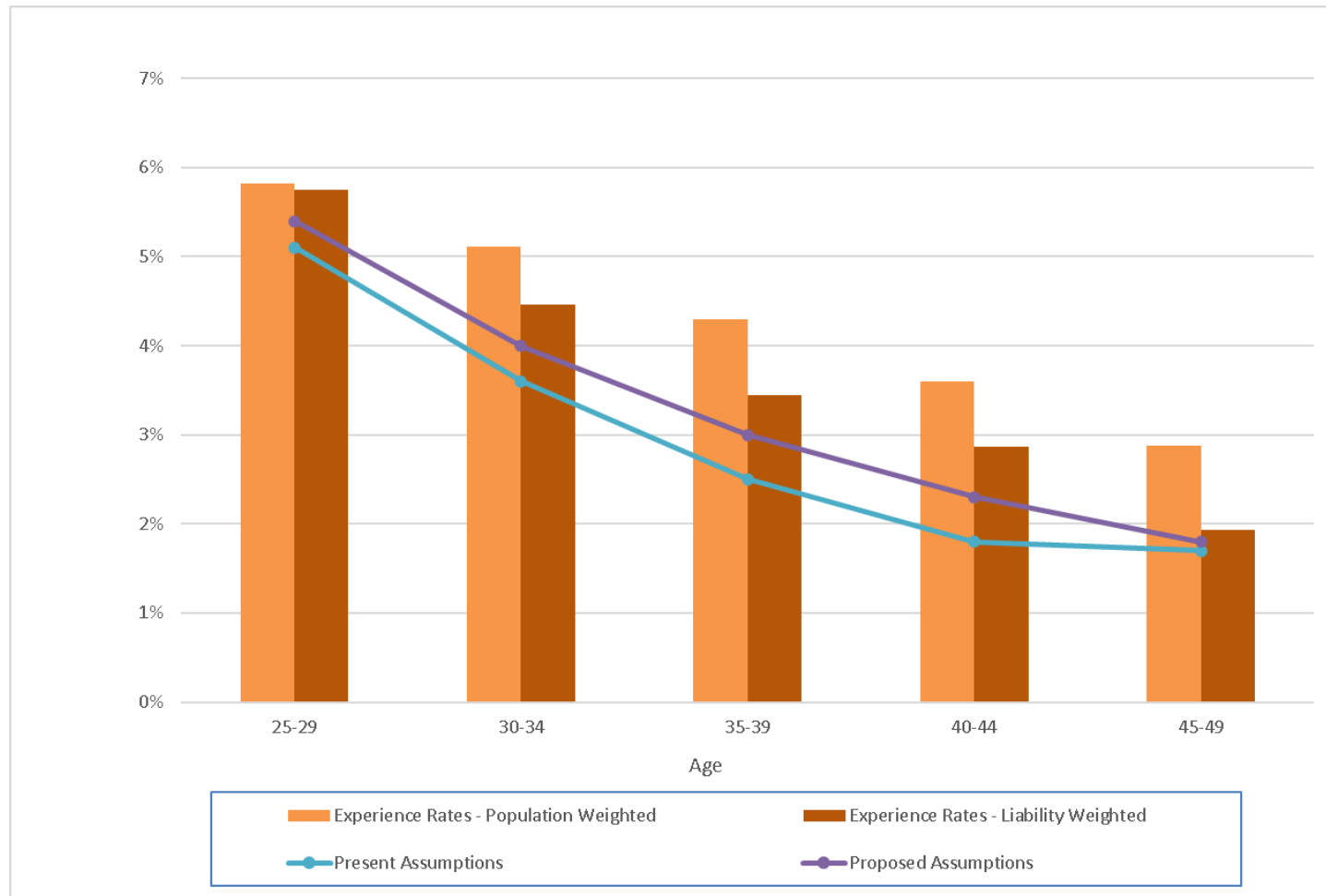
- With the exception of male Support members, the system members experienced **more** age-based withdrawals than expected
- Since age-based withdrawal rates were increased for male Support members in the prior study, we recommend no changes as the observed decrease represents a non-confirming trend
- We recommend adjustments to the current age-based tables to reflect observed experience for Education members and female Support members



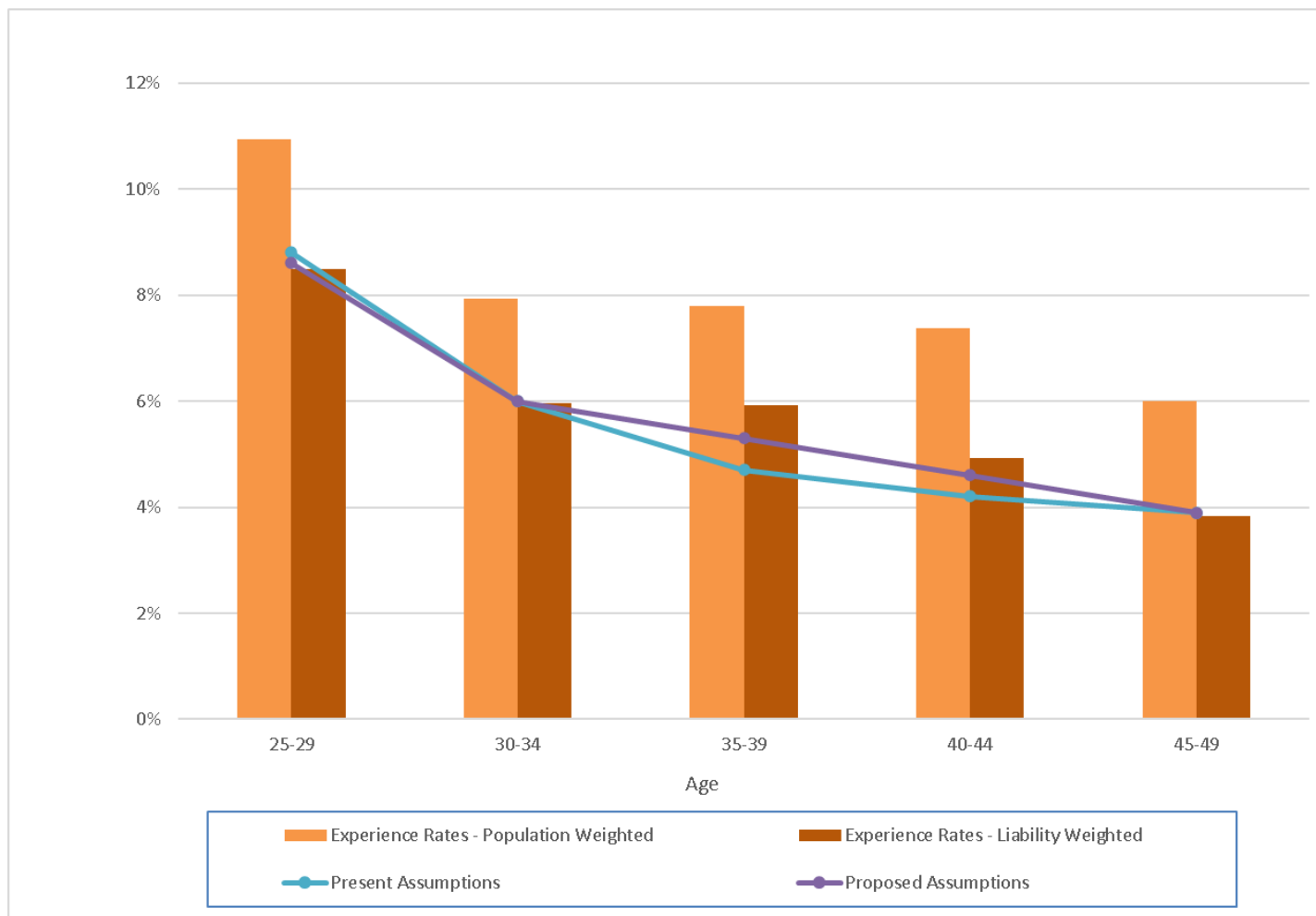
Withdrawal Experience – Education Females Members with More Than 5 Years of Service



Withdrawal Experience – Education Males Members with More Than 5 Years of Service



Withdrawal Experience – Support Females Members with More Than 5 Years of Service

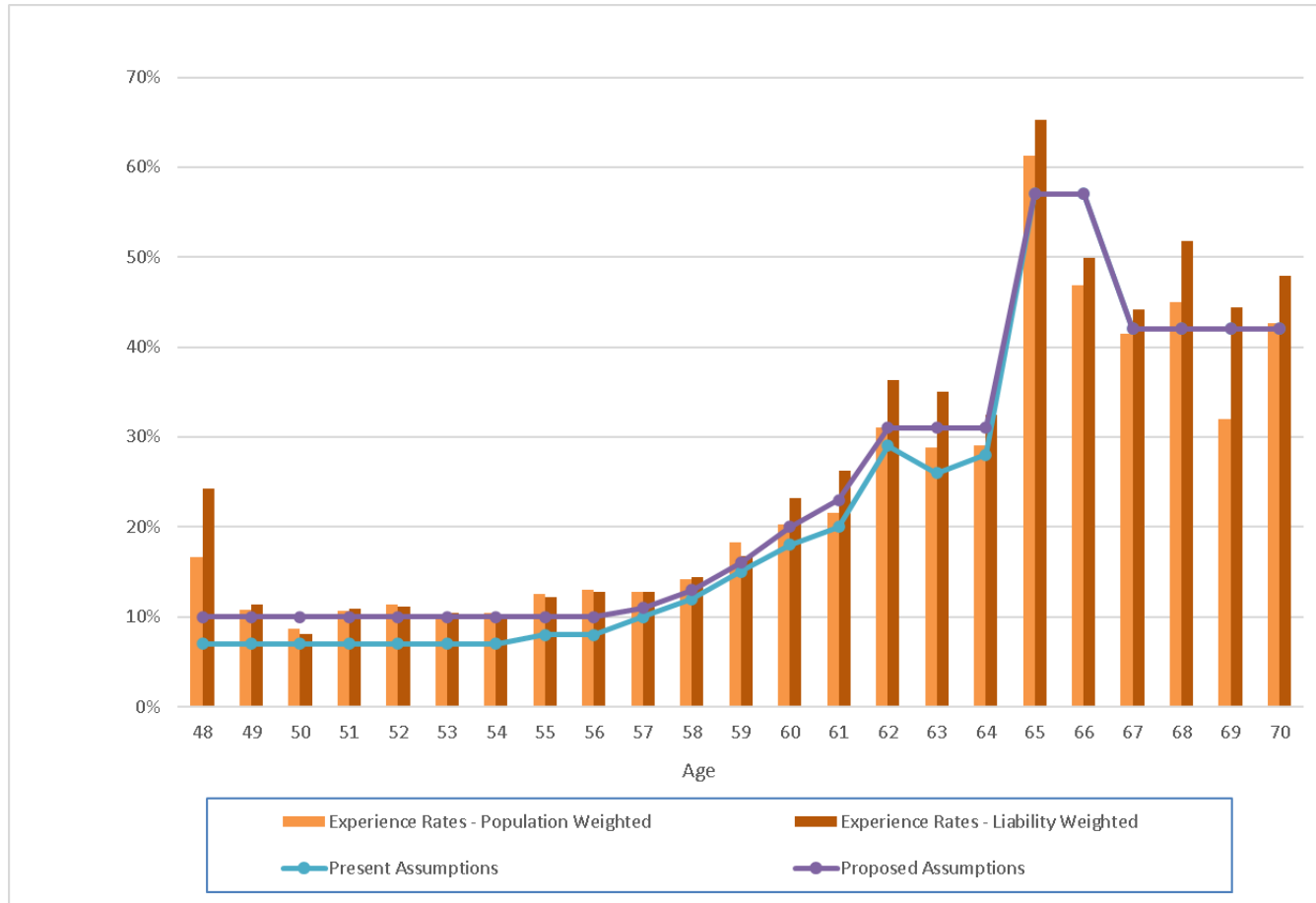


Rates of Retirement - Education

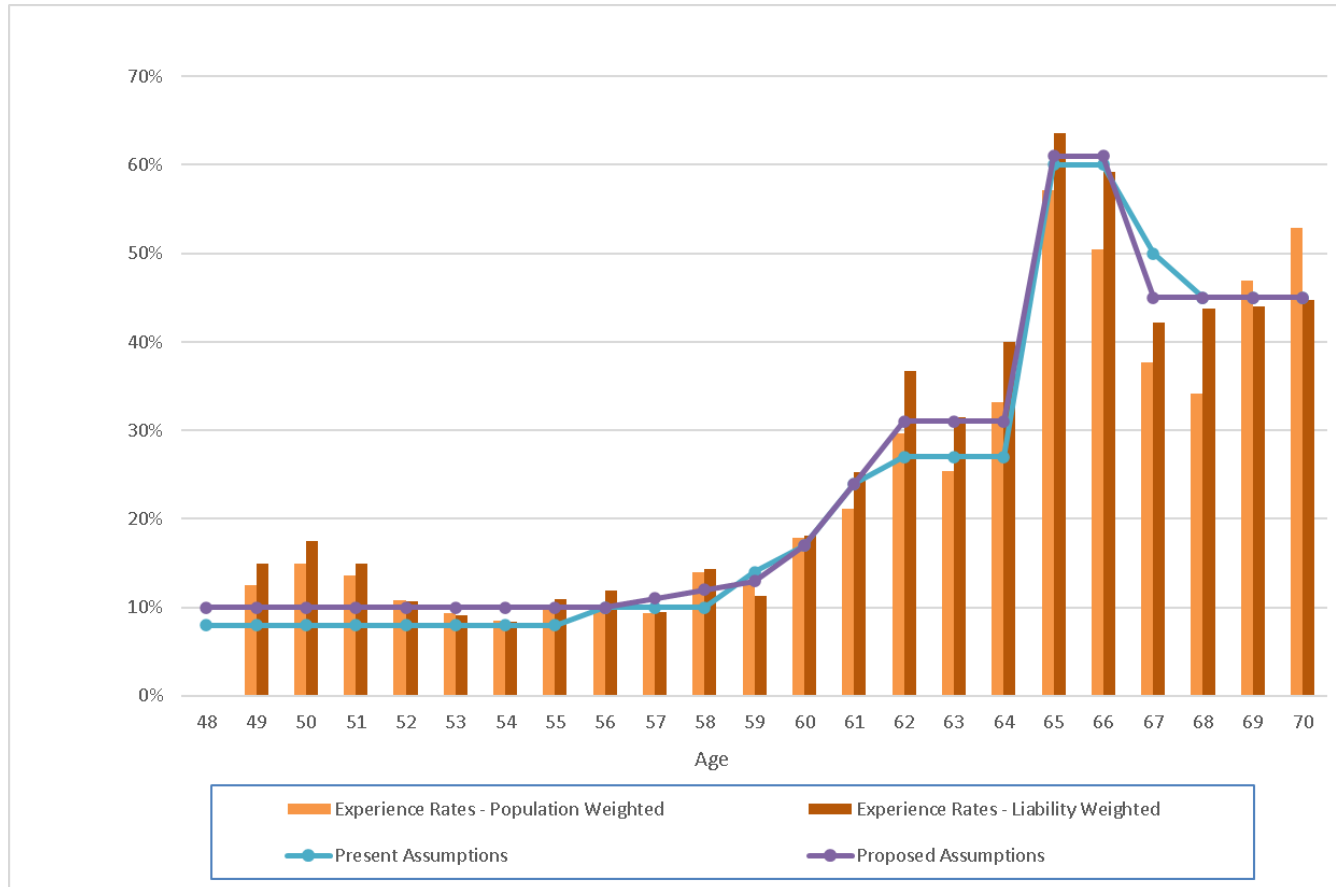
- The retirement assumption was analyzed both for unreduced and reduced retirements
- Overall, Education members experienced **more** Normal Retirements than projected by the present assumptions and close to expected Early Retirements
- Therefore, we recommend changes to the normal retirement rates to partially reflect observed experience



Normal Retirement – Education Females



Normal Retirement – Education Males



Rates of Retirement - Support

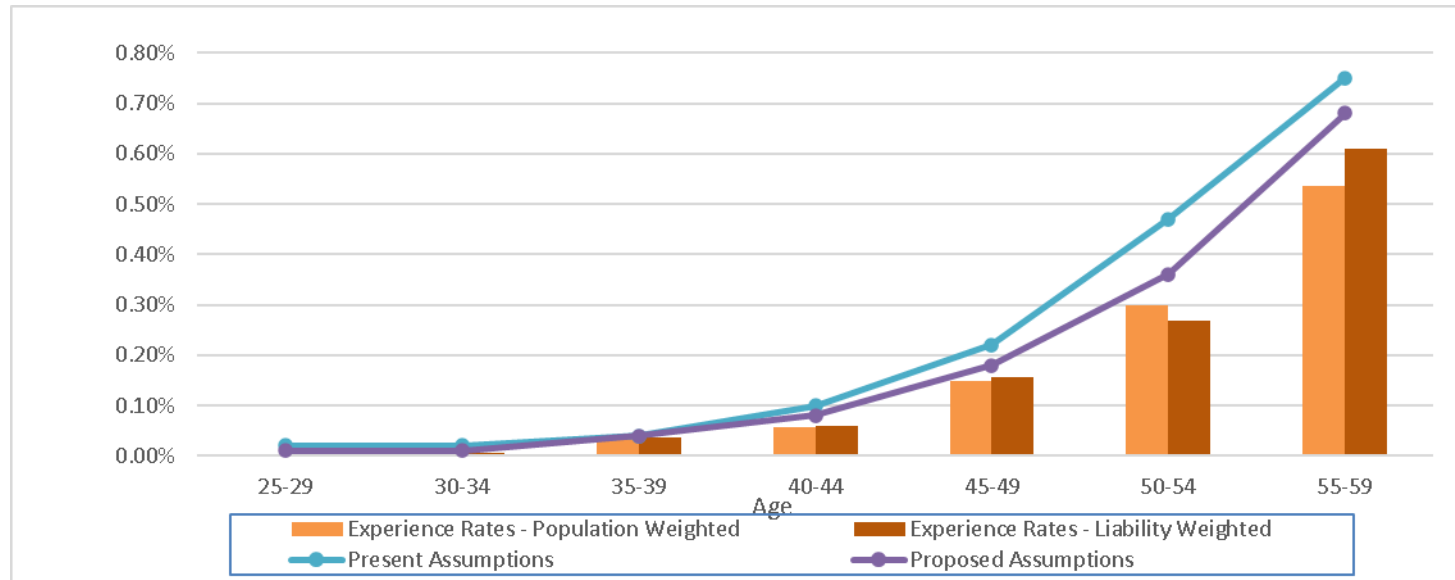
- Overall, Support members experienced **fewer** Normal Retirements and Early Retirement than projected by the present assumptions
- Since retirement rates were increased in the prior study, we recommend no changes as the observed decrease represents a non-confirming trend



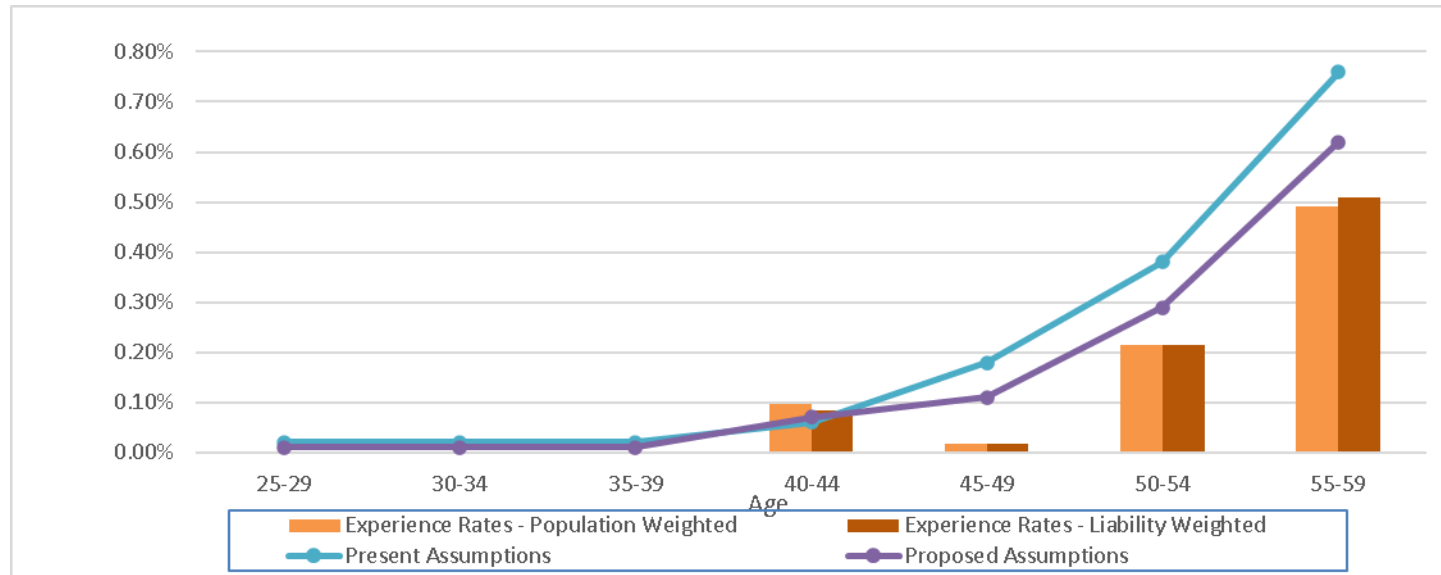
Rates of Disability

- Overall, both Education and Support members experienced **fewer** disabilities than projected by the present assumptions
- Therefore, we recommend decreasing disability rates to partially reflect observed experience

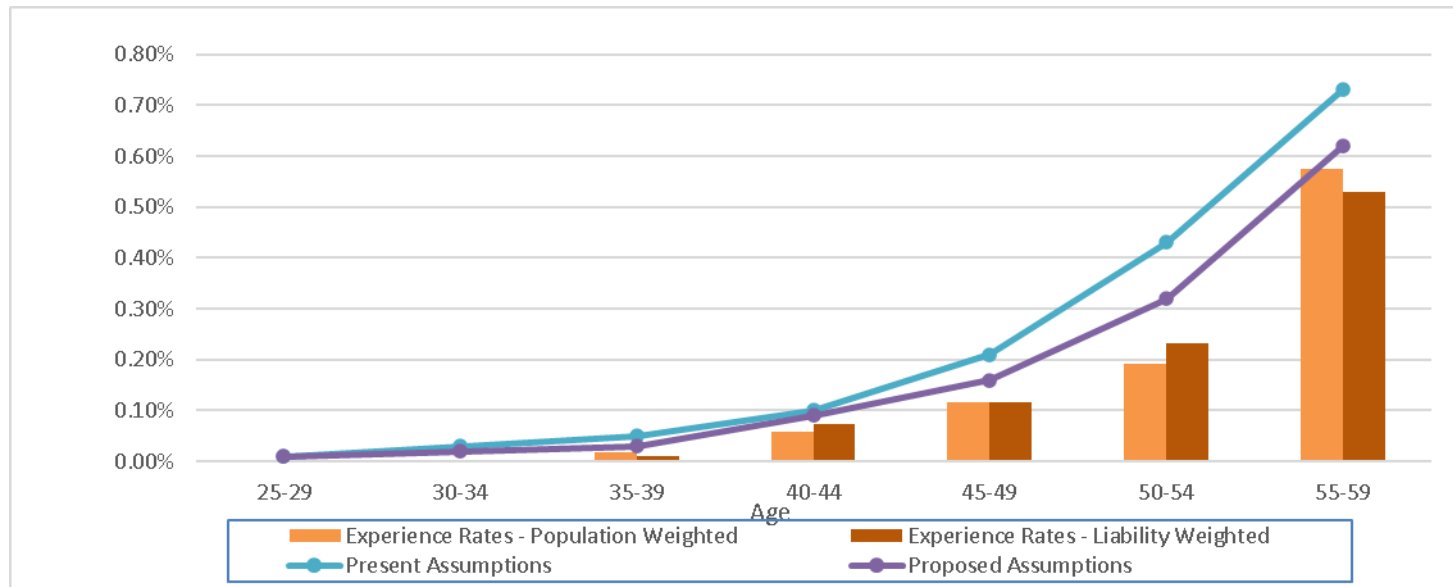
Disability – Education Females



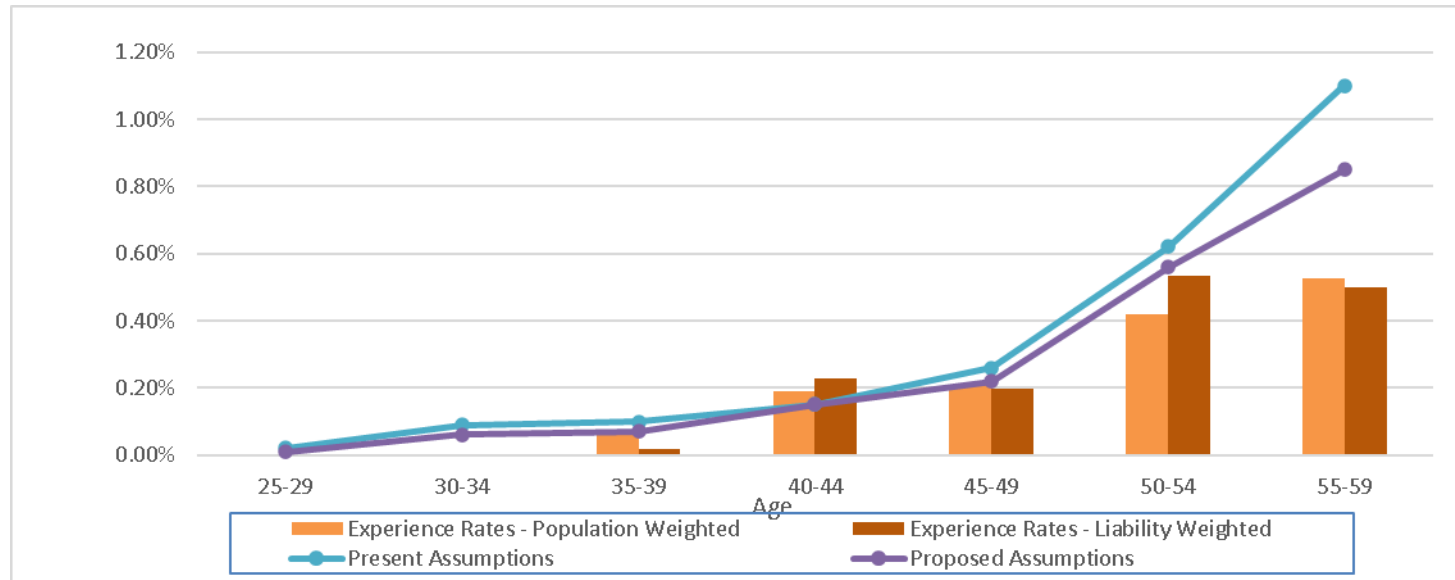
Disability – Education Males



Disability – Support Females



Disability – Support Males



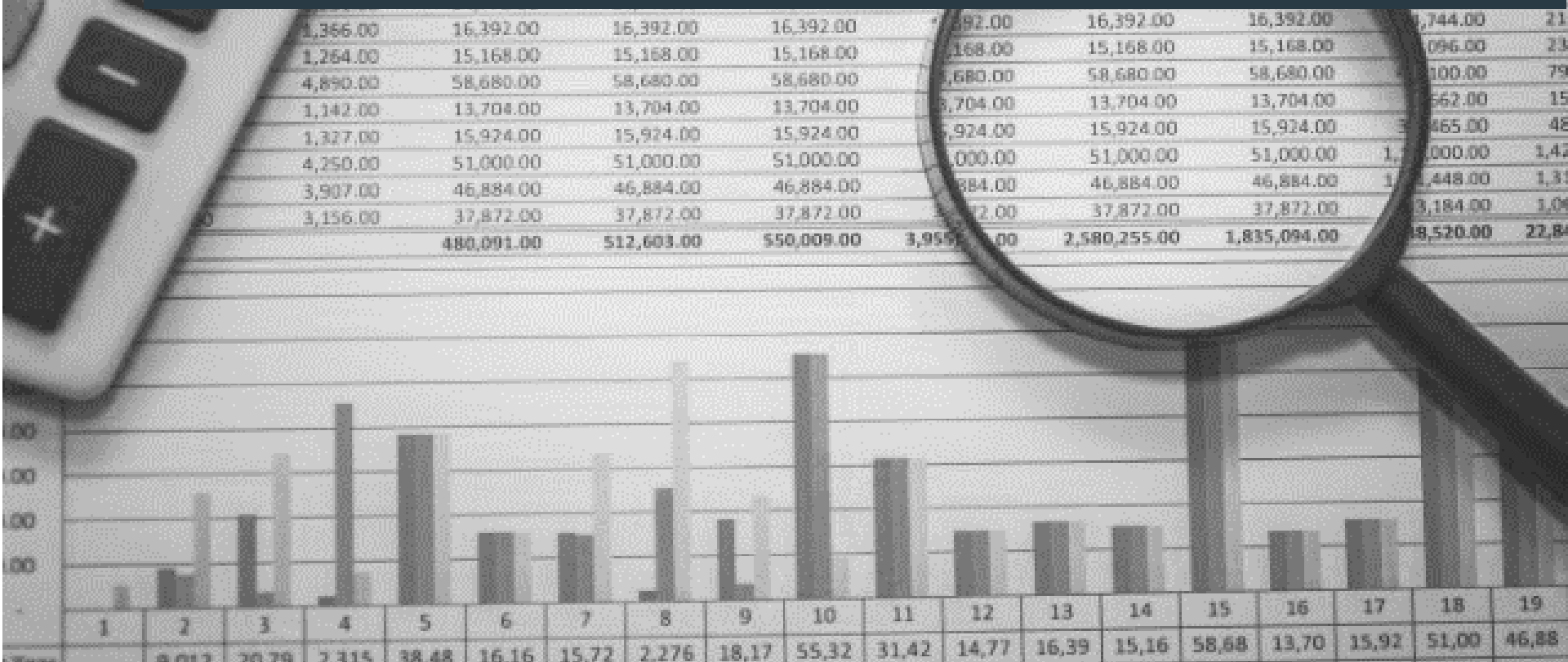
T-DROP Duration

- The average duration by age for members who retired from T-DROP or who are still in T-DROP during the experience period is shown below:

Age at DROP Date	Average Observed Duration Years			
	T-DROP	Retired during Experience Period		
	Membership at 6/30/2025		Assumed Duration Years	Present
<= 56	4.4	6.6	7	7
57	3.6	4.8	6	5
58	3.4	4.3	5	5
59	3.0	3.8	4	4
60+	2.5	2.7	4	3

- Members still in T-DROP have an unknown drop out date so duration will be higher than shown above for most members
- T-DROP duration has declined slightly, consistent with the trend identified in the prior study
- We recommend decreasing the expected T-DROP duration periods to reflect observed experience

Economic Assumptions



Economic Assumptions – Current

- The economic assumptions currently in place are:
 - Investment Return – 7.25%
 - Net of administrative and investment expenses
 - Wage Inflation – 2.75%
 - Price Inflation – 2.50%



Economic Assumptions – ASOP No. 27

- Guidance regarding the selection of economic assumptions is governed by Actuarial Standard of Practice (ASOP) No. 27
- ASOP No. 27 requires that the selected economic assumptions be individually reasonable and consistent with one another
- That is, the selection of the price inflation assumption should be consistent with the selection of the wage inflation and investment return assumptions



Economic Assumptions – Wage Inflation

- Wage inflation consists of two components:
 - A portion due to pure price inflation (i.e., increases due to changes in the CPI)
 - Increases in average salary levels in excess of pure price inflation (real wage growth/differential)
- We reviewed various sources to arrive at the price inflation assumption

Congressional Budget Office^b	
5-Year Annual Average	2.48%
10-Year Annual Average	2.39%
Federal Reserve Bank of Philadelphia^c	
5-Year Annual Average	2.40%
10-Year Annual Average	2.30%
Federal Reserve Bank of Cleveland^d	
10-Year Expectation	2.19%
20-Year Expectation	2.29%
30-Year Expectation	2.37%
Federal Reserve Bank of St. Louis^e	
10-Year Breakeven Inflation	2.34%
20-Year Breakeven Inflation	2.45%
30-Year Breakeven Inflation	2.22%
U.S. Department of the Treasury^f	
10-Year Breakeven Inflation	2.37%
20-Year Breakeven Inflation	2.44%
30-Year Breakeven Inflation	2.25%
50-Year Breakeven Inflation	2.29%
100-Year Breakeven Inflation	2.31%
Social Security Trustees^g	
Ultimate Intermediate Assumption	2.40%

Economic Assumptions – Price Inflation



^a**End of the First Quarter, 2026.** Version 2026-04-14 by Gabriel, Roeder, Smith & Company

^b*The Budget and Economic Outlook: 2026 to 2036*, Release Date: February 2026, Consumer Price Index (CPI-U), Percentage Change from Year to Year, 5-Year Annual Average (2026 - 2030), 10-Year Annual Average (2026 - 2035).

^c*First Quarter 2026 Survey of Professional Forecasters*, Release Date: March 6, 2026, Headline CPI, Annualized Percentage Points, 5-Year Annual Average (2026 - 2030), 10-Year Annual Average (2026 - 2035).

^dInflation Expectations, Model output date: March 1, 2026.

^eThe breakeven inflation rate represents a measure of expected inflation derived from X-Year Treasury Constant Maturity Securities and X-Year Treasury Inflation-Indexed Constant Maturity Securities. Observation date: March, 2026.

^fThe Treasury Breakeven Inflation (TBI) Curve, Monthly Average Rates, March, 2026.

^g*The 2025 Annual Report of The Board of Trustees of The Federal Old-Age And Survivors Insurance and Federal Disability Insurance Trust Funds*, June 18, 2025, p. 11, Key Assumptions and Summary Measures for Long-Range (75-year) Projections, Intermediate, Consumer Price Index (CPI-W).

Price Inflation

- Forward looking Price Inflation forecasts are slightly below the current 2.5% assumption.
- The 2026 annual report of the Social Security Trustees uses 2.4% as the intermediate assumption.
- For the firms included in the 2026 version of the GRS CMAM, the average price inflation assumption used in the forward-looking capital market expectations was 2.42% over the next 10 years and 2.48% over the next 20 to 30 years.
- Based upon the reviewed forward-looking data, we suggest that the inflation assumption remain unchanged at 2.50%.

Wage Inflation

- We are comfortable with the wage inflation assumption exceeding the price inflation by 0.25% to 1.00%.
- Over the last 5-year period, the across-the-board pay increase component of salary increases (i.e., wage inflation) was approximately 3.25%.
- Based upon the reviewed data and considering the price inflation assumption of 2.50%, we recommend that the Board increase the wage inflation assumption from 2.75% to 3.00%.

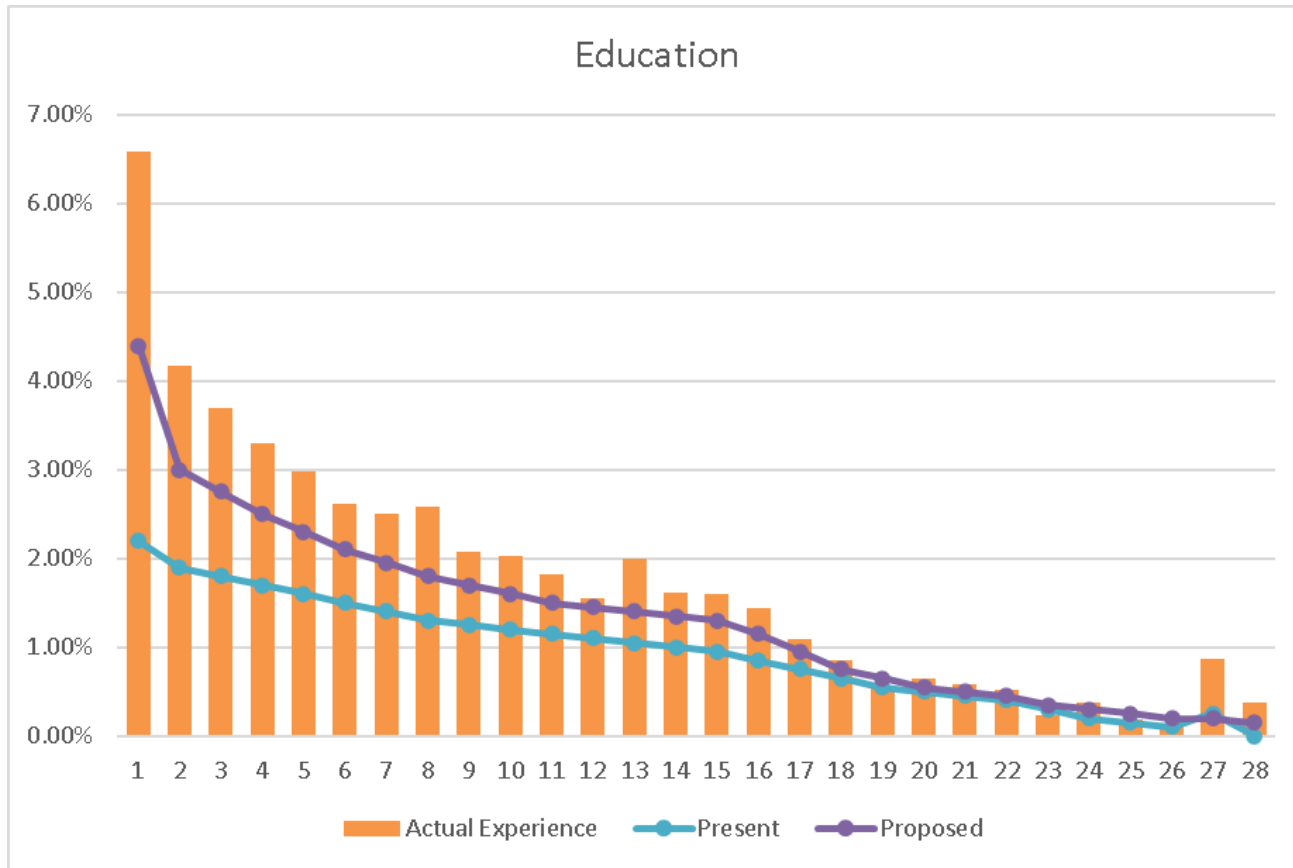


Economic Assumptions – Merit and Seniority

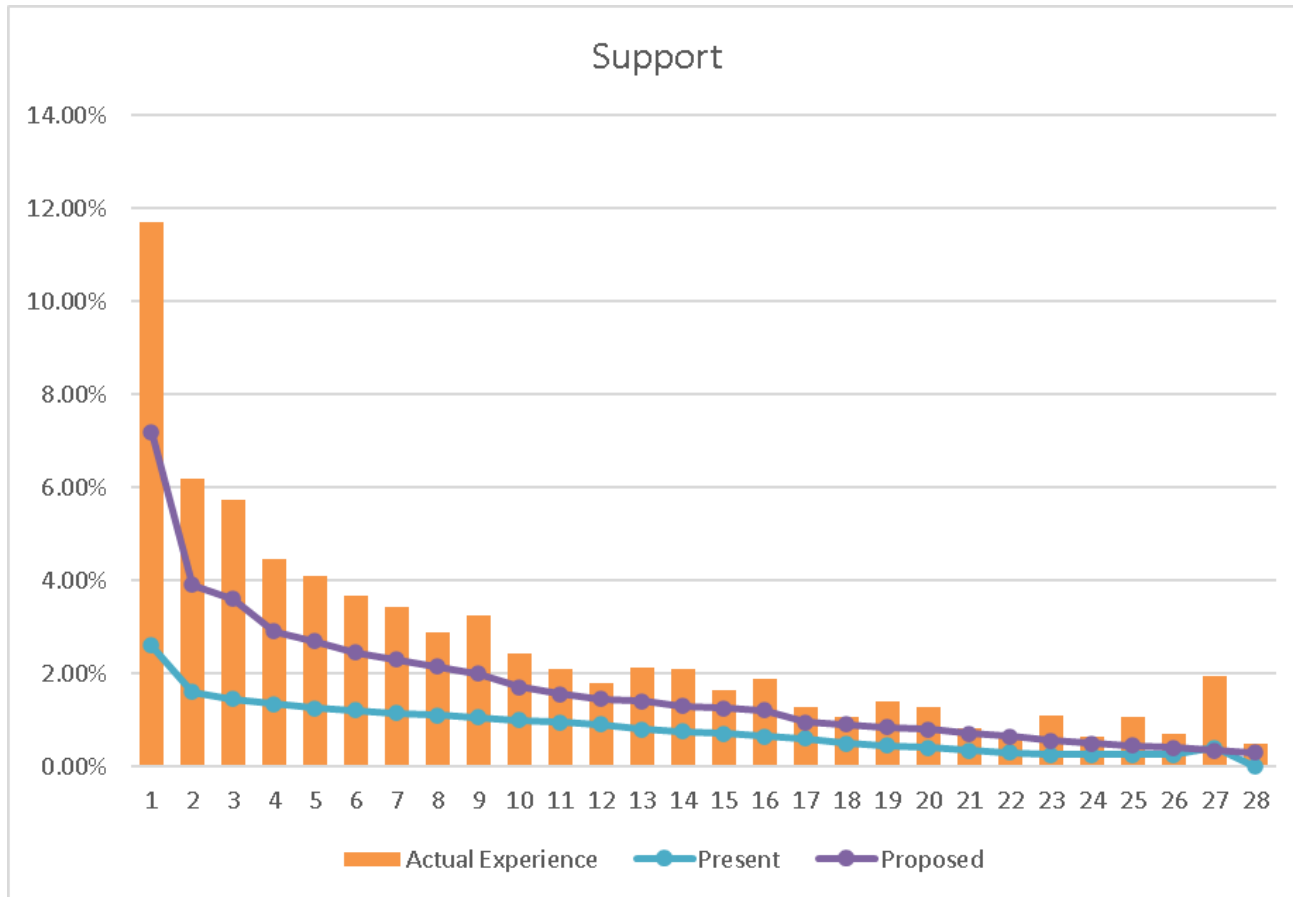
- Total pay increases for an individual consist of a portion due to wage inflation and a portion due to an individual's on the job performance (i.e., merit and seniority)
- We excluded years in our analysis where high observed increases likely reflect temporary conditions rather than a sustained pattern
 - For Education members, we excluded the implementation year of the LEARNS Act (2023-2024)
 - For Support members, we excluded the first year (2020-2021) due to the potential impact of COVID-19 related workforce disruptions
- After excluding the periods noted above, ATRS Education and Support members experienced higher merit and seniority increases during the observed period than assumed
- We recommend increasing the merit and seniority pay increase assumptions to partially reflect observed experience



Economic Assumptions – Merit and Seniority



Economic Assumptions – Merit and Seniority



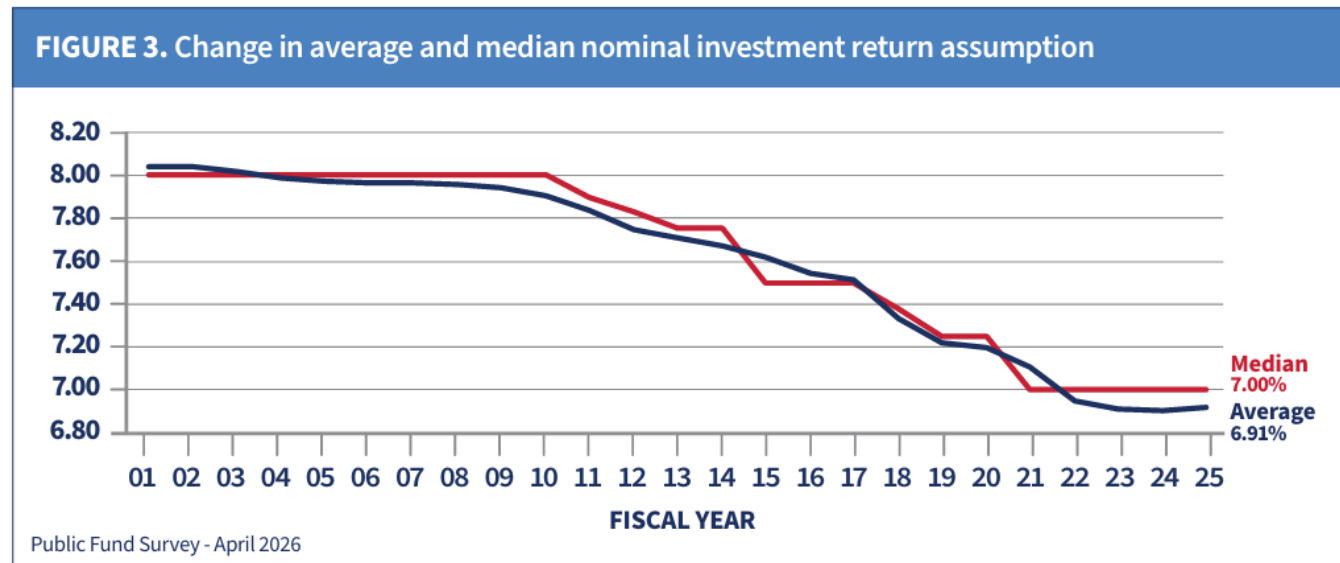
Economic Assumptions – Investment Return

- The investment return assumption is the actuarial assumption that has the largest effect on actuarial valuation results
- As more of the actuarial accrued liabilities are related to non-active members, the nominal (as opposed to real/inflation adjusted) investment return assumption becomes a more prominent factor
- More than 50% of ATRS liabilities are attributable to retirees

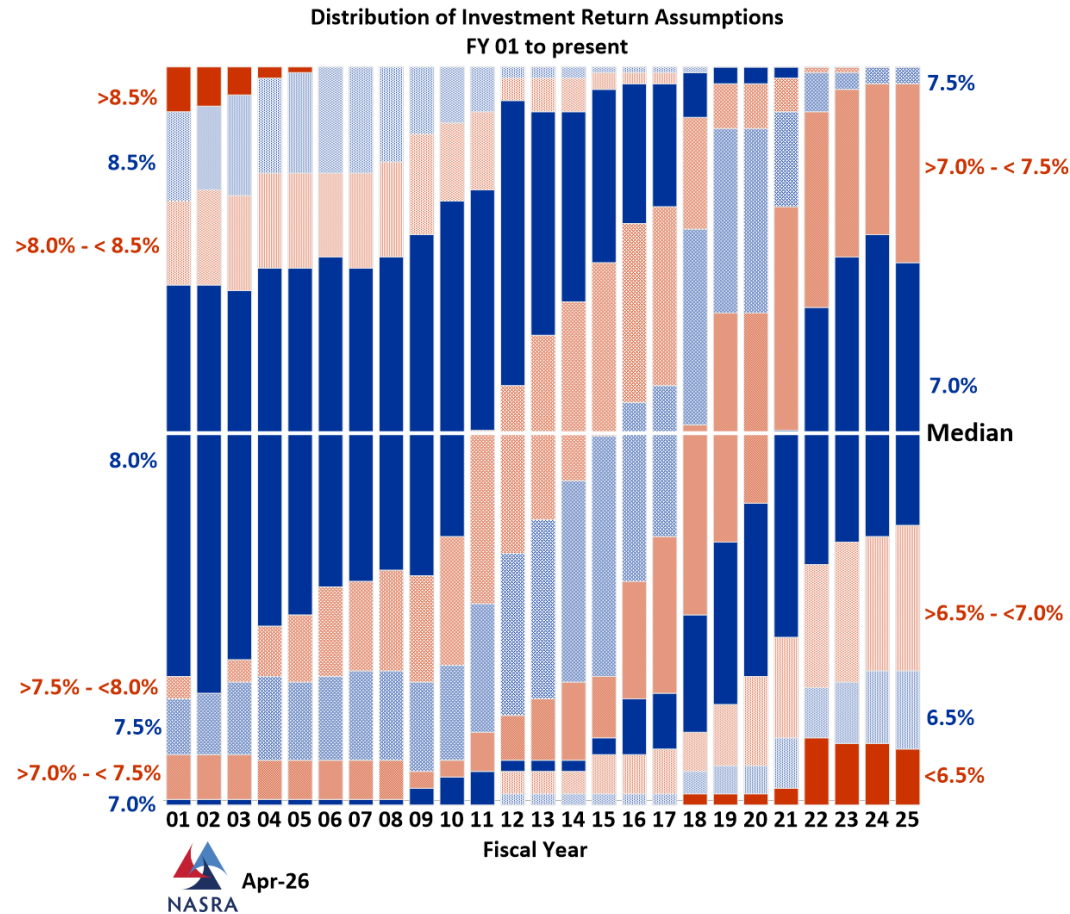


Economic Assumptions - Investment Return Averages

- NASRA Issue Brief, as of April 2026, shows that the average investment return assumption for 132 Systems was 6.91% and the median was 7.00%.
- The average and median investment return assumption has remained relatively level from 2022 to 2025.



Economic Assumptions - Investment Return Averages



Economic Assumptions – Investment Return

Target Asset Allocation

- Based on ATRS Board Policy 4, amended December 1, 2025, the target asset allocation for the plan is as follows:

Asset Category	Asset Allocation
Total Equity	46.0%
Fixed Income	18.0
Opportunistic/Alternatives	5.0
Real Assets	14.0
Private Credit	5.0
Private Equity	12.0
Total	100.0%

Economic Assumptions – Investment Return

AON 10-Year Capital Market Assumptions

Asset Class	Capital Market Assumptions ¹		Policy Target (%)	
	Expected Return	Expected Risk	Current	Long-Term
Public Equity	7.1%	17.3%	48.0%	46.0%
Private Equity	10.3%	20.0%	12.0	12.0
Real Assets ²	7.7%	11.9%	15.0	14.0
Opportunistic / Alternatives ³	6.7%	6.1%	5.0	5.0
Private Debt	7.9%	9.5%	--	5.0
Fixed Income ⁴	5.4%	5.1%	20.0	18.0
Total ATRS Expected Return			7.51%	7.59%
Total ATRS Expected Risk			11.53%	11.30%
Expected Sharpe Ratio			0.322	0.336
Illiquid Allocation			32%	36%



1. Based on Aon's 10-year Capital Market Assumptions as of 3/31/2026

2. Represents core and non-core real estate, core and non-core infrastructure, timber and agriculture

3. Represents current mix between global macro, event-driven/credit, alternative risk premia, activist, equity risk premia, and insurance risk premia and mortgage servicing rights

4. Represents blend between core fixed income and multi-asset credit used as a proxy for non-core allocations



Economic Assumptions – Investment Return

AON 30-Year Capital Market Assumptions

Asset Class	Capital Market Assumptions ¹		Policy Target (%)	
	Expected Return	Expected Risk	Current	Long-Term
Public Equity	7.1%	17.7%	48.0%	46.0%
Private Equity	10.3%	20.4%	12.0	12.0
Real Assets ²	7.6%	12.1%	15.0	14.0
Opportunistic / Alternatives ³	6.5%	5.6%	5.0	5.0
Private Debt	7.2%	10.0%	--	5.0
Fixed Income ⁴	5.6%	5.5%	20.0	18.0
Total ATRS Expected Return			7.57%	7.62%
Total ATRS Expected Risk			11.80%	11.57%
Expected Sharpe Ratio			0.303	0.313
Illiquid Allocation			32%	36%



1. Based on Aon's 30-year Capital Market Assumptions as of 3/31/2026

2. Represents core and non-core real estate, core and non-core infrastructure, timber and agriculture

3. Represents current mix between global macro, event-driven/credit, alternative risk premia, activist, equity risk premia, and insurance risk premia and mortgage servicing rights

4. Represents blend between core fixed income and multi-asset credit used as a proxy for non-core allocations



Economic Assumptions – Investment Return

- Aon's 10-year geometric return based on its capital market assumptions as of 3/31/26 is 7.59%
 - Price inflation assumption of 2.3%
 - Real Rate of Return of 5.29%
- Aon's 30-year geometric return based on its capital market assumptions as of 3/31/26 is 7.62%
 - Price inflation assumption of 2.3%
 - Real Rate of Return of 5.32%



Economic Assumptions – Investment Return

- Based upon the proposed asset allocation, future return expectations of various investment firms were analyzed
- Our analysis is based on the GRS Capital Market Assumption Modeler (CMAM)
 - Because GRS is a benefits consulting firm and does not develop or maintain its own capital market expectations, we request and monitor forward-looking expectations developed by several major investment firms
 - We update our CMAM on an annual basis
- The next few slides show the results of the analysis
 - Final expected nominal investment return results are based upon a 2.5% price inflation assumption



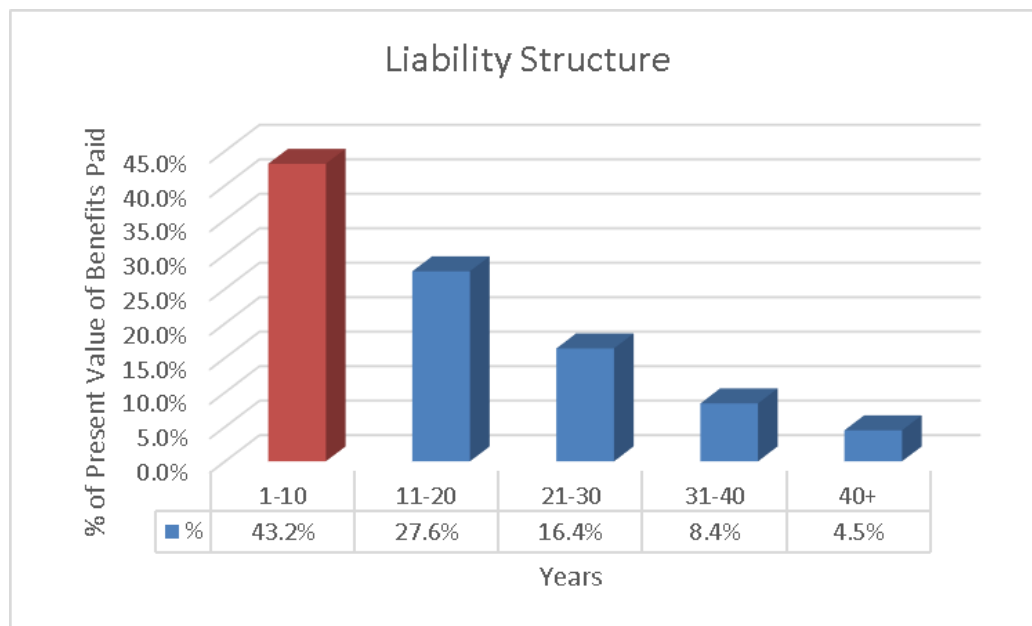
Time Horizon for Investment Return

Assumption for ATRS

- 12 investment firms in our model provide capital market assumptions over an approximate 10-year time horizon.
- 8 investment firms provide capital market expectations over a 20- to 30-year period.
- Our understanding is that the 10-year CMAs tend to be more data driven than the 20-30 year CMAs, which are sometimes based on mean reversion.



Time Horizon for Investment Return Assumption for ATRS



- Given the structure of liabilities and particularly that 43% of liabilities will be paid out within the first 10 years, we think it is important to consider the 10-year capital market assumptions more than the longer term assumption in formulating an opinion regarding the expected return on assets.

Economic Assumptions – Investment Return

The chart below gives the distribution of compounded returns over a 10-year period and the probability of achieving various returns compounded over the period.

GRS 2026 CMAM						
Capital Market Assumption Set (CMA)	Distribution of 10-Year Average Geometric Net Nominal Return			Probability of exceeding	Probability of exceeding	Probability of exceeding
	40th	50th	60th	7.25%	7.00%	6.75%
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	4.63%	5.70%	6.78%	35.81%	38.01%	40.25%
2	5.06%	6.06%	7.08%	38.34%	40.74%	43.18%
3	5.41%	6.53%	7.66%	43.58%	45.80%	48.03%
4	5.63%	6.73%	7.85%	45.32%	47.58%	49.86%
5	5.78%	6.75%	7.73%	44.88%	47.44%	50.02%
6	5.89%	6.92%	7.97%	46.83%	49.26%	51.69%
7	6.20%	7.22%	8.24%	49.66%	52.14%	54.61%
8	6.17%	7.24%	8.32%	49.89%	52.25%	54.60%
9	6.39%	7.31%	8.24%	50.68%	53.42%	56.16%
10	6.45%	7.39%	8.35%	51.53%	54.19%	56.84%
11	6.53%	7.50%	8.48%	52.62%	55.22%	57.79%
12	6.65%	7.60%	8.56%	53.68%	56.31%	58.92%
Average	5.90%	6.91%	7.94%	46.90%	49.36%	51.83%

Economic Assumptions – Investment Return

- The forward-looking expected geometric return, or 50th percentile return, is 6.91%
- The portfolio's 20-30 year geometric expectation is 7.35%
- We place greater weight on the 10-year expectation because it better reflects the System's liability structure and the period over which plan assets are expected to support benefit payments



Economic Assumptions – Investment Return

- Given the investment return expectations, we suggest that ATRS consider an investment return assumption in the range of 6.75% to 7.25%
- We review the investment return assumption on an annual basis to determine whether it remains reasonable for use in the actuarial valuation



Economic Assumptions – Investment Return

- The actuary must certify the reasonableness of all actuarial assumptions each valuation year
- An assumption at the upper end of reasonable could move outside of the reasonable range in future years increasing the risk of a qualification statement being needed in the actuarial valuation unless the assumption is changed



Administrative Expenses

Year	Administrative Expense	Valuation Payroll
2021	\$7,326,801	\$3,204,720,806
2022	6,650,604	3,320,346,417
2023	7,892,822	3,492,029,158
2024	8,427,396	3,611,533,918
2025	9,525,535	3,643,883,478
Avg.	\$7,964,632	\$3,454,502,755
% of Pay		0.23%

Current valuation treatment: Administrative expenses are assumed to be paid from the System's investment earnings, meaning the assumed rate of return is net of both investment and administrative expenses

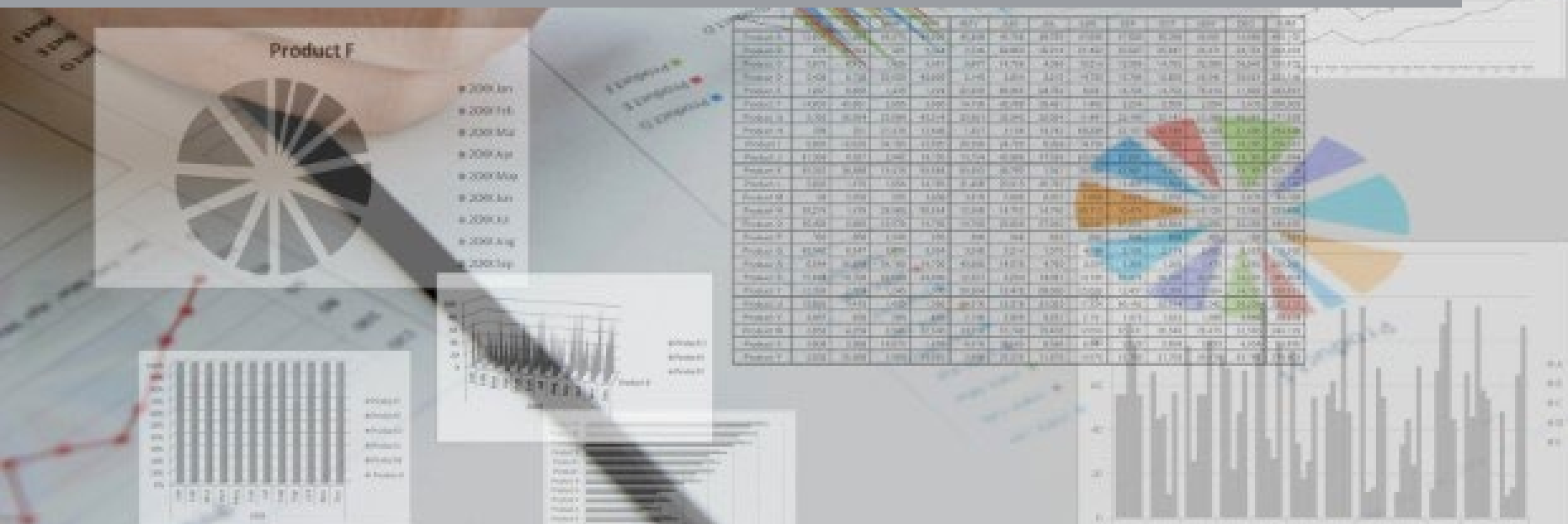
Accounting treatment: Administrative expenses are treated separately, implying that the assumed rate of return is net of investment expenses only

Observed experience: Administrative expenses averaged 0.23% of active member payroll during the experience period

Recommendation: Add a normal cost contribution of 0.25% of payroll to cover administrative expenses and better align the funding and accounting assumptions. Funding administrative expenses through the contribution rate also supports a slightly higher assumed rate of return.



EFFECTS ON PENSION VALUATION RESULTS



Proposed Alternate Economic Assumptions

Demographic Assumptions and Merit and Longevity Pay Increases Investment Return Wage Inflation	Current 7.25% 2.75%	Proposed 7.25% 3.00%	Alternate 1	Alternate 2
			Proposed 7.15% 3.00%	Proposed 7.10% 3.00%
Computed Contributions for:				
Normal Cost	13.47%	14.50%	14.87%	15.05%
Average Member Contributions	6.40%	6.38%	6.38%	6.38%
Net Employer Normal Cost	7.07%	8.12%	8.49%	8.67%
Unfunded Actuarial Accrued Liabilities	7.93%	6.88%	6.51%	6.33%
Employer Contribution Rate	15.00%	15.00%	15.00%	15.00%
Amortization Years	21.0	25.4	31.0	34.5
Actuarial Accrued Liability	\$ 27,026,712,791	\$ 27,067,158,158	\$ 27,370,667,094	\$ 27,524,575,233
Actuarial Value of Assets	22,806,564,333	22,806,564,333	22,806,564,333	22,806,564,333
Funded Ratio	84.4%	84.3%	83.3%	82.9%
Amortization Years - MVA	14.5	17.2	20.9	23.1
Funded Ratio - MVA	87.8%	87.7%	86.7%	86.3%

Based on the results of the June 30, 2025 valuation.



Proposed Alternate Economic Assumptions

- The impact of the proposed assumptions presented on the prior page is based on the June 30, 2025 actuarial valuation
- A 7.25% assumed rate of return and all other assumptions as recommended would produce an amortization period of about 25 years
 - This will place ATRS above the median return of other public retirement systems
- A 7.15% and 7.10% assumed rate of return and all other assumptions as recommended would produce amortization periods of 31 years and 35 years, respectively



Proposed Alternate Economic Assumptions

- The June 30, 2026 valuation will reflect the new assumptions, updated census data, and experience through 6/30/26 (good or bad)
- If experience from 7/1/25 – 6/30/26 were to align perfectly with assumptions, the amortization period would decrease as remaining investment gains are recognized in the funding value of assets



Projected Amortization Years

Let's look at the projected amortization years for Alternate 1 and Alternate 2 based on different rates of investment return for 2026

All scenarios assume a 7.15% or 7.10% return for years after 2026

All scenarios assume a 15% of pay contribution rate

The current schedule of deferred asset gains/losses are reflected



Projected Amortization Years – 7.15%

Valuation Year	Actual	Projection			
	2025	2026	2027	2028	2029
Projection A					
Investment Return	9.80%	7.15%	7.15%	7.15%	7.15%
Amortization Years	31	27	21	18	17
Projection B					
Investment Return	9.80%	10.00%	7.15%	7.15%	7.15%
Amortization Years	31	25	18	14	12

If the fiscal year 2026 investment return equals the assumed return of 7.15%, the amortization period is projected to be 27 years.

If the investment return is 10.00%, the projected amortization period would be 25 years.



Projected Amortization Years – 7.10%

Valuation Year	Actual	Projection			
	2025	2026	2027	2028	2029
Projection A					
Investment Return	9.80%	7.10%	7.10%	7.10%	7.10%
Amortization Years	35	30	23	20	19
Projection B					
Investment Return	9.80%	10.00%	7.10%	7.10%	7.10%
Amortization Years	35	28	20	16	13

If the fiscal year 2026 investment return equals the assumed return of 7.10%, the amortization period is projected to be 30 years.

If the investment return is 10.00%, the projected amortization period would be 28 years.



**NEXT
STEPS**

SUMMARY AND NEXT STEPS

Making a Decision

- GRS recommends adopting the set of proposed demographic assumptions as a package
- GRS recommends increasing the wage inflation assumption from 2.75% to 3.00%
- GRS recommends an investment return assumption in the range of 6.75% to 7.25%
- Maintaining the 7.25% assumption, which is at the upper end of the range, may lead to a series of continuing losses for ATRS
- An upper end assumption could be deemed unreasonable in a future valuation



Timeline

- Today or very soon
 - Board action taken regarding the actuarial assumptions
- August/September
 - GRS to produce formal experience study report as a follow up
- October
 - GRS to produce GASB 67 & 68 Schedules
- December
 - GRS to present detailed valuation results to ATRS Board and Staff based on the new assumptions



THANK YOU

QUESTIONS

Disclosures

- This presentation shall not be construed to provide tax advice, legal advice or investment advice.
- Judith Kermans, Heidi Barry and Derek Henning 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.
- Additional information regarding actuarial assumptions and methods, and important additional disclosures will be provided in the report titled “5-Year Experience Study – July 1, 2020 through June 30, 2025”.
- If you need additional information to make an informed decision about the contents of this presentation, or if anything appears to be missing or incomplete please contact us before using this presentation.



ARKANSAS TEACHER RETIREMENT SYSTEM
1400 West Third Street
Little Rock, Arkansas 72201

RESOLUTION
No. 2026-36

**MODIFICATION OF ACTUARIAL ASSUMED RATE OF RETURN
FOR FISCAL YEAR 2026 AND THEREAFTER**

WHEREAS, the Board of Trustees (Board) of the Arkansas Teacher Retirement System (ATRS) is authorized to adjust the actuarial assumed rate of return for ATRS; and

WHEREAS, the ATRS Board reviews the actuarial assumed rate of return for ATRS to ensure it fairly and accurately reflects a reasonable rate of return for ATRS based upon the ATRS asset allocation, the expected rates of inflation, projected economic conditions, global economic activity, and actuarial standards; and

WHEREAS, the ATRS Board has reviewed the recommendation of the ATRS executive staff, considered input from the ATRS general investment consultant, Aon Hewitt Investment Consulting, Inc., and received additional input from the ATRS actuary, Gabriel, Roeder, Smith & Company, regarding an appropriate actuarial assumed rate of return for ATRS; and

WHEREAS, the ATRS actuary's recommendation is for the Board to adopt an actuarial assumed rate of return within a range of 6.75% to 7.25% based upon the various factors and conditions discussed.

NOW, THEREFORE, BE IT RESOLVED, that the ATRS Board approves the establishment of a _____% annual actuarial assumed rate of return for fiscal year 2026, and each fiscal year thereafter, until such time as the ATRS Board modifies the actuarial assumed rate of return.

FURTHER, BE IT RESOLVED, that the ATRS staff is hereby authorized and directed to take all necessary and proper steps to implement this resolution.

Adopted this 25th day of August, 2026.

Dr. Mike Hernandez, Chairman
Arkansas Teacher Retirement System

6. Other Business

Presented by Dr. Mike Hernandez

7. Adjourn

For Approval

Presented by Dr. Mike Hernandez