



Classic Values, Innovative Advice

# Fairfax County Employees' Retirement System

## 2025 Experience Study

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January 21, 2026



# UAL Since Last Experience Study

|                                                       |    | (millions)   |
|-------------------------------------------------------|----|--------------|
| Unfunded Actuarial Liability (UAL) as of July 1, 2020 | \$ | 1,611.8      |
| Changes in Actuarial Assumptions                      | \$ | 233.7        |
| Expected Change in UAL                                |    | (386.8)      |
| Investment (Gain)/Loss                                |    | 131.7        |
| Plan Changes                                          |    | 0.0          |
| Liability Loss on Salary                              |    | 282.0        |
| Liability Loss on COLA                                |    | 200.0        |
| Liability Losses on Other Items                       |    | <u>143.8</u> |
| Net Change                                            | \$ | 604.4        |
| Unfunded Actuarial Liability as of July 1, 2025       | \$ | 2,216.2      |

# Overview

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Every five years, an experience study is performed to review all of the assumptions used in the actuarial valuations

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Analysis covers both economic and demographic assumptions

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Recent history of the System's liability gains and losses shows large losses on both salary and COLA as well as additional losses on other demographic assumptions

# Overview

## Economic Assumptions

- Inflation
- Rate of investment return
- Non-merit salary increases
- Retiree COLAs
- Administrative expenses

## Demographic Assumptions

- Merit salary increases
- Retirement and DROP rates
- Termination rates
- Disability rates
- Mortality rates and improvement

# Economic Assumptions

Inflation

Retiree COLAs

Rate of Investment Return

Non-merit salary increases

Administrative Expenses

# Economic Assumptions Factors to Consider

Past  
experience of  
the System

Outlook for  
the future

What other  
funds are  
doing

|                         | Current Assumption | Experience Since 2020 | Experience Since 2015 | Experience Since 2010 |
|-------------------------|--------------------|-----------------------|-----------------------|-----------------------|
| Inflation (local CPI-U) | 2.25%              | 3.9%                  | 2.5%                  | 2.3%                  |
| Investment Return       | 6.75%              | 7.1%                  | 5.7%                  | 7.4%                  |
| Salary Increases*       | 2.25%              | 5.6%                  | 4.6%                  | 3.6%                  |
| COLA                    | 2.10%              | 3.2%                  | 2.1%                  | 2.0%                  |
| Admin Expenses          | 0.30%              | 0.31%                 | 0.31%                 | 0.30%                 |

\* Based on increase in average pay

# Inflation Assumption

Current assumption is 2.25%

- Used as a building block for investment returns assumption
- Used as across-the-board component of pay increases
- Informs the choice of annual COLA assumption

The Fed is targeting a rate of 2% when deciding on their monetary policy

2025 Social Security Trustees Report

- Uses a range from 1.8% to 3.0% with median rate of 2.4%

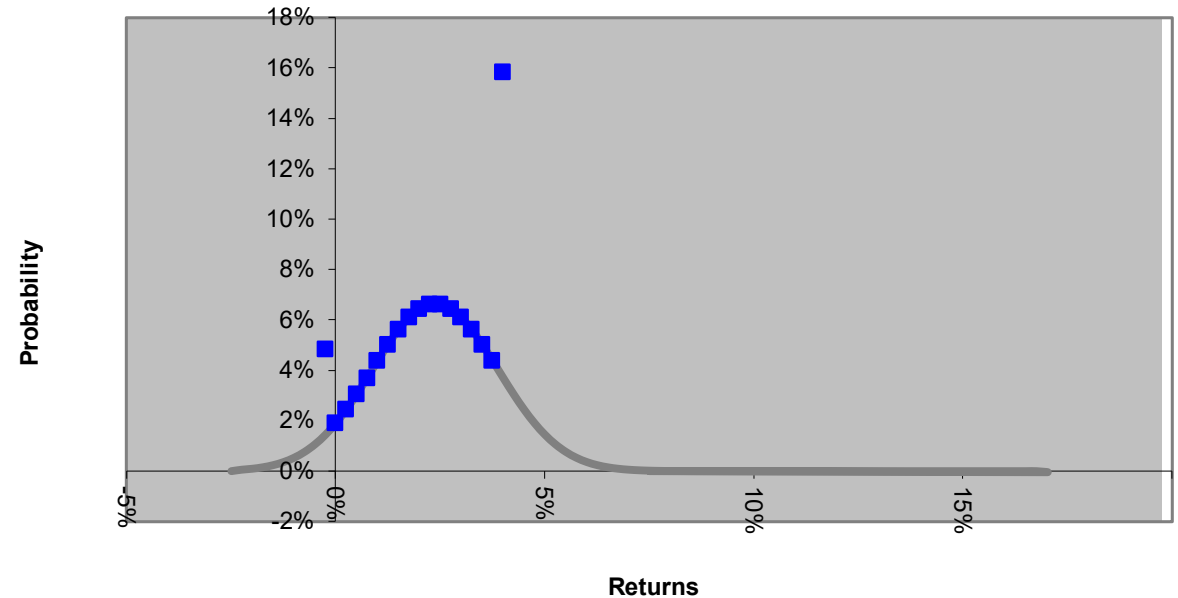
Recommend increasing inflation to 2.5%

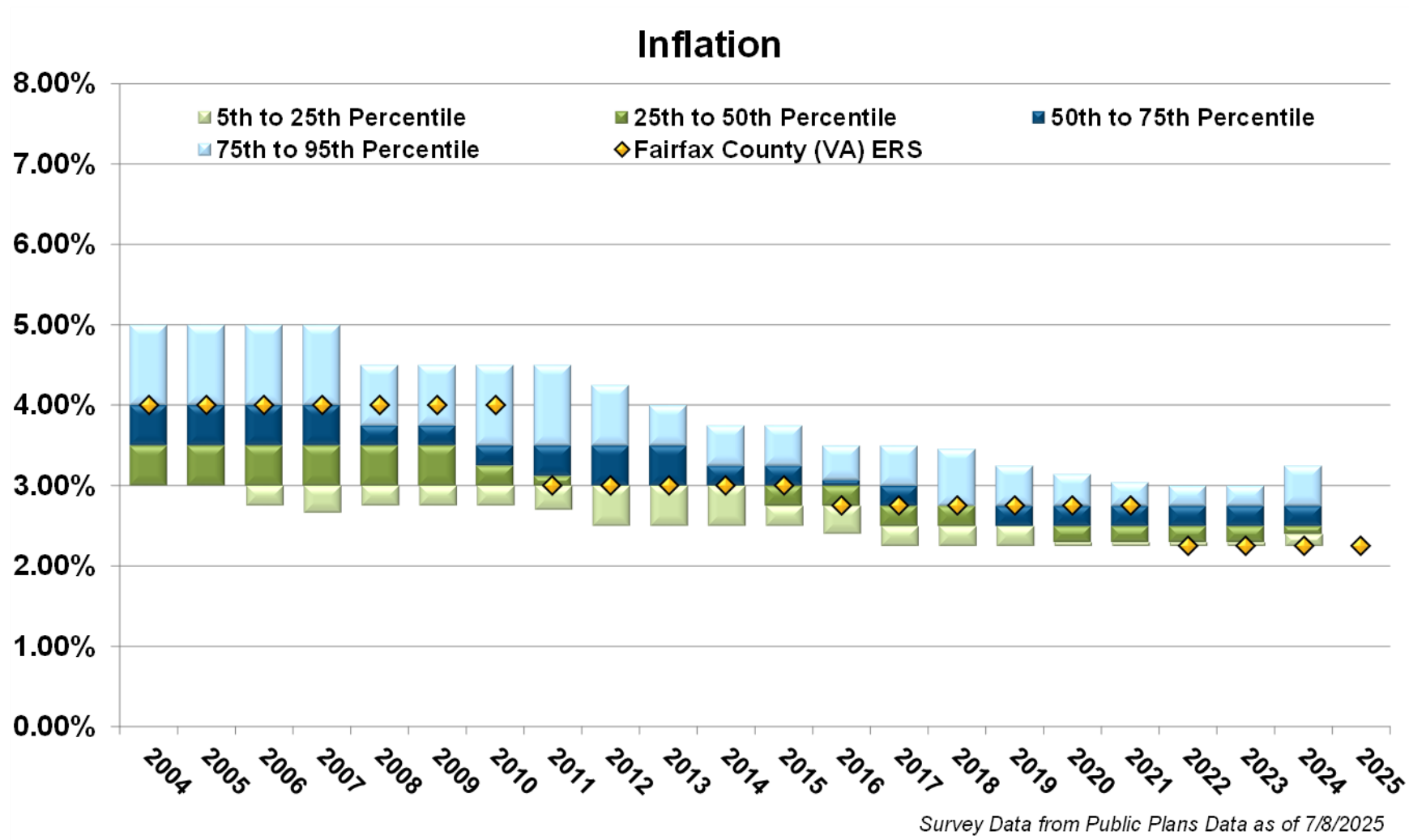
- COLA assumption would then be 2.3%



- Inflation assumption increased to 2.5%
- Actual average over 40 years has been 2.85% and over the last 30 years has been 2.56%
- COLA assumption can be lower than the inflation assumption due to 4% cap
- Graph shows that using the “normal curve” and allowing COLA to run from 0% to 4% results in an average annual amount of 2.3%

Distribution of COLA with 0% Floor and 4% Ceiling





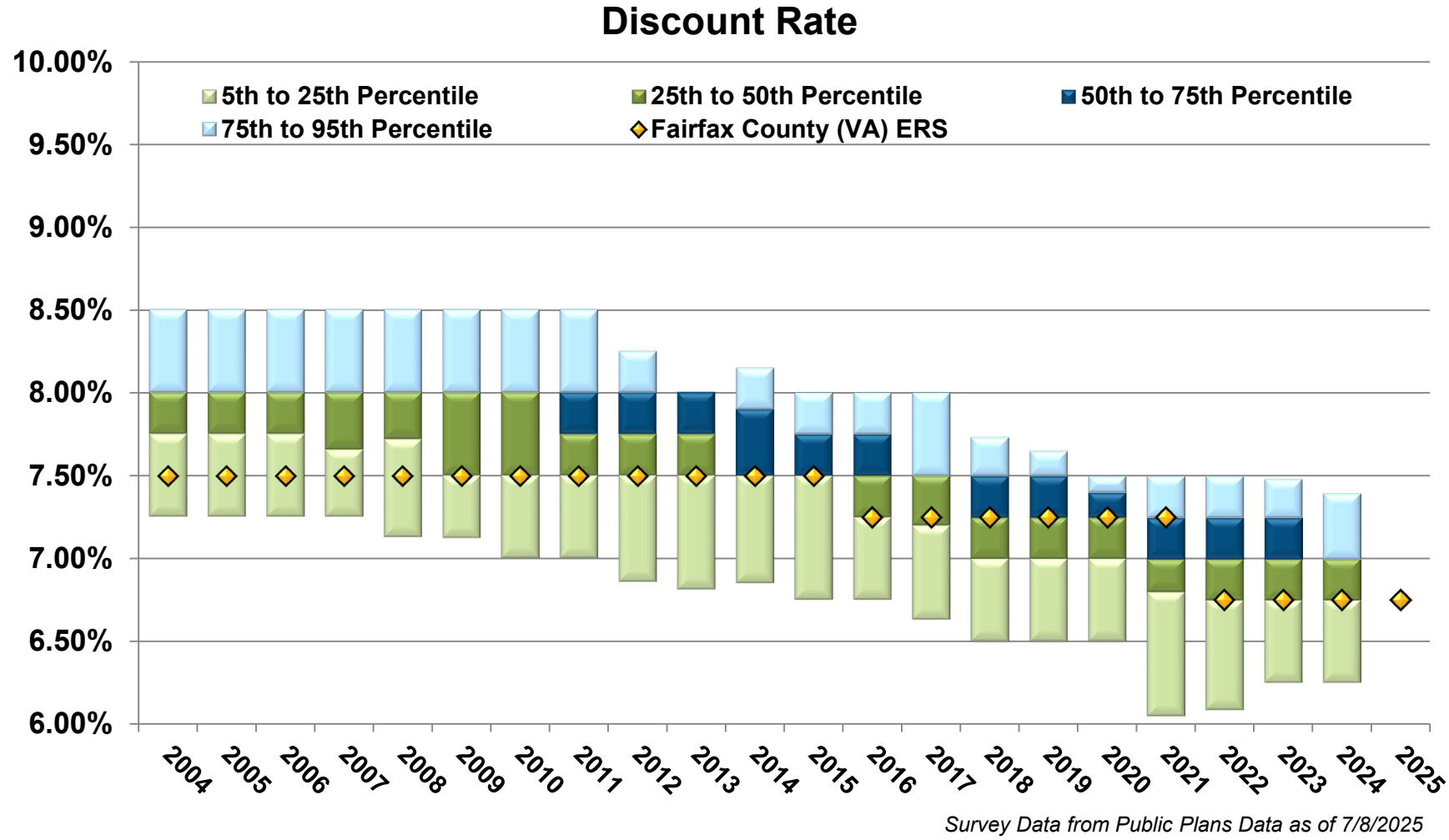
- Based on the Agilis asset liability study of the ERS, the expected arithmetic return on the current asset mix is 8.49%, using an inflation assumption of 2.25%
- We adjust that for the average investment expenses incurred by the ERS over the last 5 years of 1.12% to get a return net of expenses of 7.37%
- The study also showed that the standard deviation of asset returns is 10.5%
- Putting these two metrics together we project percentiles of 15-year returns

# Expected Future Rate of Return

- The first column shows 40<sup>th</sup> through 60<sup>th</sup> percentile range of 6.18%-7.54%
- Adjusting for valuation inflation assumption the range becomes 6.43%-7.79%
- Recommend retaining the 6.75% return assumption
- With the change in inflation assumption this would actually decrease the real rate of return from 4.5% to 4.25%

## Expected Distribution of Average Annual Investment Returns over 15 Years

| Percentile | With 2.25% Inflation | Adjust for 2.5% Inflation |
|------------|----------------------|---------------------------|
| 95th       | 11.38%               | 11.63%                    |
| 90th       | 10.37%               | 10.62%                    |
| 75th       | 8.69%                | 8.94%                     |
| 60th       | 7.54%                | 7.79%                     |
| 50th       | 6.86%                | 7.11%                     |
| 40th       | 6.18%                | 6.43%                     |
| 25th       | 5.06%                | 5.31%                     |
| 10th       | 3.47%                | 3.72%                     |
| 5th        | 2.52%                | 2.77%                     |



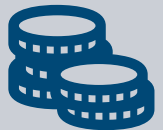
# Administrative Expense



Currently use 0.30% of payroll



History shows the 5-year average has been 0.28%-0.35% of payroll



Recommend maintaining the current expense assumption of 0.30%

# Economic Assumptions - Recommendations

Maintain investment return assumption of 6.75%

Increase inflation from 2.25% to 2.50%

- Value future COLAs at 2.3% (current assumption 2.1%)
- Future Payroll growth at 2.5% (current assumption 2.75%)
- Real rate of return decreased from 4.5% to 4.25%

Maintain administrative cost assumption as 0.30% of payroll

# Demographic Assumptions

Merit Salary Increases

Retirement and DROP Rates

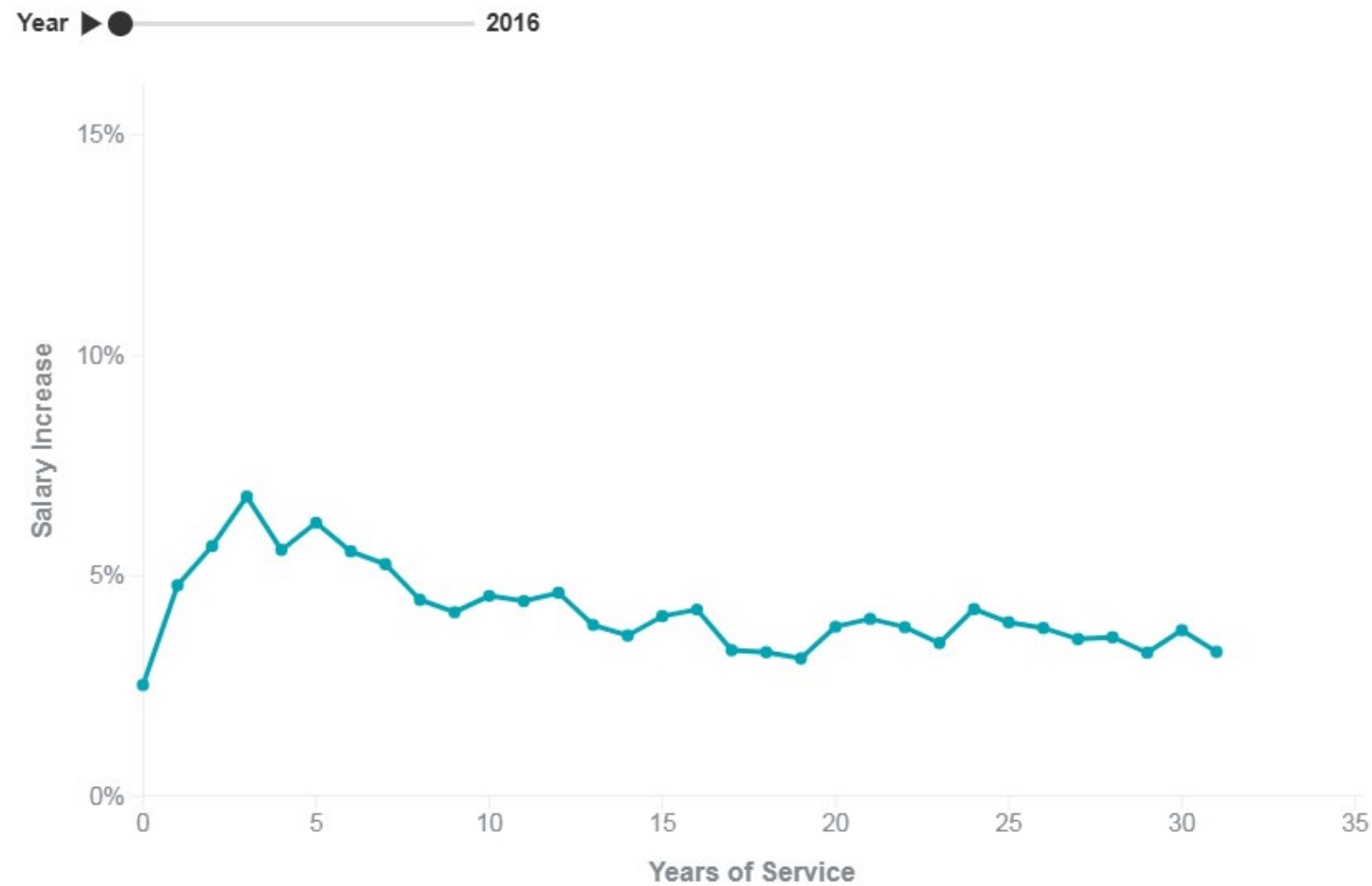
Termination Rates

Disability Rates

Mortality Rates



# Historical Salary Increases



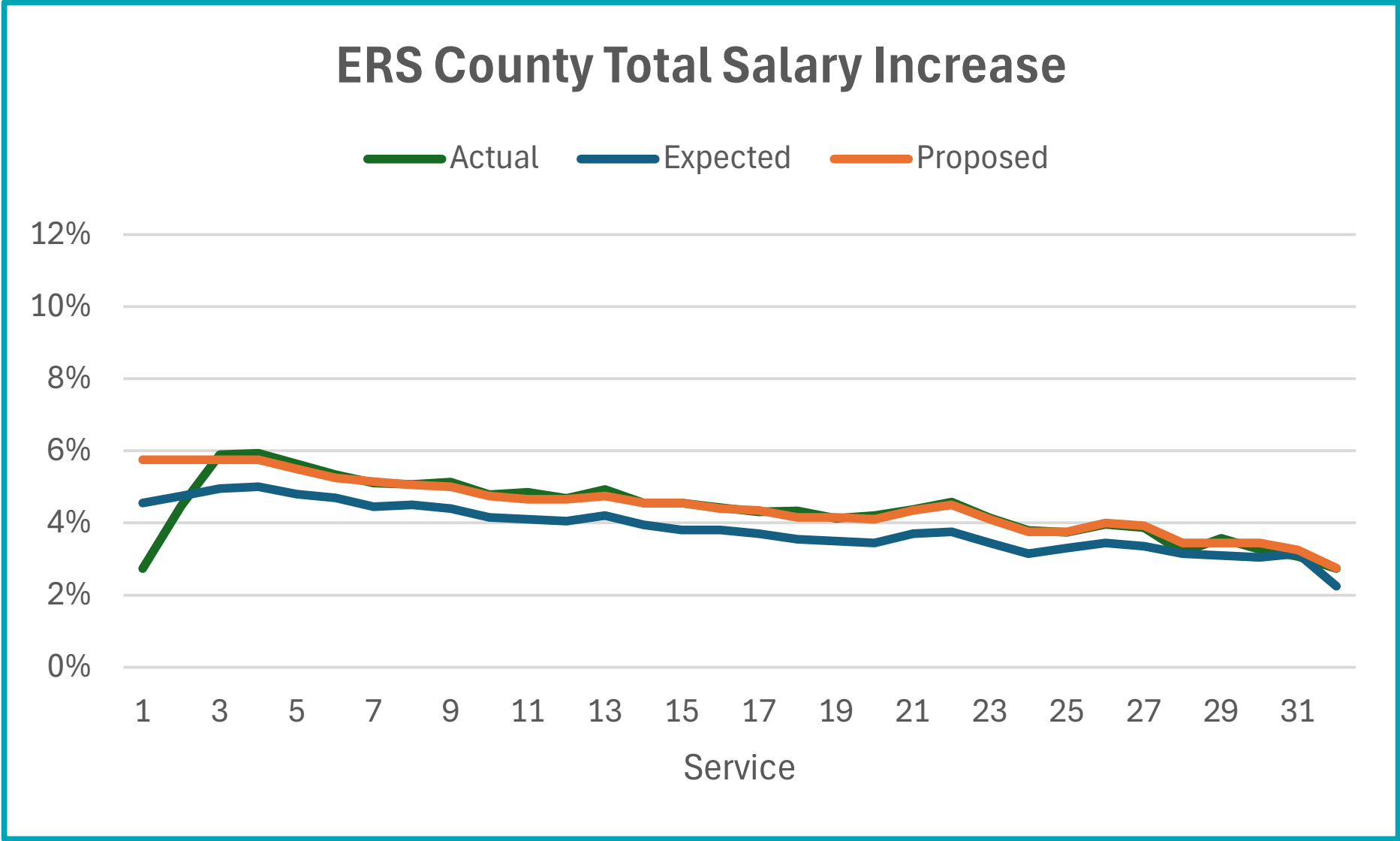
# County Increase Assumption

Currently use different assumptions for County versus Schools

Data shows this should still be the case

We added an observed merit increase to the overall increase average from years 2015-2023

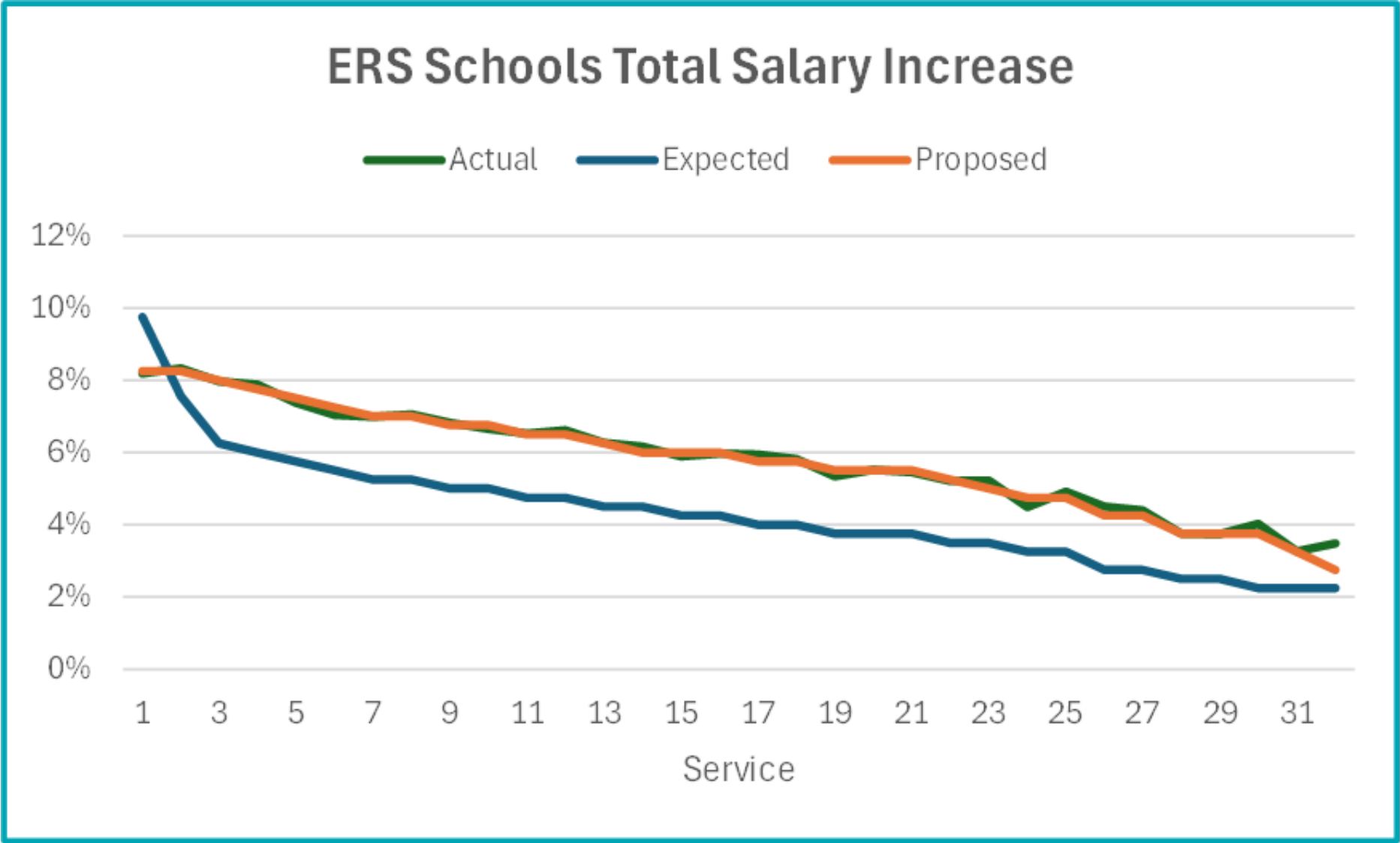
This ignores the large increases from the last 2 years



# Schools Increase Assumption

We added an observed merit increase to the overall increase average from years 2015-2025

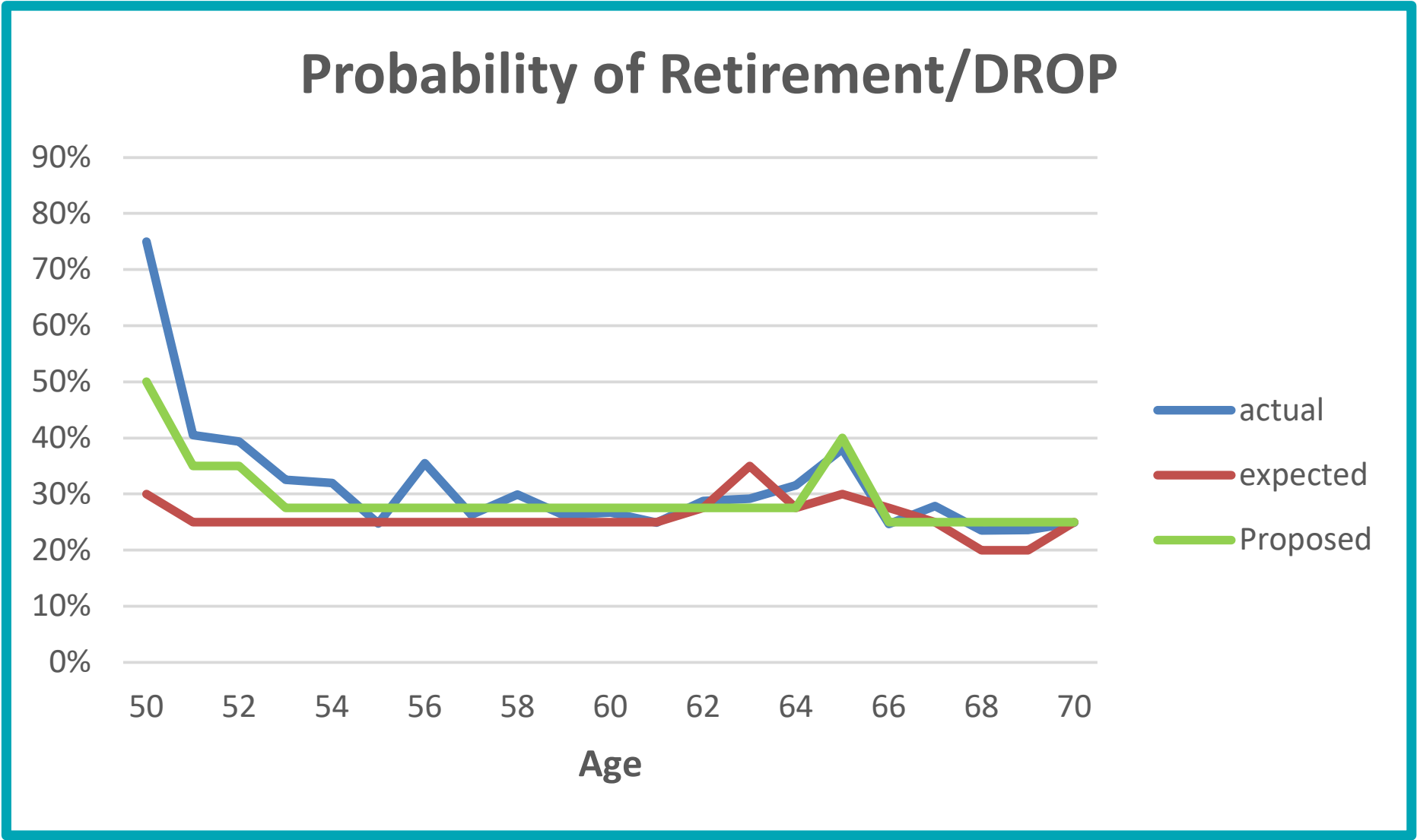
Schools data did not show the large across-the-board increases in 24 & 25 that we saw in the County data



# Retirement/DROP Probability

Experience showed that more people than expected took Retirement/DROP when they reached Rule of 80 at younger ages

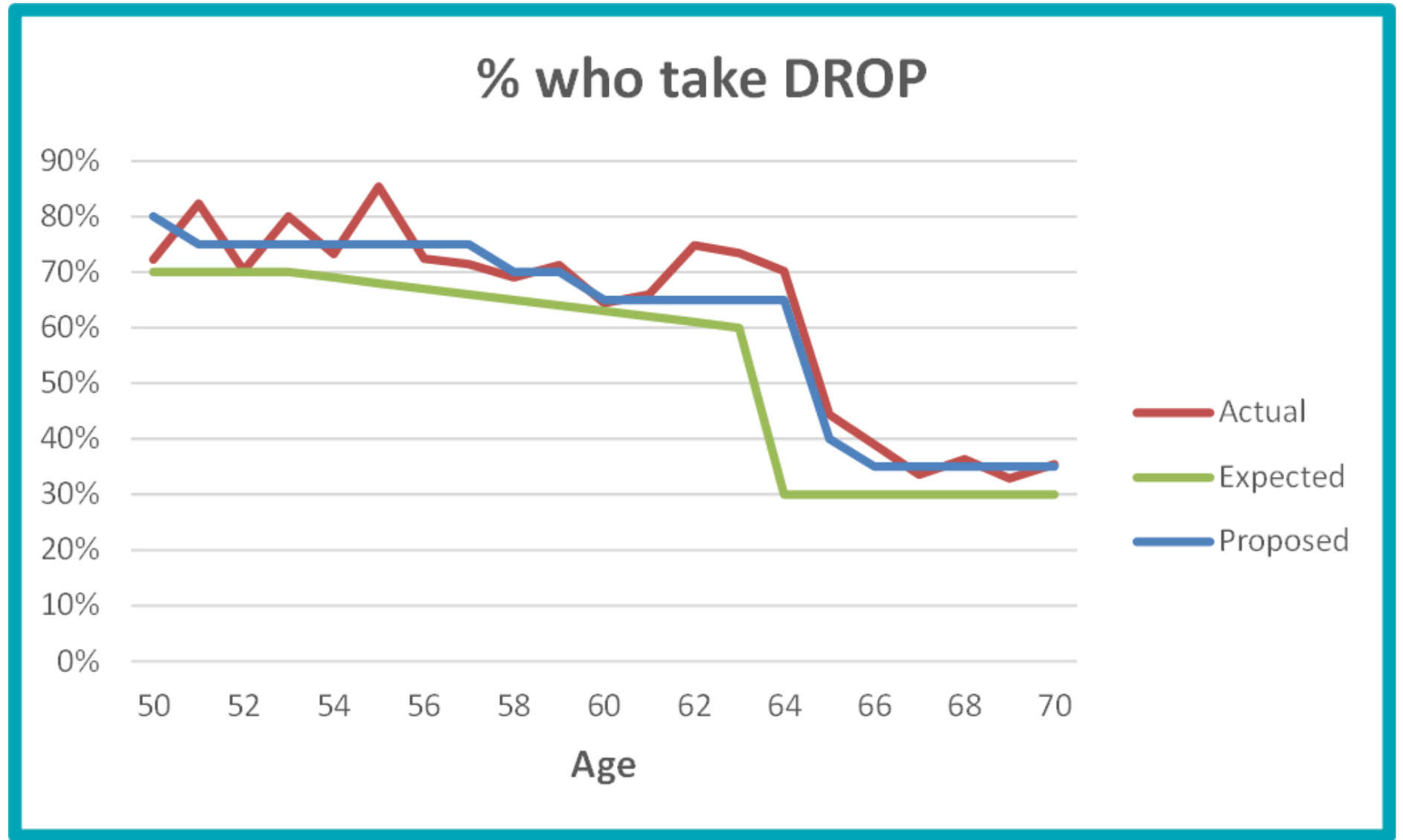
Propose increasing the assumption at those ages and moving the assumption up from ages 52-61



# Percent who take DROP

Study shows percent who elect DROP was generally a bit higher than expected

Increased rates recommended

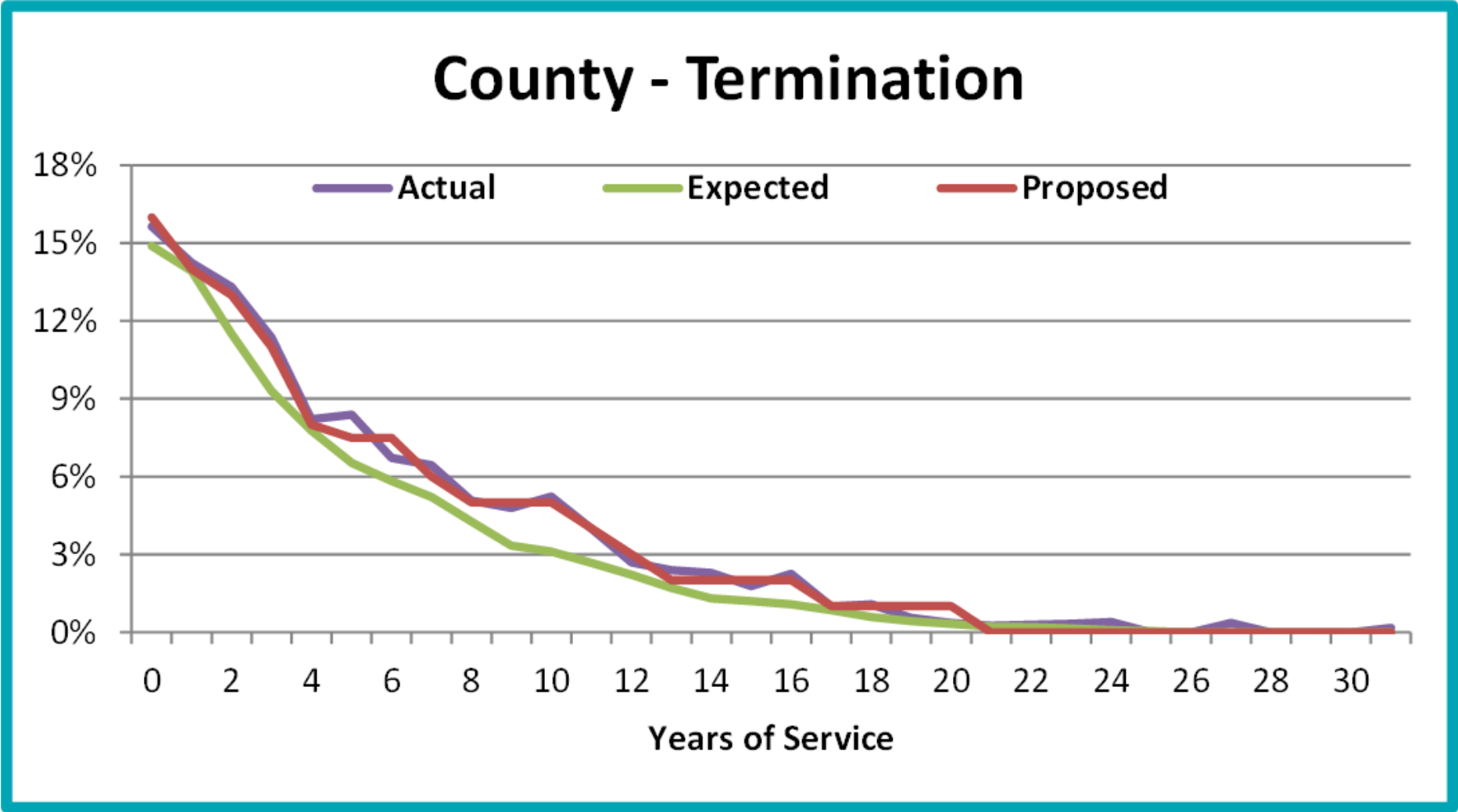


# County Termination

County termination based on service

Assume refund of member contributions for those terminating prior to age 45 or reaching age + service of 60

No termination assumed in the 3 years prior to reaching Rule of 80 (85)

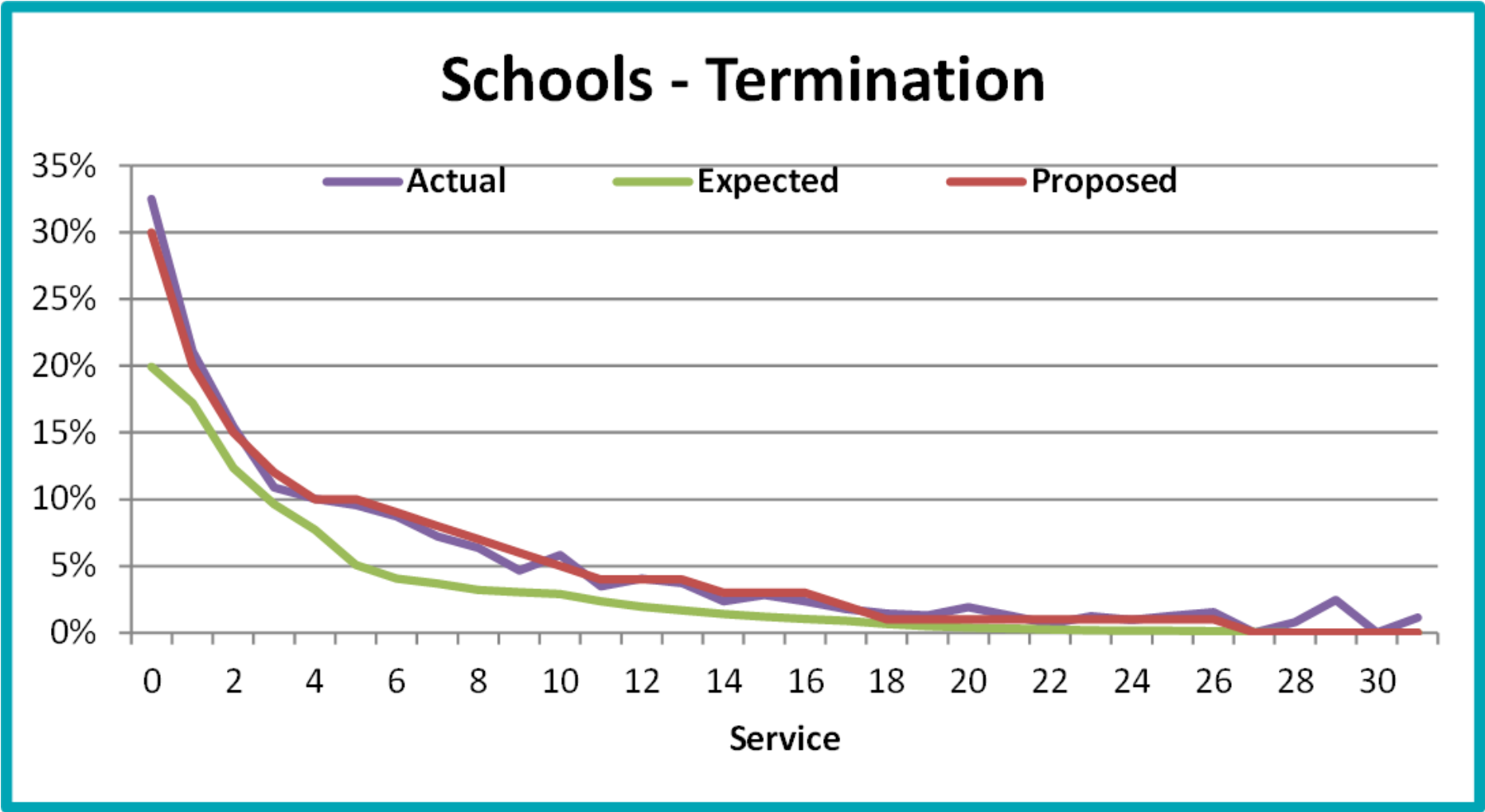


# Schools Termination

Schools tables similarly service-based table for both genders

Maintain phase out as member approaches Rule of 80 (85)

Maintain refund of contributions for those terminating prior to age 45 or age plus service equal to 60



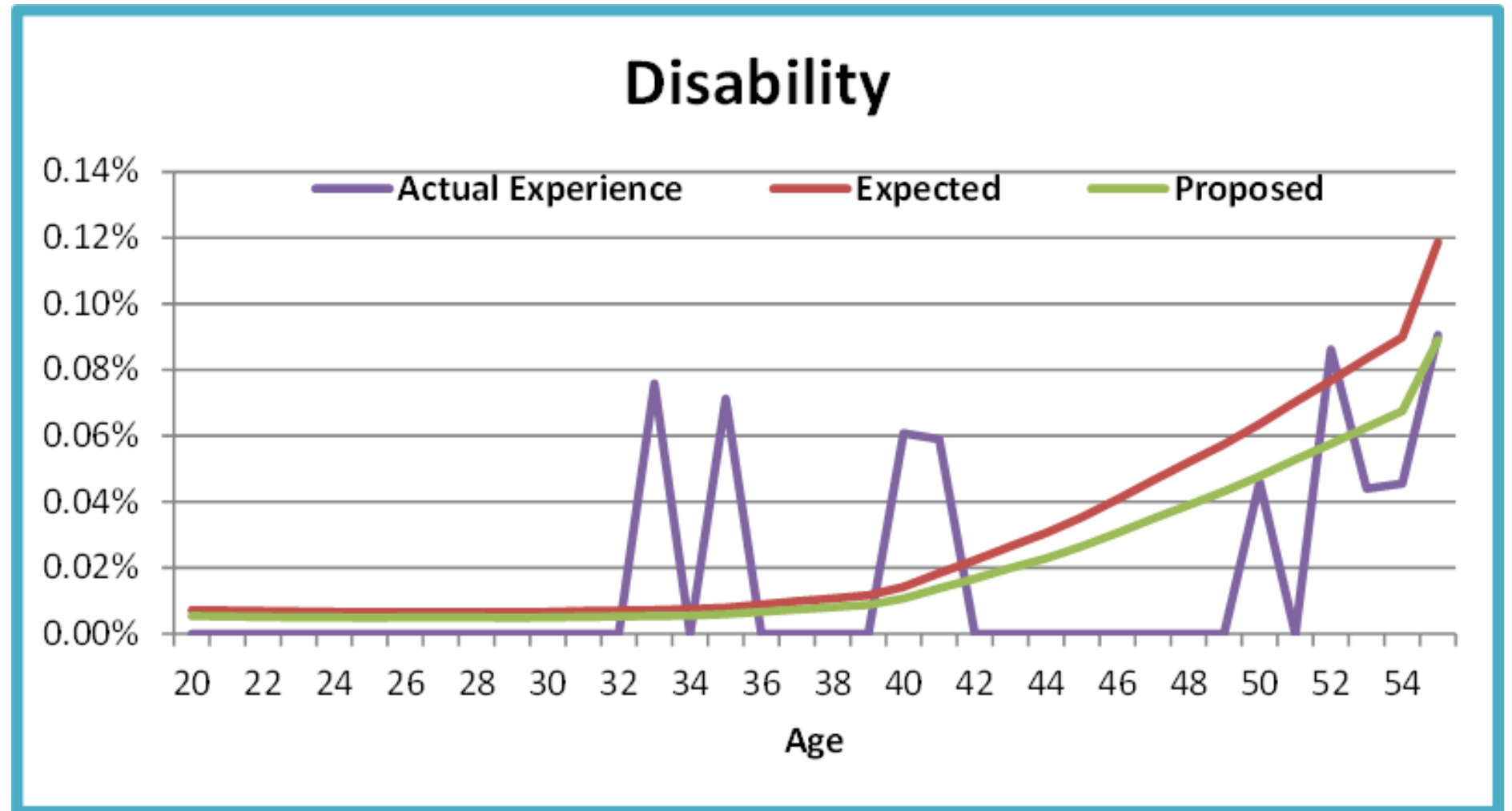
# Disability

Disability assumption predicted 44 disabilities during the period

Actual experience was 30 disabilities

Similar results in prior studies

Recommend reducing disability by 25%





## Percent Service Connected

- Currently assume 20% of disabilities are service-connected (SC) and 80% ordinary (Ord)
- Actual experience was 23%/77%
- Change % to 25%/75%

## Percent Receiving Workers' Compensation

- Currently assume 31% of SC receive Workers' Comp
- Actual experience 43%
- Increase % to 40%

## Components of Mortality Assumption

Actuary selects two components of the mortality assumption for each group:

How long are people currently living, referred to as the base table

How will that change in the future, referred to as the mortality improvement



Mortality assumptions set for active members, healthy annuitants, and disabled annuitants

# Mortality Experience

Mortality varied by healthy/disabled and by gender

In all cases, the new table moves closer to the experience

| Group             | Exposures | Actual Deaths | Expected Deaths |                |
|-------------------|-----------|---------------|-----------------|----------------|
|                   |           |               | Current Table   | Proposed Table |
| Healthy Annuitant |           |               |                 |                |
| Males             | 20,439    | 530           | 583             | 546            |
| Females           | 34,424    | 859           | 827             | 858            |
| Disabled          |           |               |                 |                |
| Males             | 942       | 70            | 36              | 48             |
| Females           | 1,356     | 72            | 55              | 55             |

# Mortality Recommendation

- Update base tables to most recent public sector mortality tables released by the Society of Actuaries (SOA) in January 2025
- The SOA has not released a mortality improvement scale since 2021, due to uncertainty about continued improvement since covid
- Propose using the MP-2021 scale as adjusted by the IRS to top out at 0.78% annual improvement (versus 1.35% in the unadjusted tables)

- Currently using PubG.H-2010 using MP-2020 model with custom generational scale
- Propose moving to PubG.H-2016/MP-2021 adjusted according to loads:
  - Male 93.9%
  - Female 101.1%
- Disabled mortality
  - Used same analysis as for non-disabled retirees
  - No load made to the tables

- **Changes Recommended**

- Merit/Seniority Salary: Adjust to better match latest experience
- Retirement/DROP: Adjust retirement to better match latest experience
- % who take DROP: Increase rates
- Withdrawals: Adjust to better match experience
- Disability: Reduce rates by 25%  
Change % service connected from 20% to 25%  
Change % of these who get Workers' Comp from 31% to 40%
- Mortality: Move to appropriate percent of recently released Public tables
- Mortality Improvement: Use MP-21 Adjusted Scale
- Marital Composition: Reduce percentage married from 80% to 60%  
Adjust spousal age to assume female employees have spouses 2-years older  
Maintain assumption for males

# Updated 6/30/2025 Valuation Results

| Discount/Inflation<br>(Millions) | In 2025 Report<br>6.75%/2.25% | w/New Assumptions<br>6.75%/2.50% |
|----------------------------------|-------------------------------|----------------------------------|
| <b>Funding Liability</b>         | <b>\$7,735</b>                | <b>\$7,991</b>                   |
| <b>Actuarial Assets</b>          | <b><u>5,519</u></b>           | <b><u>5,519</u></b>              |
| <b>Unfunded</b>                  | <b>\$2,216</b>                | <b>\$2,472</b>                   |
| <b>Funded Ratio (AVA)</b>        | <b>71.3%</b>                  | <b>69.1%</b>                     |
| <b>Funded Ratio (MVA)</b>        | <b>69.6%</b>                  | <b>67.4%</b>                     |
| <b>Normal Cost</b>               | <b>9.32%</b>                  | <b>9.98%</b>                     |
| <b>Amortization Charges</b>      | <b>23.65%</b>                 | <b>26.07%</b>                    |
| <b>Expense</b>                   | <b><u>0.30%</u></b>           | <b><u>0.30%</u></b>              |
| <b>County Rate</b>               | <b>33.27%</b>                 | <b>36.35%</b>                    |
| <b>Change</b>                    |                               | <b>3.08%</b>                     |
|                                  |                               | <b>\$34</b>                      |

County has policy of not paying less than the existing rate until the UAL has been exhausted.  
The FY 2027 will be held at the 33.79% rate in effect for FY 2026

- The previous slide assumes inflation is increased from 2.25% to 2.5%
- We do not know how the long-term inflation will play out
  - 10-year average was 2.1%
  - 15-year average was 2.0%
- Trustees may wish to maintain the inflation assumption at the 2.25% level which was adopted in the 2020 experience study
- Could lead to additional short-term liability losses if current trend remain through next March
- If the Fed is successful in keeping inflation around 2.0% then this increase in assumption may not be necessary



# Updated 6/30/2025 Valuation Results

| Discount/Inflation<br>(Millions) | In 2025 Report<br>6.75%/2.25% | w/New Assumptions<br>6.75%/2.50% |
|----------------------------------|-------------------------------|----------------------------------|
| <b>Funding Liability</b>         | <b>\$7,735</b>                | <b>\$7,857</b>                   |
| <b>Actuarial Assets</b>          | <b><u>5,519</u></b>           | <b><u>5,519</u></b>              |
| <b>Unfunded</b>                  | <b>\$2,216</b>                | <b>\$2,338</b>                   |
| <b>Funded Ratio (AVA)</b>        | <b>71.3%</b>                  | <b>70.2%</b>                     |
| <b>Funded Ratio (MVA)</b>        | <b>69.6%</b>                  | <b>68.6%</b>                     |
| <b>Normal Cost</b>               | <b>9.32%</b>                  | <b>9.72%</b>                     |
| <b>Amortization Charges</b>      | <b>23.65%</b>                 | <b>24.89%</b>                    |
| <b>Expense</b>                   | <b><u>0.30%</u></b>           | <b><u>0.30%</u></b>              |
| <b>County Rate</b>               | <b>33.27%</b>                 | <b>34.91%</b>                    |
| <b>Change</b>                    |                               | <b>1.64%</b>                     |
|                                  |                               | <b>\$18</b>                      |

County has policy of not paying less than the existing rate until the UAL has been exhausted.  
The FY 2027 will be held at the 33.79% rate in effect for FY 2026

In preparing this presentation, we relied on information (some oral and some written) supplied by the Fairfax County Retirement Administration Agency. This information included, but is not limited to, the Plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice #23.

The actuarial assumptions, data and methods are those used in the preparation of the latest actuarial valuation report prepared for these plans as of June 30, 2025, except where noted.

The assumptions reflect our understanding of the likely future experience of the System, and individually represent our best estimate of future experience conforming to these assumptions. To the extent that future experience deviates from the actuarial assumptions, the true cost of the plan could vary from our results.

This presentation and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board as well as applicable laws and regulations. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this presentation. This presentation does not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.

This presentation was prepared exclusively for the Fairfax County Employees' Retirement System Board for the purposes described herein. Other users of this presentation are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to any other user.

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Principal Consulting Actuary

Coralie Taylor, FSA  
Consulting Actuary

- ProVal
  - Cheiron utilizes ProVal, an actuarial valuation software leased from Winklevoss Technologies (WinTech) to calculate the liabilities, normal costs and projected benefit payments. We have relied on WinTech as the developer of ProVal. We have reviewed ProVal and have a basic understanding of it and have used ProVal in accordance with its original intended purpose. We have not identified any material inconsistencies in assumptions or output of ProVal that would affect this study.
- Experience Study Tools
  - We have used Cheiron's Excel-based experience study tools to measure the actual versus expected experience before and after recommended assumption changes. We have not identified any material inconsistencies in assumptions or output of the experience study tools that would affect this study.



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**We thank you for your time!**

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