

**Merced County Employees'
Retirement Association
(MercedCERA)**

**Actuarial Experience Study
for period through June 30, 2025**

January 22, 2026

Economic Assumptions

Inflation
Discount Rate
Wage Inflation /
Payroll Growth
COLAs

Demographic Assumptions

Merit Salary
Increases
Decrements
Other Assumptions

Cost Impact

Overall Plan
Valuation Subgroups
Funded Status

These are the current economic assumptions.



Inflation Rate
Current: 2.50%

Price inflation; building block for other assumptions



Return on Assets
Current: 6.75%

Assumed annual return on investments; net of investment expenses



Wage / Payroll Growth
Current: 2.75%

Price inflation plus real wage growth



COLA Rates
Tier 1: 2.4% (actives), 2.65% (retirees)

Increases in post-retirement COLAs; affected by caps and banking provisions

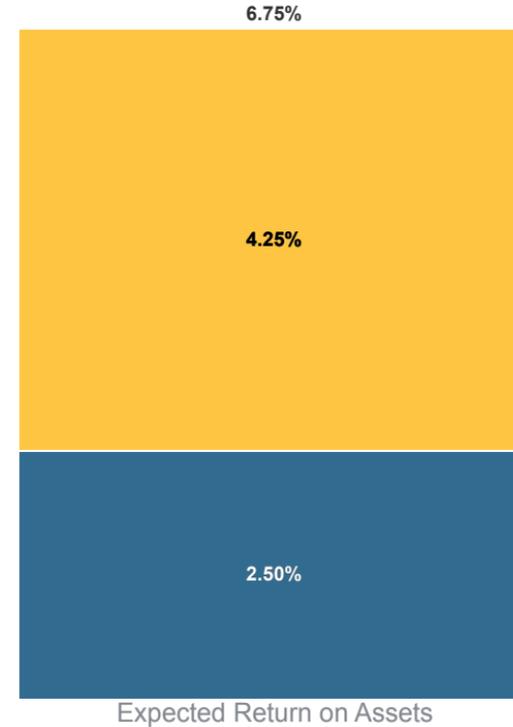
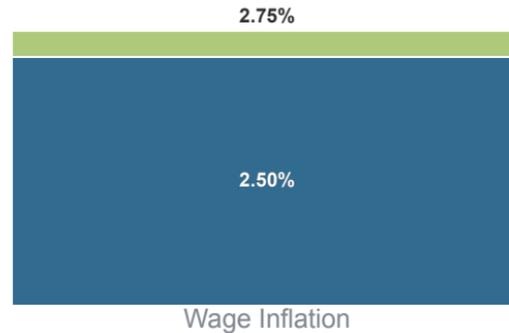
We start with a summary of the analysis to provide context for our discussion.

Summary

Assumption	Current	Baseline (Banking change only)	Alternative (Increase Wage / Payroll Growth)
Price Inflation	2.50%	2.50%	2.50%
Discount Rate or Nominal Return (net of investment expenses)	6.75%	6.75%	6.75%
Real Return	4.25%	4.25%	4.25%
Wage / Payroll Growth	2.75%	2.75%	3.00%
COLA Growth (No COLA Bank)	2.40%	2.40%	2.40%
COLA Growth (Existing COLA Bank)	2.65%	3.00% until bank depleted, 2.40% thereafter	3.00% until bank depleted, 2.40% thereafter

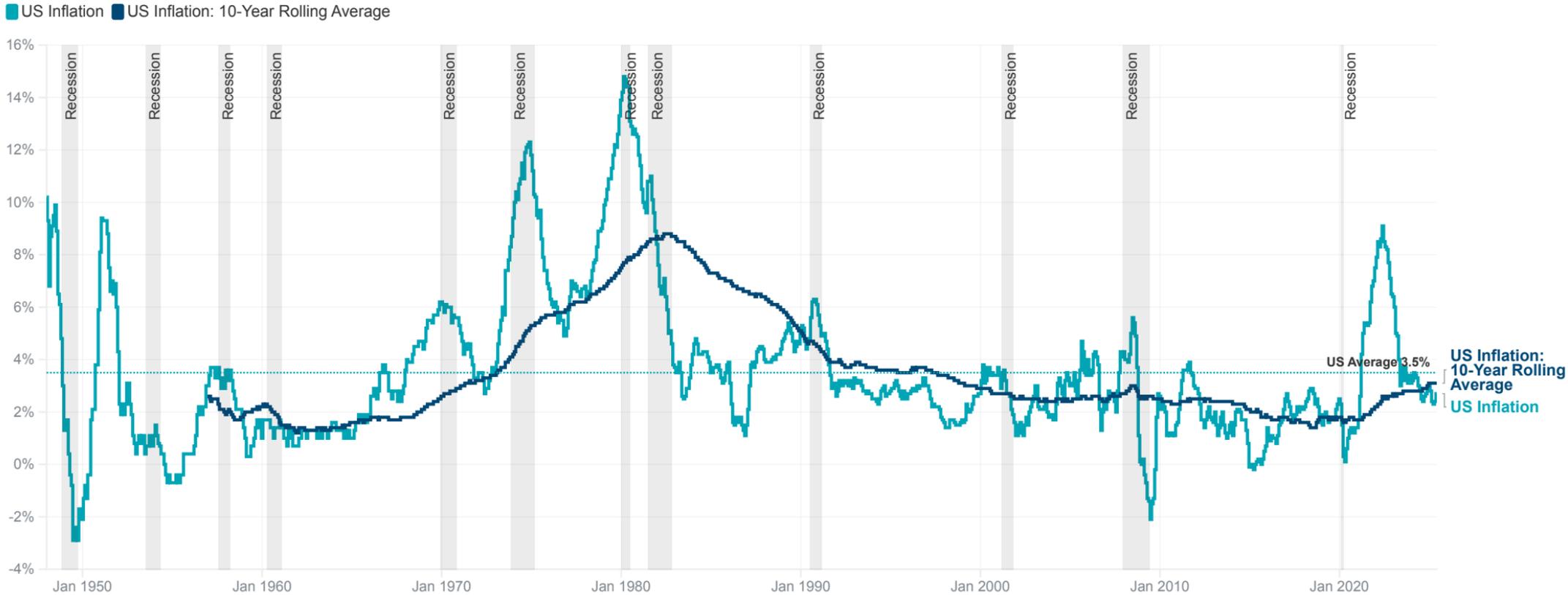
Traditional Building Block Approach

Price inflation is the foundation for all economic assumptions.



■ Price Inflation ■ Real Wage Growth ■ Real Return

We start by reviewing historical inflation, as measured by CPI-U. The long-term history provides perspective on recent inflation.



Source: [US Inflation - U.S. Bureau of Labor Statistics](#)
Inflation measured by CPI-U, All Items, not seasonally adjusted, percent change from year ago



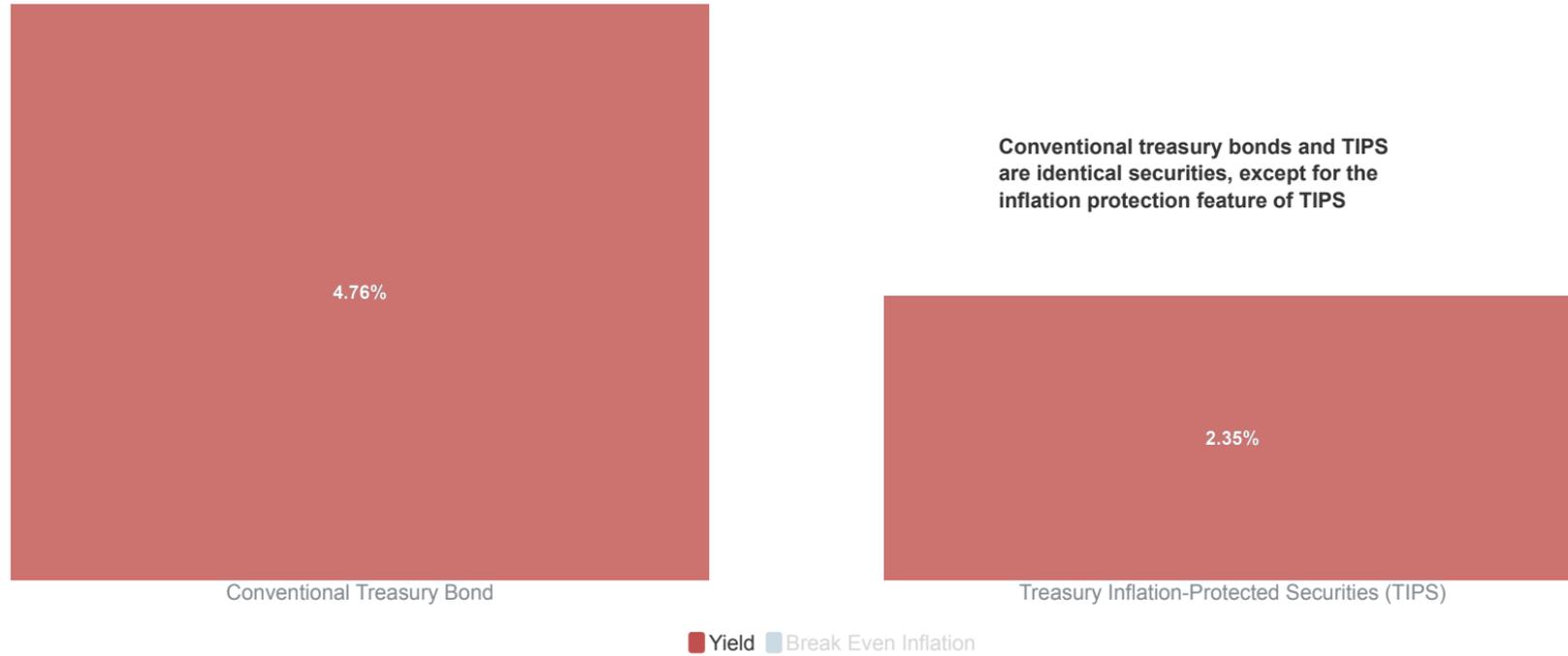
However, we focus more on recent history when evaluating the current assumption.



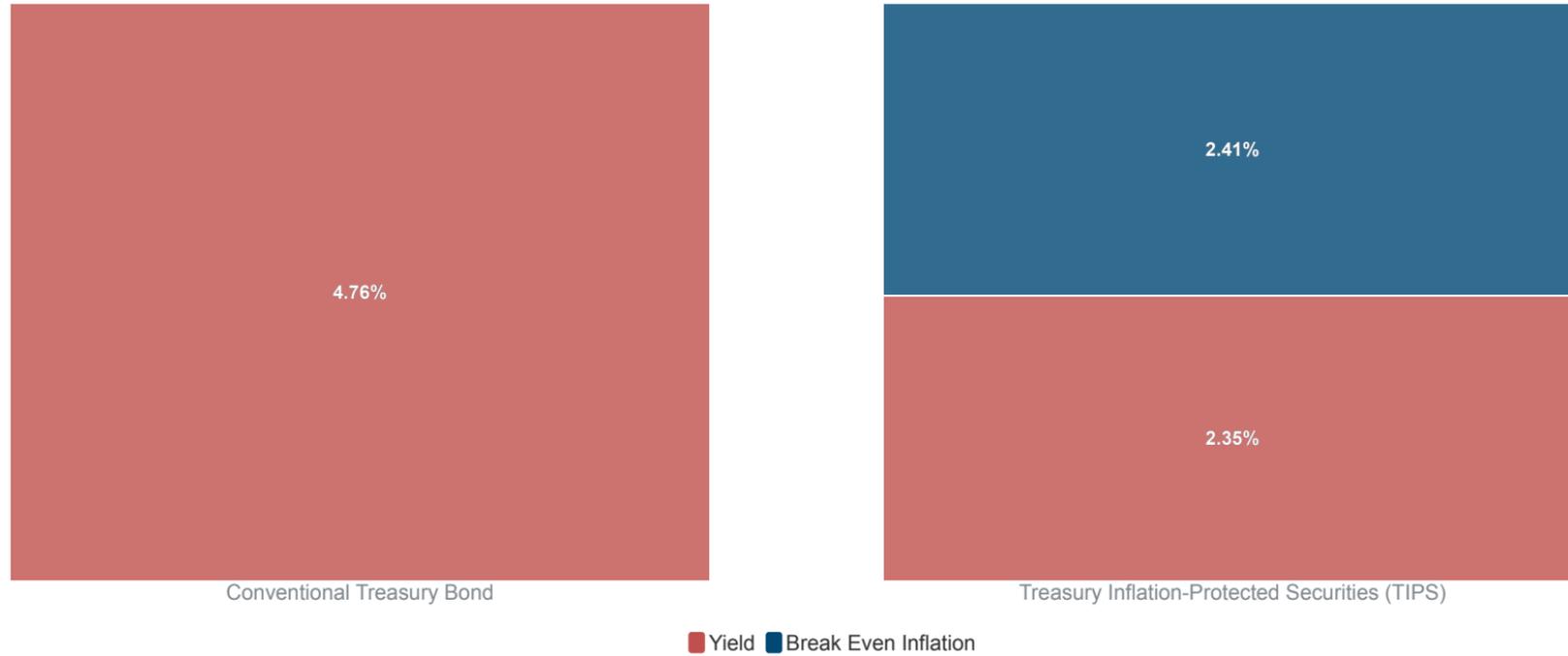
Source: [US Inflation - U.S. Bureau of Labor Statistics](#)
Inflation measured by CPI-U, All Items, not seasonally adjusted, percent change from year ago



Yields as of December 2025 20 Years to Maturity



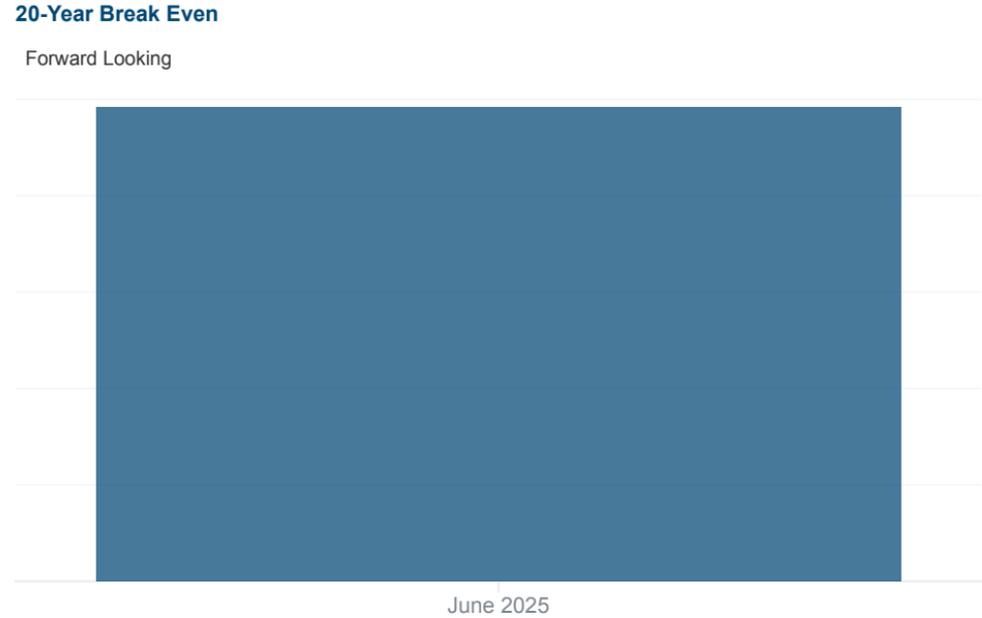
Yields as of December 2025 20 Years to Maturity



It can be helpful to consider the current level of break even inflation relative to recent inflation readings.

Inflation Metrics

All	June 2019	June 2020	June 2021	June 2022	June 2023	June 2024	June 2025
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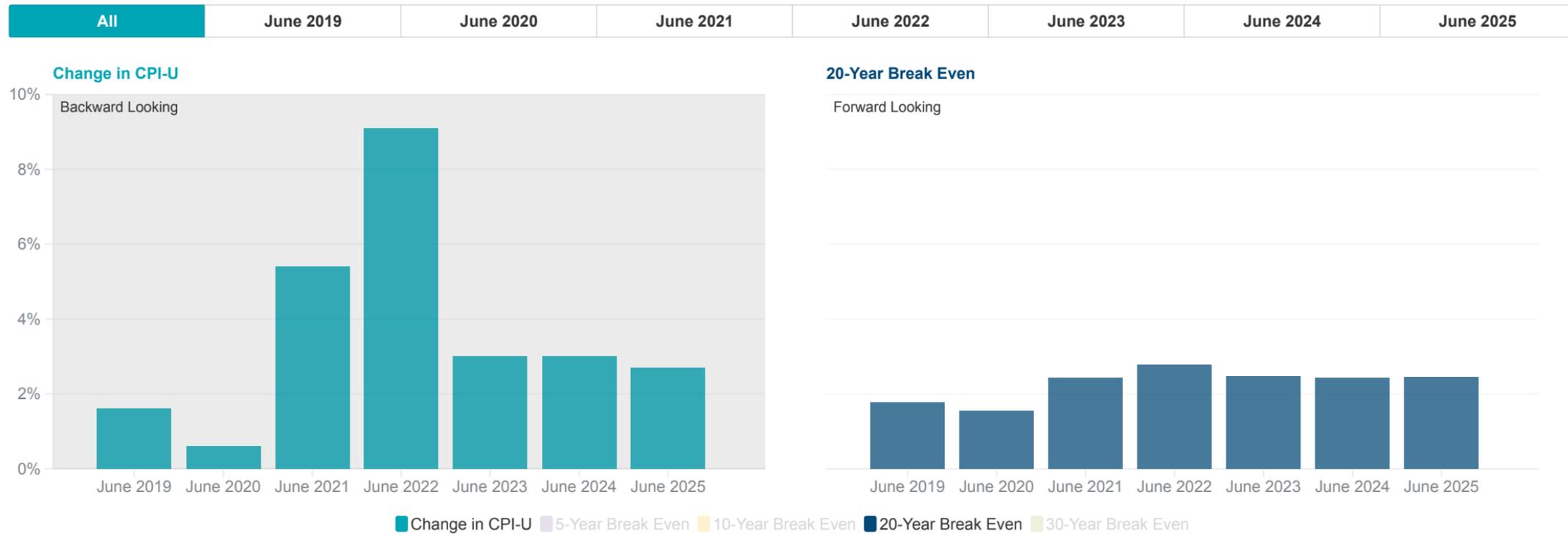
Change in CPI-U 5-Year Break Even 10-Year Break Even 20-Year Break Even 30-Year Break Even

Source: [Board of Governors of the Federal Reserve System](#)



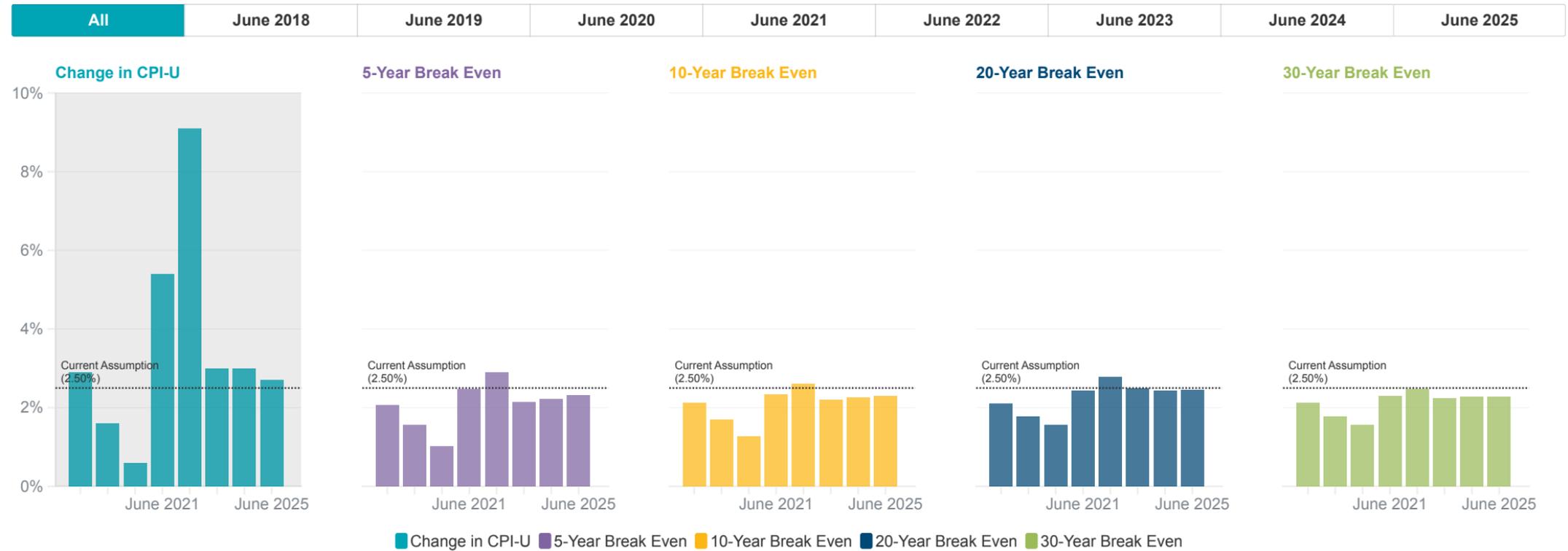
And to understand the changes in those metrics over time. Inflation has fluctuated significantly over the last five years but inflation expectations have remained steadier.

Inflation Metrics



Source: [Board of Governors of the Federal Reserve System](#)

Inflation Metrics



Change in CPI-U 5-Year Break Even 10-Year Break Even 20-Year Break Even 30-Year Break Even

Source: [Board of Governors of the Federal Reserve System](#)

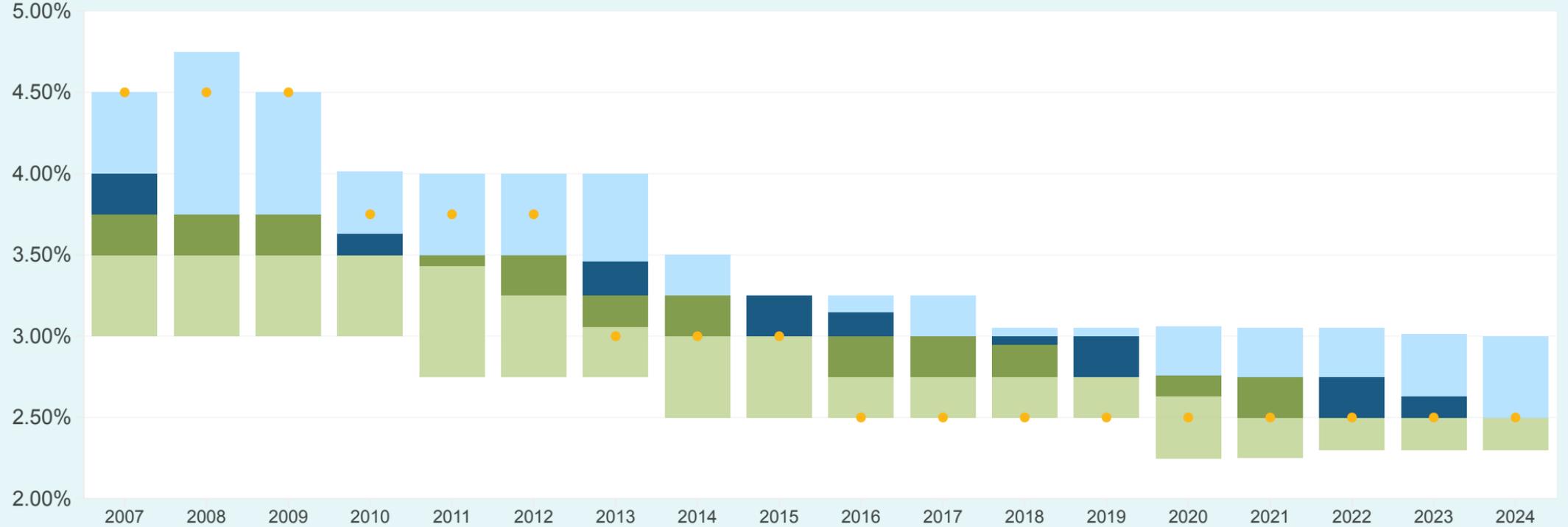


Another important consideration is the trend among peer retirement systems.

California Public Retirement Systems - Distribution of Price Inflation Assumptions

Gold dot = Merced CERA

Percentiles of Distribution ■ Min to 25th ■ 25th to 50th ■ 50th to 75th ■ 75th to Max



Hover over a bar to see the statistics for that year. Click on a bar to see a bee swarm of the plans for the year. Close the tab in the browser to return to the menu.

We also look at a wider universe of public retirement systems, professional economic forecasters and investment consultants' capital market assumptions.

Distribution of Price Inflation Forecasts and Assumptions

Gold dot = MercedCERA

Percentiles of Distribution ■ Min to 25th ■ 25th to 50th ■ 50th to 75th ■ 75th to Max



Finally, we consider the influence of the Federal Reserve.

The current price inflation assumption of 2.50% is very close to the Federal Reserve's **inflation target of roughly 2.40%.**

The Fed's interprets its statutory mandate of stable prices as "inflation at the rate of 2 percent, as measured by the annual change in the price index for personal consumption expenditures (PCE)".

Since 2000, the annual change in CPI-U has been higher than the annual change in PCE by about 40 bps, on average.

So, over this period, the goal would have been achieved with average annual inflation of about 2.40%, based on CPI-U.

To summarize our findings on the price inflation assumption:

Recommendation: Maintain current price inflation assumption of 2.50%

- Reasonable from a **historical perspective**
- In line with **financial market expectations**
- Similar to **professional forecasts**
- **Trend for public plans** toward lower assumptions
- Consistent with the Fed's **inflation target**

National average of 2.50% annually over last 30 years

Real Return & Discount Rate

Expected Risk Premium

Capital Market Expectations

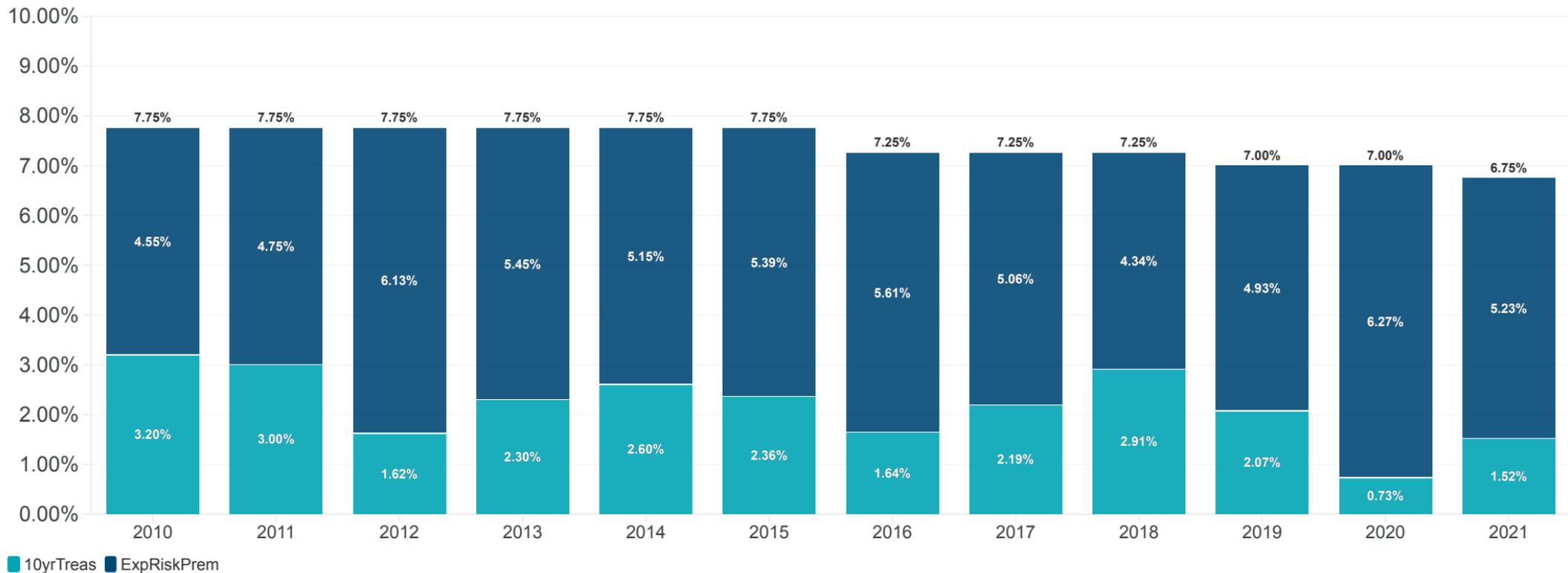
Trends among California Public Plans

From 2010 to 2021 the discount rate was lowered to maintain a relatively steady expected risk premium.

Expected Risk Premium = Discount Rate - 10-Year Treasury Yield

Pre-2022 ▾

Fiscal Year End: June 30

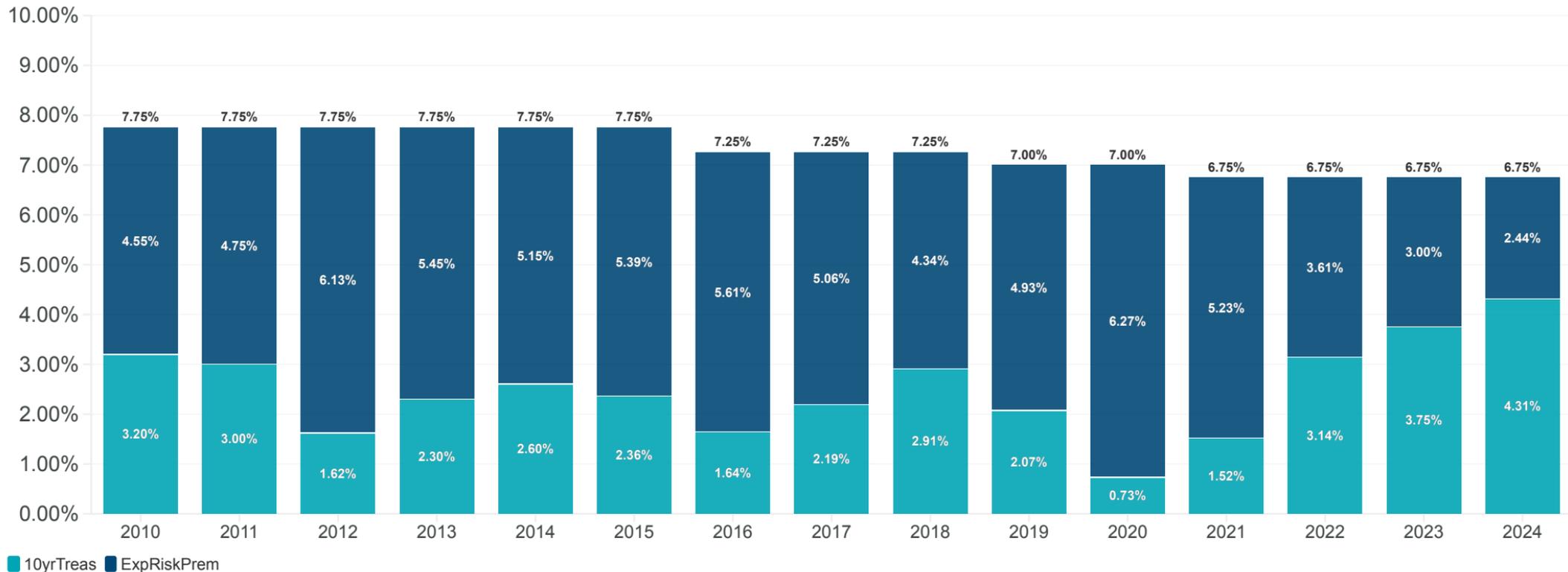


In recent years, the risk-free rate has increased and the expected risk premium is relatively low.

Expected Risk Premium = Discount Rate - 10-Year Treasury Yield

All Years ▾

Fiscal Year End: June 30



Capital Market Expectations

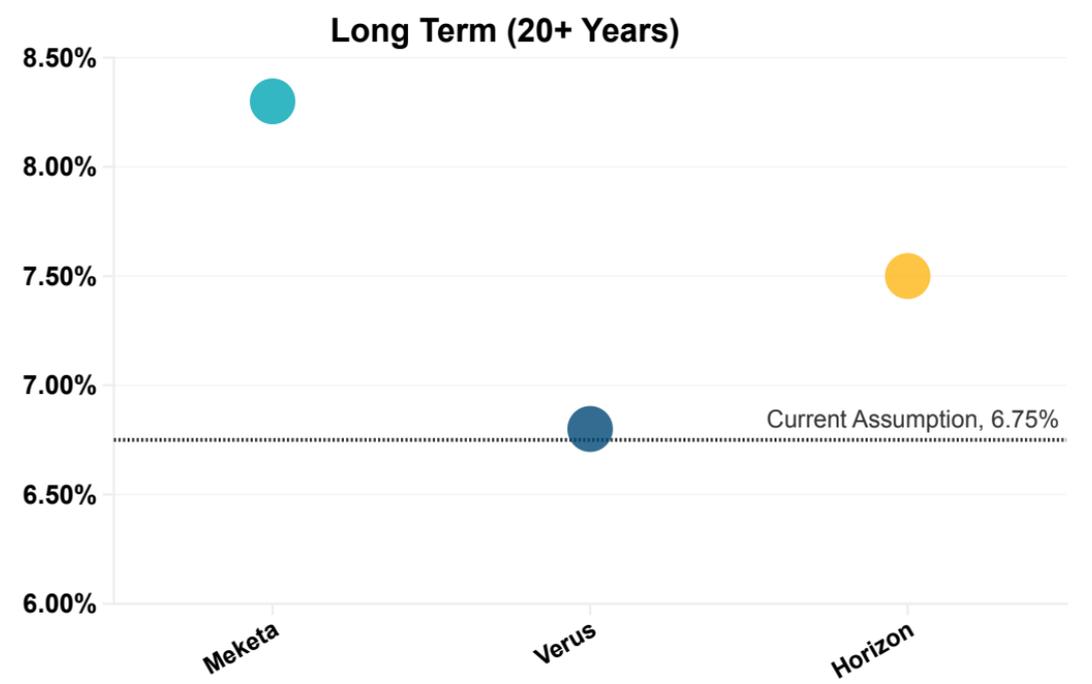
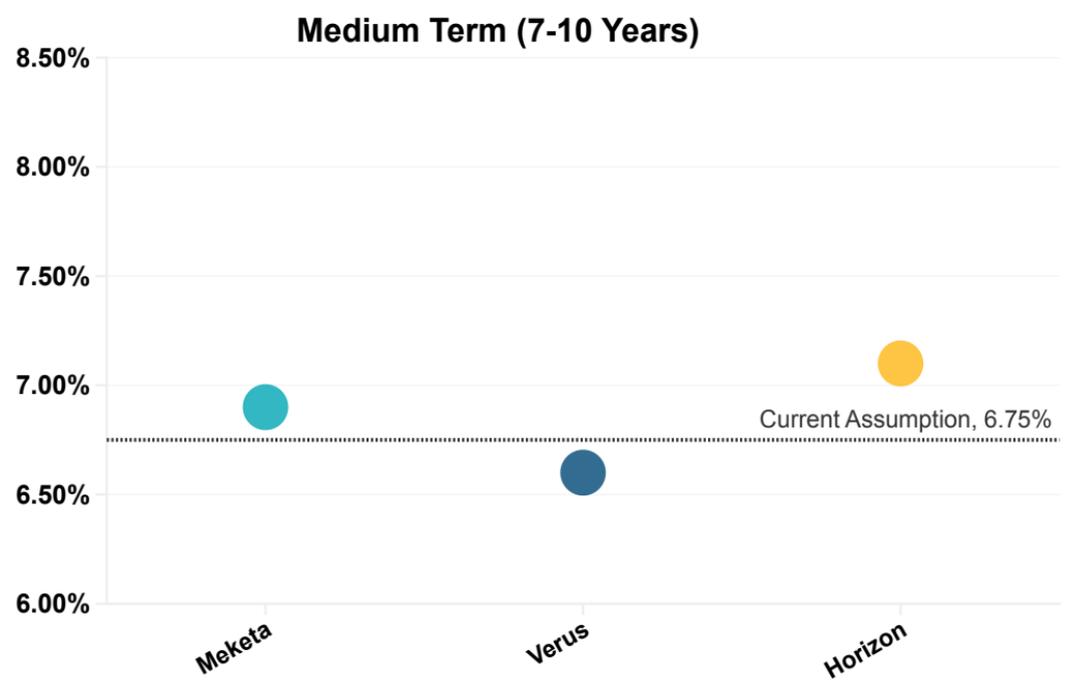
- Collect assumptions of returns, risks, and correlations from **investment consultants**
- **Adjust for investment expenses** of consultant, custodian and fees for passively-managed assets
- Model MercedCERA's target portfolio using these assumptions

Meketa (the Plan's investment consultant, from 2025); Verus (2026 assumptions)
Horizon Actuarial Services Survey of 2025 Capital Market Assumptions (from about 40 firms)

We modeled the expected nominal returns for all six sets of capital market assumptions. The current nominal return assumption of 6.75% is still reasonable.

Expected Nominal Returns (for MercedCERA Target Portfolio)

Source ● Meketa ● Verus ● Horizon

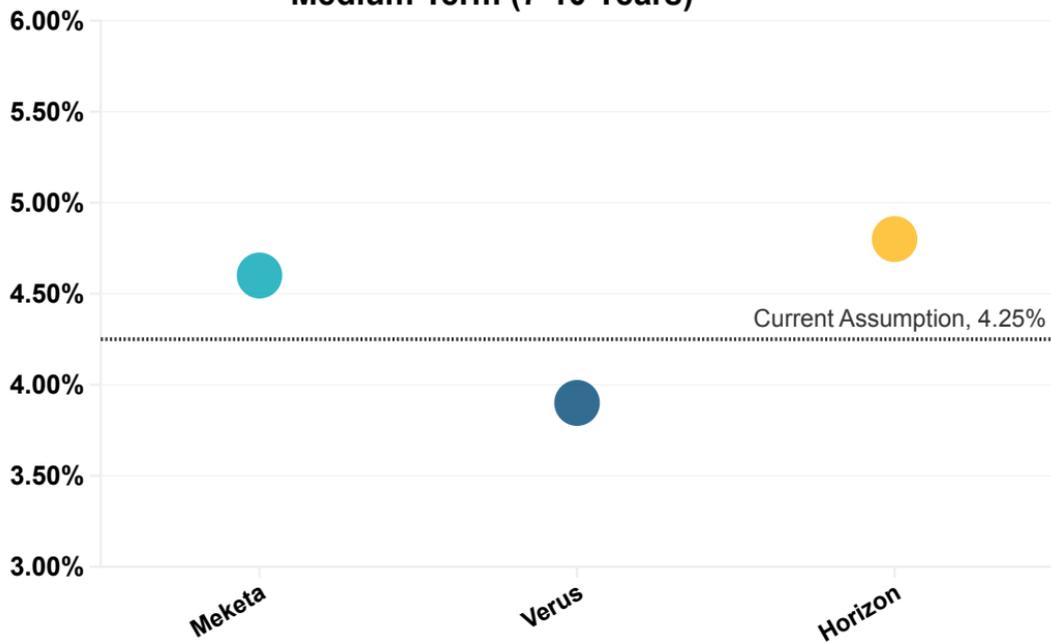


If we look at the real returns (the return above the inflation assumption underlying each set of CMAs), the current assumption of 4.25% is also still reasonable (6.75% expected nominal return less the 2.50% inflation assumption).

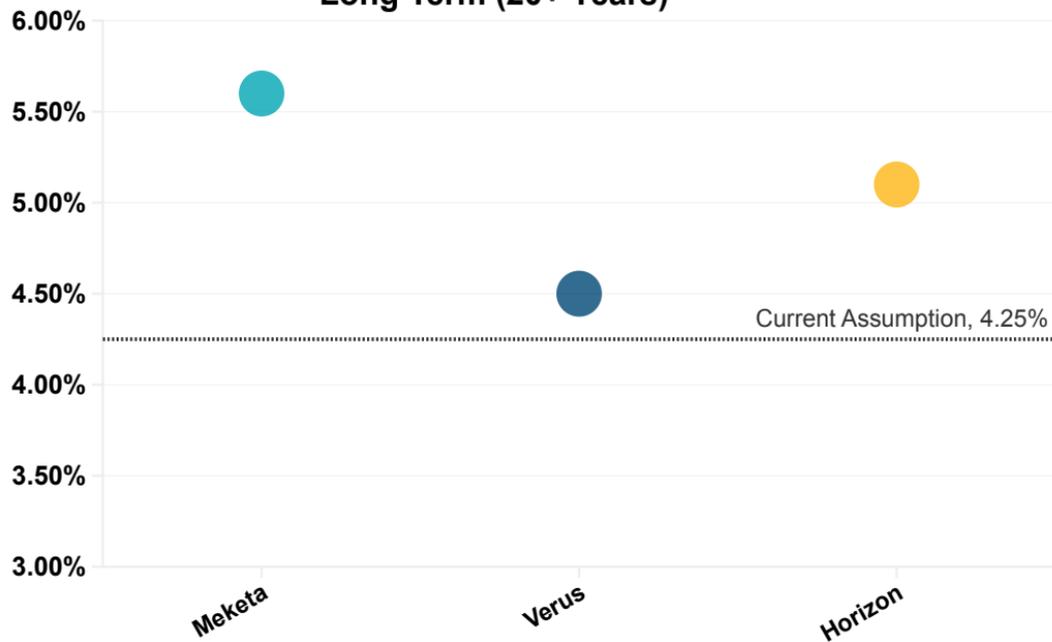
Expected Real Returns (for MercedCERA Target Portfolio)

Source ● Meketa ● Verus ● Horizon

Medium Term (7-10 Years)



Long Term (20+ Years)

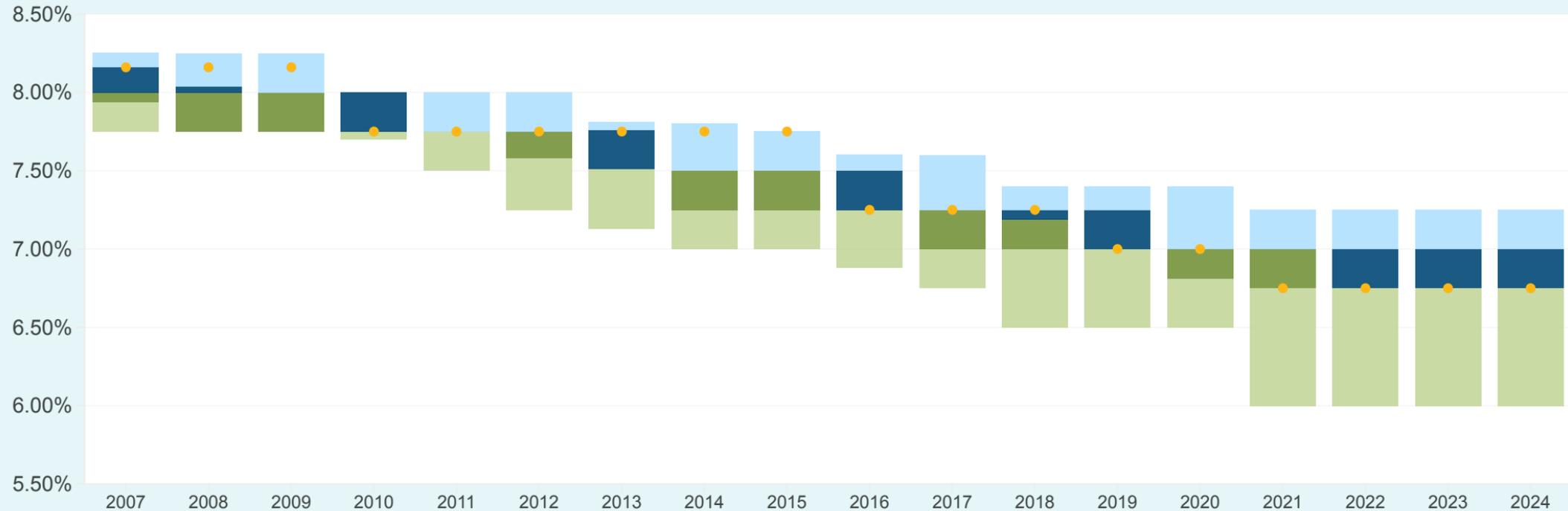


We examine the trends among similar systems. The current discount rate is equal to the median of 6.75% as California systems have continued to lower their discount rates.

California Public Retirement Systems - Distribution of Discount Rates

Gold dot =

Percentiles of Distribution ■ Min to 25th ■ 25th to 50th ■ 50th to 75th ■ 75th to Max



Hover over a bar to see the statistics for that year. Click on a bar to see a bee swarm of the plans for the year. Close the tab in the browser to return to the menu.

To summarize our findings on the real return assumption and the discount rate:

Recommendation: Reasonable to leave the nominal return assumption at 6.75% and the real return assumption at 4.25%

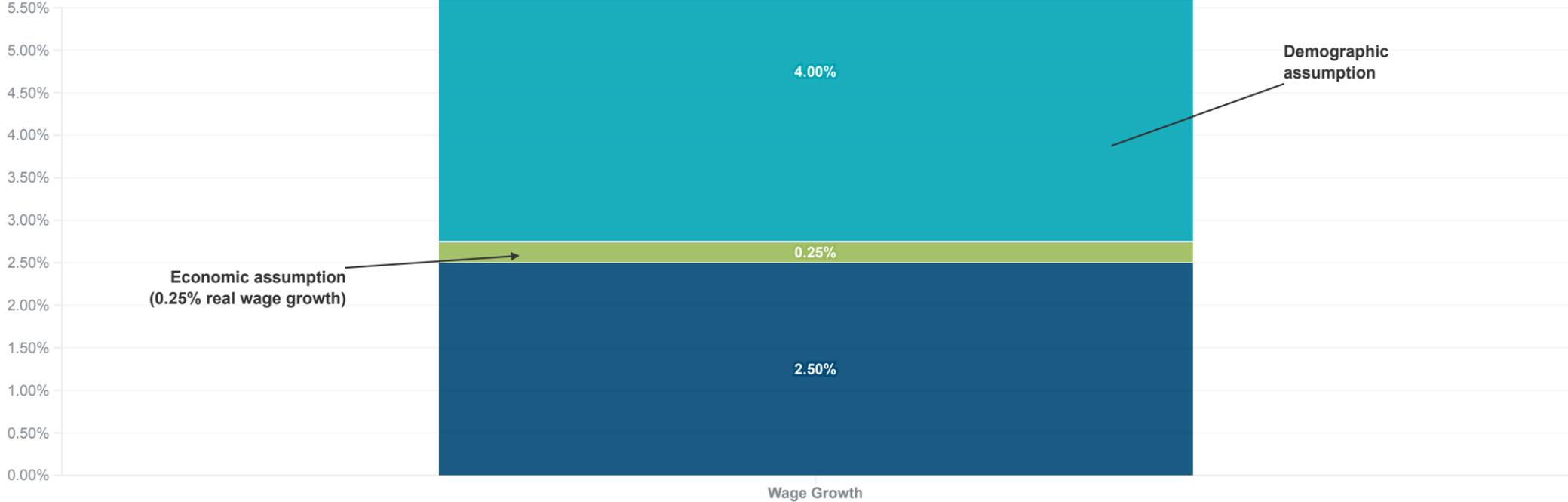
- Current expected risk premium is relatively low, but this measure can be very volatile
- Current discount rate is less than **Meketa's expectations**
- Current discount rate and real return at the median for California public plans.

of 6.9% / 8.3%, after adjusting by 15bp for non-management investment expenses

Salary increases are made of three components: base price inflation, plus "real" wage growth (for productivity or other reasons), plus increases in individual pay due to merit, promotion, and longevity.

Total Assumed Pay Increase Rate (General Member, 5 Years of Service)

■ Price Inflation ■ Real Wage Growth ■ Merit/Longevity

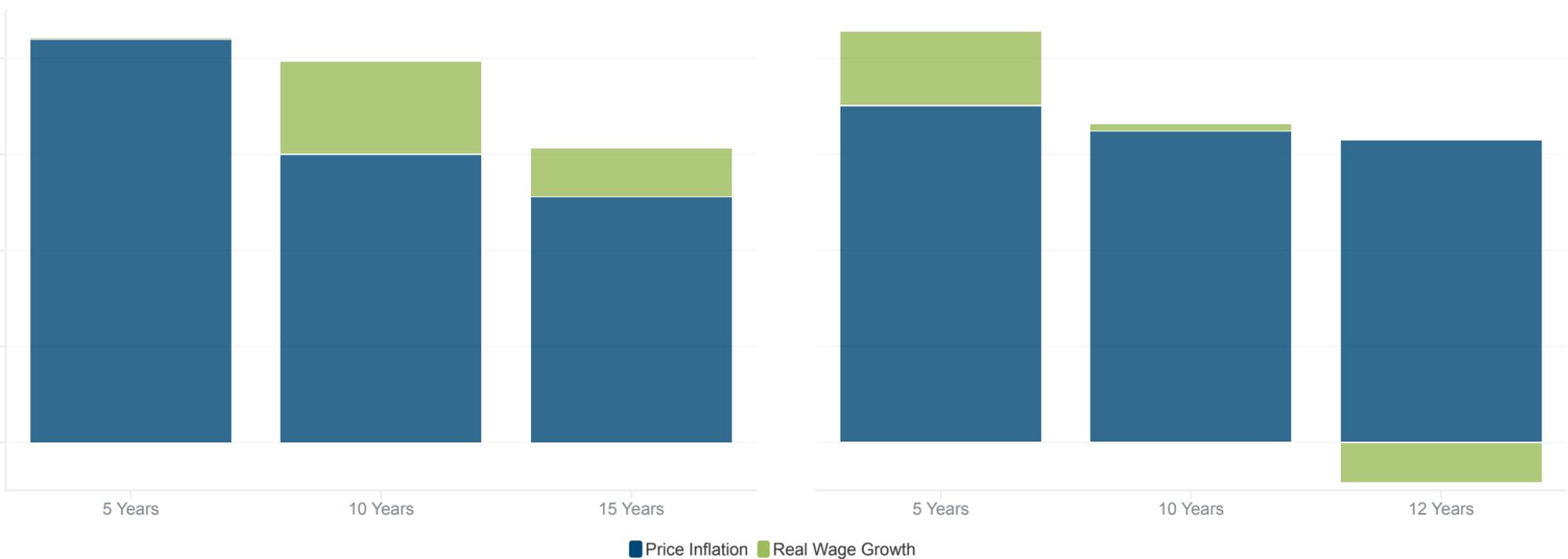


For historical real wage growth, we consider data from both MercedCERA and Local Governments across the country.

Wage Inflation Data

Local Governments

MercedCERA



■ Price Inflation ■ Real Wage Growth

Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages, Average Weekly Wages • Local Governments data as of 2024 Q4, MercedCERA data as of 2025 Q2
Local Government wage growth compared to national CPI-U, MercedCERA wage growth compared to Bay Area CPI-U



We calculate historical real wage growth by subtracting inflation from total wage growth. The average real wage inflation across these six data points is 0.32%, slightly higher than the current 0.25% real wage growth assumption.

Wage Inflation Data



Source: Bureau of Labor Statistics, Quarterly Census of Employment and Wages, Average Weekly Wages • Local Governments data as of 2024 Q4, MercedCERA data as of 2025 Q2
Local Government wage growth compared to national CPI-U, MercedCERA wage growth compared to Bay Area CPI-U



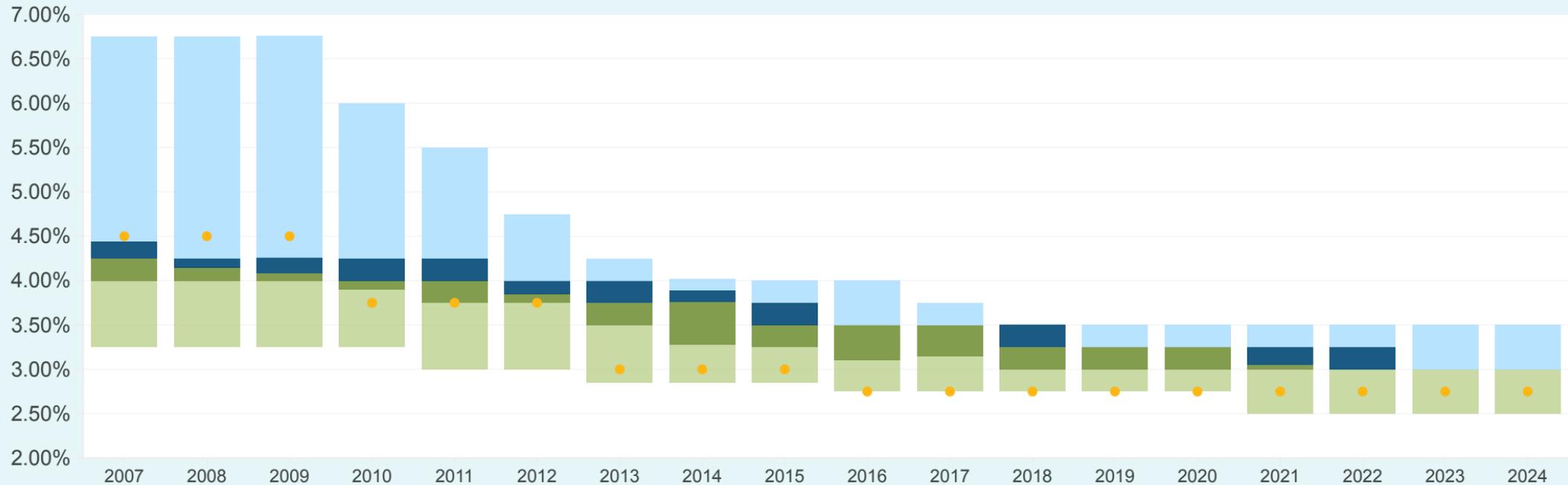
When compared to peer systems, MercedCERA's current overall wage inflation assumption (inflation + real wage growth) is below the median.

California Public Retirement Systems - Distribution of Wage Inflation Assumptions

Wage Inflation = Price Inflation + Real Wage Growth

Gold dot = Merced CERA

Percentiles of Distribution Min to 25th 25th to 50th 50th to 75th 75th to Max



Hover over a bar to see the statistics for that year. Click on a bar to see a bee swarm of the plans for the year. Close the tab in the browser to return to the menu.

Recommendation: Consider increase in real wage growth assumption from 0.25% to 0.50%

Current assumption also reasonable from a **historical perspective** but near the lower end of the range

Current assumption slightly lower than many other **California pension systems**

Lower than some **expert forecasts**

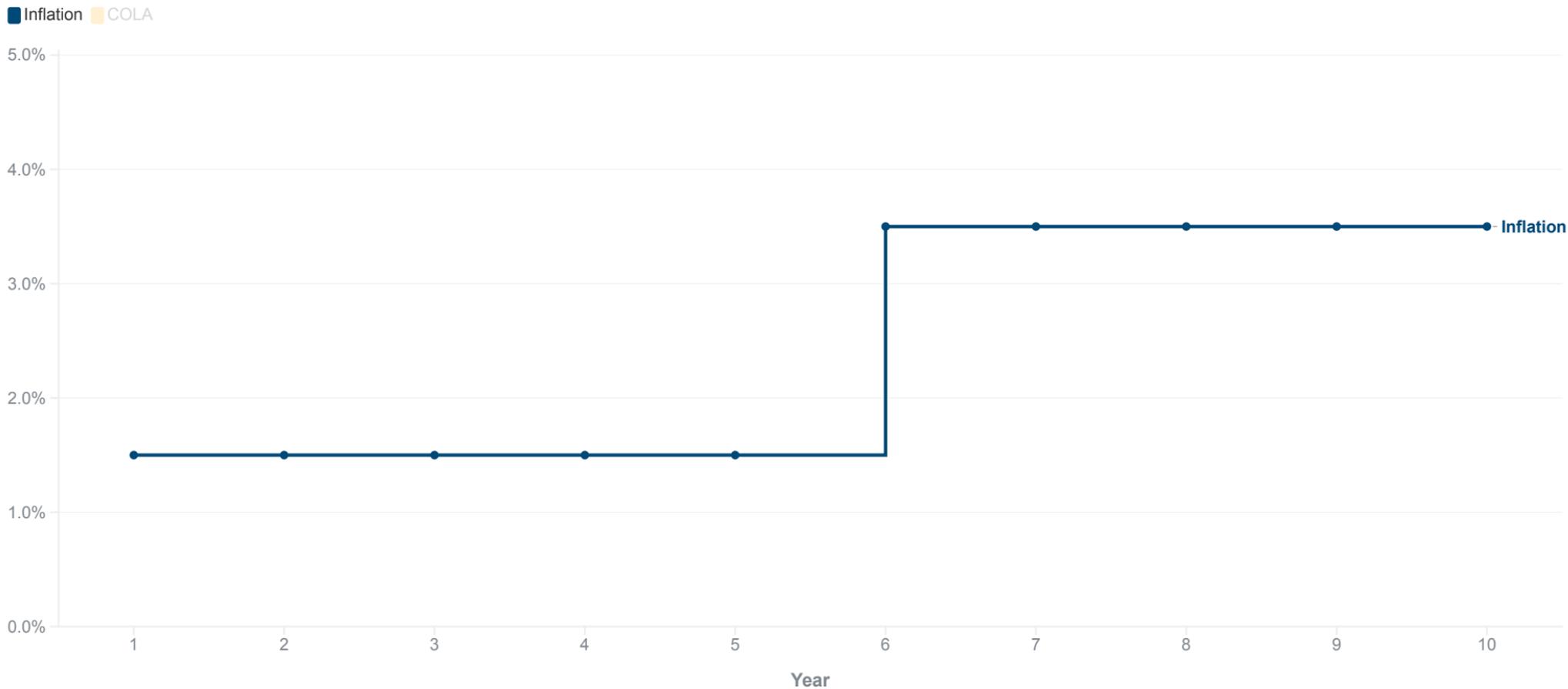
Use the same assumption for growth in **overall payroll**.

3.00% wage inflation assumption if price inflation of 2.50%

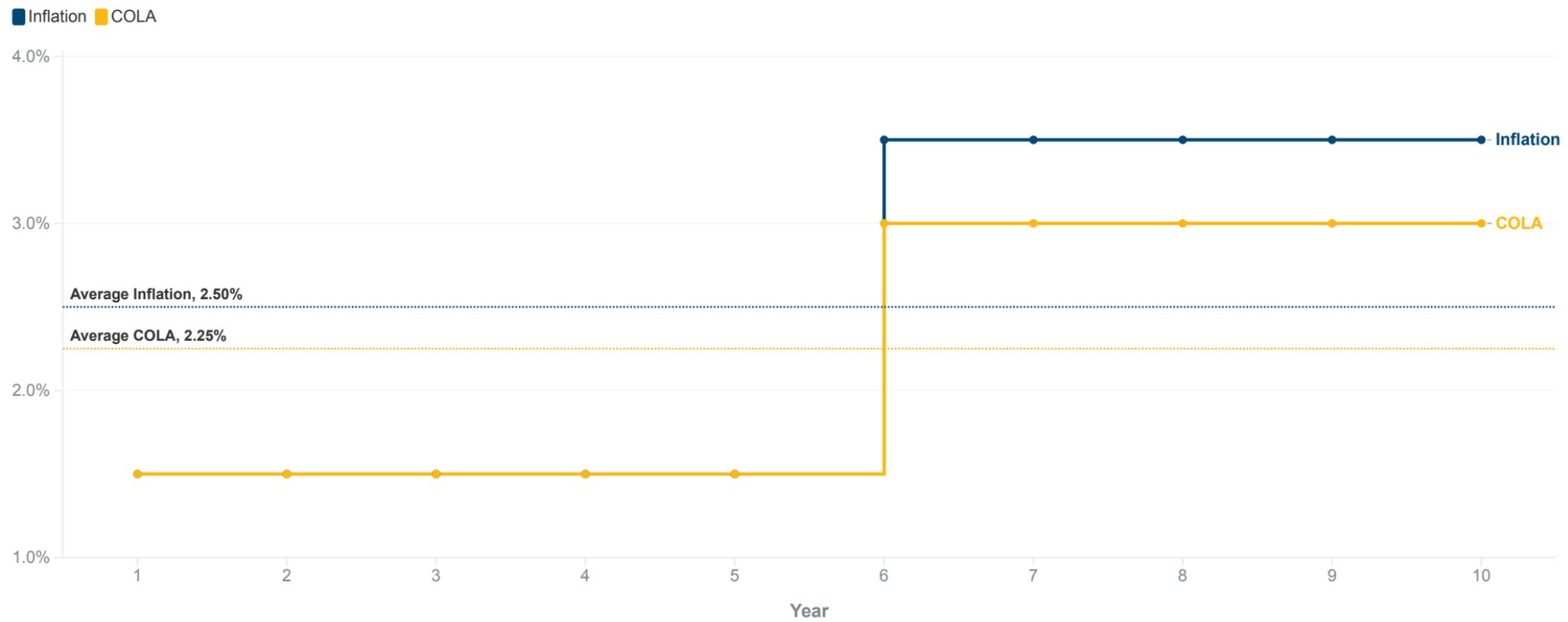
Cost of Living Adjustments (COLAs)

- Tier 1 members are eligible for COLAs, based on increase in the Bay Area Consumer Price Index (CPI-U)
- 3% cap on the annual COLA increase
- Increases in the CPI above the maximum can be banked for future years in which the change in the CPI is below the cap

Since the current price inflation assumption of 2.50% is less than the maximum COLA of 3.00%, it seems natural to use 2.50% as the COLA assumption. However, consider the following simple example when no COLA bank exists.

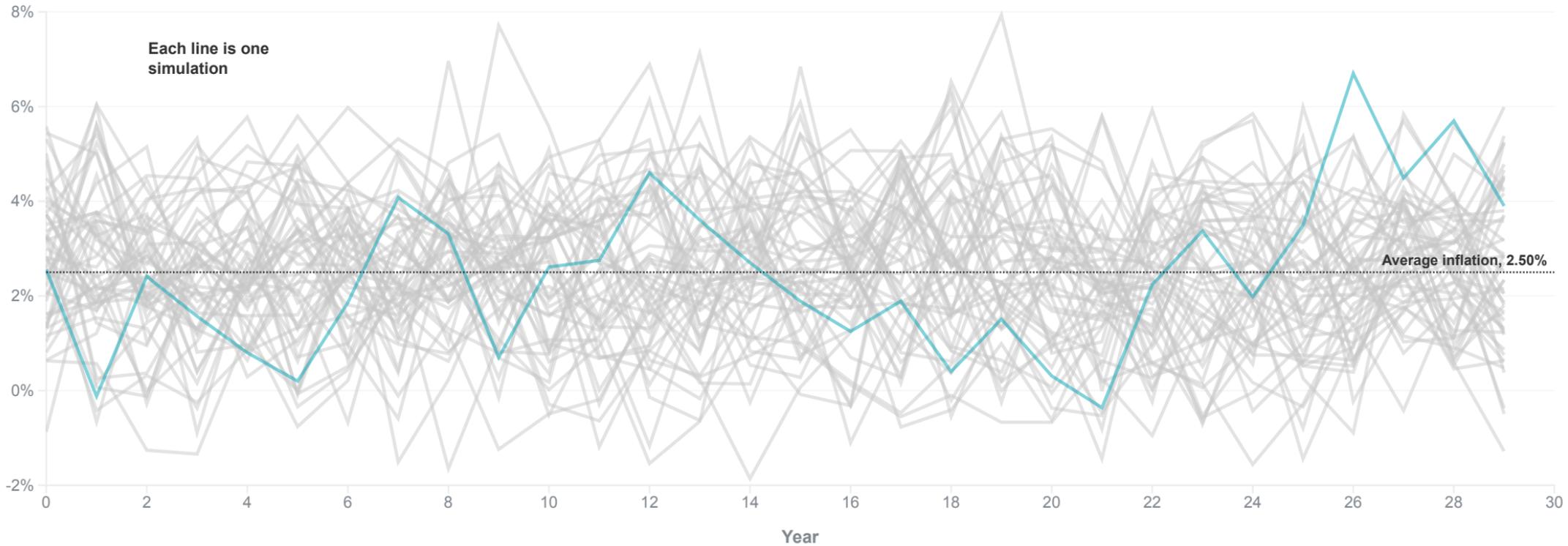


When high inflation follows low inflation, the average COLA can be less than average inflation.



To better analyze the relationship between inflation and COLAs, we produced stochastic simulations of inflation.

Inflation Simulations

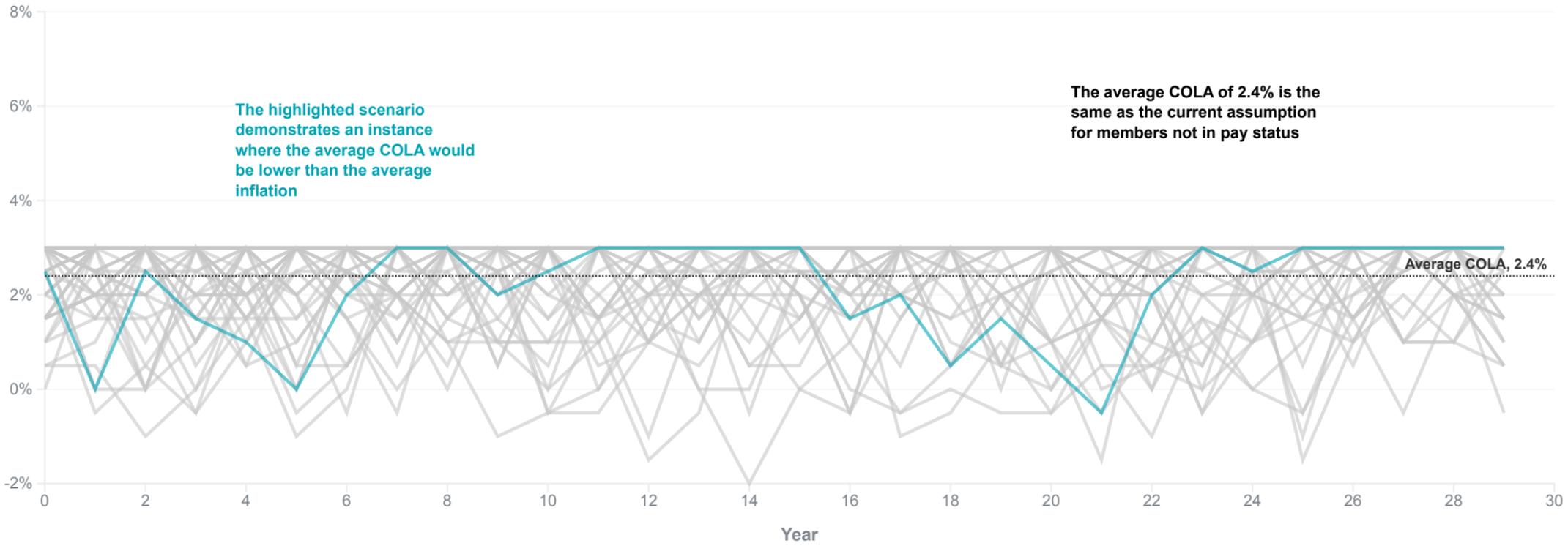


For a given long-term estimate of inflation, simulations based on a 30% autocorrelation factor with 1.50% annual inflation volatility (expressed as a standard normal error). This model is intended only for use in analyzing the relationship between long-term average COLAs and CPI. These assumptions may result in an unrealistically narrow distribution of annual inflation rates.



And modeled how the COLA maximum and the banking process interacts with the changes in CPI.

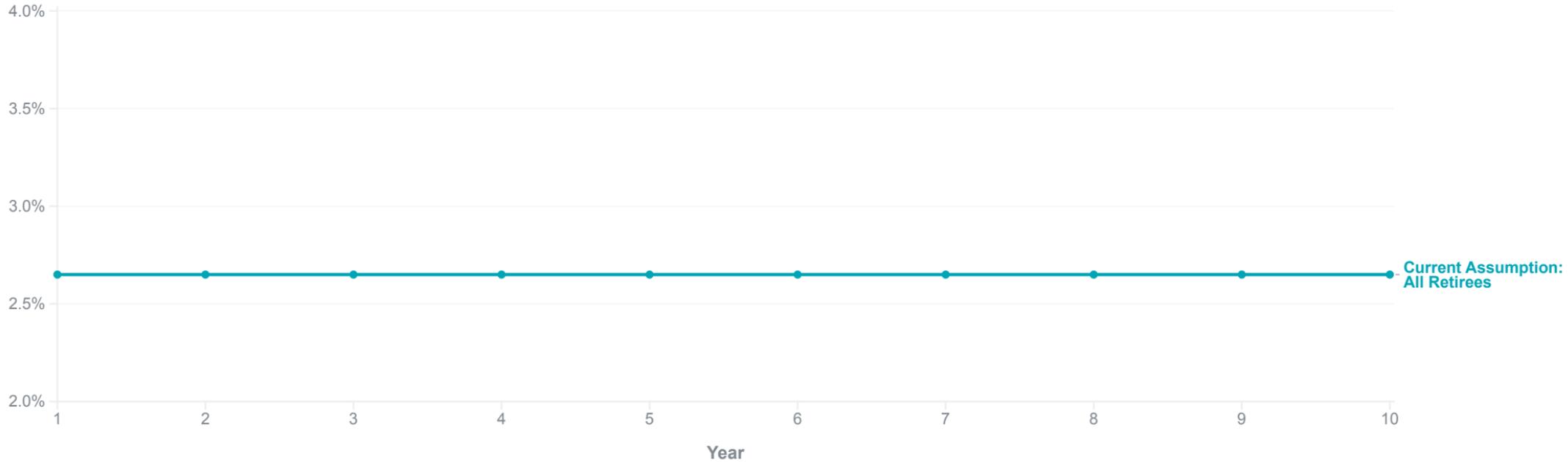
Modeled COLAs



The current assumption for members in pay status is 2.65% COLA per year is greater than the active member assumption of 2.40% to consider the varying COLA banks for current retirees.

COLA Assumptions for Members In Pay Status

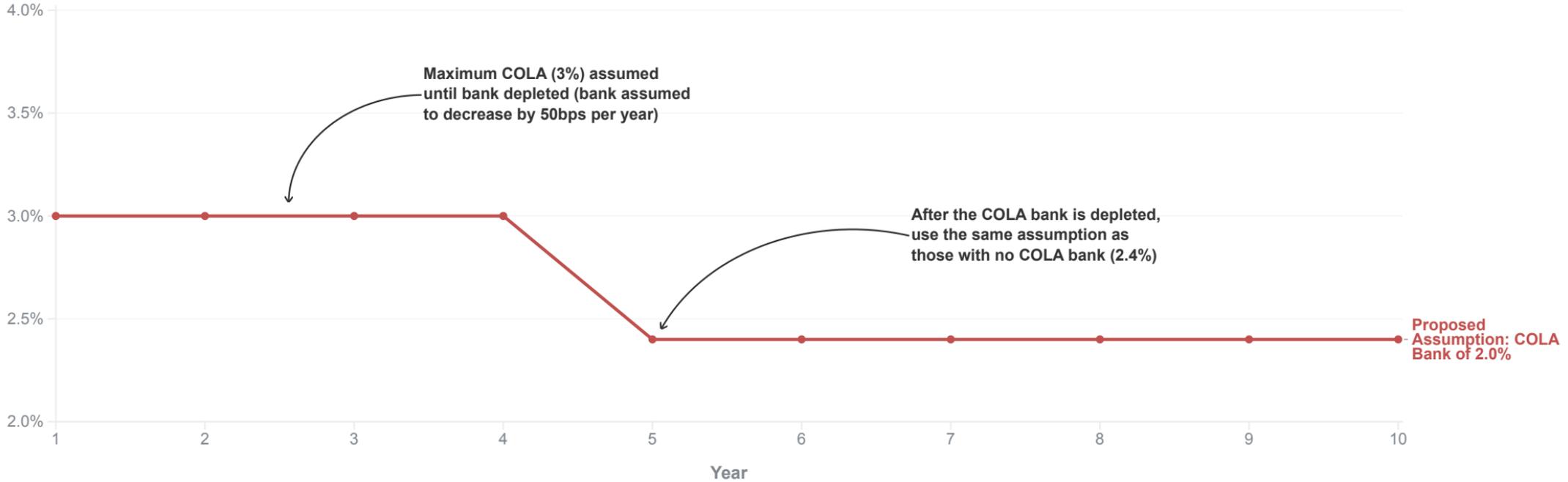
Current Assumption: All Retirees



We propose a new structure so that the assumption varies based on the member's COLA bank as of the valuation date.

COLA Assumptions for Members In Pay Status

Proposed Assumption: COLA Bank of 2.0%



To summarize our findings on the COLA assumption:

For members with an existing bank, set COLA assumption equal to the 3.0% max COLA until the bank is depleted then use the long term assumption.

- The bank is assumed to decrease annually by the difference between the inflation assumption and the 3.0% cap.
- The recommended assumption captures the impact of existing COLA banks more precisely.
- The recommended assumption is dynamic, incorporating future inflation experience without any additional analysis.

Simulation shows long-term average of COLA with no bank, 3% cap, and 2.50% inflation is expected to be 2.40%.

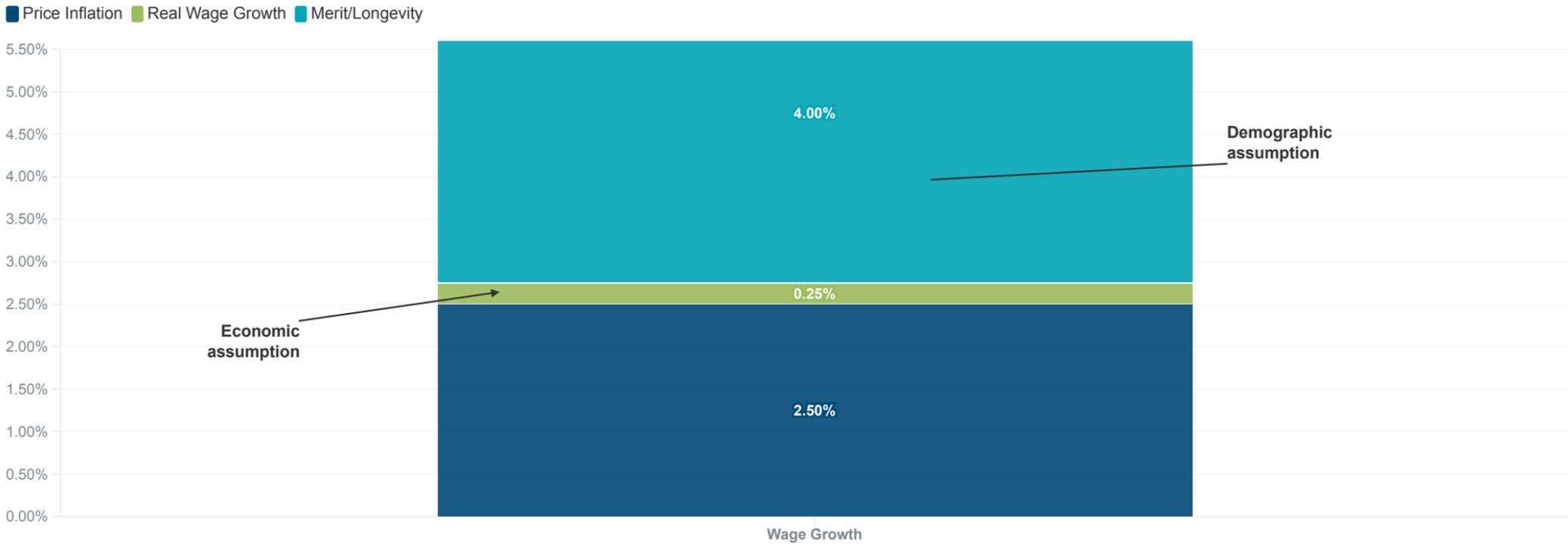
Assumption	Group	Recommendation
Merit/Longevity Pay	General	No changes proposed
Merit/Longevity Pay	Safety	No changes proposed
Retirement	General Non-PEPRA	Increase rates for 20-29 YOS at ages 59-64, reduce rates for <20 YOS at 58-59 and 62
Retirement	General PEPRA	Decrease rates with <20 YOS at 52-53 and 67-69
Retirement	Safety Non-PEPRA	Various changes, with overall reduction in expected retirements, and increase in ultimate retirement age from 60 to 65
Retirement	Safety PEPRA	Apply separate set of rates, with 50% adjustment to proposed non-PEPRA rates below age 57
Termination	General and Safety	Increase rates at most service levels
Disability	General	Use 2025 CalPERS Miscellaneous Non-Industrial rates (50/50 split of service and non-service)
Disability	Safety	Use 2025 CalPERS County Peace Officers Industrial Disability rates plus Non-Industrial Safety rates (increases to rates)
Mortality	Healthy General Retirees & Beneficiaries	Use 2025 CalPERS Healthy Annuitant rates, adjusted 1.05 (only minor changes to female base rates)
Mortality	Healthy Safety Retirees & Beneficiaries	Use 2025 CalPERS Healthy Annuitant rates, adjusted 1.05 (change from PubS-2010(B) tables)
Mortality	Disabled General and Safety Retirees	Use 2025 CalPERS Industrial and Non-Industrial rates (only minor changes to female base rates)
Mortality	Active General and Safety Employees	Use 2025 CalPERS Non-Industrial plus Industrial (Safety only) Employee rates

Demographic Assumption Recommendations

Assumption	Group	Recommendation
Mortality Improvement Scale	All	80% of the MP-2020 scale to 80% of the MP-2021 scale
Withdrawal of Employee Contribution Account	General	Increase rates <5 YOS, reduce from 5-14 YOS
Withdrawal of Employee Contribution Account	Safety	Increase rates >5 YOS
Reciprocity	General	No changes proposed
Reciprocity	Safety	Reduce rates
Deferral Retirement Age	General	No changes proposed
Deferral Retirement Age	Safety	Split assumption between PEPRA and non-PEPRA. Reduce for non-PEPRA reciprocals.
Spouse Age Difference	All	No changes proposed
Probability of Subsidized Benefit Option (Marriage %)	All	Reduce General males, increase Safety males
Sick Leave Load	General and Safety	Apply 0.4% load to service and disability retirements from active status
Plan Administrative Expenses	All	Increase from \$3.0M to \$3.2M

As discussed earlier, salary increases are made of three components: base price inflation, plus "real" wage growth (for productivity or other reasons), plus increases in individual pay due to merit, promotion, and longevity.

Total Assumed Pay Increase Rate (General Member, 5 Years of Service)

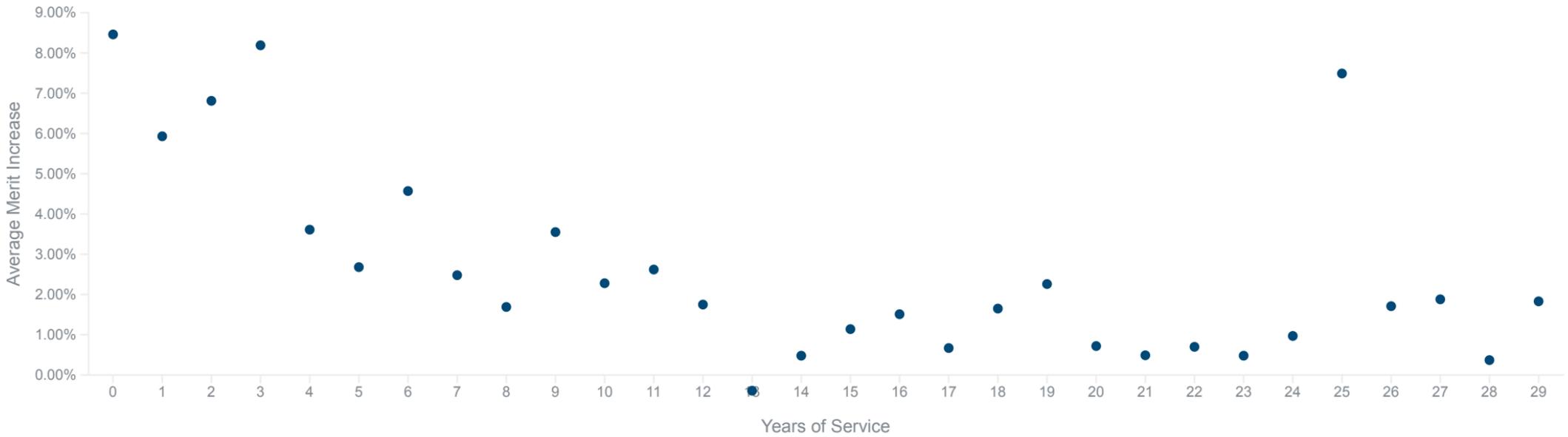


To analyze the merit salary increase assumption, we calculate the average year-over-year rate of salary growth at each service level, and then back out the base wage growth to get the average merit increase. We do this for each of the last nine years.

Merit Pay Increase Rates

General ▾

2017 2018 2019 2020 2021 2022 2023 2024 2025 2017-2025 Avg (Rate) 2017-2025 Avg (Earnings) 2017-2025 Avg (Combined) Current Proposed

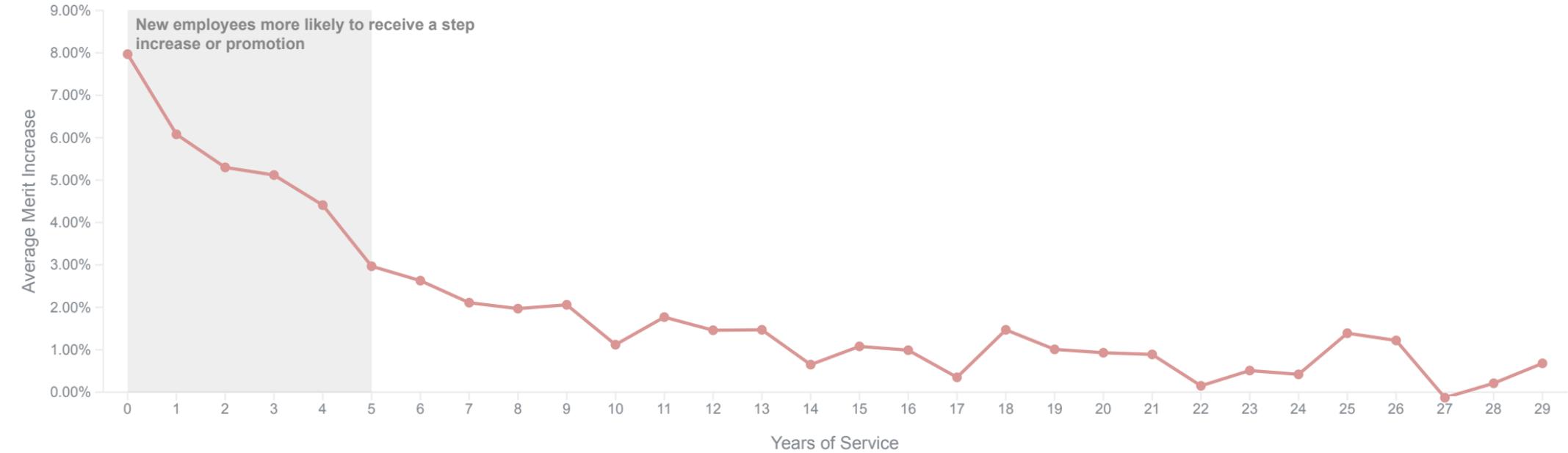


Then calculate the average merit increase over the nine-year period for General members.

Merit Pay Increase Rates

General ▾

■ 2017 ■ 2018 ■ 2019 ■ 2020 ■ 2021 ■ 2022 ■ 2023 ■ 2024 ■ 2025 ■ 2017-2025 Avg (Rate) ■ 2017-2025 Avg (Earnings) ■ 2017-2025 Avg (Combined) ■ Current ■ Proposed

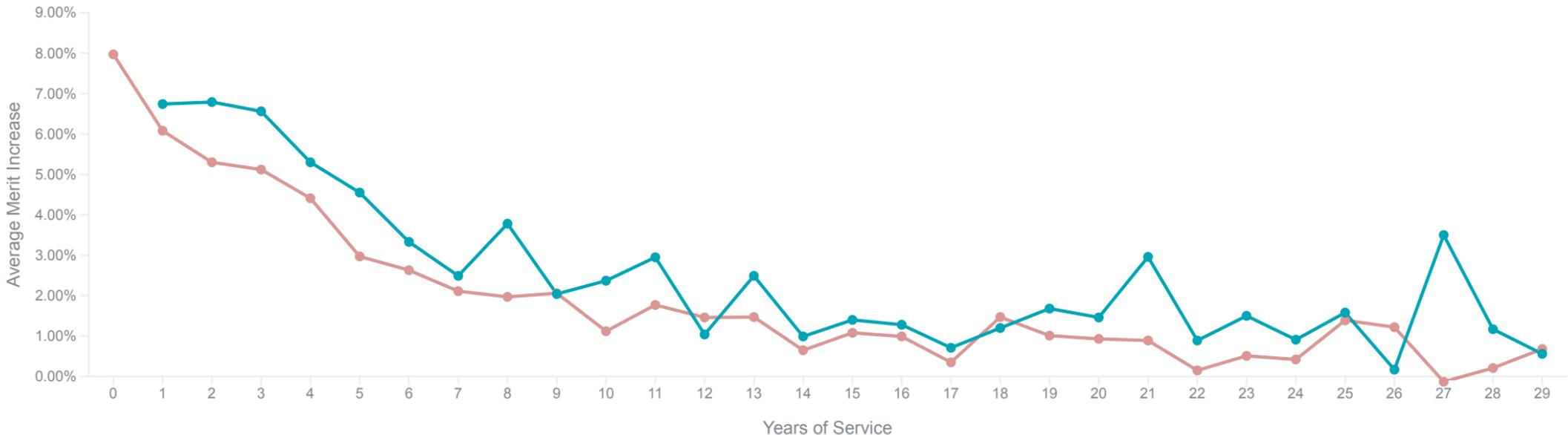


We performed this analysis using two different pay measurements: the rate of pay on the valuation date and the annual earnings (which tends to be more volatile, in particular when members have periods of absence).

Merit Pay Increase Rates

General ▾

2017 2018 2019 2020 2021 2022 2023 2024 2025 2017-2025 Avg (Rate) 2017-2025 Avg (Earnings) 2017-2025 Avg (Combined) Current Proposed

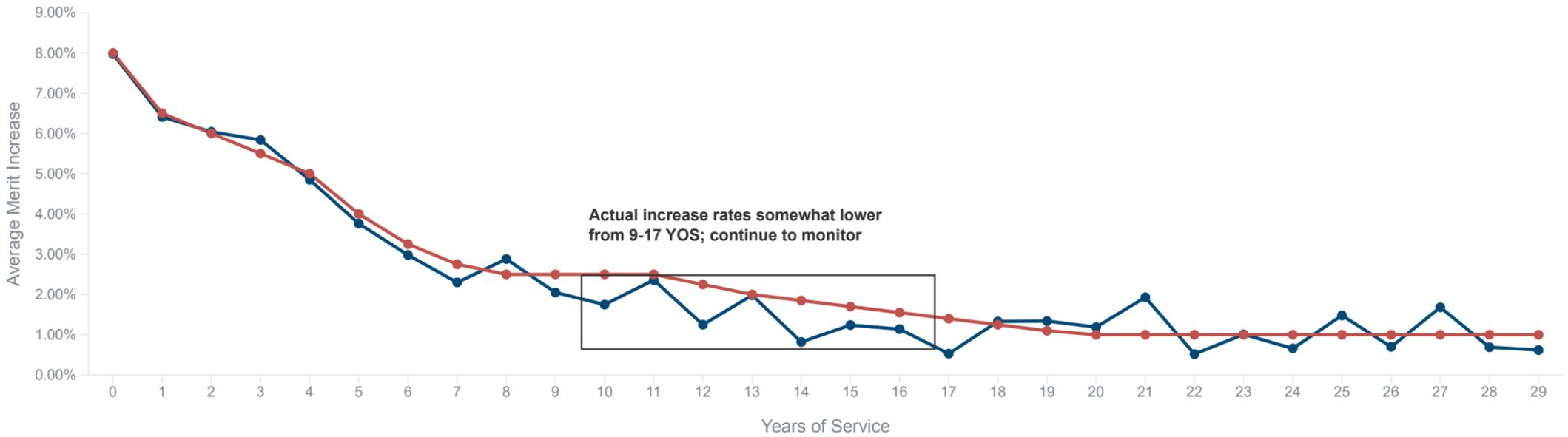


Using the average of these approaches, we compared the actual data to our current assumption. For the General members, the current assumption fits the overall pattern relatively closely, and no changes are recommended.

Merit Pay Increase Rates

General ▾

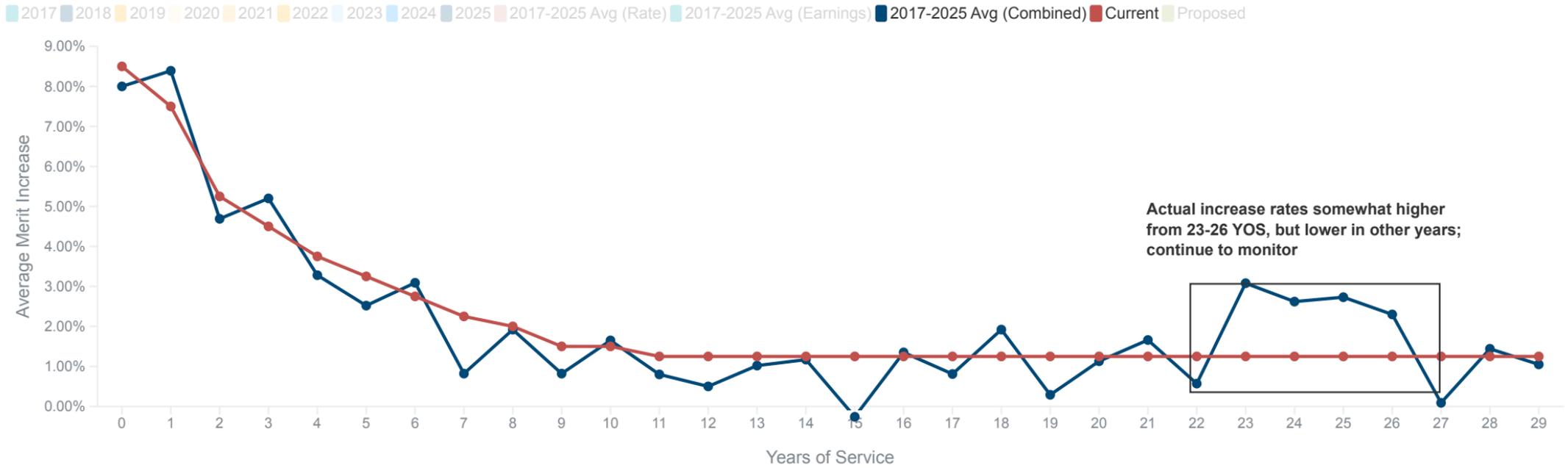
2017 2018 2019 2020 2021 2022 2023 2024 2025 2017-2025 Avg (Rate) 2017-2025 Avg (Earnings) 2017-2025 Avg (Combined) Current Proposed



Similarly, the combined average Safety experience under the two methodologies was relatively close to the assumptions, and no changes are recommended.

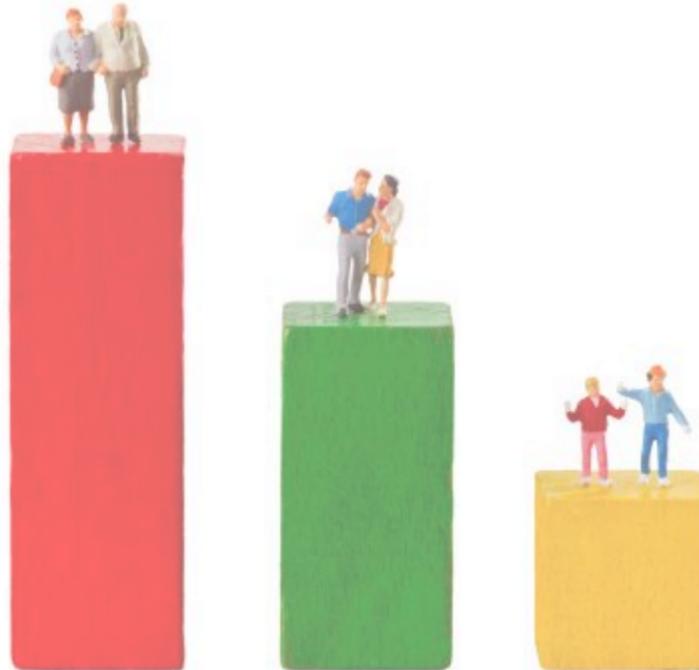
Merit Pay Increase Rates

Safety ▾



Our analyses for retirement, termination, disability, and mortality experience includes data from fiscal years ending 2017 through 2025. We also reviewed the assumptions looking just at the most recent period (2023-2025), as well as other periods, as indicated in the slides that follow. Using longer periods allows us to mitigate impact of COVID-relate experience on assumptions.

Retirement / Termination / Disability / Mortality Rates

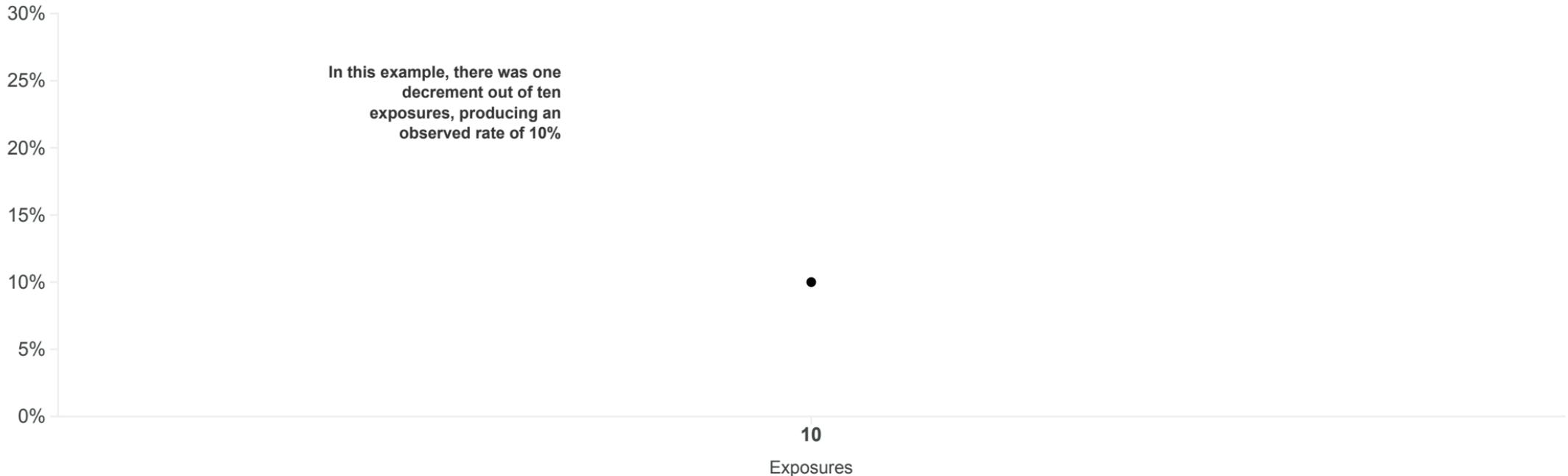


For each *decrement*- i.e., retirement, termination, disability, or death - we first calculate the observed rate of decrement, which equals the number who left active service divided by the number who could have done so (i.e., the number **exposed** to the decrement).

Confidence Interval Illustration

All 10 100 1000

Observed Rate Confidence Interval

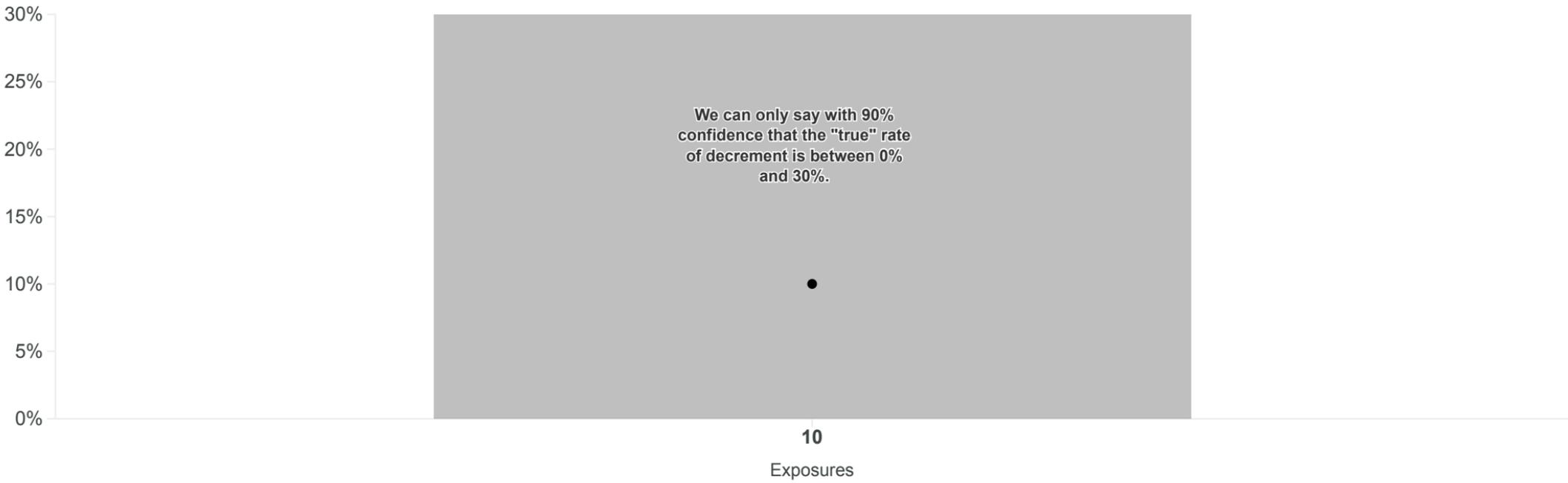


Statistically, 1 decrement out of 10 exposures doesn't tell us very much about the "true" rate of decrement because small random variations have a significant impact on the observed rate.

Confidence Interval Illustration

All 10 100 1000

Observed Rate Confidence Interval

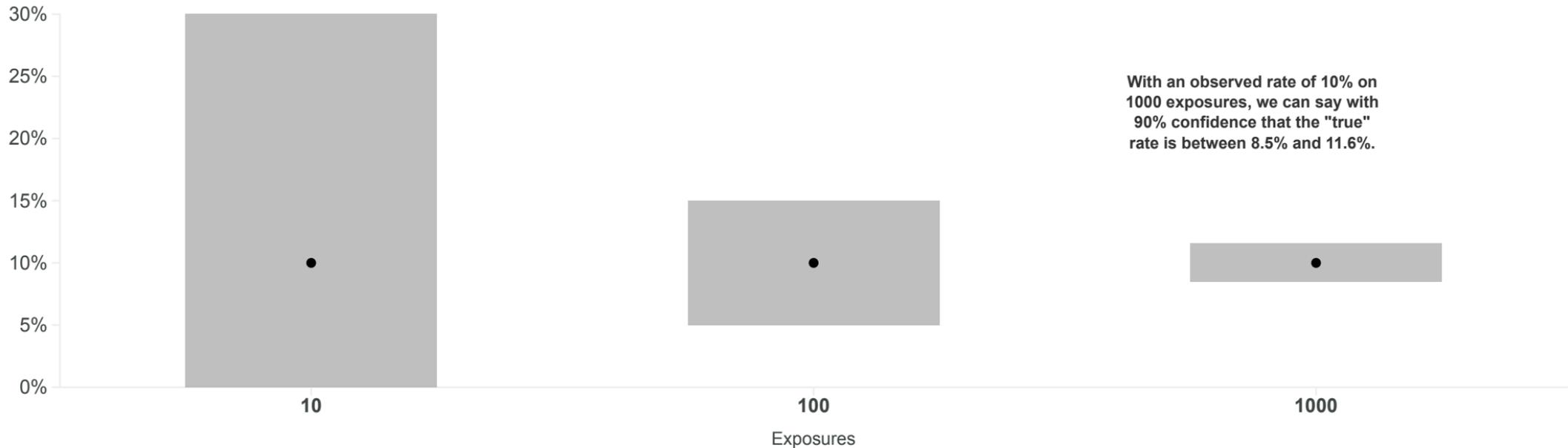


With more exposures, the confidence interval narrows. We generally propose assumption changes if the current assumption is outside the confidence interval. However, we also adjust for observations that appear to be anomalous or for future expectations that may differ from historical experience.

Confidence Interval Illustration

All 10 100 1000

Observed Rate Confidence Interval

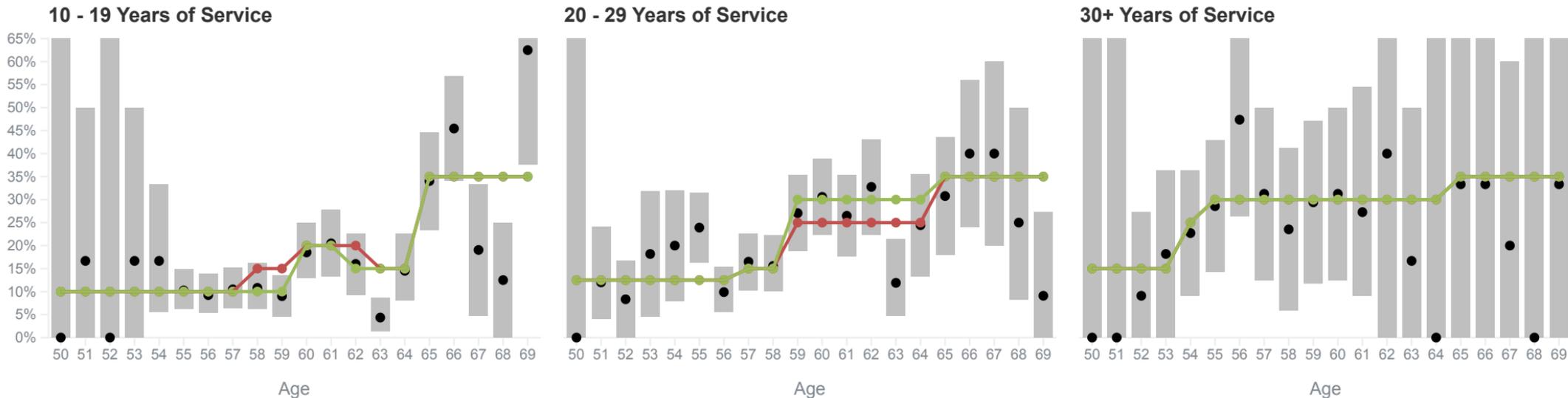


We are recommending no changes to the General retirement rates for the highest service levels, modest increases from ages 59-64 for 20-29 years of service and small decreases to ages 58, 59 and 62 for 10-19 years of service. We note that the experience below age 55 is limited to the Tier 1 retirees, as General members of Tiers 2 and 3 are not eligible to retire below age 55 with less than 30 years of service.

General Non-PEPRA Retirement Rates (2017-2025)

All 10 - 19 Years of Service 20 - 29 Years of Service 30+ Years of Service

Actual Rate Current Assumption Proposed Assumption Confidence Interval



Hovering over the values will reveal additional information, including the actual and expected number of members retiring, as well as several statistical measures including the Actual/Expected ratio (for the overall group) and the R-squared (a statistical measure related to the amount of variance explained by the assumption).

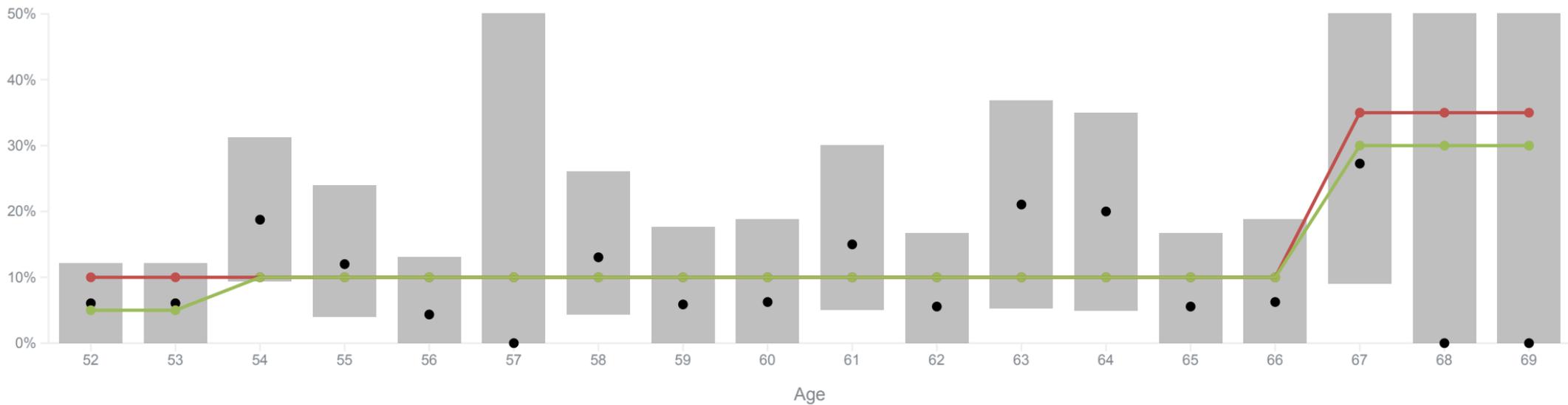


PEPRA retirement experience is beginning to emerge, with 36 retirements over the past six years. The actual experience is somewhat lower than the current assumptions, so we are proposing minor reductions at ages 52-53 and 67-69. There is no experience yet at the higher service levels, and we are not proposing any changes.

General PEPRA Retirement Rates (2020-2025)

All 5-19 Years of Service

Actual Rate Current Assumption Proposed Assumption Confidence Interval



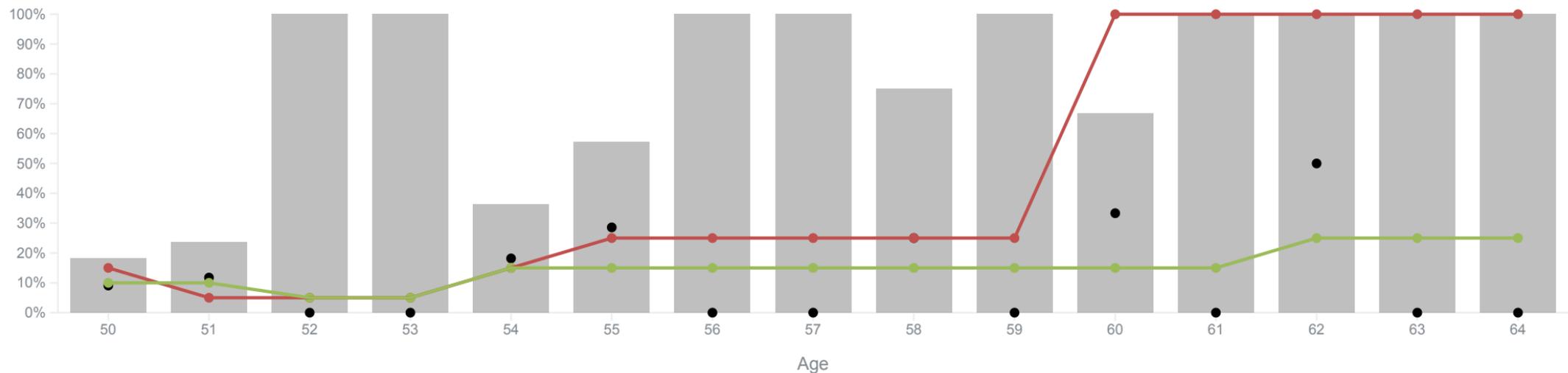
For the Safety Non-PEPRA members with 10-19 years of service, we are proposing reductions to the retirement rates after age 54 to bring the assumptions closer in line with experience. We are also proposing extending the ultimate retirement age (the age at which all members are assumed to retire) from 60 to 65 for the Safety members.

Safety Non-PEPRA Retirement Rates (2017-2025)

All **10 - 19 Years of Service** 20+ Years of Service

Actual Rate Current Assumption Proposed Assumption Confidence Interval

10 - 19 Years of Service

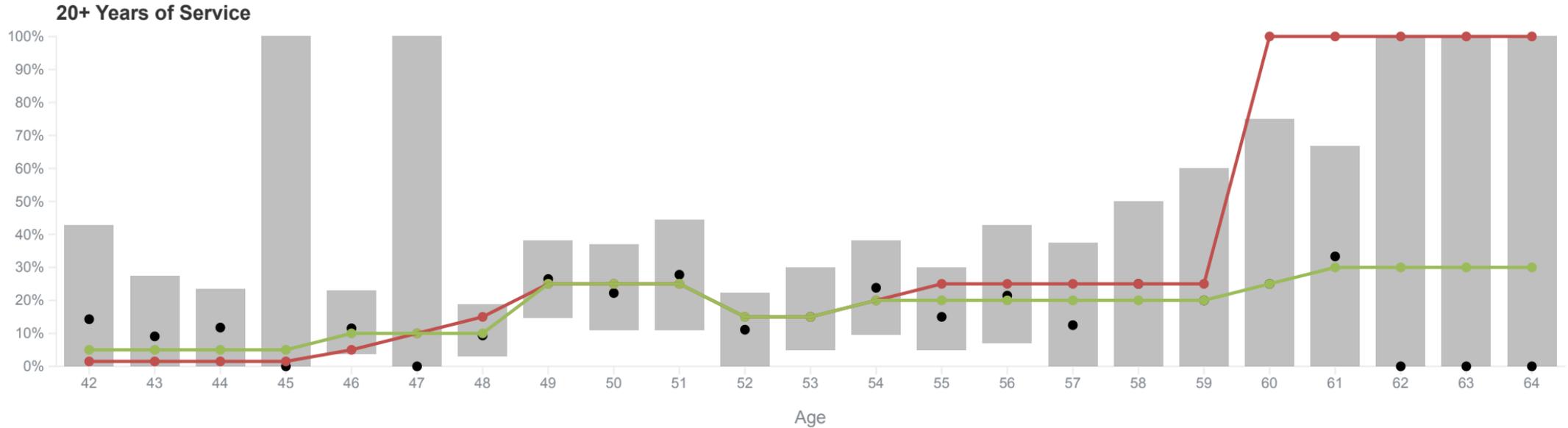


For the Safety members with 20+ years of service, we are proposing small changes to the retirement rates before age 49 and decreases to the retirement rates after age 54 to bring the assumptions closer in line with experience.

Safety Non-PEPRA Retirement Rates (2017-2025)

All 10 - 19 Years of Service 20+ Years of Service

Actual Rate Current Assumption Proposed Assumption Confidence Interval



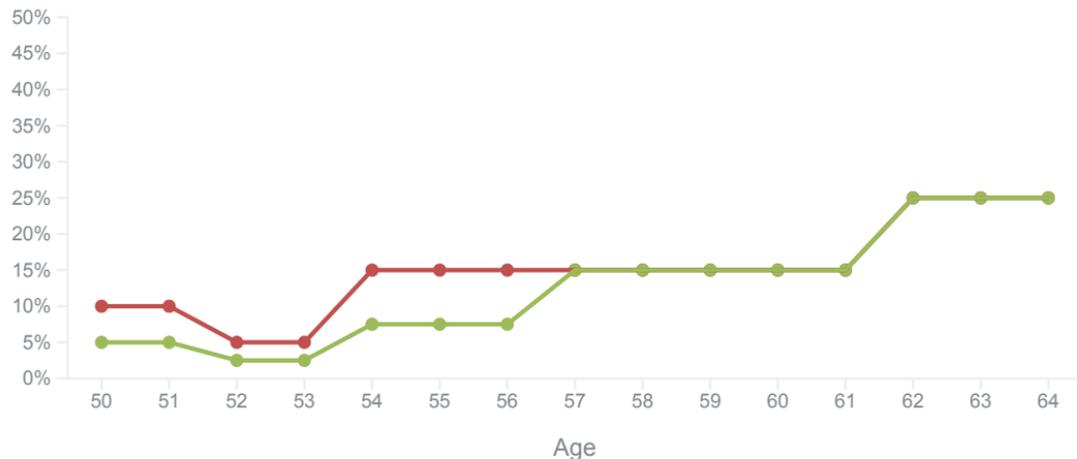
For Safety PEPRA members there is very little experience. However, using the proposed Non-PEPRA rates would result in relatively few (<20%) PEPRA members reaching the maximum benefit factor (at age 57). We are proposing the use of different retirement assumptions for the PEPRA members, applying a 50% reduction to the rates before age 57. We will continue to monitor the PEPRA retirement experience.

Safety Retirement Rates (PEPRA)

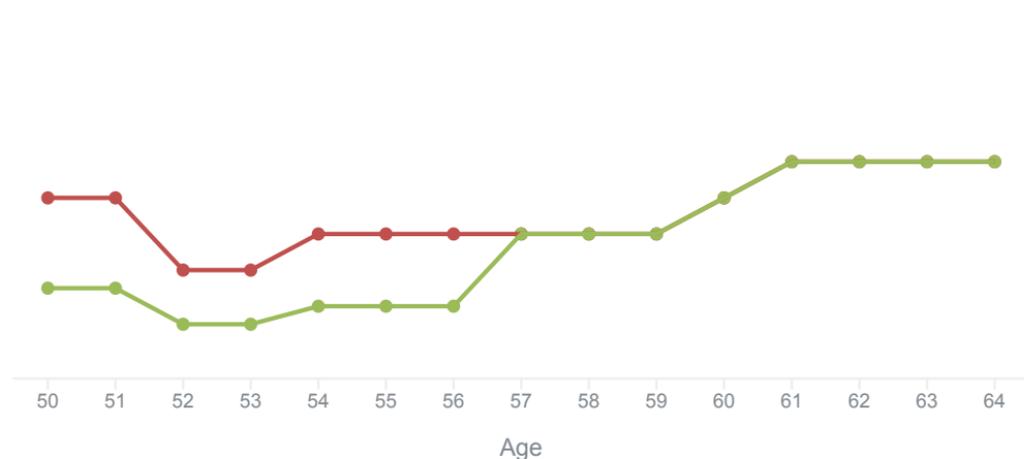
All 10 - 19 Years of Service 20+ Years of Service

Proposed Assumption (Non-PEPRA) Proposed Assumption (PEPRA)

10 - 19 Years of Service



20+ Years of Service

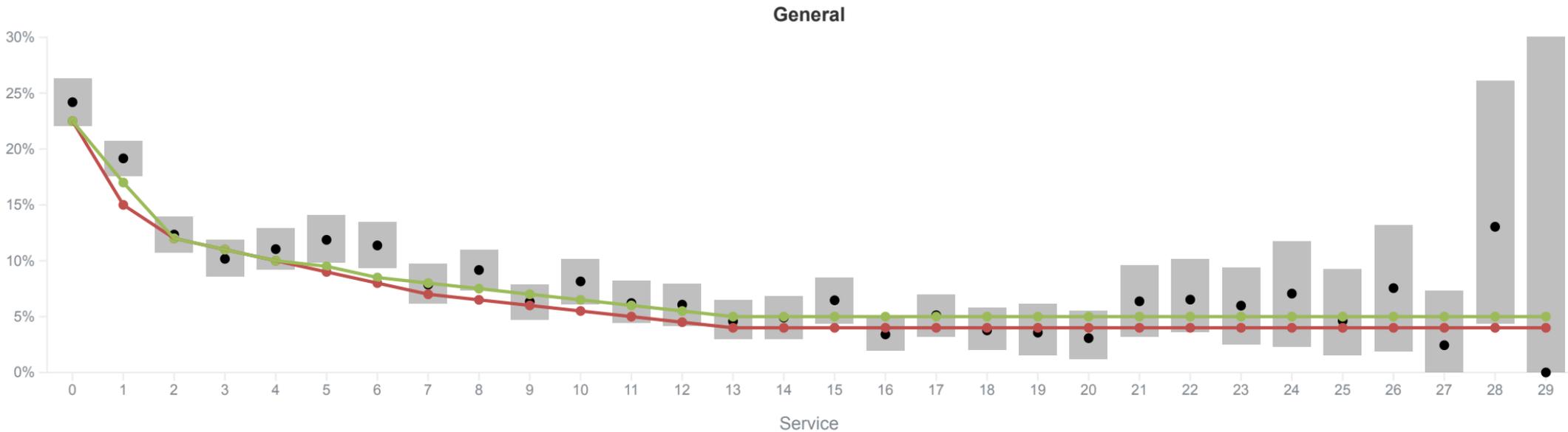


Below we show the termination rates for General members for the past nine years. We are proposing slight increases for most service levels to better align with experience.

Termination Rates

All **General** Safety

Actual Rate Current Assumption Proposed Assumption Confidence Interval

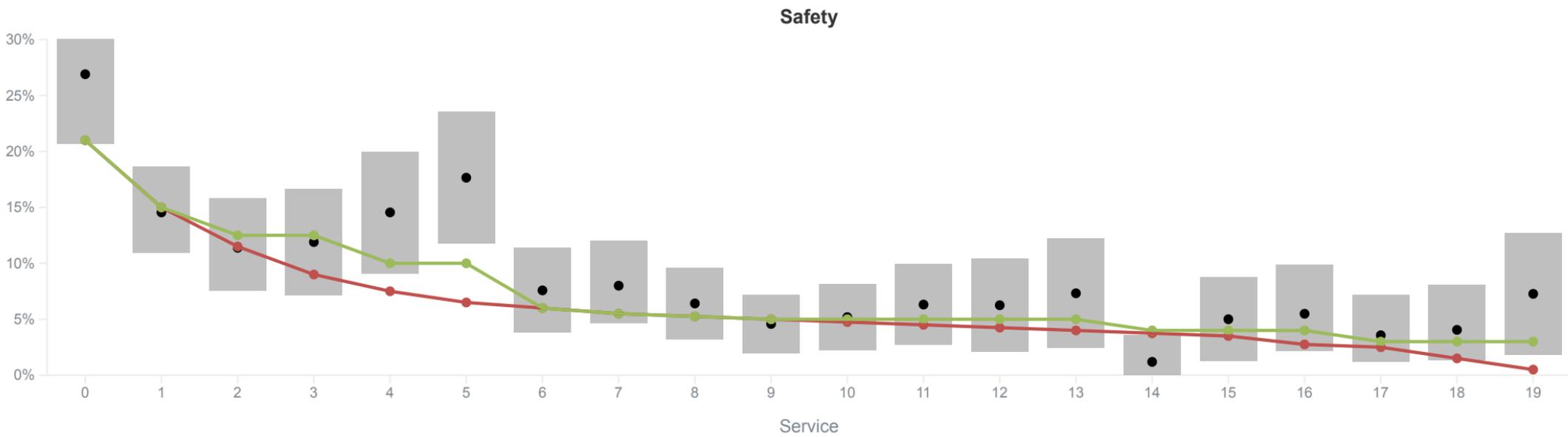


Below we show the termination rates for Safety members for the past nine years. We are proposing slight increases for most service levels to better align with experience.

Termination Rates

All General Safety

Actual Rate Current Assumption Proposed Assumption Confidence Interval

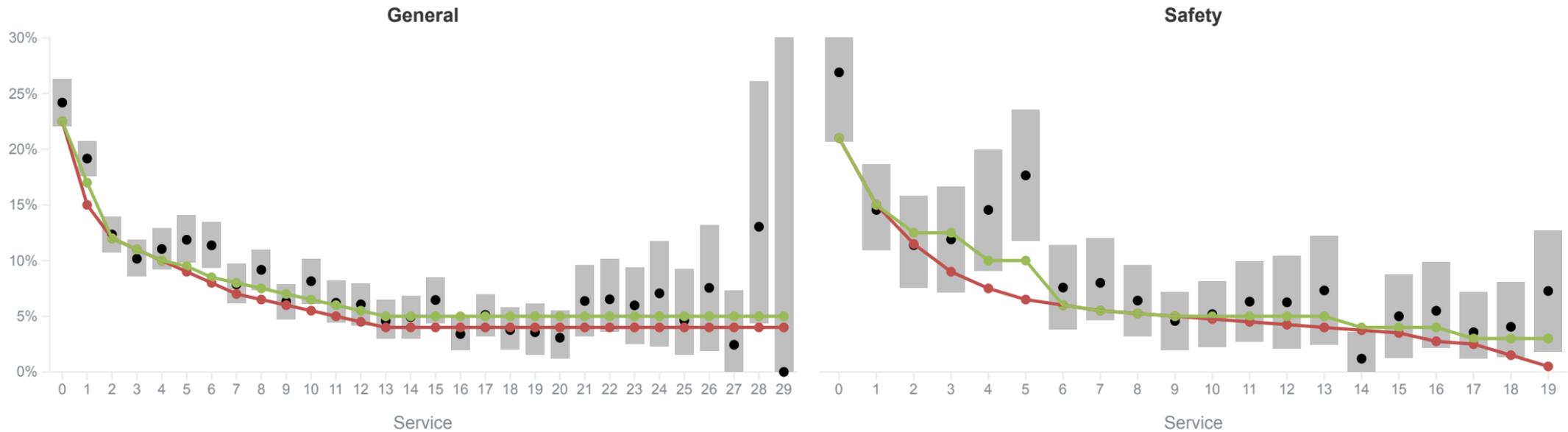


We considered proposing larger increases to the termination rates, particularly for Safety, but we note that the termination experience of the last three years has been significantly higher than in prior periods, and we recommend making only moderate changes for now.

Termination Rates

All General Safety

Actual Rate Current Assumption Proposed Assumption Confidence Interval

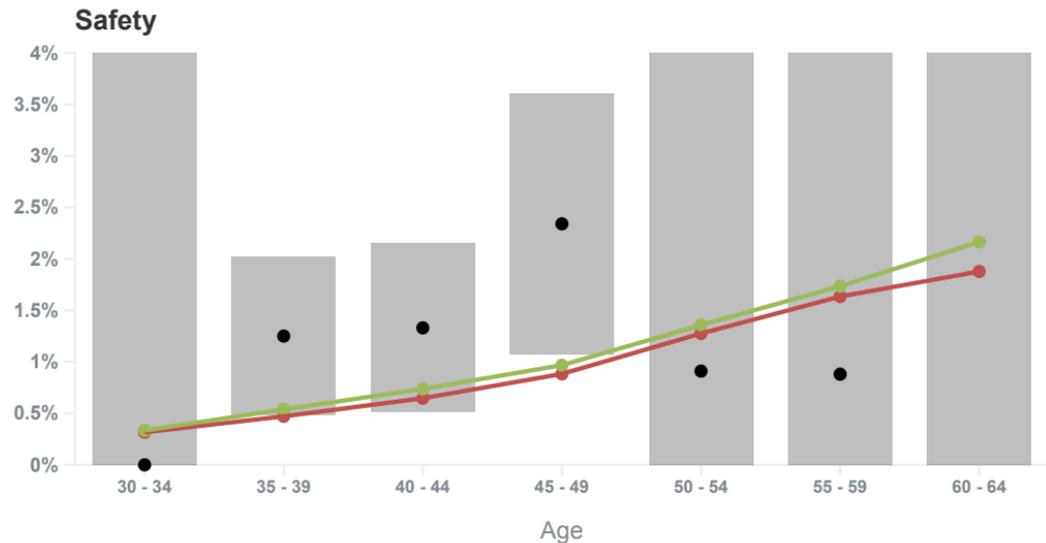
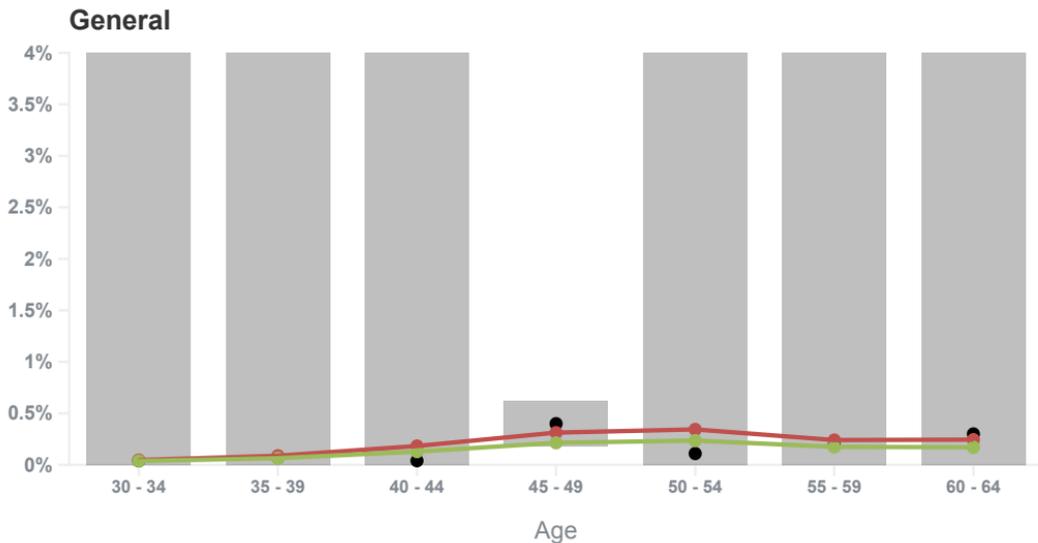


The current disability assumptions are based on CalPERS standard tables. We recommend updating the assumptions using relevant disability tables from the recent 2025 CalPERS experience study, which are more consistent with MercedCERA's disability experience. The amount of data for MercedCERA is also quite limited, even over a nine-year period, which explains the large confidence intervals.

Total Disability Rates (2017-2025, Service and Non-Service Connected)

All General Safety

Actual Rate Current Rate Proposed Rate Confidence Interval



Proposed General disability rates based on the CalPERS 2025 Public Agency Miscellaneous Non-Industrial Disability Table, with a 50/50 split between Service and Non-Service disabilities

Proposed Safety disability rates based on the CalPERS 2025 Public Agency County Peace Officer Industrial (Service) and Non-Industrial (Non-Service) Tables

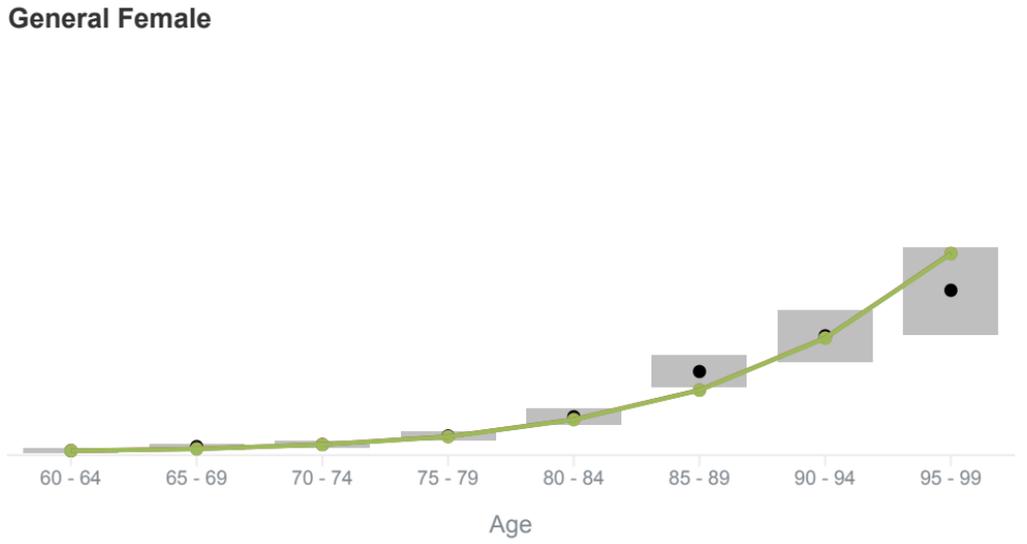
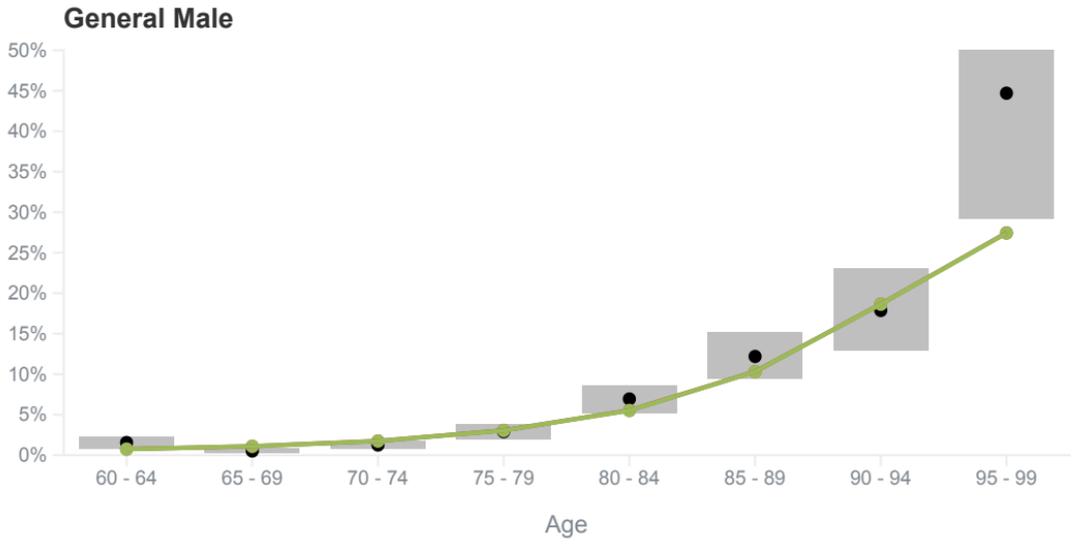


For mortality, we review the experience based on benefit amount, not headcount, since members with higher incomes are expected to live longer. General healthy retiree and beneficiary deaths were close to expected, so we are only recommending to update from the CalPERS 2021 table to the 2025 tables and keeping the 105% adjustment (indicating MercedCERA members have slightly higher death rates).

General Healthy Annuitants (2017-2025)

All General Male General Female

Actual Rate Current Assumption Proposed Assumption Confidence Interval

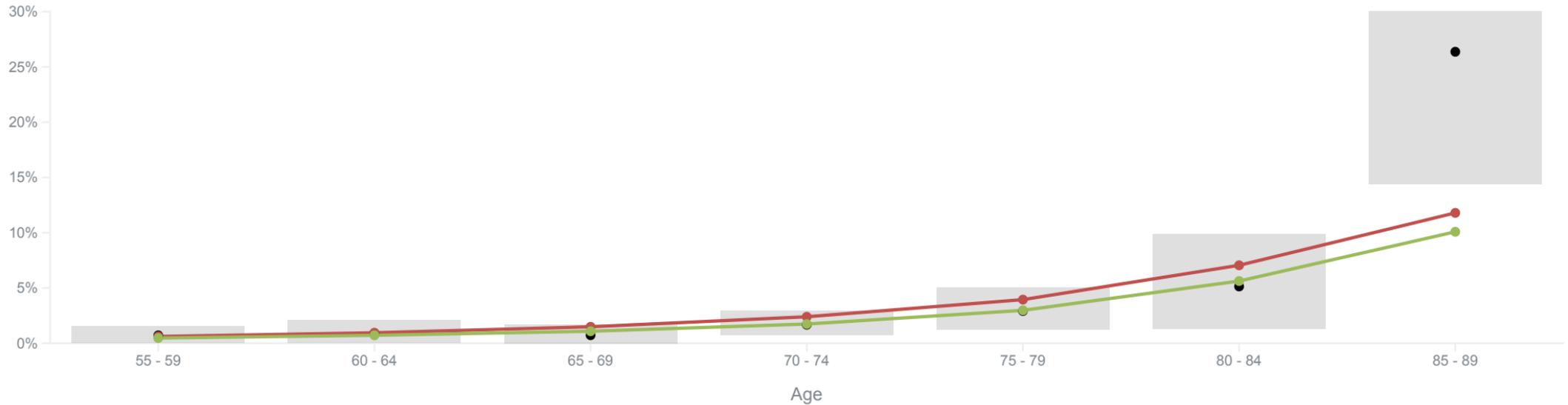


Safety male retirees had fewer deaths than expected. We propose using the same CalPERS 2025 retiree tables with 105% adjustment to better align with MercedCERA's experience, and for consistency with the General assumption (CalPERS has indicated that Safety and non-Safety experience has been similar). There is not enough credible data to show the Safety female experience.

Healthy Retiree Mortality Rates (2017 - 2025)

Safety Male

■ Actual Rate
 ■ Current Rate
 ■ Proposed Rate
 ■ Confidence Interval



Mortality rates are generationally projected from the base year using generational mortality from 2017 using 80% of Scale MP-2021.

Below we summarize the current and proposed base tables. We considered using a separate set of (higher) mortality assumptions for beneficiaries in pay status compared to the members, because of the "widower effect". However, we concluded the impact would not be material on the results and would introduce additional complexity, particularly when developing administrative factors.

We also recommend updating the scale used to anticipate future changes in mortality (for all groups), from 80% of the MP-2020 Scale published by the Society of Actuaries to 80% of the MP-2021 Scale (the most recent published table). This continues the practice of using the improvement scale adopted by CalPERS, as MercedCERA does not have enough experience to reliably evaluate mortality improvement.

Summary of Base Mortality Assumptions

Group	Current Tables	Proposed Tables
General Healthy Retirees and Beneficiaries	CalPERS 2021 with a 105% adjustment	CalPERS 2025 with a 105% adjustment
Safety Healthy Retirees and Beneficiaries	Safety Pub2010 Healthy Retiree (Below Median Income), without adjustments	CalPERS 2025 with a 105% adjustment
Current Disabled (Duty related)	CalPERS 2021 Industrial Disabled Annuitant, without adjustments	CalPERS 2025 Industrial Disabled Annuitant, without adjustments
Current Disabled (Non-duty related)	CalPERS 2021 Non-Industrial Disabled Annuitant, without adjustments	CalPERS 2025 Non-Industrial Disabled Annuitant, without adjustments
Future General Disabled	CalPERS 2021 50/50 Industrial & Non-Industrial Disabled Annuitant, without adjustments	CalPERS 2025 50/50 Industrial & Non-Industrial Disabled Annuitant, without adjustments
Future Safety Disabled	CalPERS 2021 Industrial Disabled Safety Annuitant, without adjustments	CalPERS 2025 Industrial Disabled Safety Annuitant, without adjustments
General Active Employees	CalPERS 2021 Non-Industrial Miscellaneous Employees, without adjustments	CalPERS 2025 Non-Industrial Miscellaneous Employees, without adjustments

Note: For most CalPERS tables, the only difference between the 2021 and 2025 tables are a small change in the female base rates.

Withdrawal / Refund Rates

Transfers / Reciprocity

**Commencement Age for Deferred
Members**

Family Composition

Terminal Pay Loads

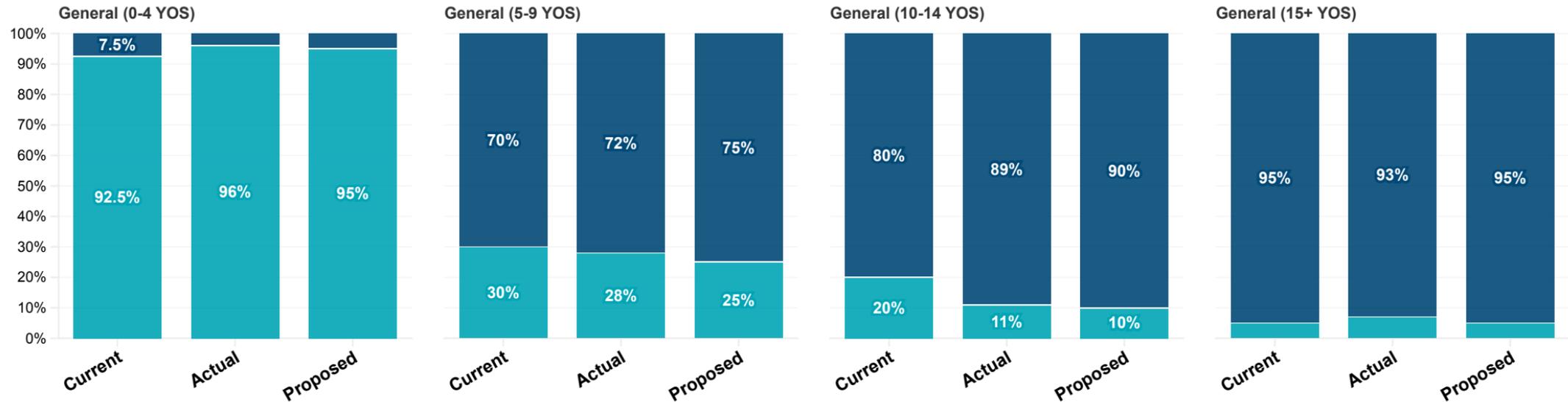
Administrative Expenses

For members who terminate prior to retirement, we studied the percentage of those who withdraw their contributions, versus those who leave them on deposit and receive a deferred benefit. Members with less service at termination are more likely to take a refund. **We recommend increasing the refund rate for 0 - 4 years of service and decreasing the refund rate for 5 - 9 and 10 - 14 years of service.**

Refunds as a % of General Terminations (2017 - 2025)

All General (0-4 YOS) General (5-9 YOS) General (10-14 YOS) General (15+ YOS)

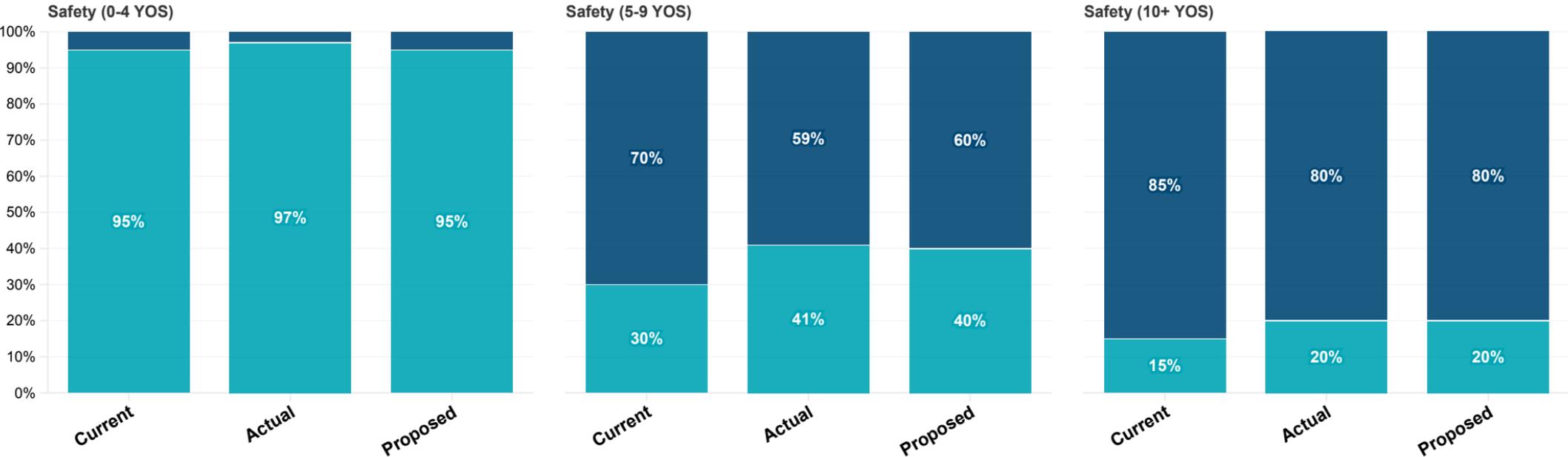
Withdrawal Deferred Benefit



Refunds as a % of Safety Terminations (2017 - 2025)

All
 Safety (0-4 YOS)
 Safety (5-9 YOS)
 Safety (10+ YOS)

Withdrawal
 Deferred Benefit

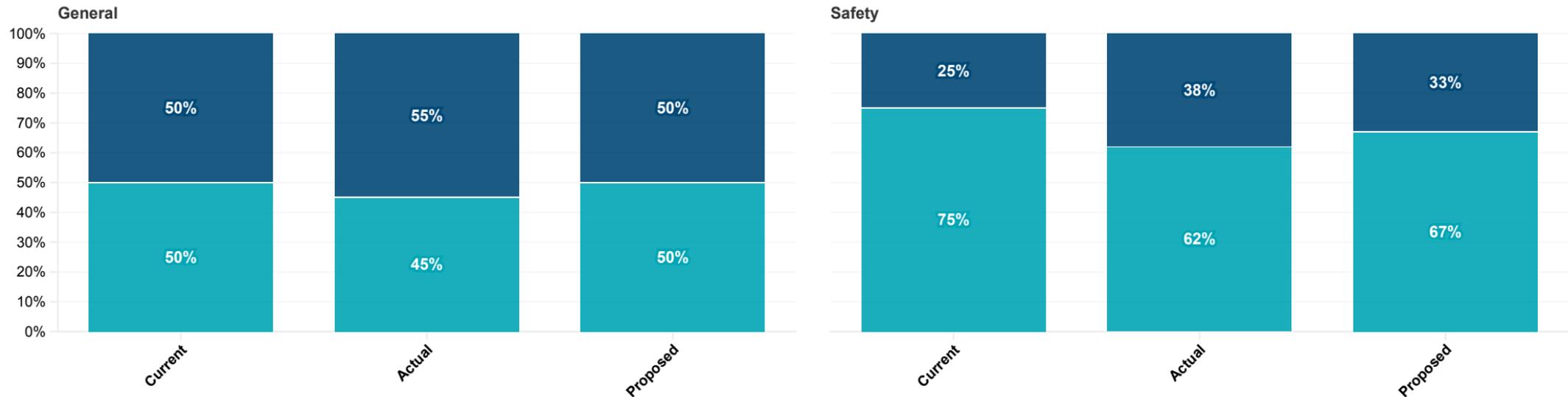


Similarly, we reviewed the likelihood that members who terminate and leave their contributions on deposit will establish reciprocity with another system. This generally results in higher liabilities, because we assume that the pay for members with reciprocity will continue to grow until their final expected retirement date. **We are proposing a reduction to this assumption for Safety.**

Reciprocity as a % of Deferred Retirements (2017 - 2025)

All General Safety

Reciprocity No Reciprocity



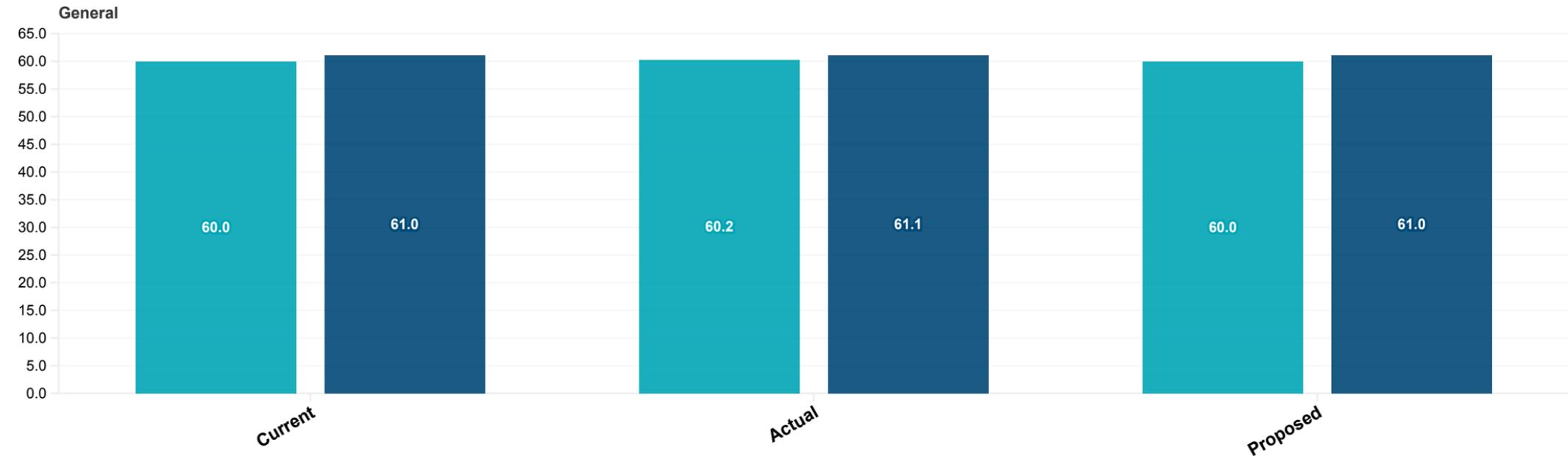
All members taking a deferred benefit with less than 5 years of service are assumed to establish reciprocity.

The pay for members establishing reciprocity in the future is assumed to grow at the ultimate salary growth rate for their class (3.75% for General, 4.00% for Safety). Current reciprocal member pay is expected to grow based on the assumptions applied to the active members.

We reviewed the commencement ages for those who retired from a deferred status, analyzing the data separately for those who had established reciprocity with another employer. For General, we propose no change to the assumed retirement ages for vested terminated or reciprocal members since experience has been close to the assumptions.

Age at Commencement from Inactive Status (2017-2025)

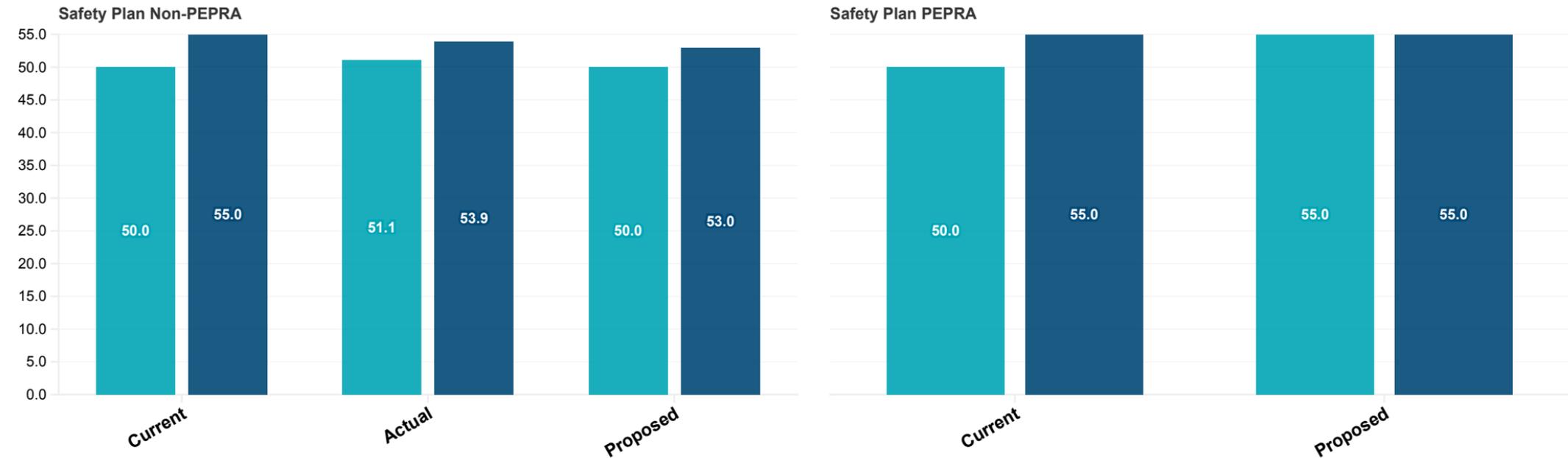
■ From Vested Status ■ From Reciprocal Status



For Safety, we propose a reduction in the assumed retirement ages for reciprocal Non-PEPRA members; over the last six years the average age (51.4) has been well below the assumption (55.0). Although there is not yet reliable experience for the PEPRA members, we propose increasing the commencement age for vested members to age 55, in line with the recommended changes in retirement rates.

Age at Commencement from Inactive Status (2017-2025)

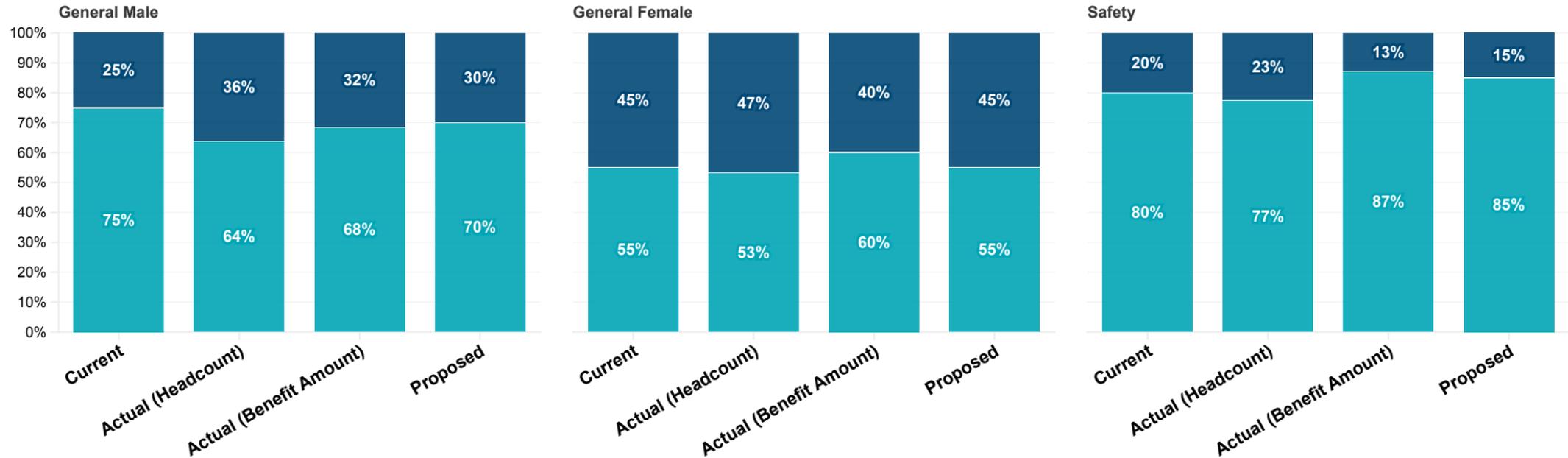
From Vested Status From Reciprocal Status



We reviewed the data over the past six years (2019-2025) on the number of new retirees reporting a spouse beneficiary AND selecting a (subsidized) unmodified form of payment, with the data weighted both by headcount and benefit amount. We are recommending changes to the percent married assumption for General males and all Safety members to more closely align with more recent experience.

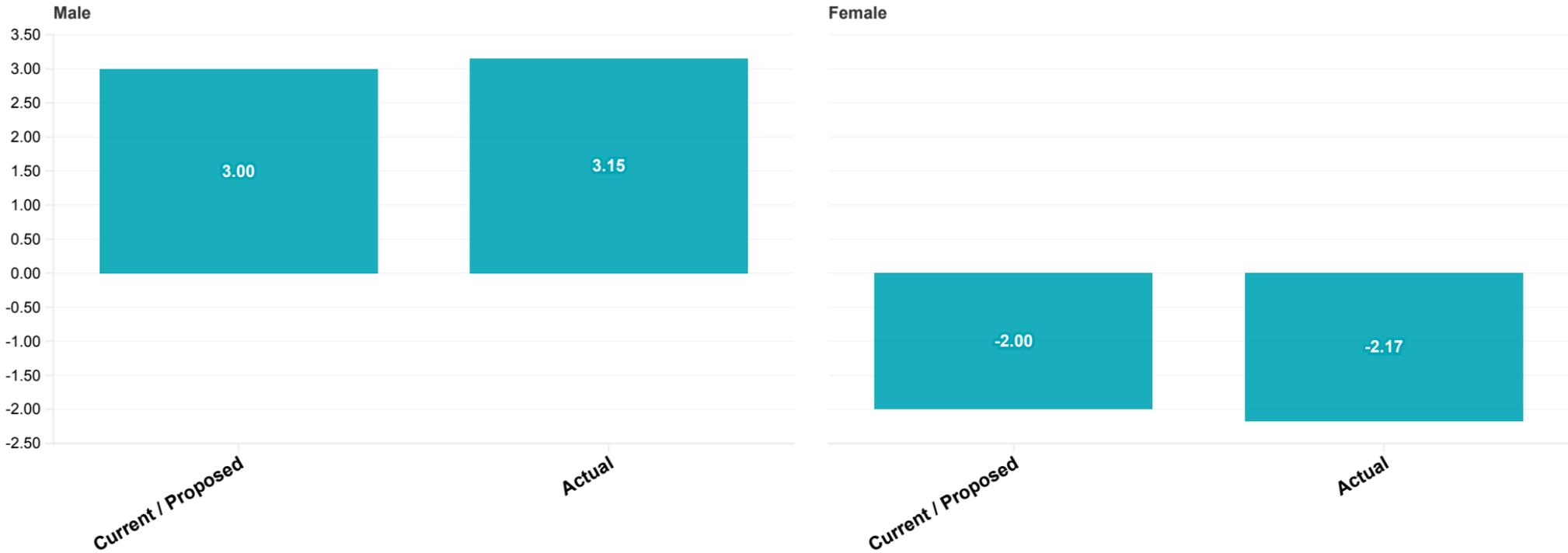
Family Composition (% Married and Electing Unmodified Payment Form)

■ % With Spouse ■ % Without Spouse



We are not recommending any changes to the assumptions regarding the age difference between future retirees and their spouses, as the experience among new retirees over the past three years has been very close to the current assumptions.

Family Composition (Spouse Age Difference)



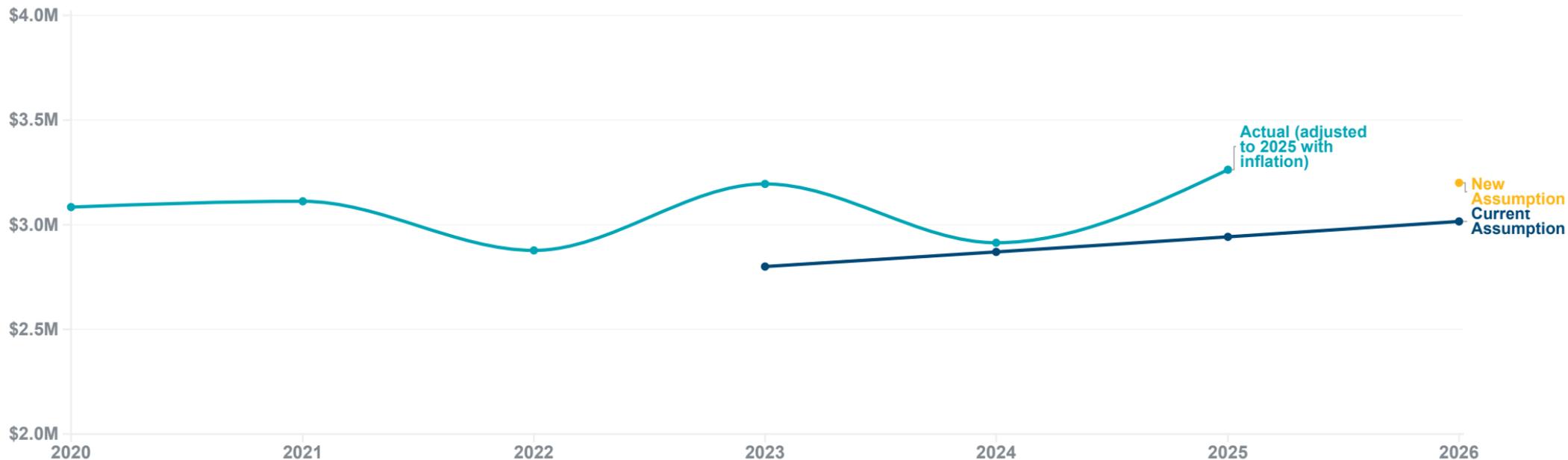
Sick and Vacation Leave

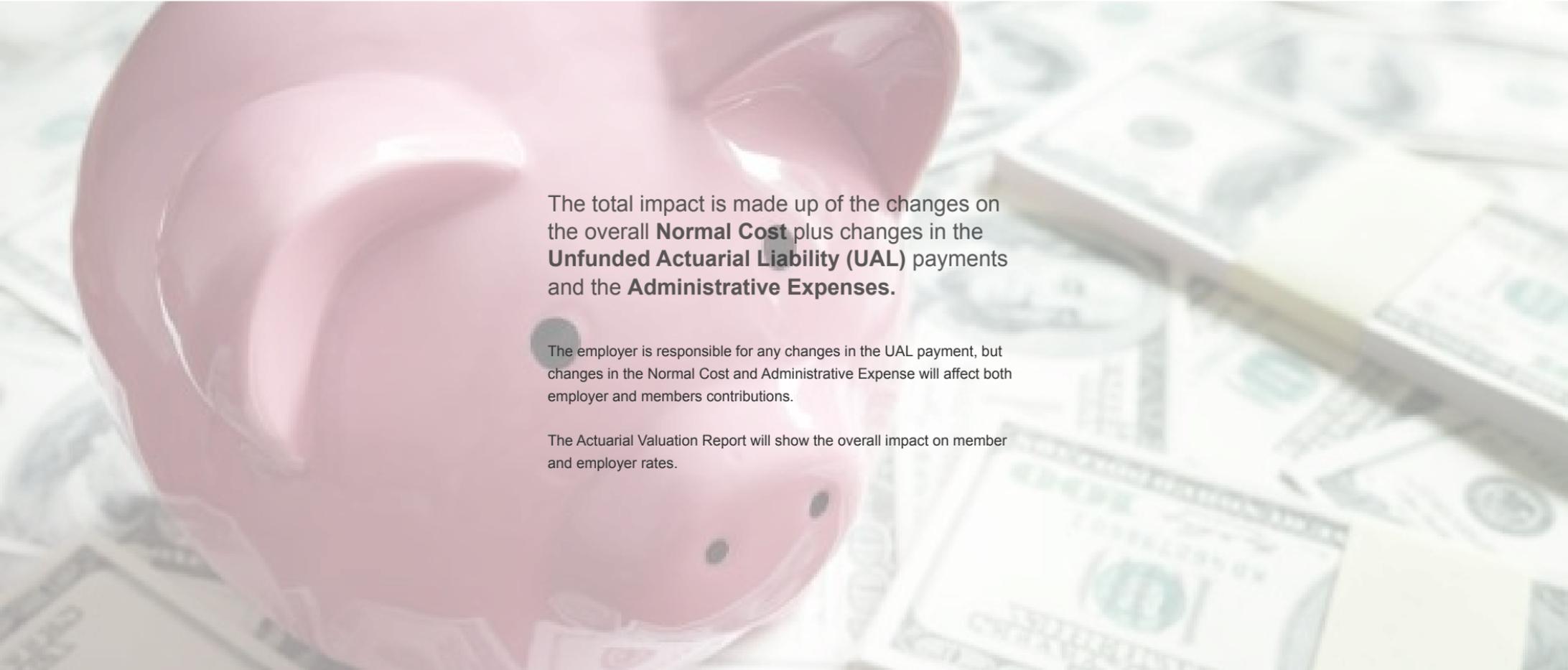
- We reviewed recent benefit calculations from the past three years and analyzed the amount of sick leave service included in the calculations.
- On average, members converted approximately 8 hours of sick time per year of benefit service at retirement to service credit, with similar results for General and Safety. We recommend applying a load of 0.4% to the service amount used in **service and disability** retirement calculations.
- We also reviewed the amount of sick and vacation time sold back in the year prior to retirement, vs. the average amounts sold back by other active employees. We found no indication that members were selling back more sick and vacation time prior to retirement, therefore we continue to conclude no compensation load is necessary.

(8 hours / 2080 hours per year)

We are recommending a slight increase to the administrative expense assumption. The most recent 6-year average (adjusted for inflation to June 30, 2025) is \$3.1 million. Increasing this amount with the inflation assumption of 2.5%, we propose an administrative expense assumption for July 1, 2025 to June 30, 2026 of \$3.2 million. This amount is allocated to employee and employer contribution rates based on their proportion of the total contribution prior to the assumption.

Administrative Expenses (Recommendation)



A pink piggy bank is the central focus, positioned on the left side of the slide. The background is a soft-focus image of several US dollar bills, including a prominent \$100 bill on the right. The overall color palette is light and airy, with a semi-transparent white box containing text overlaid on the piggy bank.

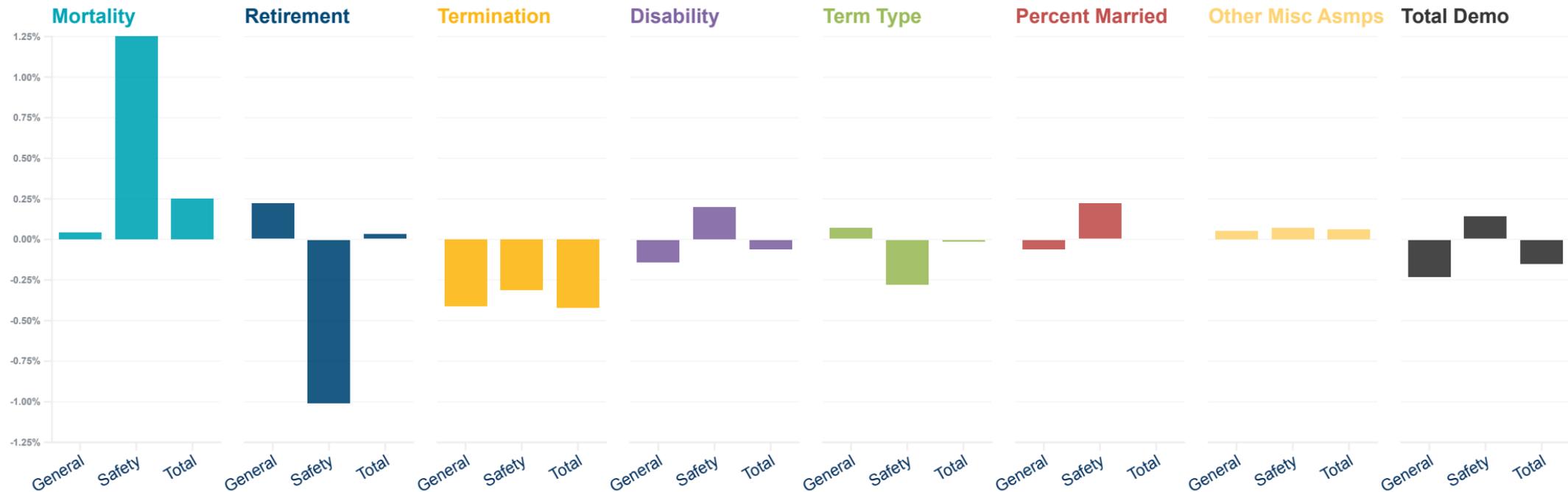
The total impact is made up of the changes on the overall **Normal Cost** plus changes in the **Unfunded Actuarial Liability (UAL)** payments and the **Administrative Expenses**.

The employer is responsible for any changes in the UAL payment, but changes in the Normal Cost and Administrative Expense will affect both employer and members contributions.

The Actuarial Valuation Report will show the overall impact on member and employer rates.

The recommended changes in the demographic assumptions all have a relatively minor impact on total plan cost (employer + employee) for the 2025 Valuation. The net impact on the total contribution is a decrease of 0.15% for MercedCERA in total; General decrease of 0.23%, and Safety increase of 0.14% of pay.

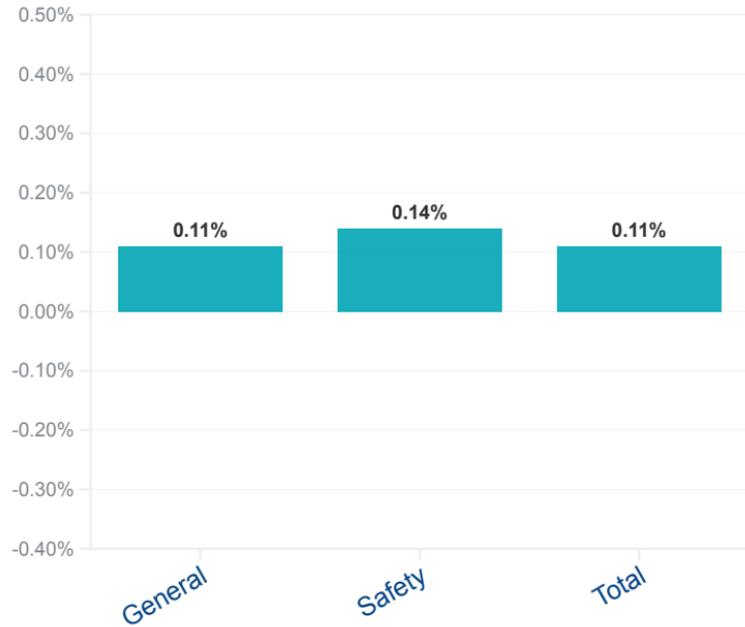
Contribution Rate Change by Source (Demographics)



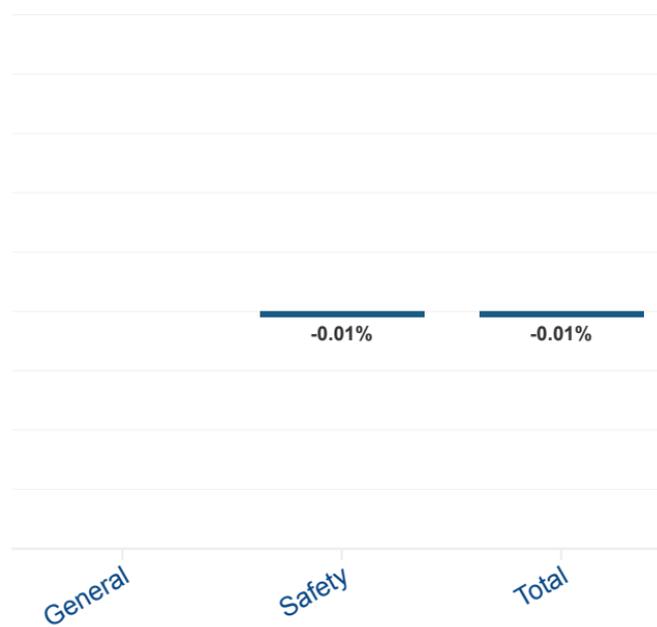
The impacts on the 2025 Valuation of the administrative expense assumption, COLA banks, and the proposed wage inflation and payroll growth assumptions are shown below. Updating the assumed administrative expenses and the wage inflation / payroll growth assumption increases the total cost. Explicitly valuing the current COLA banks results in a very small decrease in total cost.

Contribution Rate Change by Source (Economic)

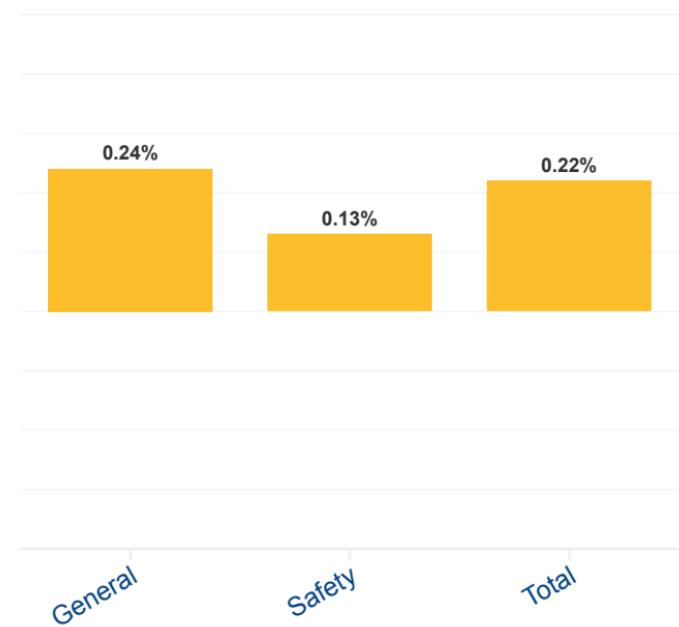
Admin Expense



COLA Banks



3.0% Wage Inflation and Payroll Growth



Below we show the impact on the total contribution rate under the demographic, administrative, and economic assumption changes for the 2025 Valuation and after the 3-year phase-in of UAL payment changes.

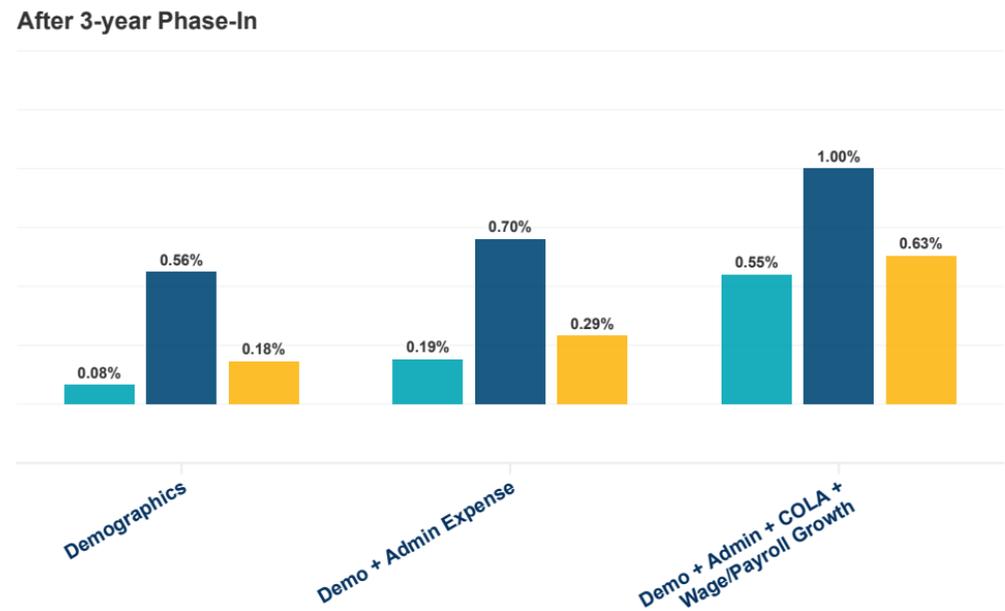
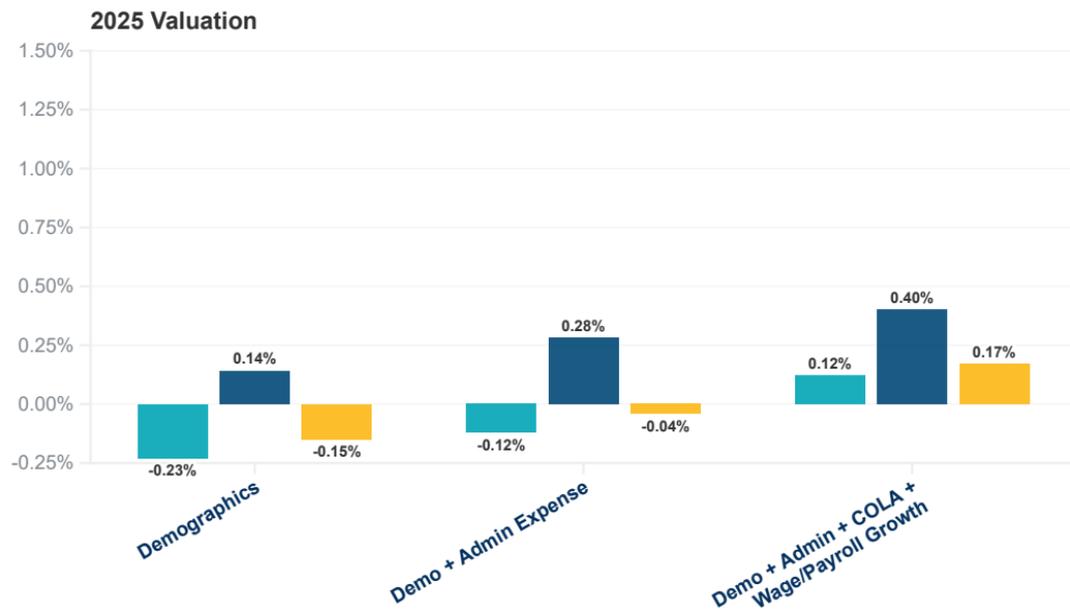
Contribution Rate Change by Source (Including Demographic Changes)

General Safety Total

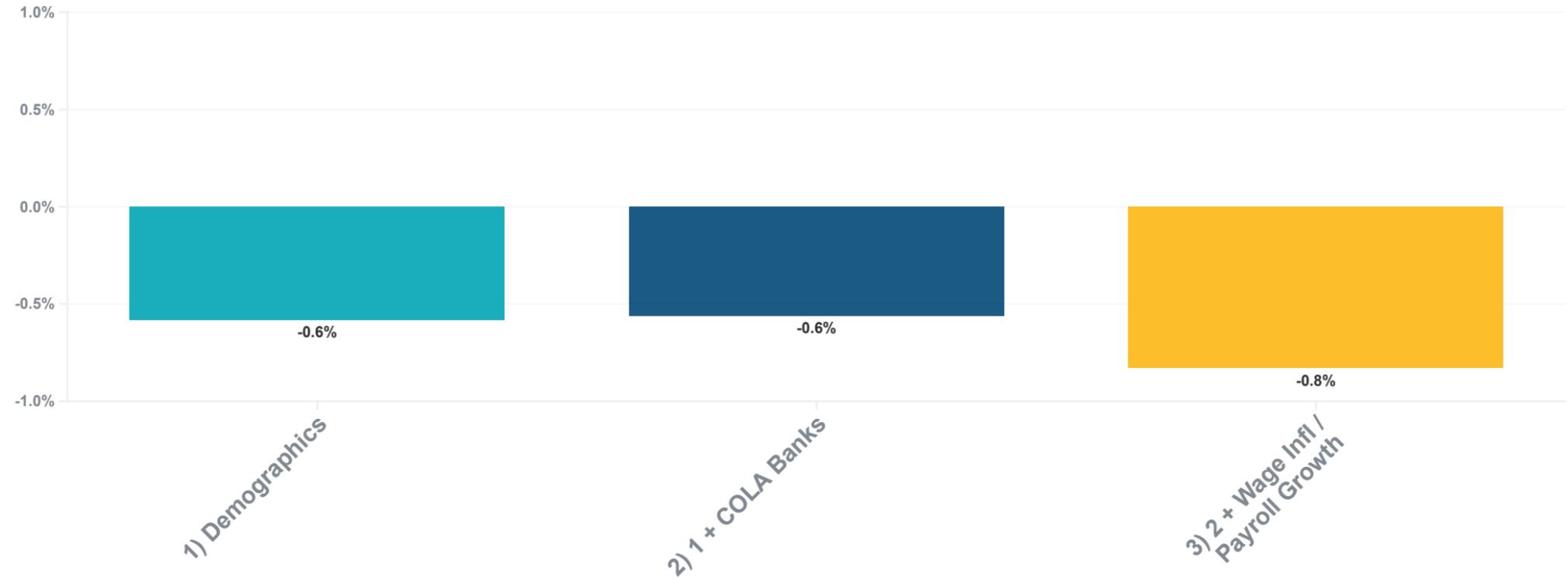


Contribution Rate Change by Source (Including Demographic Changes)

General Safety Total



Funded Ratio Change



MercedCERA Consulting Team



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Principal Consulting Actuary

Lafayette, CA



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San Diego, CA



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San Diego, CA

Certification

The purpose of this presentation is to present documentation related to the review of the demographic and economic assumptions for the Merced County Employees' Retirement Association (MercedCERA) as part of the triennial experience study. This presentation is for the use of MercedCERA in selecting assumptions to be used in actuarial valuations beginning June 30, 2025. Any other user of this report is not an intended user and is considered a third party.

In preparing our presentation, we relied on information (some oral and some written) supplied by MercedCERA. This information includes, 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 No. 23, Data Quality. *The actuarial assumptions, data, and methods are those that will be used in the preparation of the actuarial valuation report as of June 30, 2025.*

Cheiron utilizes ProVal actuarial valuation software leased from Winklevoss Technologies (WinTech) to calculate liabilities and project benefit payments. We have relied on WinTech as the developer of ProVal. We have a basic understanding of ProVal 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 valuation.

Future results may differ significantly from the projections presented in this report due to such factors as the following: plan experience different from that anticipated by the assumptions; changes in assumptions; and changes in plan provisions or applicable law.

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 report. This report 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 for the MercedCERA Retirement 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.

