

2023 Preliminary Valuation Results and Demographic Experience Study

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Agenda



Preliminary Valuation Results

Historical Gains and Losses

Analysis of Demographic Assumptions

Board Decisions



- October Board Meeting
 - ASOP 4 Updates
 - Pension Economic Assumption Review
- **November Board Meeting**
 - **Preliminary Pension Valuation Results**
 - **Demographic Experience Study**
 - **OPEB Assumptions Review**
- December Board Meeting
 - Final Pension Valuation Presentation
 - Final Pension Valuation Report
 - Preliminary OPEB Valuation Results
- January Board Meeting
 - Final OPEB Valuation Presentation
 - Final OPEB Valuation Report

Preliminary Results

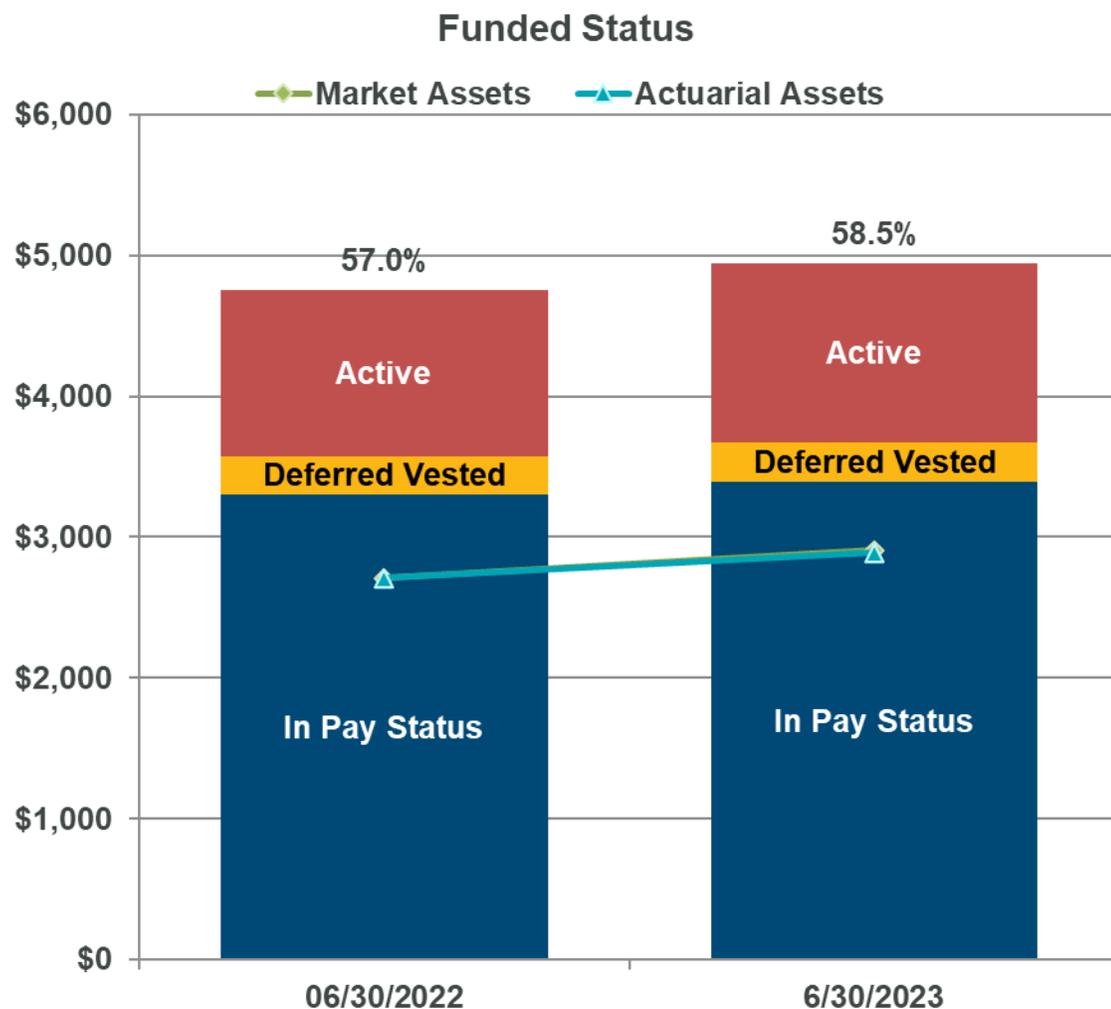


Preliminary Valuation Results



- Preliminary
- Before assumption changes
- Internal review processes are not complete
- Final valuation results may differ
- Intended to provide Board with a sense of valuation results to expect

Preliminary Funded Status



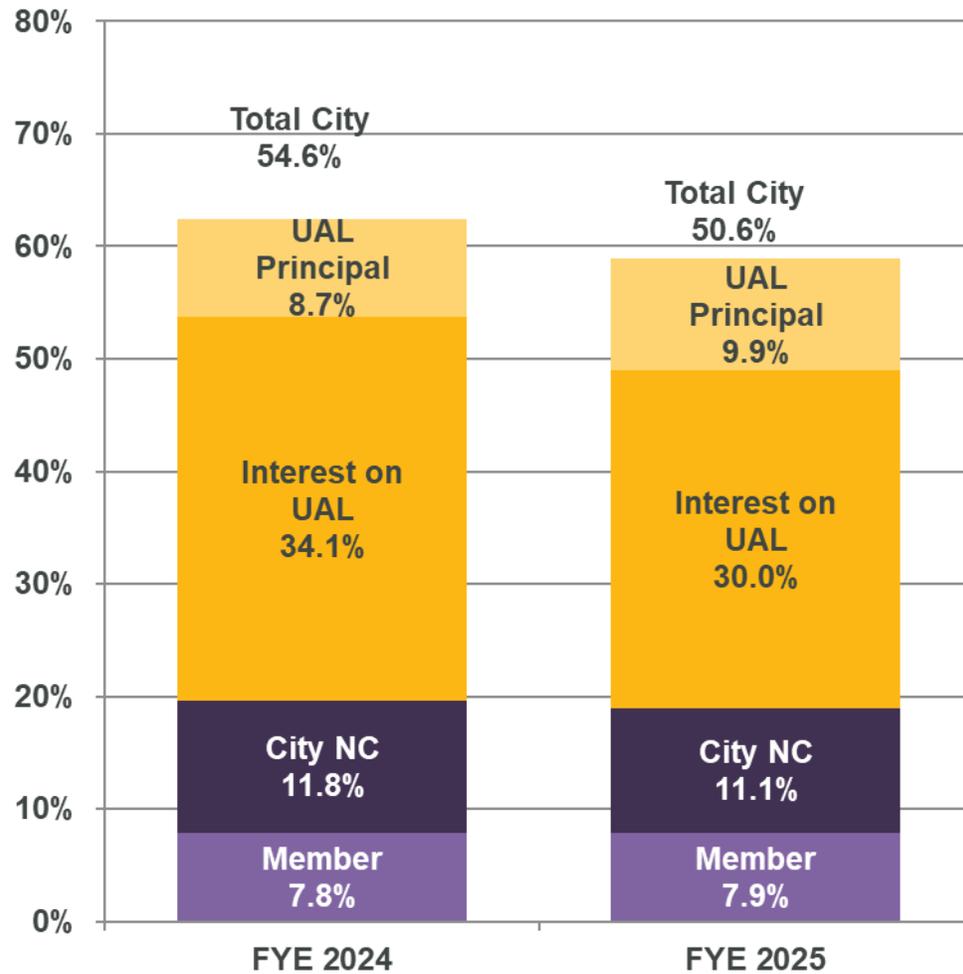
Funded Status By Tier			
	6/30/2022	6/30/2023	Change
<u>Tier 1</u>			
Actuarial Liability	\$ 4,555.2	\$ 4,688.5	2.9%
AVA	<u>2,522.8</u>	<u>2,650.9</u>	5.1%
UAL-AVA Basis	2,032.4	2,037.6	0.3%
AVA Funded Ratio	55.4%	56.5%	1.2%
MVA	<u>2,523.1</u>	<u>2,668.1</u>	5.7%
UAL-MVA Basis	2,032.1	2,020.4	-0.6%
MVA Funded Ratio	55.4%	56.9%	1.5%
<u>Tier 2</u>			
Actuarial Liability	\$ 195.5	\$ 254.8	30.3%
AVA	<u>186.8</u>	<u>239.0</u>	27.9%
UAL-AVA Basis	8.6	15.7	81.8%
AVA Funded Ratio	95.6%	93.8%	-1.7%
MVA	<u>184.9</u>	<u>239.3</u>	29.4%
UAL-MVA Basis	10.6	15.5	46.6%
MVA Funded Ratio	94.6%	93.9%	-0.7%

Amounts in millions

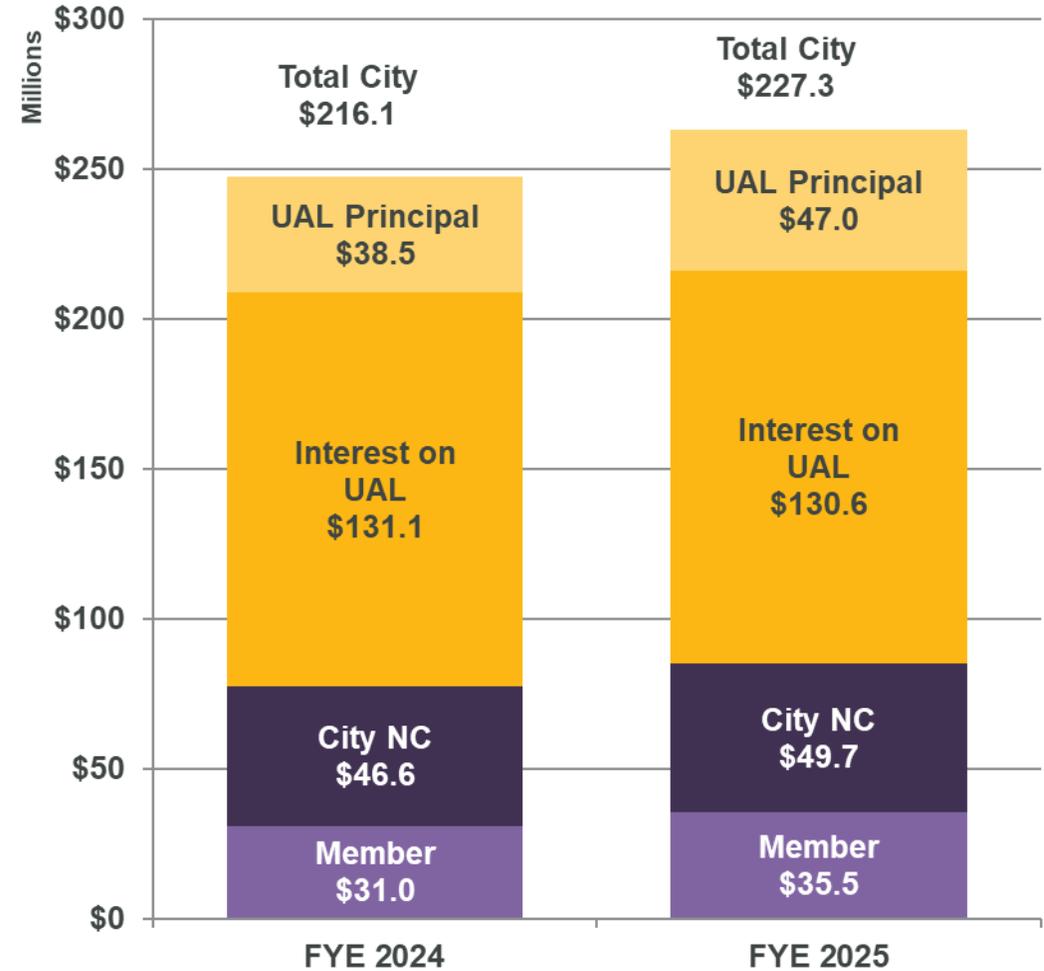
Preliminary Contributions



Contribution Rates



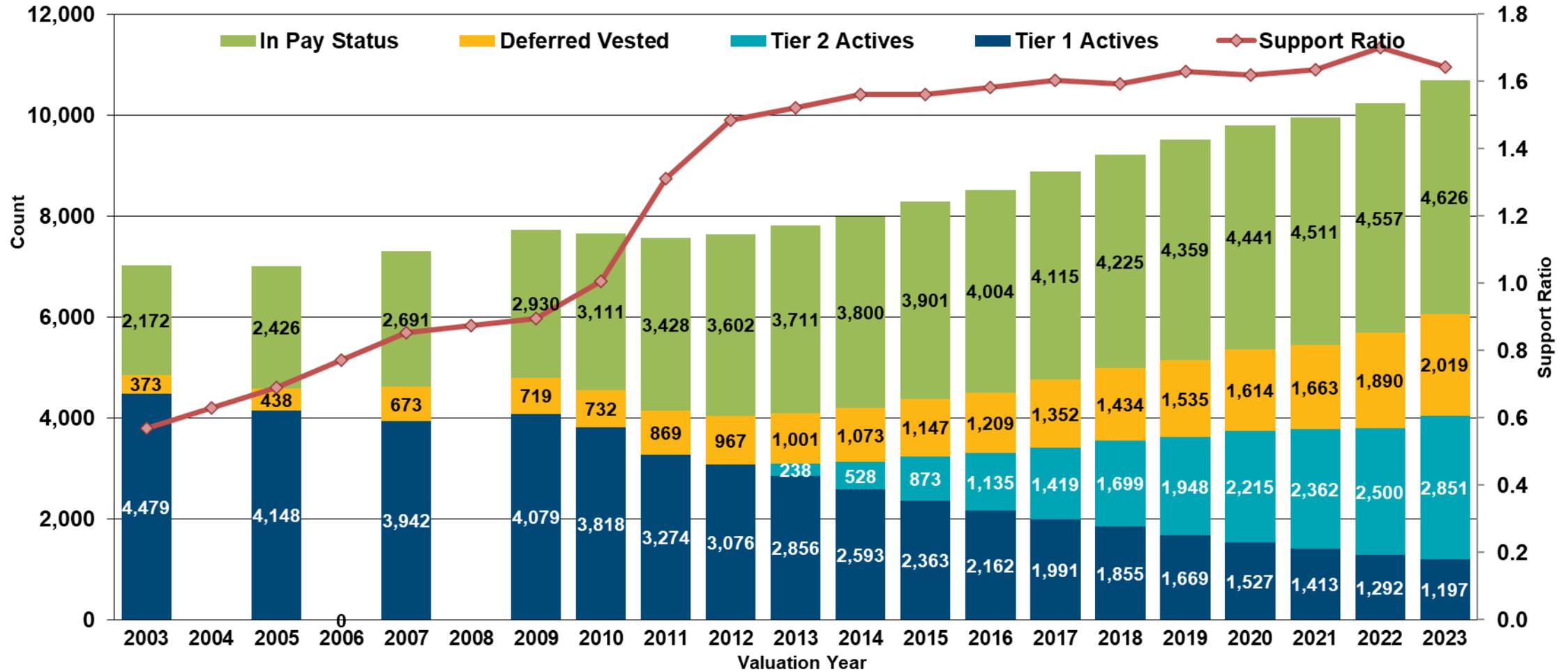
Contribution Amounts



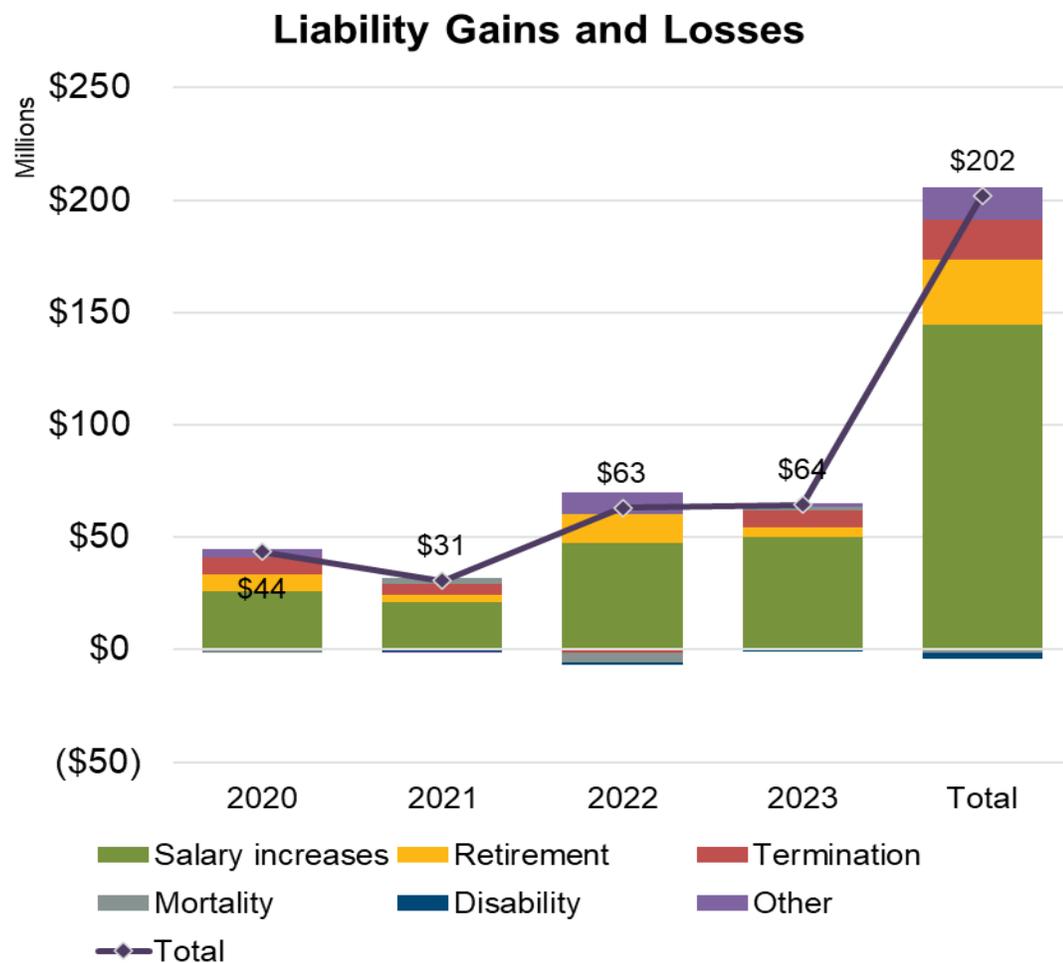
Membership Trends



Federated Historical Membership Counts



Historical Gains and Losses



Actuarial Liability is about \$5.5 billion, so all demographic gains and losses are relatively small

- Demographic assumptions have not been updated since 2019
- Sources of loss
 - Salary increases (\$145 million)
 - Retirement (\$29 million)
 - Terminations (\$18 million)
 - Other (\$15 million)
- Sources of gain
 - Disability (\$3 million)
 - Mortality (\$1 million)



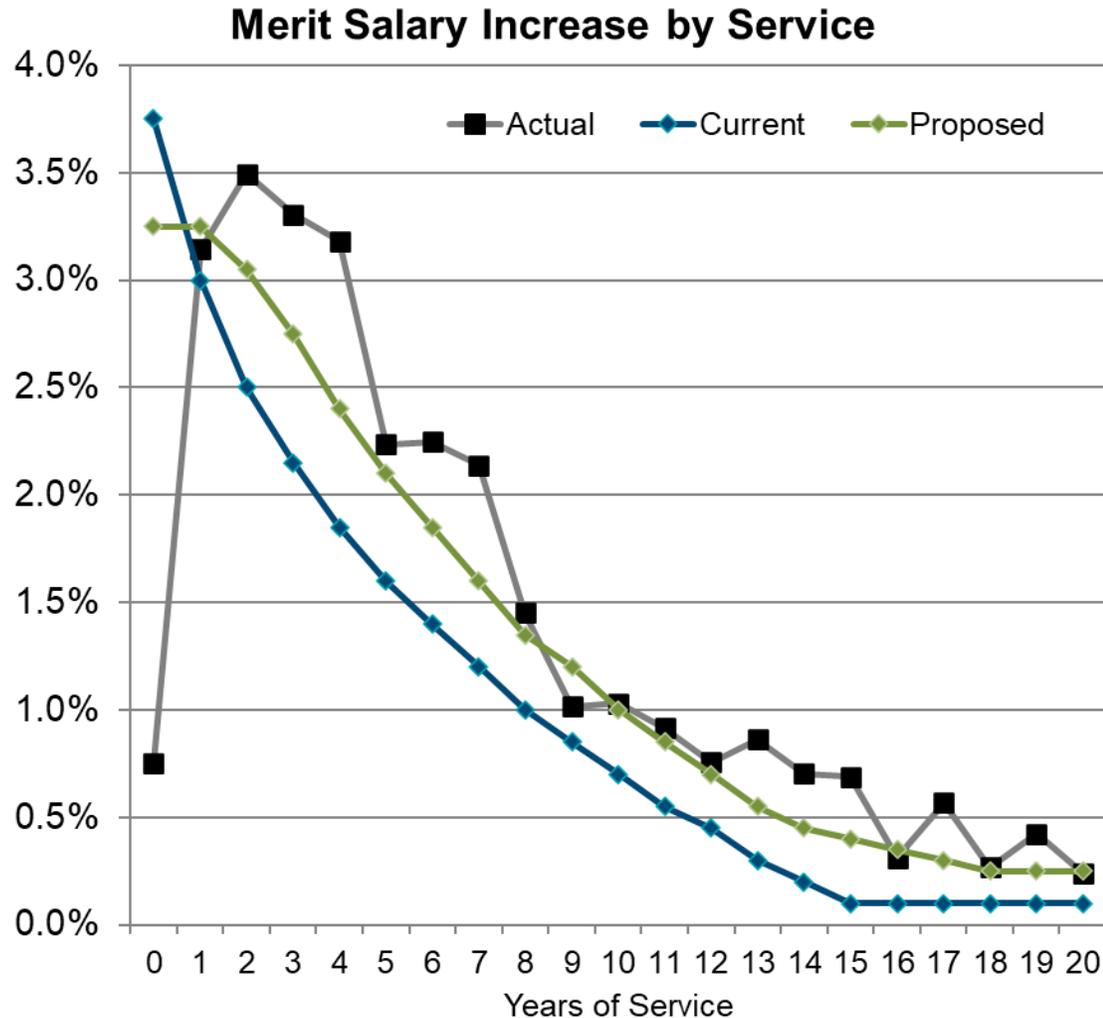
Demographic Experience Study

Demographic Assumption Summary



Assumption	Proposed Changes
Merit Salary Scale	<ul style="list-style-type: none"> • Increase merit salary scale
Retirement	<ul style="list-style-type: none"> • Mostly lower Tier 1 rates for 5-14 and 30+ years of service • Lower Tier 1 rates for 15-24 years of service • Higher Tier 1 rates for 25-29 years of service • Higher Tier 2 rates
Termination	<ul style="list-style-type: none"> • No changes
Refunds	<ul style="list-style-type: none"> • Higher Tier 1 rates for less than 11 years of service • Lower Tier 1 rates for 11-17 years of service • Lower Tier 2 rates for less than 9 years of service • Higher Tier 2 rates for 10-14 years of service
Reciprocity	<ul style="list-style-type: none"> • Higher reciprocity rates and salary increase rate in reciprocity
Mortality	<ul style="list-style-type: none"> • Higher mortality rates for female retirees • Lower mortality rates for disabled retirees
Disability	<ul style="list-style-type: none"> • Slightly lower disability rates • Increase assumed duty disability rate
Percentage Married / Spouse's Age	<ul style="list-style-type: none"> • No change to percentage married • Male members are assumed to be 2 years older than their spouse instead of 3 years older
Administrative Expenses	<ul style="list-style-type: none"> • Allocate between Tiers in proportion to assets

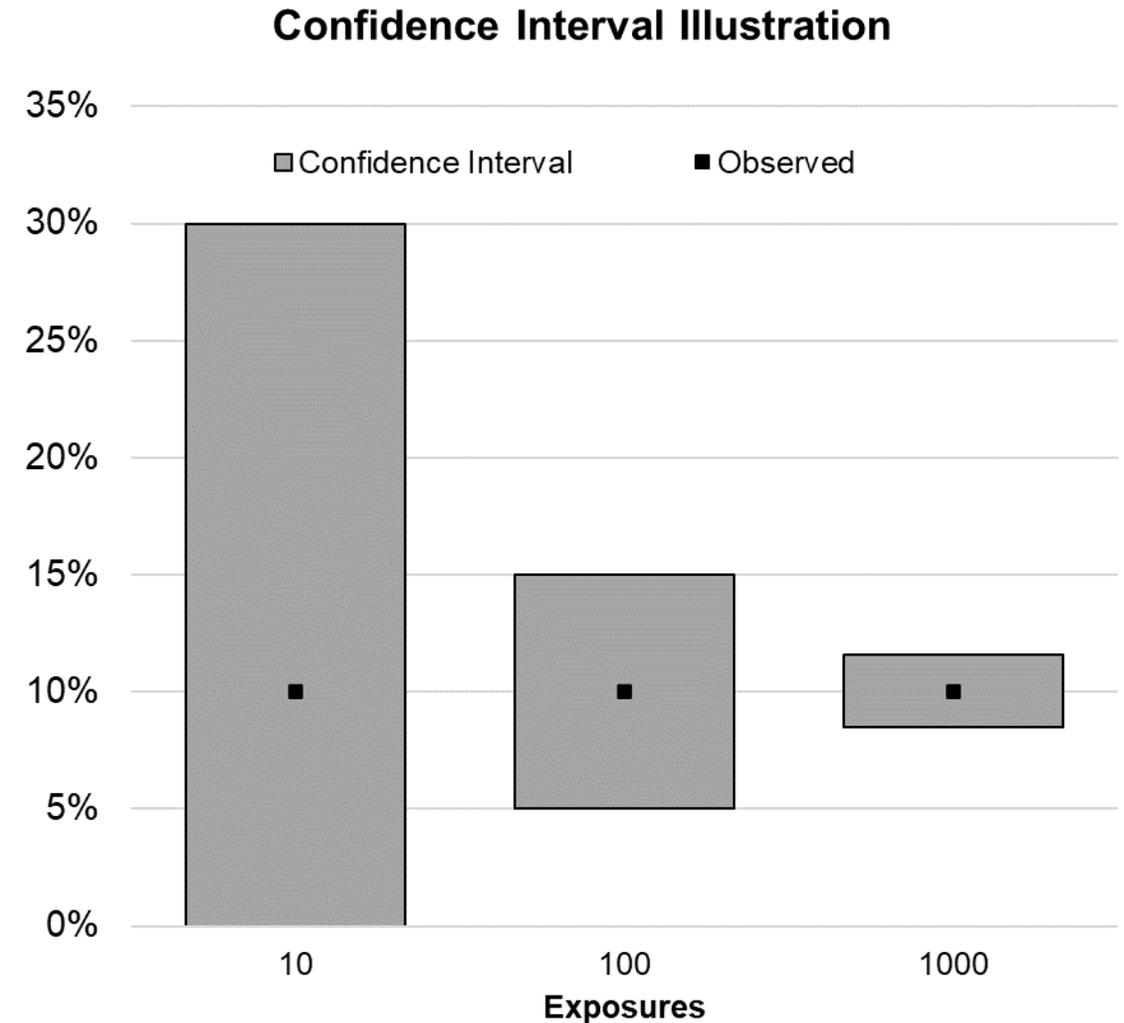
Merit Salary Scale



- Merit salary increases are primarily due to steps and promotions
 - Does not include across-the-board increases
- Experience has been higher than the current assumption
- Propose increase to partially reflect experience
 - Some recent experience adjusting pay levels for certain positions is not likely to continue in the future



- Amount of data is critical in determining how much credibility to assign to the experience:
 - Observed Rate = 10%
 - 1 retirement with 10 exposures, “true” rate between 0% – 30%
 - 10 retirements with 100 exposures, “true” rate between 5% – 15%
 - 100 retirements with 1000 exposures, “true” rate between 8% – 12%
- **Generally**, propose changes if current assumption is outside confidence interval
 - Adjust for future expectations that differ from historical experience





- **Generally**, 10 years of data (2014 to 2023) used to analyze each assumption
- Additional consideration given to experience during the pandemic if materially different
- Actual-to-expected ratios used to set the level of the assumption
 - Ideal ratio is 100%
 - Proposed changes generally move closer to 100%
- R-squared statistics used to assess the pattern of the assumption
 - Ideal statistic is 100%
 - Proposed changes generally move closer to 100%

Retirement Rates



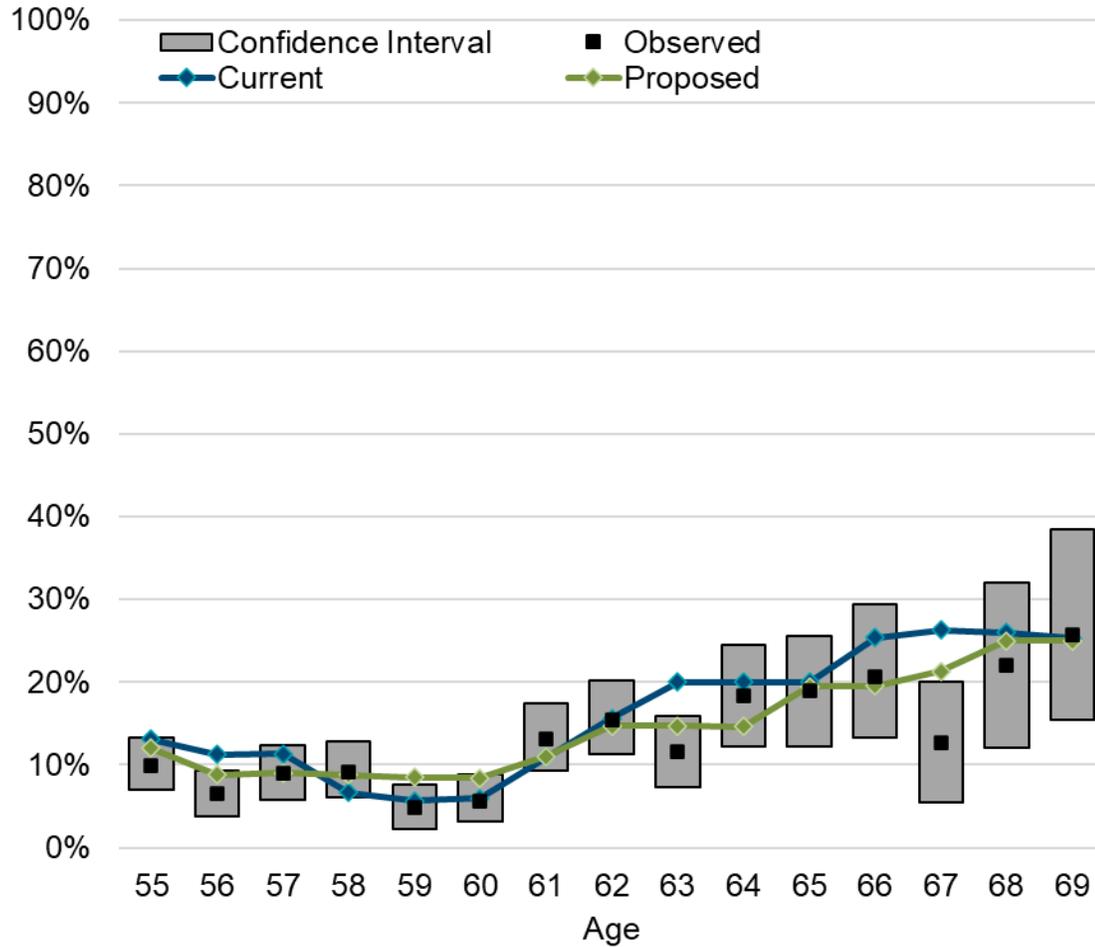
- Tier 1 retirement eligibility
 - Age 55 with 5 years of service
 - Any age with 30 years of service
 - Maximum benefit at 30 years of service
- Tier 2 retirement eligibility
 - Age 62 with 5 years of service
 - Reduced benefit at age 55 with 5 years of service
 - Maximum benefit at 35 years of service
- Changes noted in this Analysis
 - First analysis with any Tier 2 retirement data
 - Recommend 4 service categories
- No changes to assumed vested terminated retirement age

Tier 1				
Service	<15	15 - 24	25 - 29	30 +
<u>A/E Ratios</u>				
Current	89%	74%	143%	82%
Proposed	99%	99%	99%	95%
<u>R-Squared</u>				
Current	42%	97%	99%	67%
Proposed	70%	98%	100%	78%
Tier 2				
Service	<15	15 - 24	25 - 34	35 +
<u>A/E Ratios</u>				
Current	209%	N/A	N/A	N/A
Proposed	98%	N/A	N/A	N/A
<u>R-Squared</u>				
Current	27%	N/A	N/A	N/A
Proposed	67%	N/A	N/A	N/A

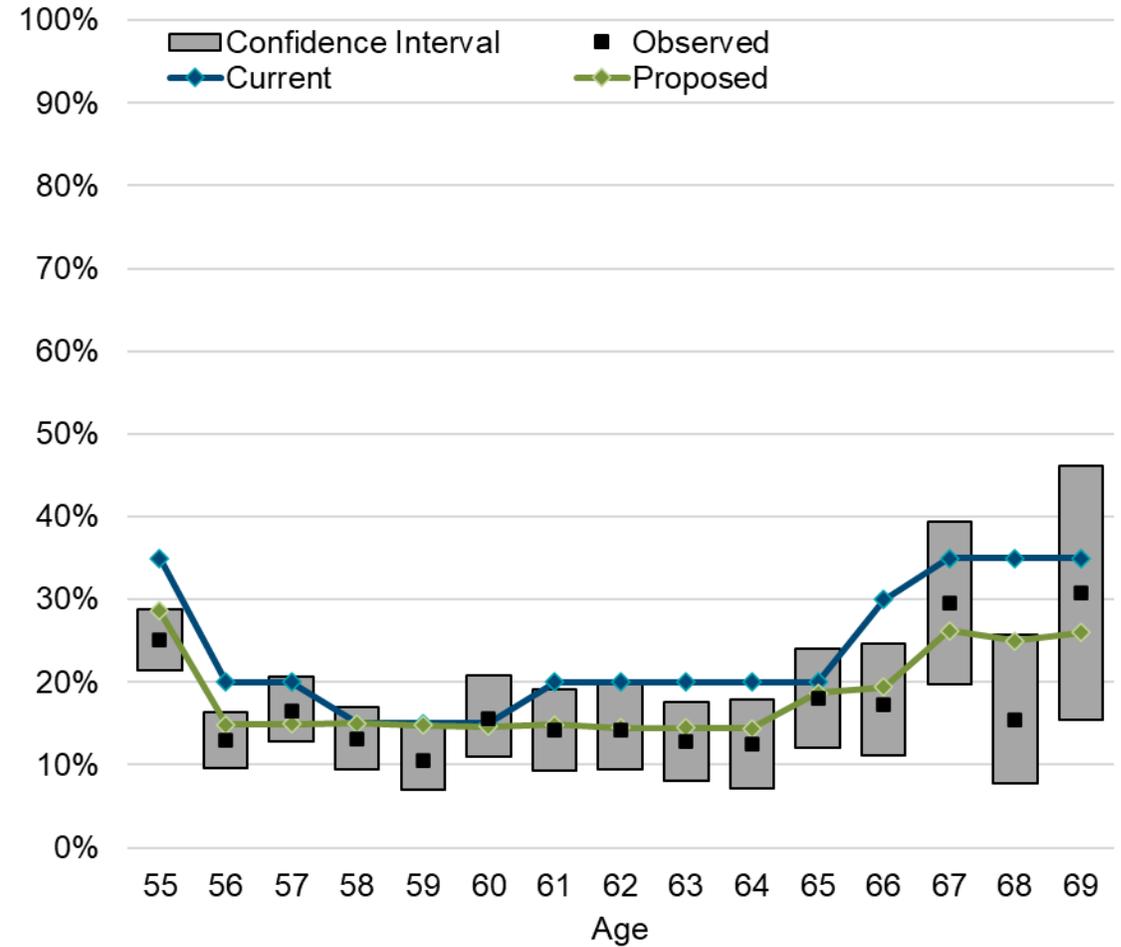
Tier 1 Retirement Rates



Tier 1 Retirement Rates - 5 to 15 Years of Service



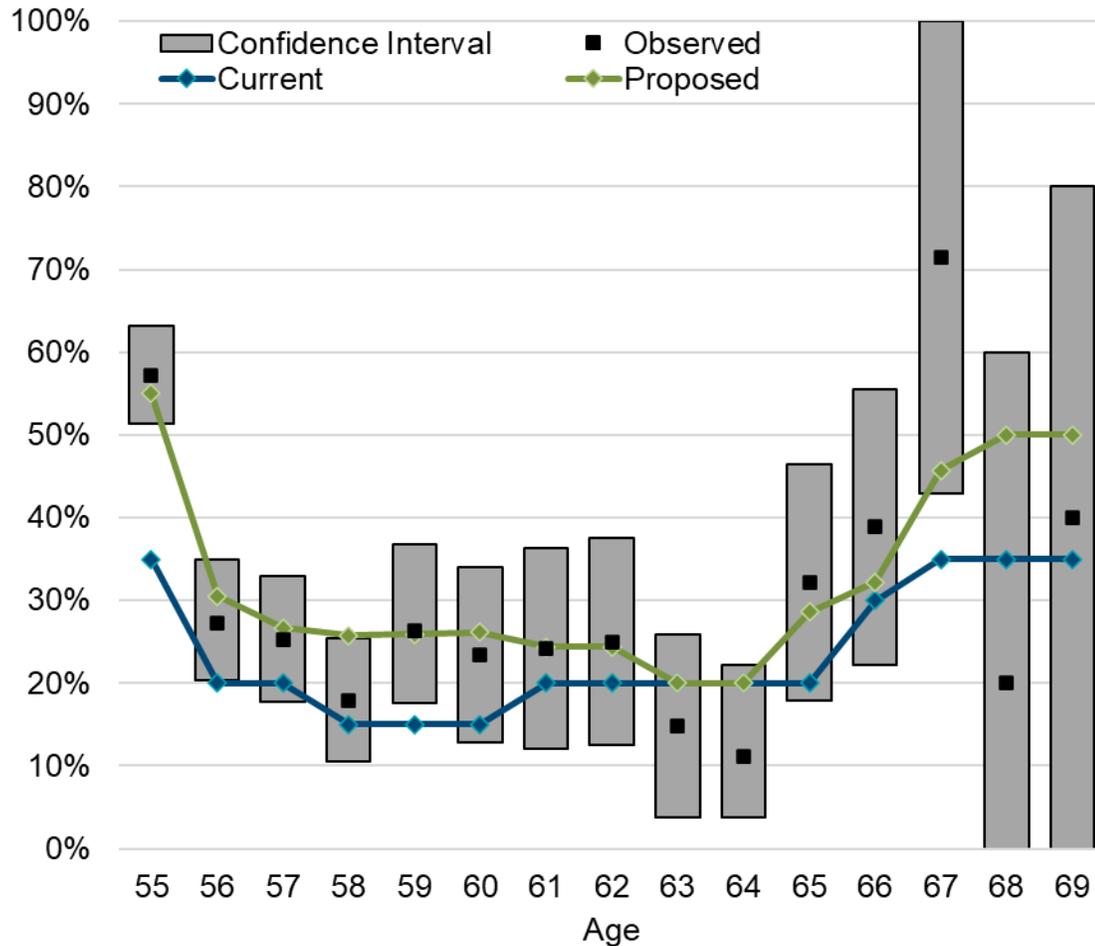
Tier 1 Retirement Rates - 15 to 24 Years of Service



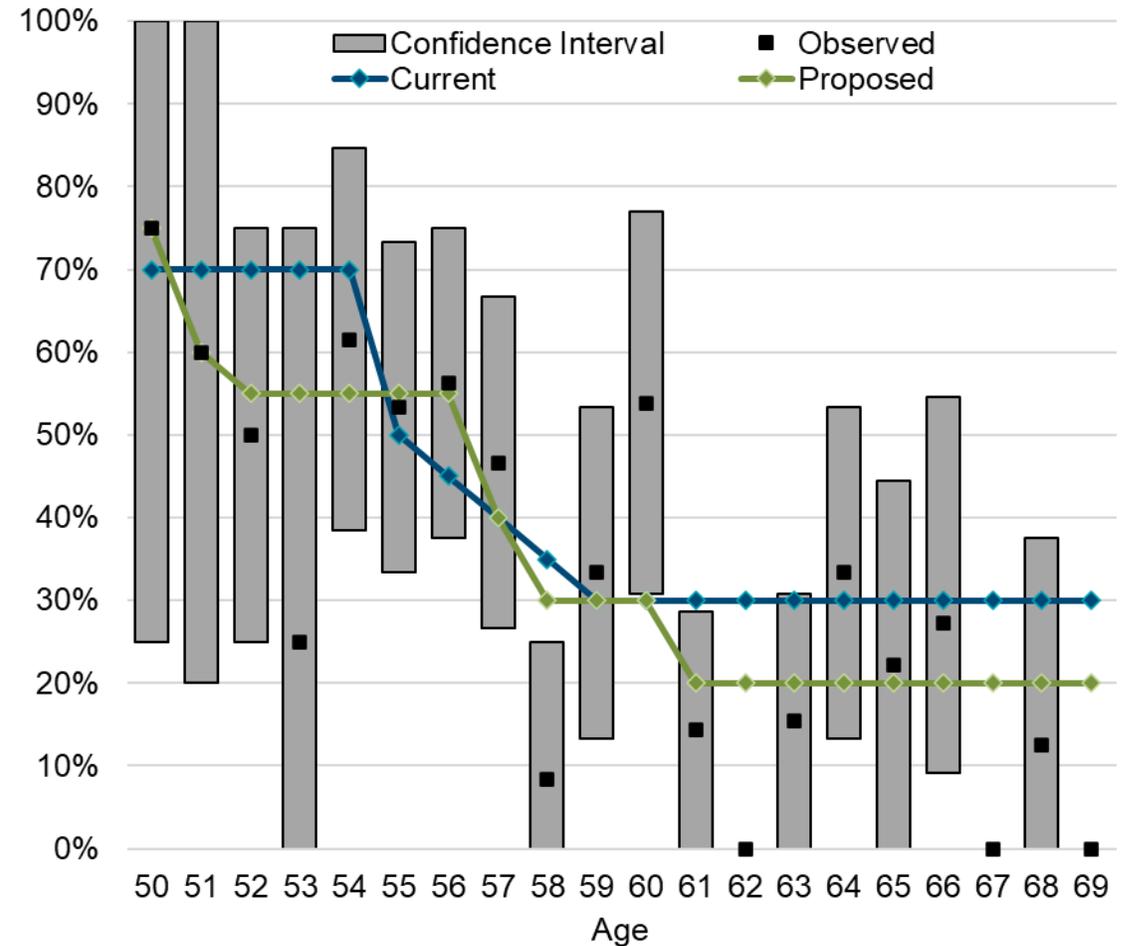
Tier 1 Retirement Rates



Tier 1 Retirement Rates - 25 to 29 Years of Service



Tier 1 Retirement Rates - 30 to 35 Years of Service

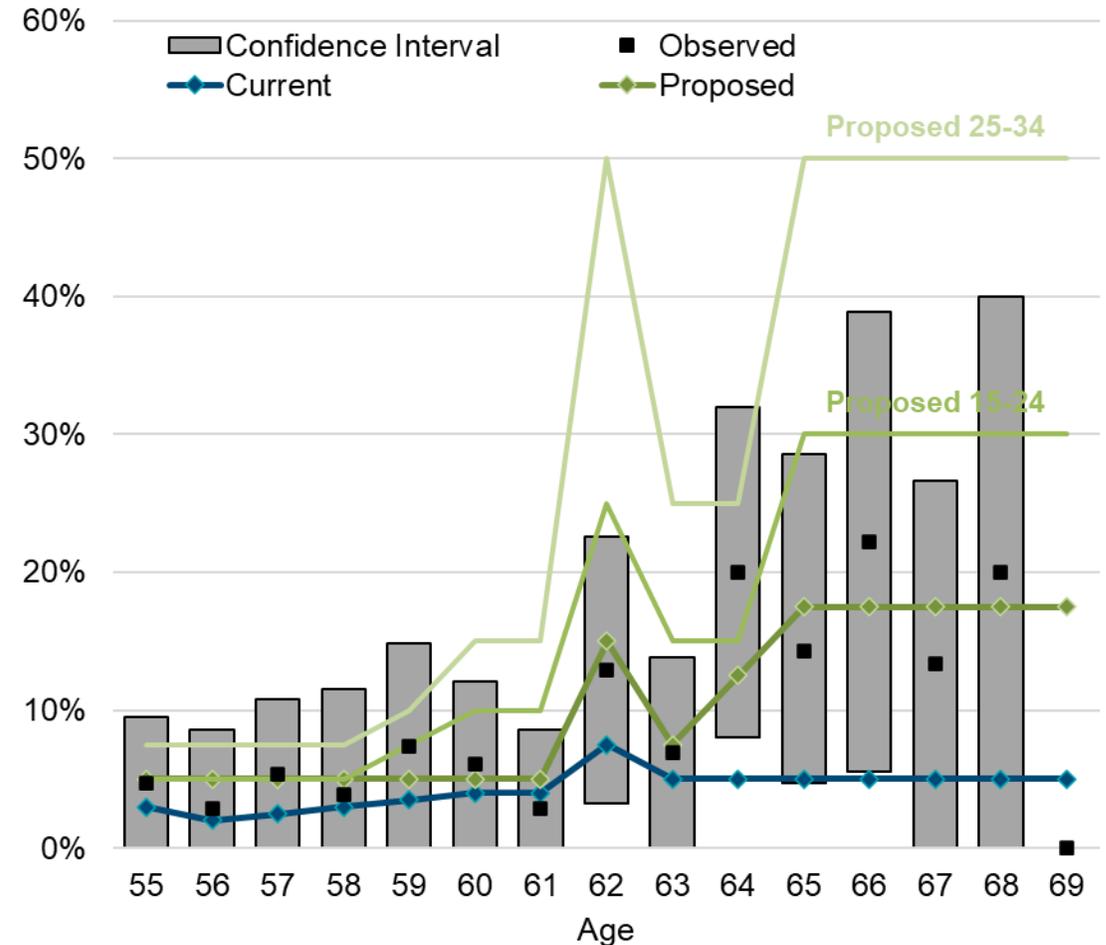


Tier 2 Retirement Rates



- Original Tier 2 retirement assumptions based on CalPERS experience with similar benefit formula
- Actual experience for 5-14 years of service is significantly higher rates of retirement
- No data for 15 or more years of service
 - Proposed assumptions based on experience with less than 15 years and professional judgment
 - Assume 100% retirement for 35+ years of service

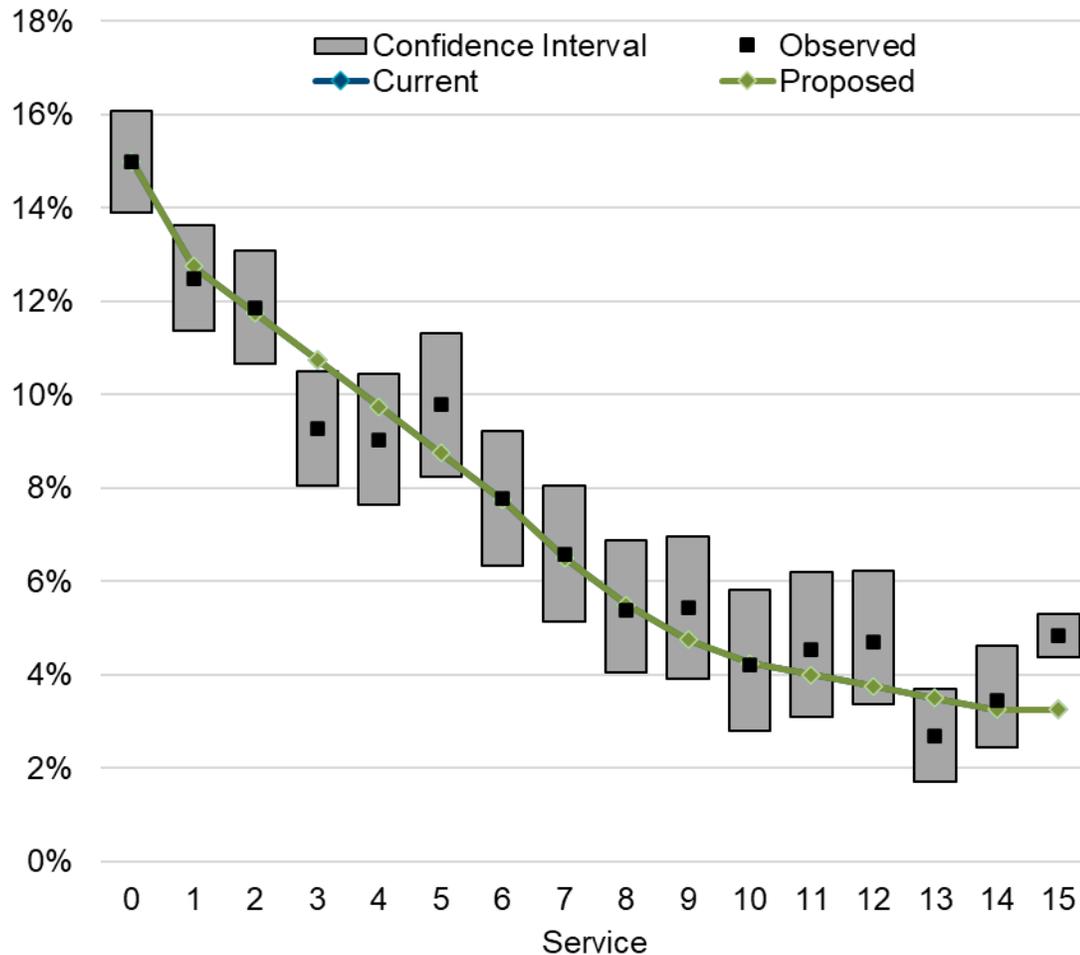
Tier 2 Retirement Rates - 5 to 14 Years of Service



Termination Rates



All Termination Rates - Ages 20 to 70



- A/E Ratio = 104%
- R-Squared = 96%
- No changes proposed

Refund Rates



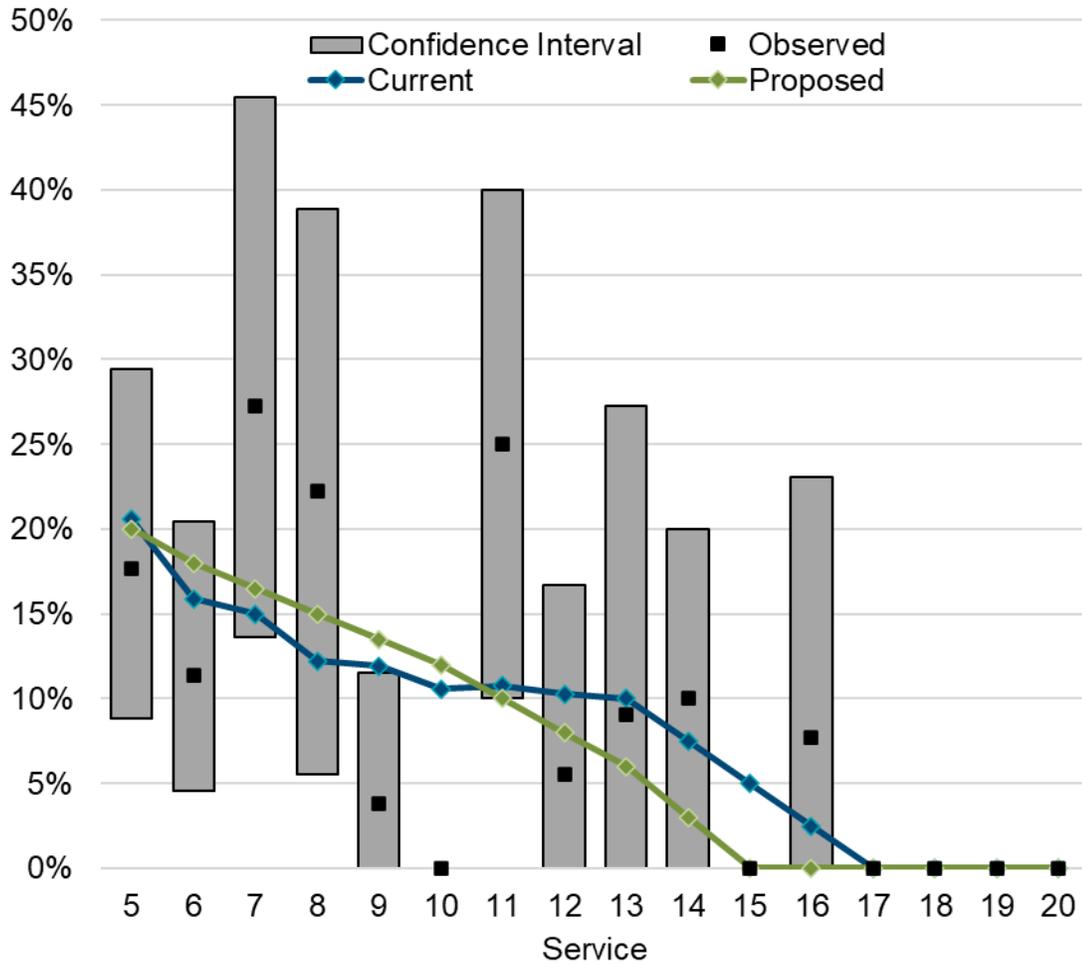
- When member terminates employment, they have option to take a refund of contributions instead of a deferred annuity
- Tier 1 rates vary by service for three age groups
 - Propose reducing to two age groups
 - 100% when not vested (<5 years service)
 - 0% for 15 or more years of service
- Tier 2 – No changes proposed
 - Value of refund depends on member's historical Tier 2 contribution rates
 - 100% when not vested (<5 years service)
 - Greater present value: refund or deferred annuity

Tier 1		
Age	<45	45 +
<u>A/E Ratios</u>		
Current	99%	255%
Proposed	102%	192%
<u>R-Squared</u>		
Current	61%	4%
Proposed	60%	13%

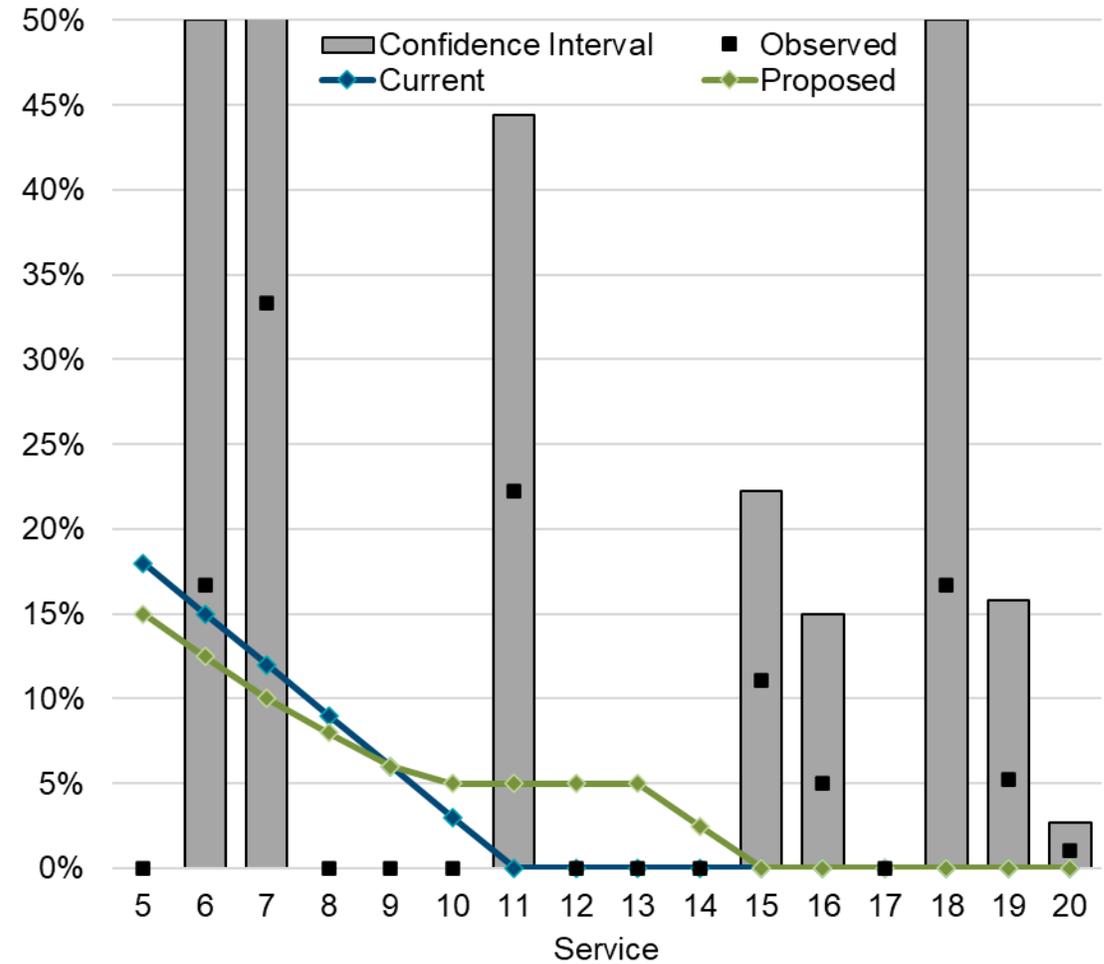
Tier 1 Refund Rates



Tier 1 Refund Rates - Ages 20 to 44



Tier 1 Refund Rates - Ages 45 to 55



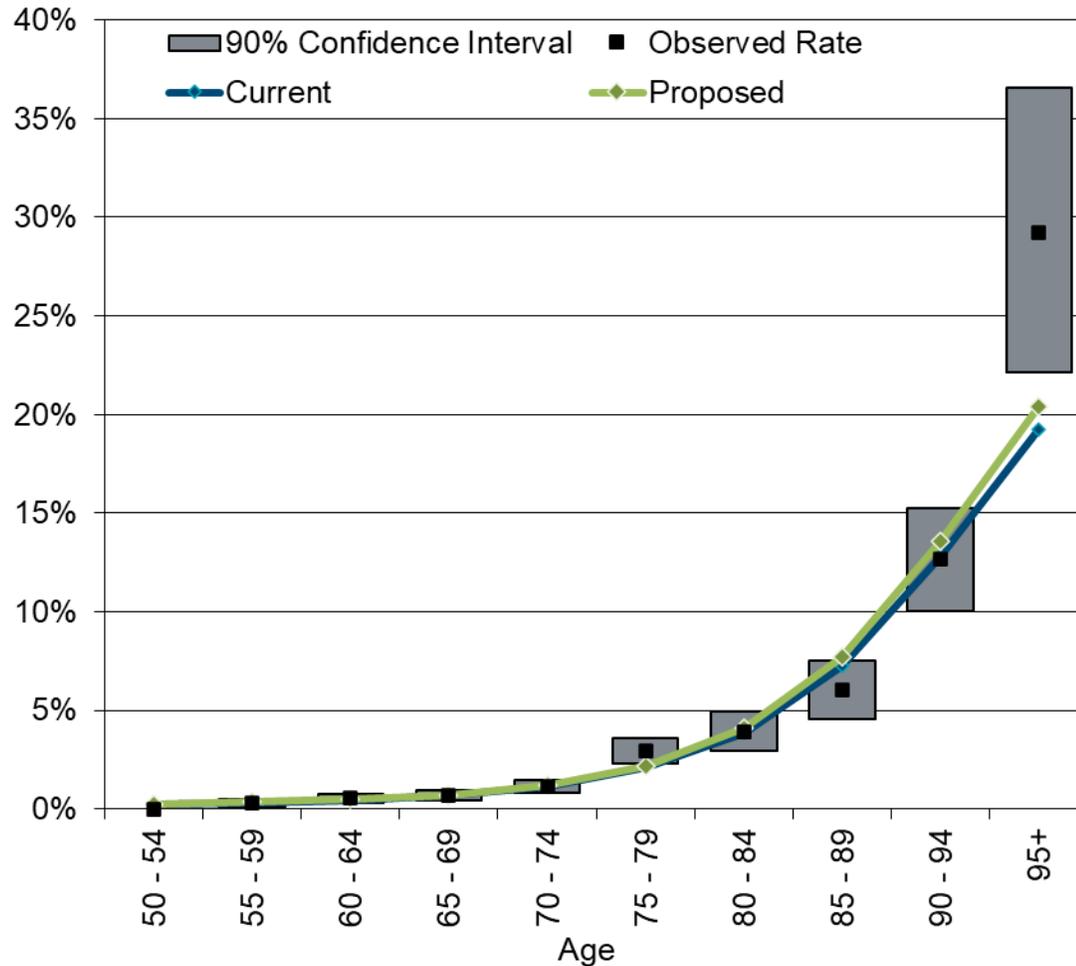


- Members who terminate employment at San José and work for a reciprocal employer receive a benefit based on their final pay at the reciprocal employer
 - Often don't know about it until they retire
- Current assumption
 - 30% of vested terminated members work for a reciprocal employer
 - Earn 3% annual salary increases until retirement
- Analysis
 - 42% of members who retired from terminated status in last 10 years had final compensation in their benefit calculation that was materially greater than the last salary reported
 - Average annual increase in pay since leaving San José was between 4% and 5%
- Proposed assumption
 - 40% of vested terminated members work for a reciprocal employer
 - Earn 4% (wage inflation + 1%) annual salary increases until retirement

Mortality



Female Healthy Annuitant Mortality



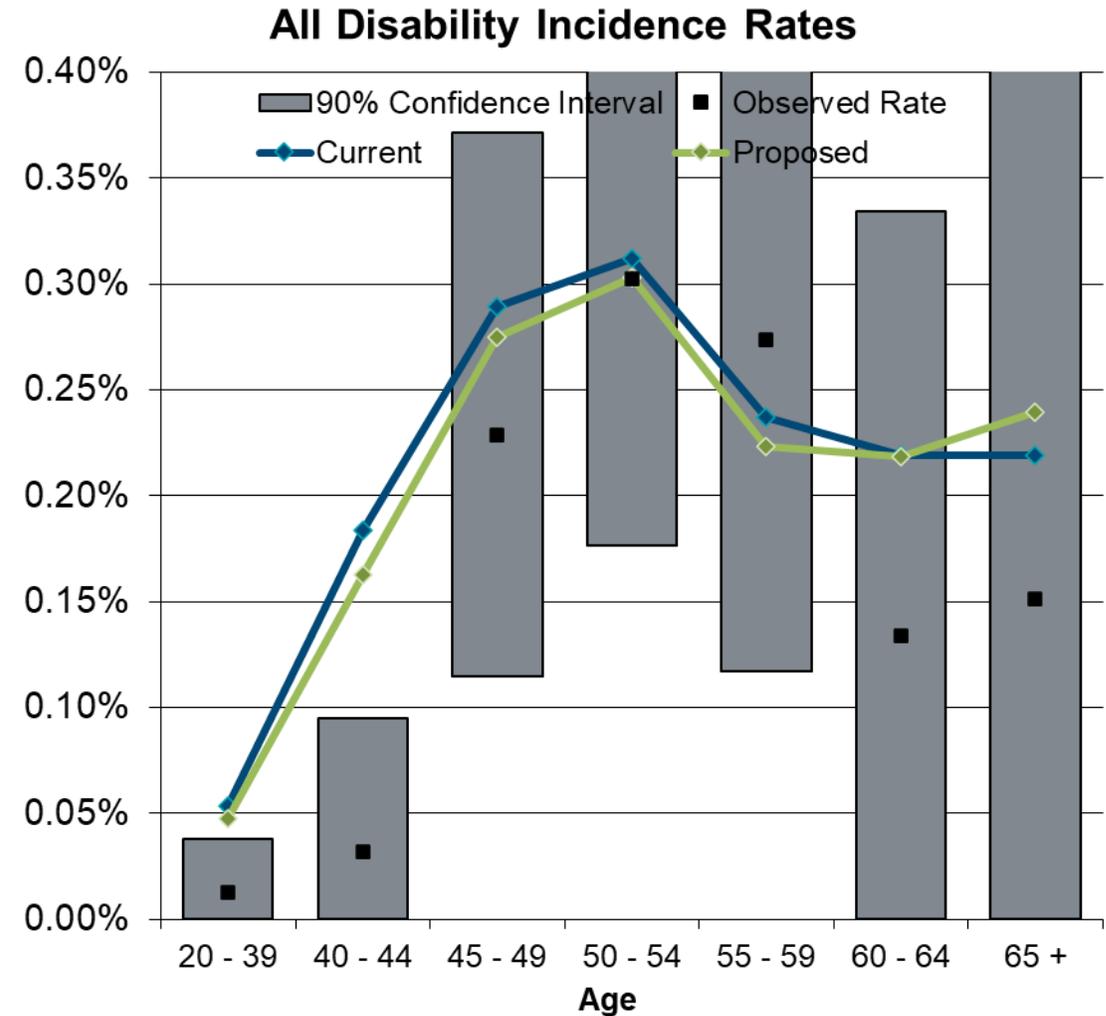
Group	Sex	Deaths	Current A/E	Proposed A/E
Healthy Retirees	M	461	98%	98%
	F	308	107%	101%
Disabled Retirees	M	45	87%	98%
	F	23	83%	84%
Beneficiaries	M	60	130%	131%
	F	221	125%	118%
Non-Annuitants	M	32	86%	85%
	F	21	115%	115%

- Female healthy retirees (and beneficiaries)
 - Increase adjustment factor from 0.96 to 1.02
- Disabled retirees
 - Change from 2009 CalPERS disabled mortality to PubG-2010 disabled mortality
- No changes to other mortality assumptions

Disability Incidence



- Excluded 2021-2023 experience from analysis
 - No disabilities
 - Likely due to lag processing disability claims
- Updated to latest CaIPERS ordinary disability table for State Misc.
 - Applied adjustment factor of 0.956 based on credibility of data
 - A/E ratio improves from 74% to 78%
 - R-squared remains at 45%
- Increase assumed duty disabilities from 45% to 50%



Administrative Expenses



- Administrative expenses are allocated between groups based on:
 - Expenses that can be attributed to a specific group
 - In proportion to assets
- Current assumption allocates in proportion to headcount
 - Heavier weighting to Tier 2 than historical practice since implementation of Measure F
- Proposed assumption
 - Total expenses = prior year's expenses increased by wage inflation
 - Expenses allocated to Tiers in proportion to assets

Administrative Expenses as % of Assets

FYE	Tier 1	Tier 2	Total
2019	0.22%	0.21%	0.22%
2020	0.22%	0.23%	0.22%
2021	0.21%	0.23%	0.22%
2022	0.17%	0.17%	0.17%
2023	0.20%	0.19%	0.20%

- Administrative expenses vary slightly between tiers as a percentage of assets
- Fit is much better than on a headcount basis
- Proposed change will reduce assumed expenses allocated to Tier 2 and increase assumed expenses allocated to Tier 1



Percentage Married at Retirement

- Current Assumption
 - Males = 80%
 - Females = 60%
- Actual Experience
 - Males = 79.9%
 - Females = 61.6%
- No change proposed

Spouse Age Difference

- Current Assumption
 - Male members = 3 years older than spouse
 - Female members = 2 years younger than spouse
- Recent experience (last 5 years)
 - Males = 2.1 years older than spouse
 - Females = 1.5 years younger than spouse
- Proposed Assumption
 - Male members = 2 years older than spouse
 - Female members = 2 years younger than spouse

Impact of Proposed Changes



	Baseline	Demographic Assumption Changes
Actuarial Liability	\$ 4,943.2	\$ 4,965.8
Actuarial Assets	2,890.0	2,890.0
UAL	\$ 2,053.3	\$ 2,075.8
Funded %	58.5%	58.2%
Member Rates		
Tier 1	7.5%	8.2%
Tier 2	8.1%	8.3%
City Rate	50.6%	51.3%
City Amount	\$ 227.3	\$ 230.7

Amounts in Millions

- Proposed changes increase costs
 - Tier 1 Member costs increase more than Tier 2 Members
 - Tier 1 is affected more significantly due to change in administrative expense allocation
 - City costs increase
 - Administrative expense assumption shifts costs to Tier 1 where City pays a greater proportion
 - Increase in Tier 1 normal cost is primarily borne by City

Tier 1 member and city rates are pending a legal opinion on who pays administrative expenses.

Board Decisions – Adopt Proposed Changes



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- The purpose of this presentation is to present the preliminary valuation results and review the demographic assumptions for the City of San José Federated City Employees' Retirement System.
- In preparing our presentation, we relied on information (some oral and some written) supplied by the Plan. 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.
- 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 City of San José Federated City Employees' Retirement System for the purpose 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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