

San José Police & Fire Department Retirement Plan

4d(1)



2023 Final Pension Valuation Results

December 7, 2023

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Anne Harper, FSA, EA, MAAA

Agenda



Schedule

Summary of Valuation Results

Baseline Projections

Plan Maturity and Sensitivity

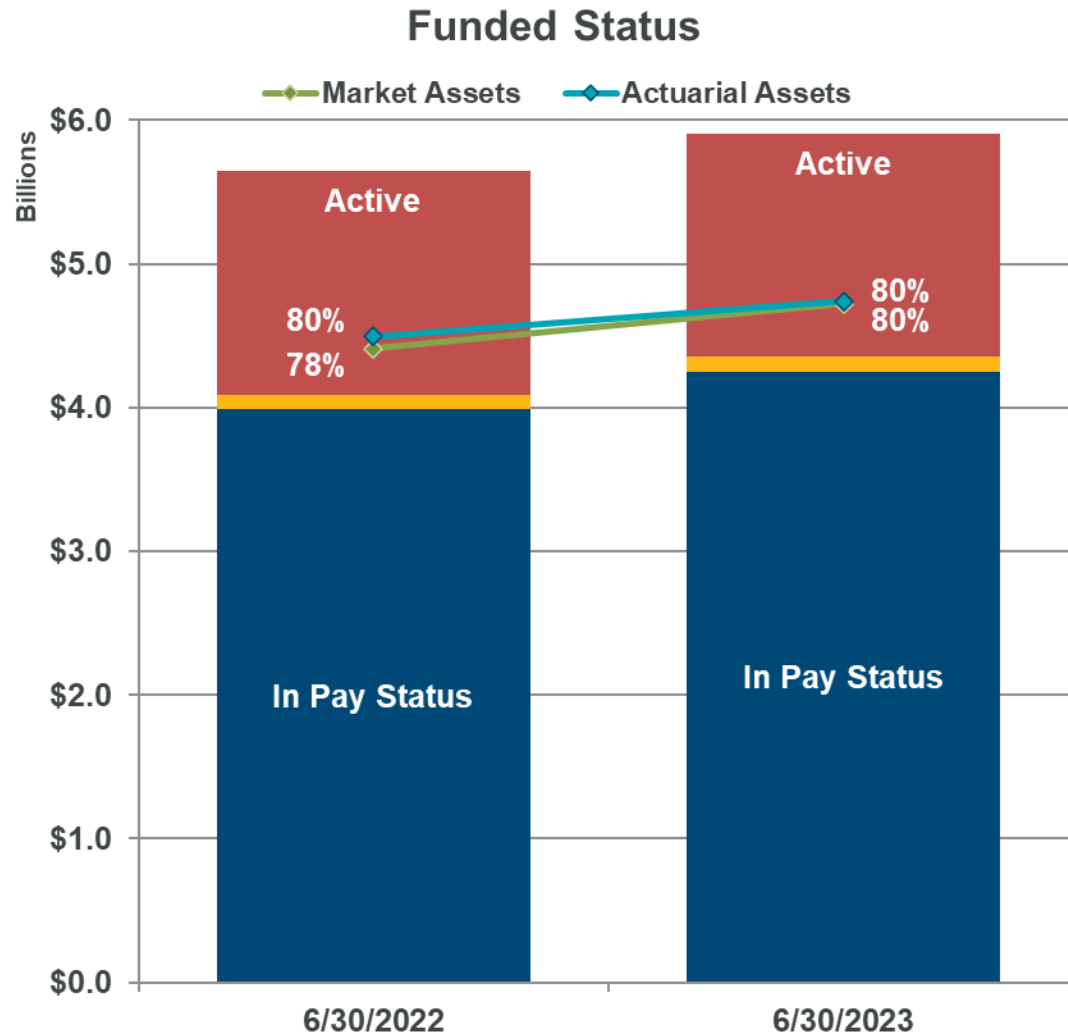
Projection Scenarios

Appendix



- October Board Meeting
 - ASOP 4 Changes
 - Pension Economic Assumption Review
- November Board Meeting
 - Preliminary Pension Valuation Results
 - Demographic Experience Study
 - Board Decisions on Pension Assumptions and Methods
 - OPEB Assumptions Review
- **December Board Meeting**
 - **Final Pension Valuation Presentation**
 - **Final Pension Valuation Report**
 - **Preliminary OPEB Valuation Results**
- January Board Meeting
 - No Presentation
- February Board Meeting
 - Final OPEB Valuation Presentation
 - Final OPEB Valuation Report

Funded Status



Funded Status By Tier

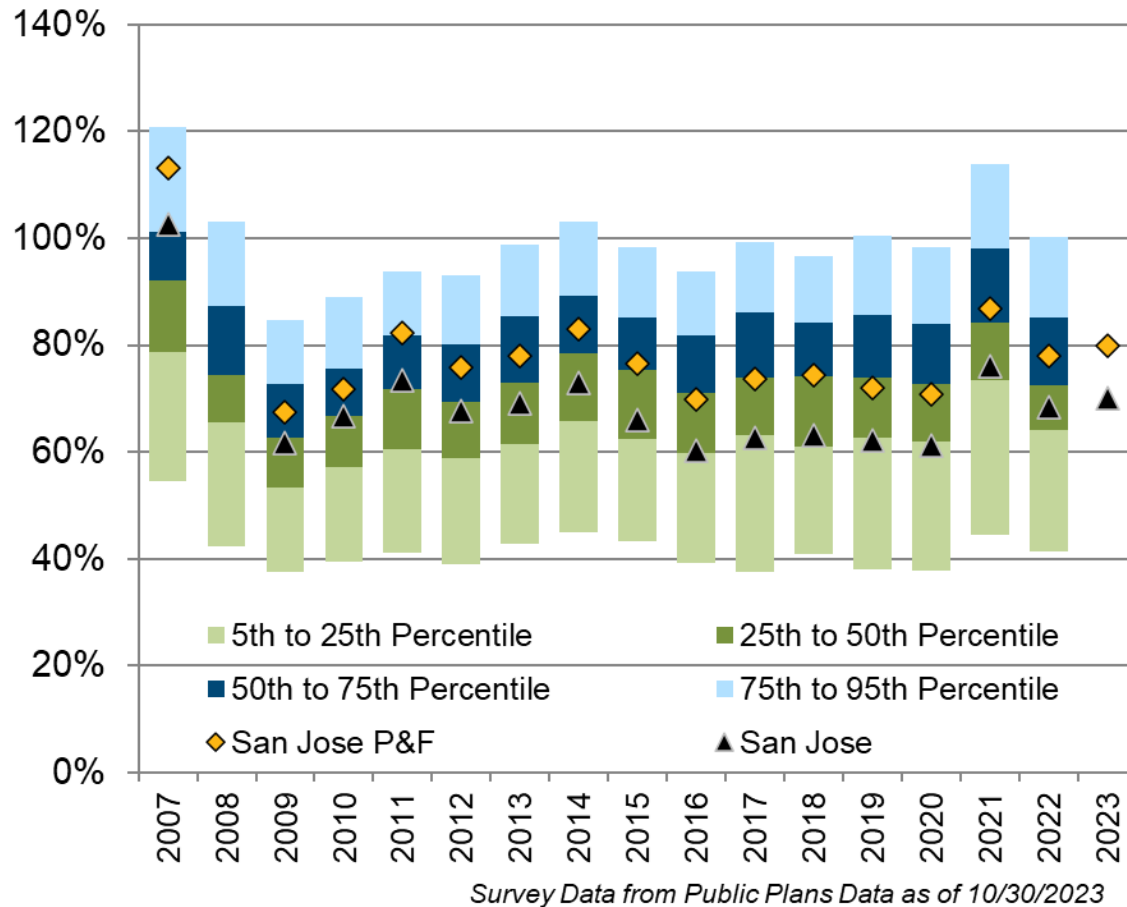
	6/30/2022	6/30/2023	Change
Tier 1			
Actuarial Liability	\$ 5,553.2	\$ 5,777.0	4.0%
AVA	<u>4,387.6</u>	<u>4,594.2</u>	4.7%
UAL-AVA Basis	1,165.7	1,182.8	1.5%
AVA Funded Ratio	79.0%	79.5%	0.5%
MVA	<u>4,304.9</u>	<u>4,576.9</u>	6.3%
UAL-MVA Basis	1,248.4	1,200.1	-3.9%
MVA Funded Ratio	77.5%	79.2%	1.7%
Tier 2			
Actuarial Liability	\$ 97.2	\$ 131.6	35.3%
AVA	<u>108.1</u>	<u>145.6</u>	34.6%
UAL-AVA Basis	(10.9)	(14.0)	28.7%
AVA Funded Ratio	111.2%	110.6%	-0.5%
MVA	<u>105.0</u>	<u>144.6</u>	37.7%
UAL-MVA Basis	(7.8)	(13.0)	68.0%
MVA Funded Ratio	108.0%	109.9%	1.9%

Amounts in millions

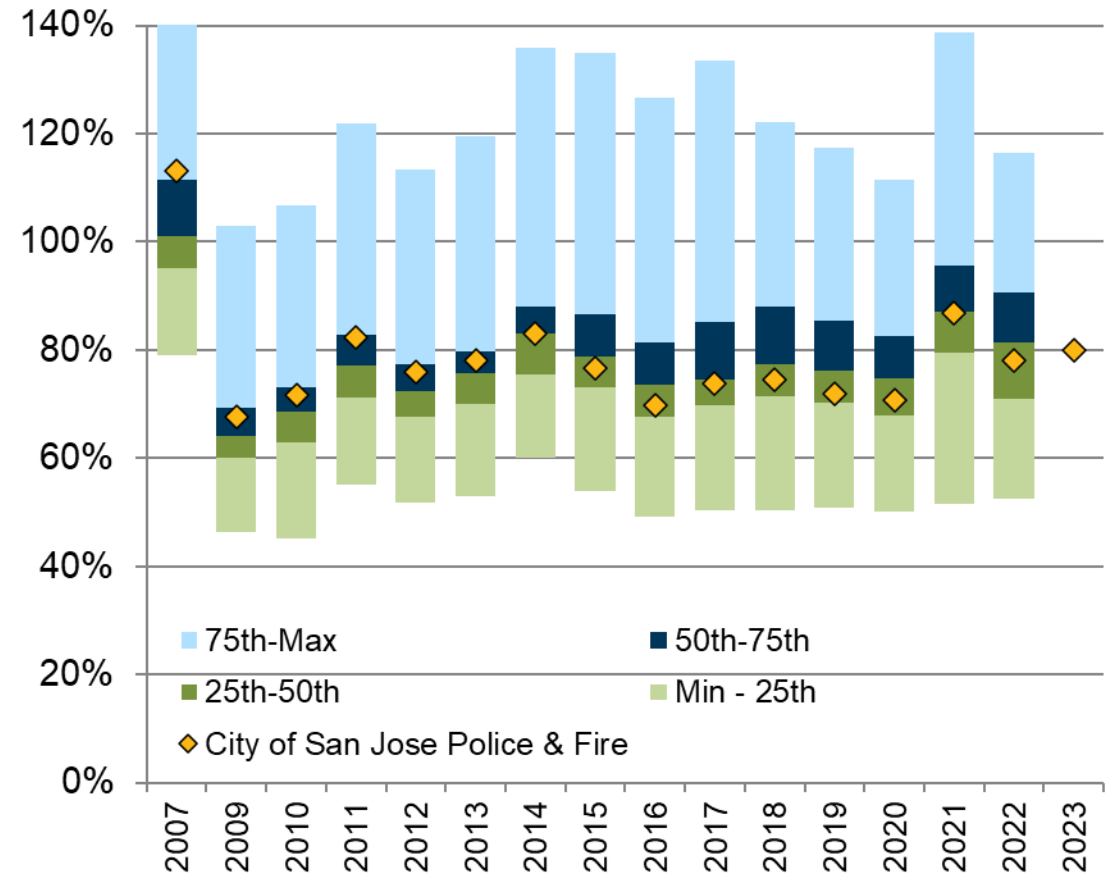
Comparison of Funded Ratio (Market Value of Assets)



National Survey Data from PublicPlansData.org



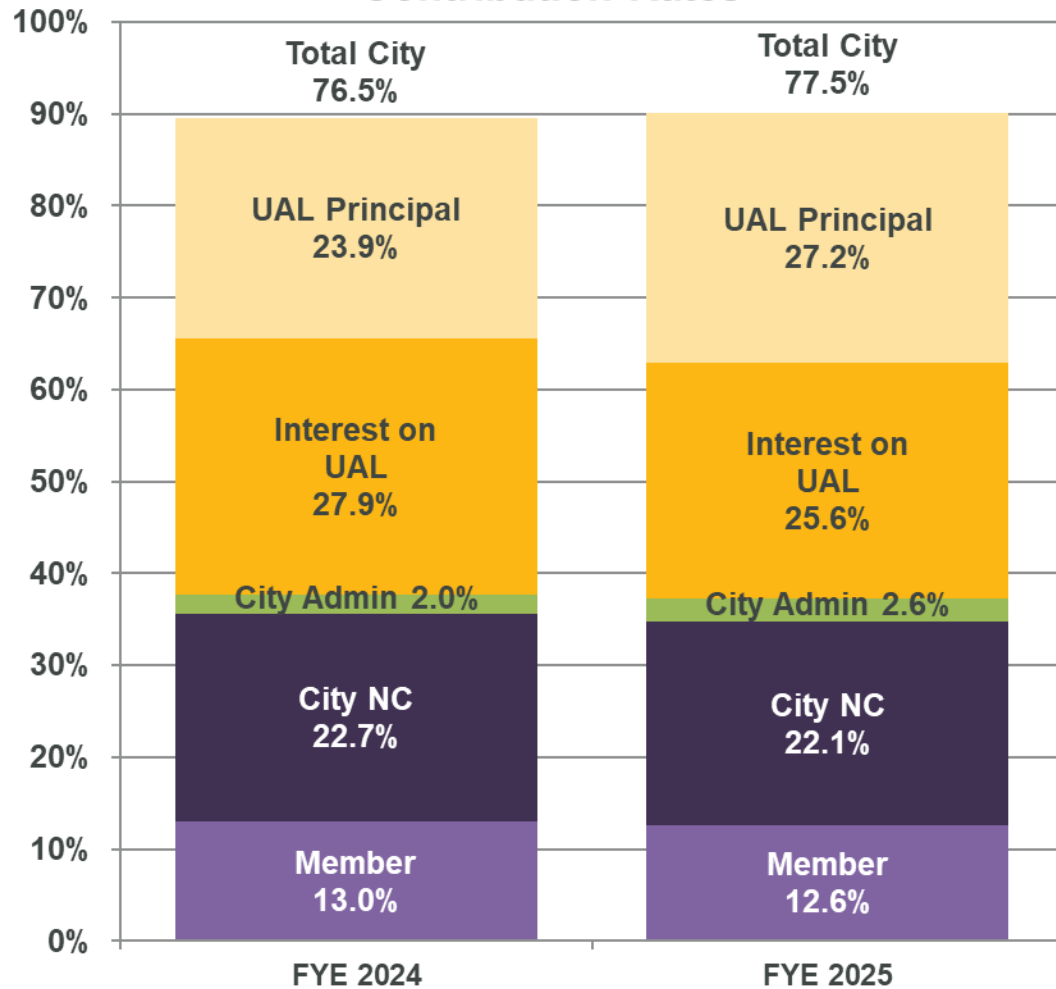
Cheiron Survey of California Public Pension Systems



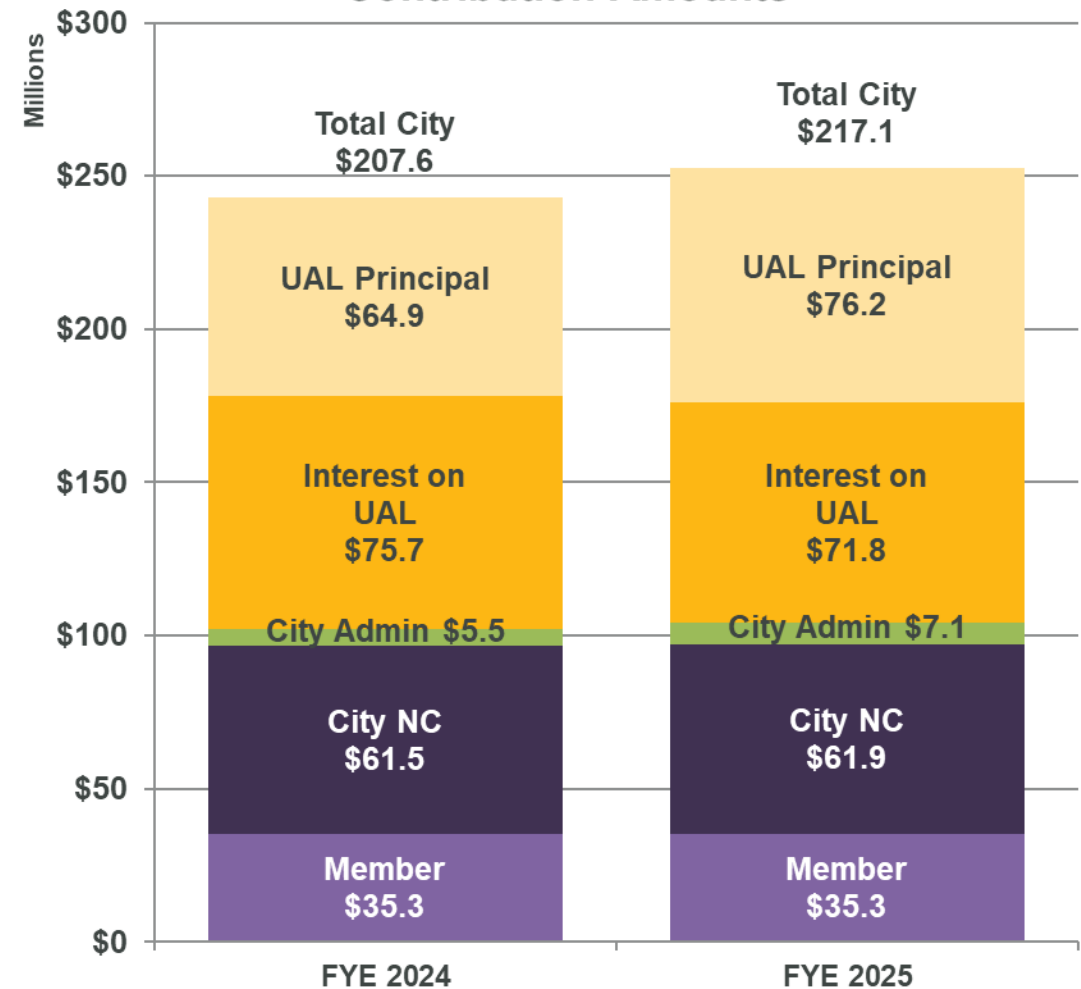
Final FYE 2025 Contributions



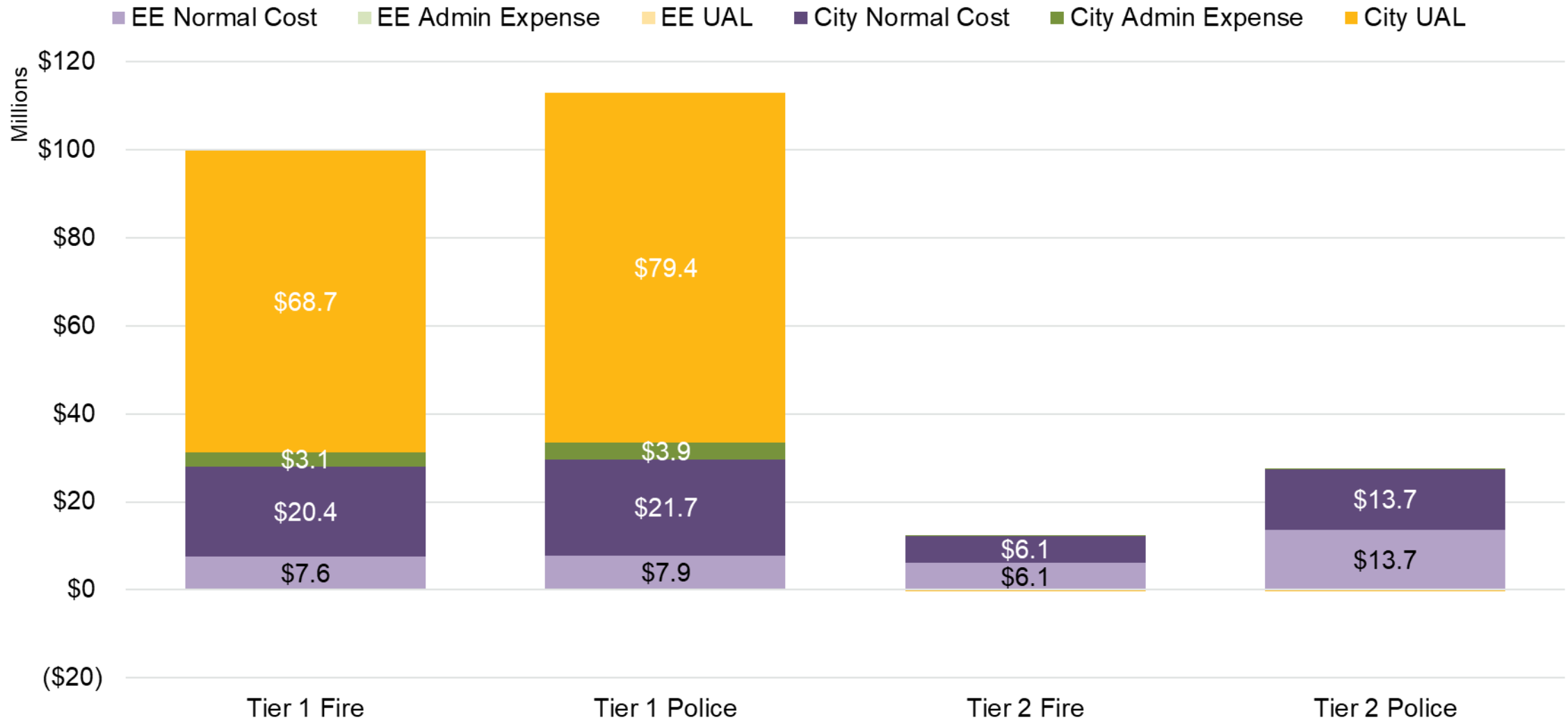
Contribution Rates



Contribution Amounts



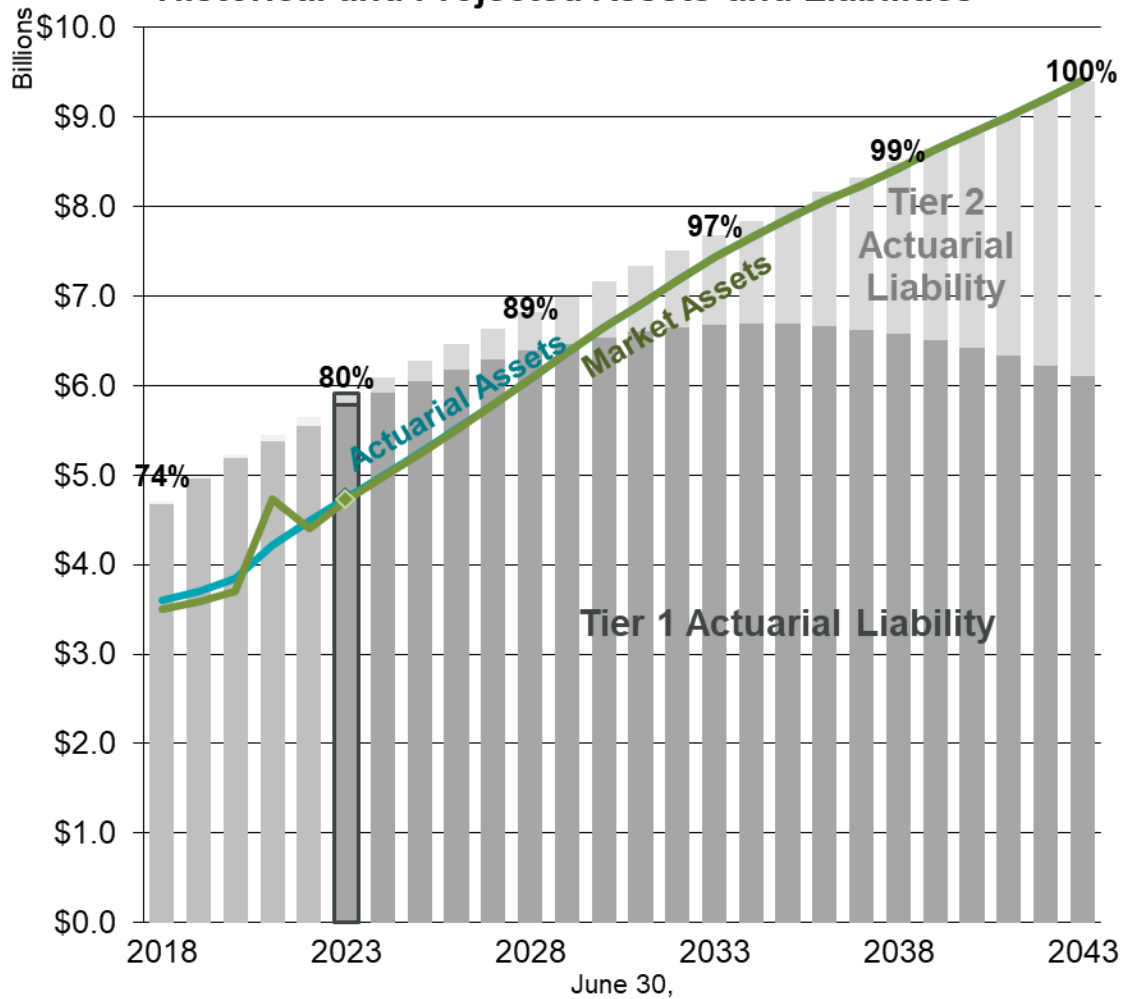
FYE 2025 Contributions By Tier



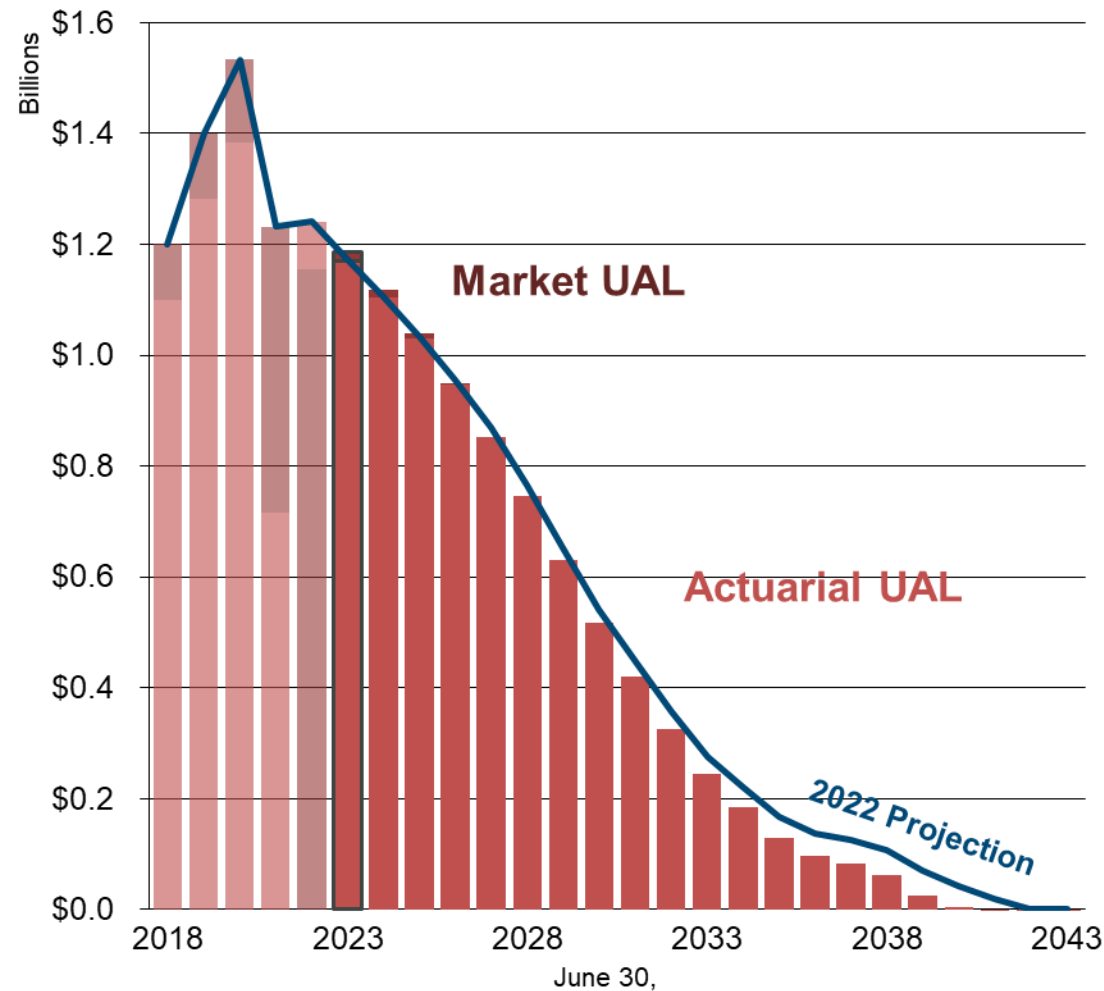
Baseline Projections – Funded Status and UAL



Historical and Projected Assets and Liabilities



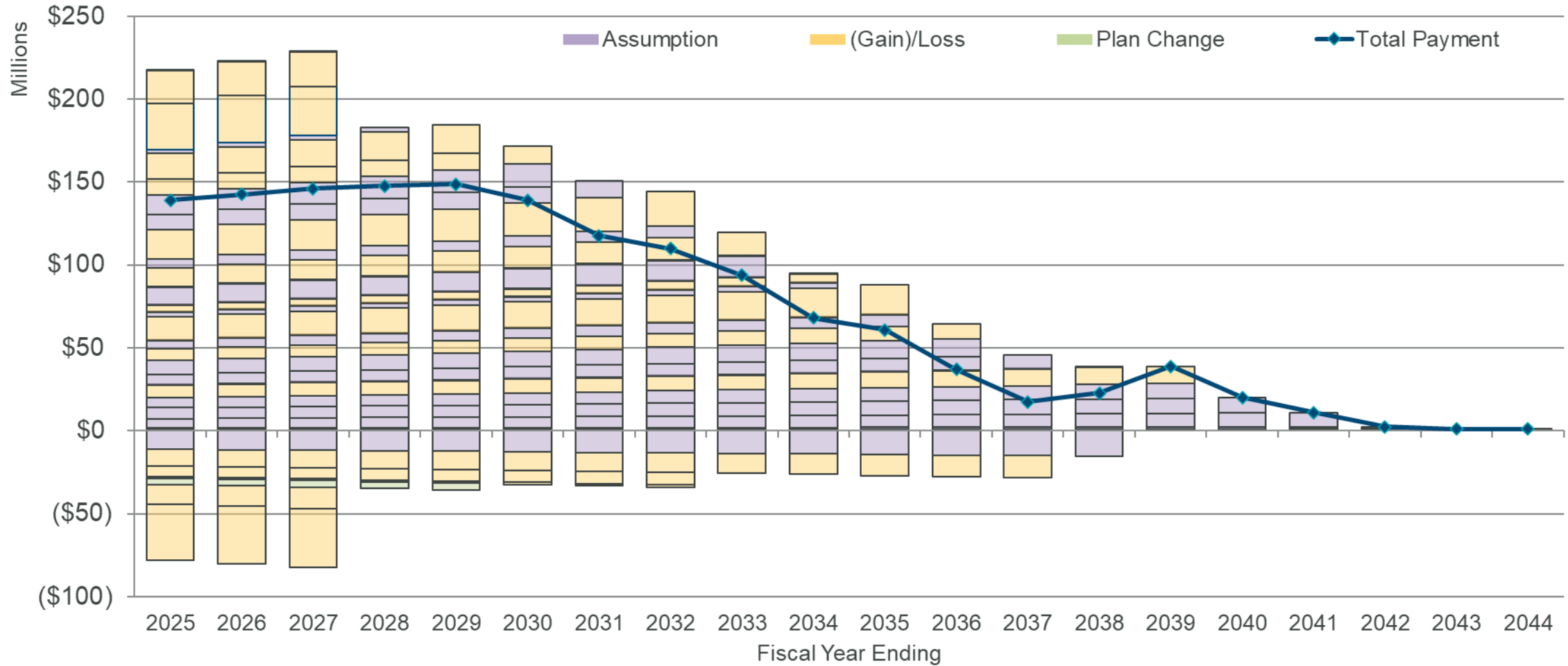
Historical and Projected UAL



Current Tier 1 Amortization Layers



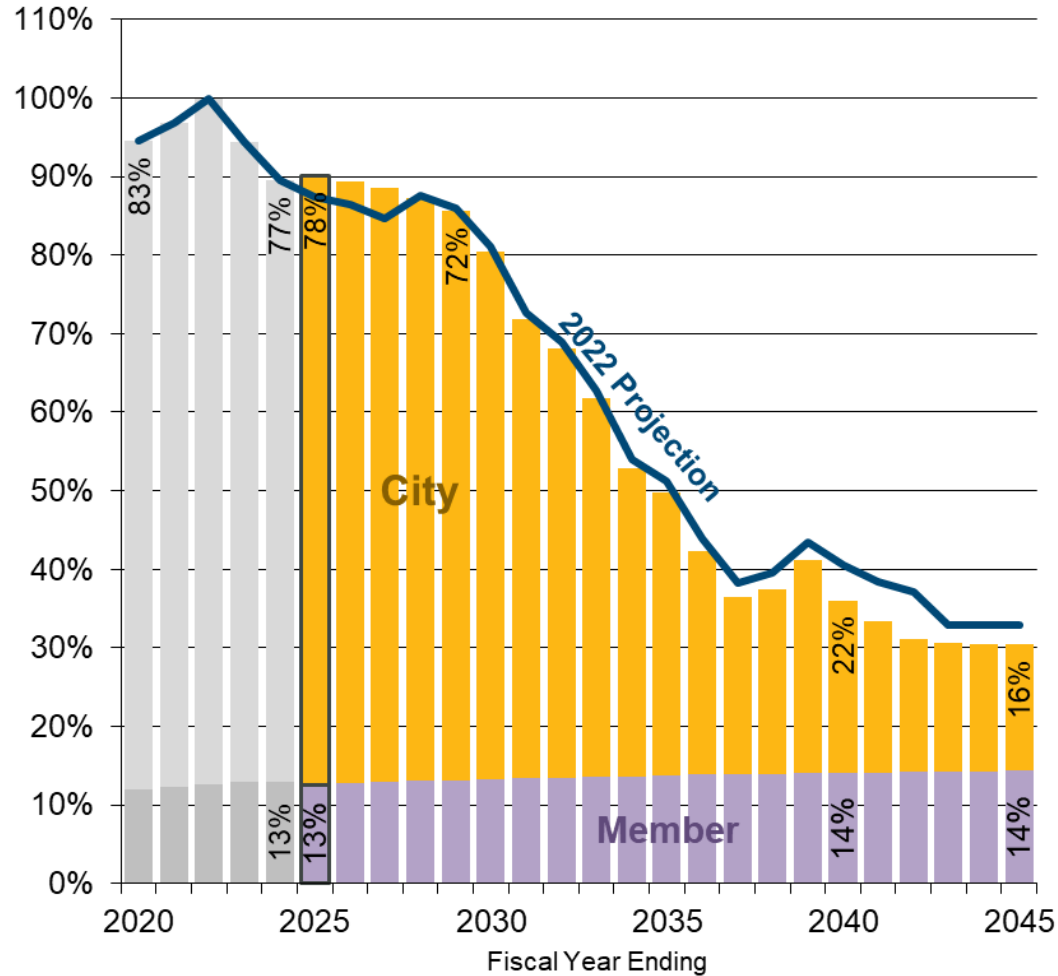
Tier 1 Amortization Payments



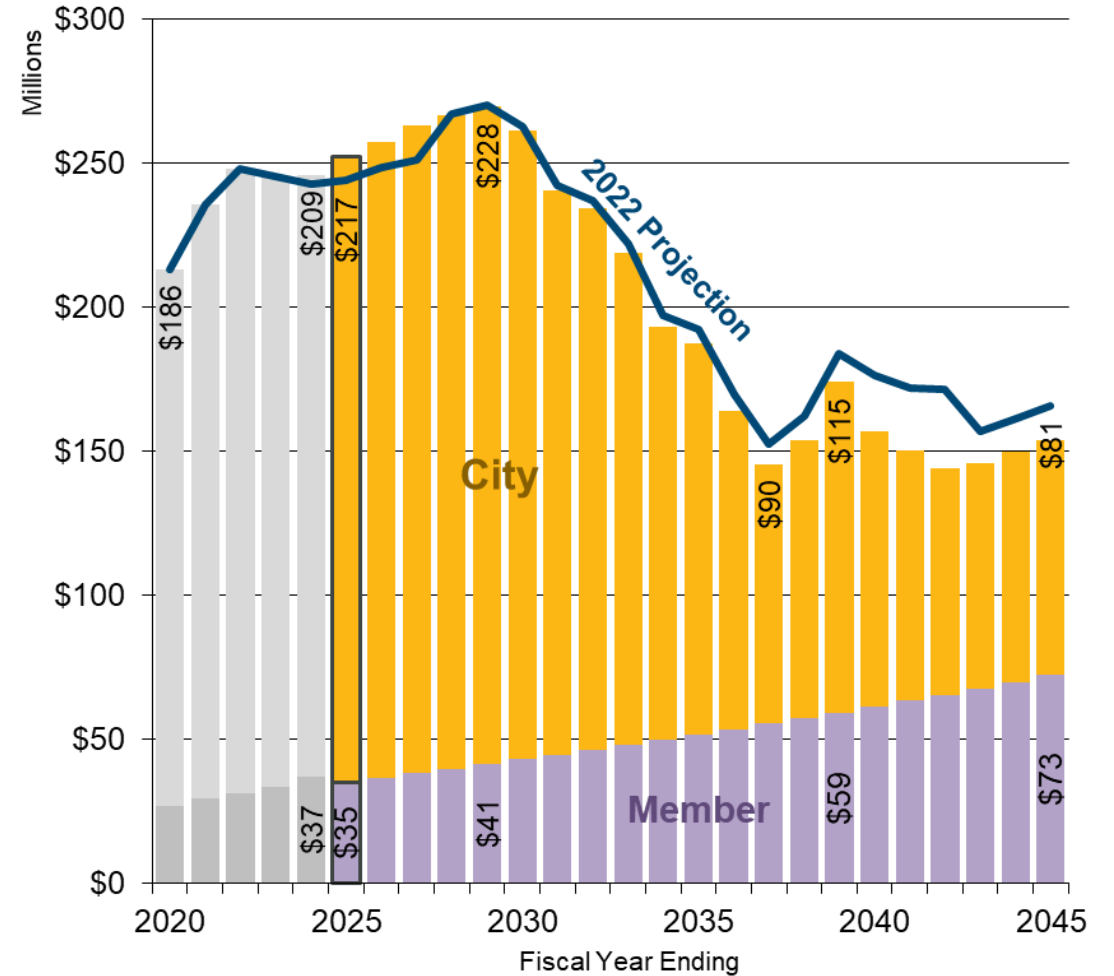
Baseline Projections – Contributions



Historical and Projected Contribution Rates



Historical and Projected Contribution Amounts



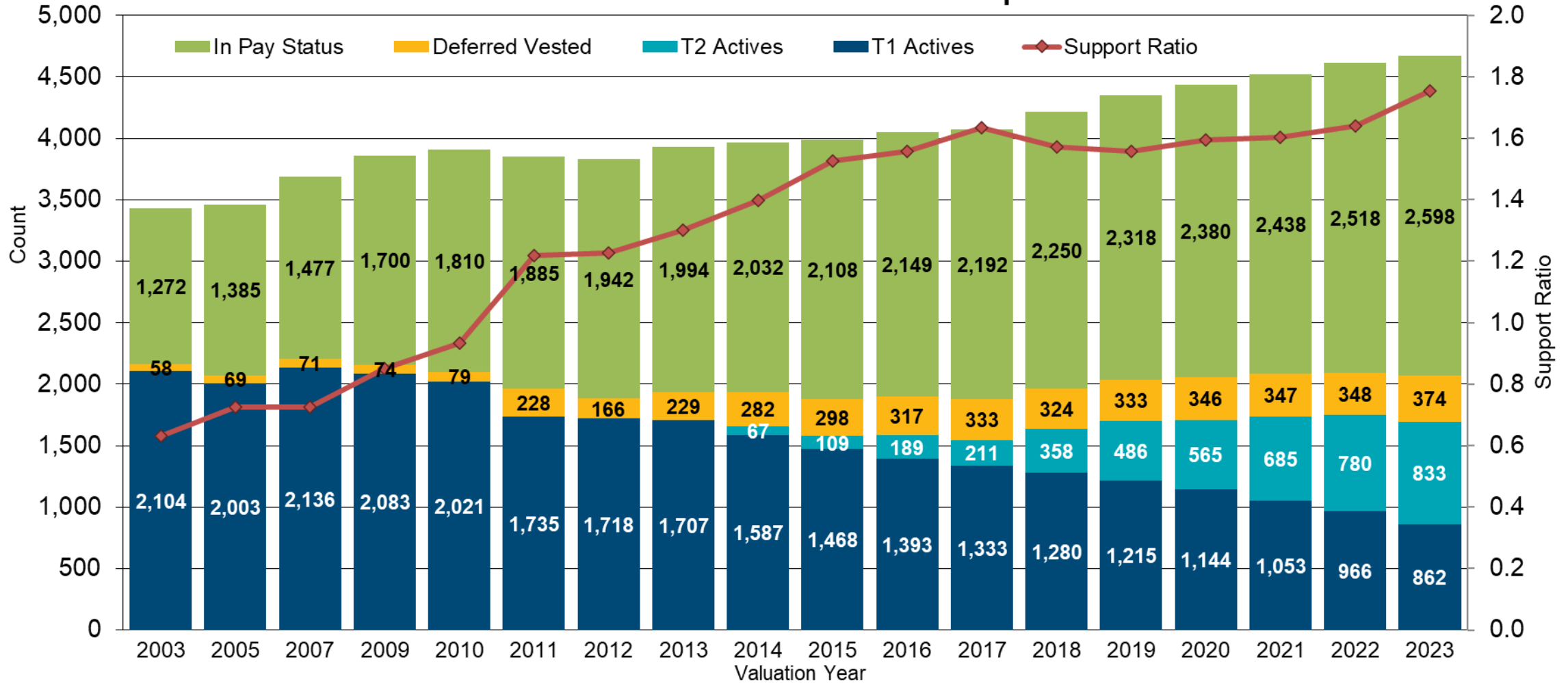


Mature Pension Plans Are More Sensitive to Risk

Membership Trends



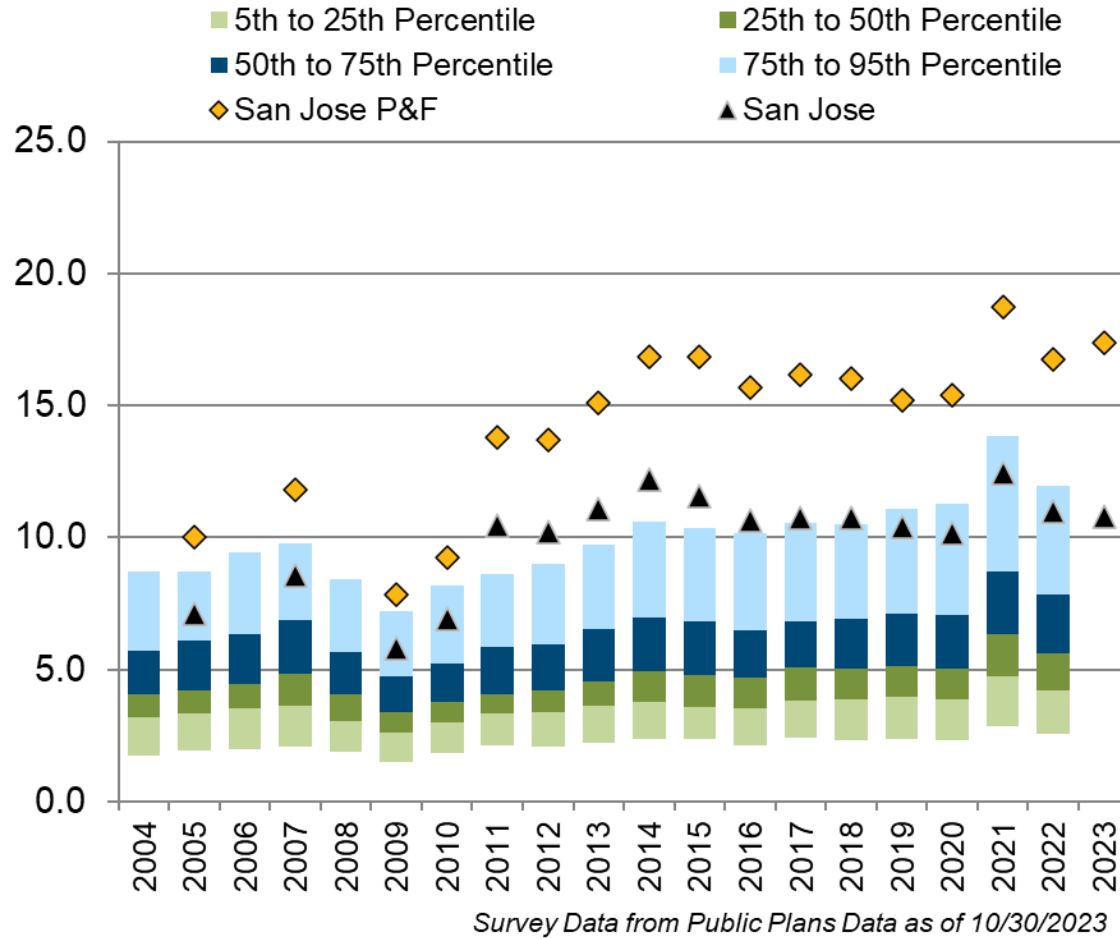
Police & Fire Historical Membership Counts



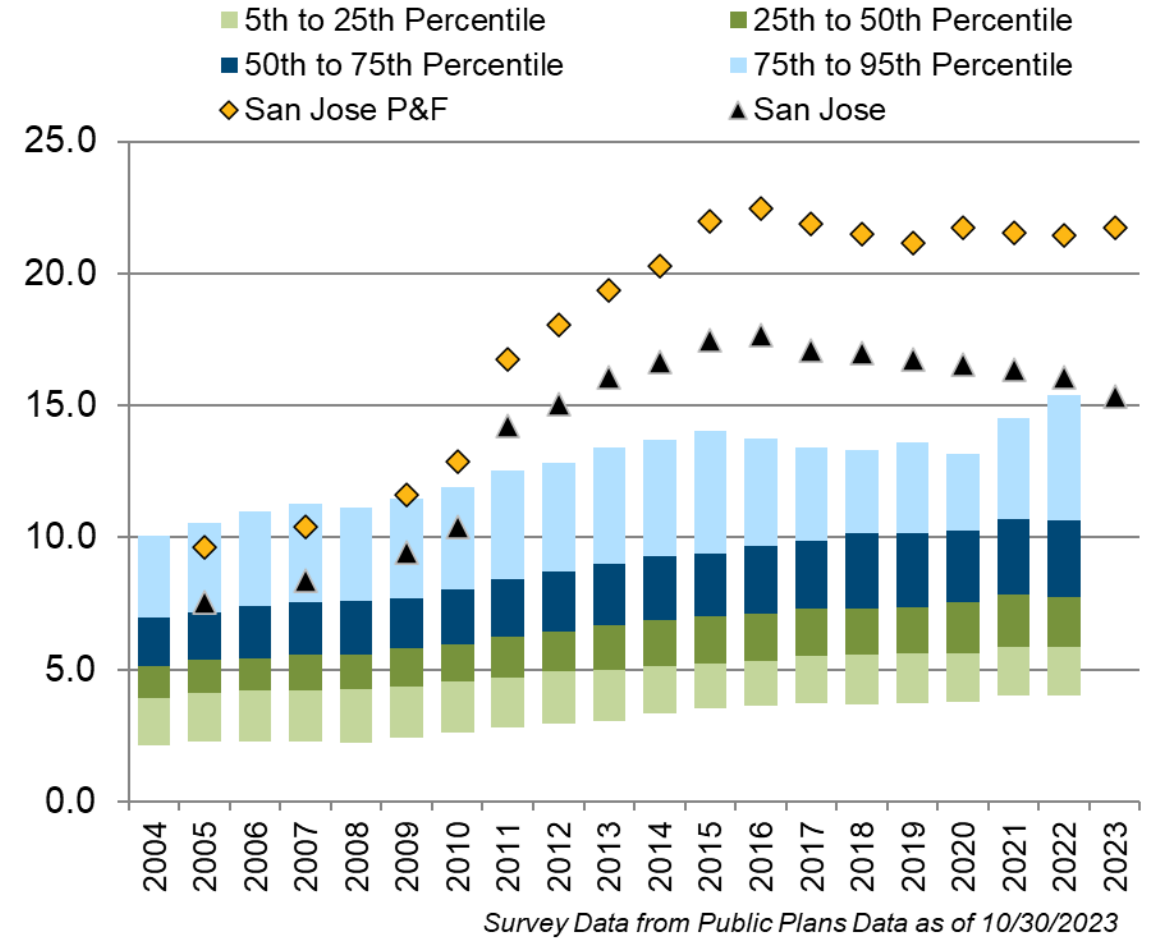
Leverage Ratios



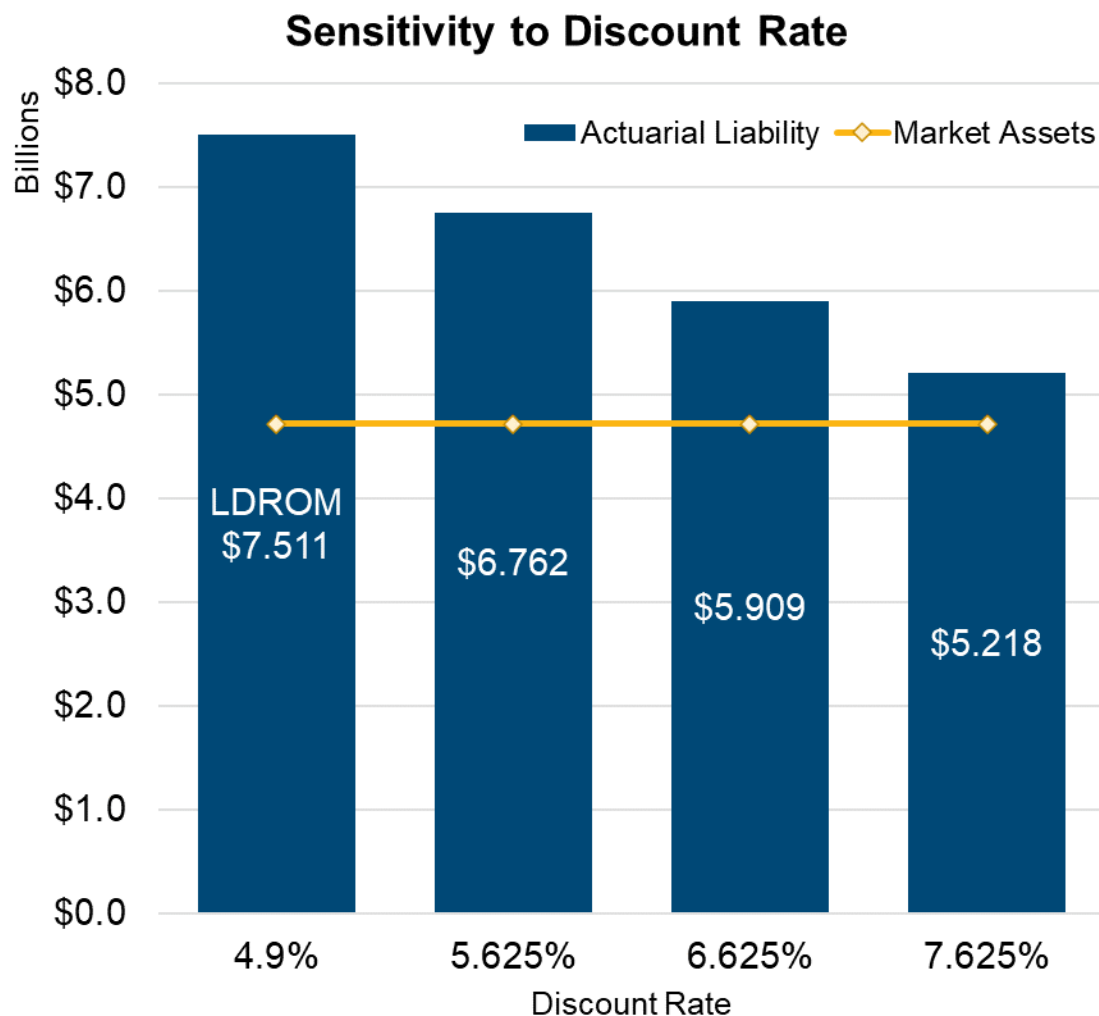
Asset Leverage Ratio



Liability Leverage Ratio



Sensitivity of Actuarial Liability to Discount Rate

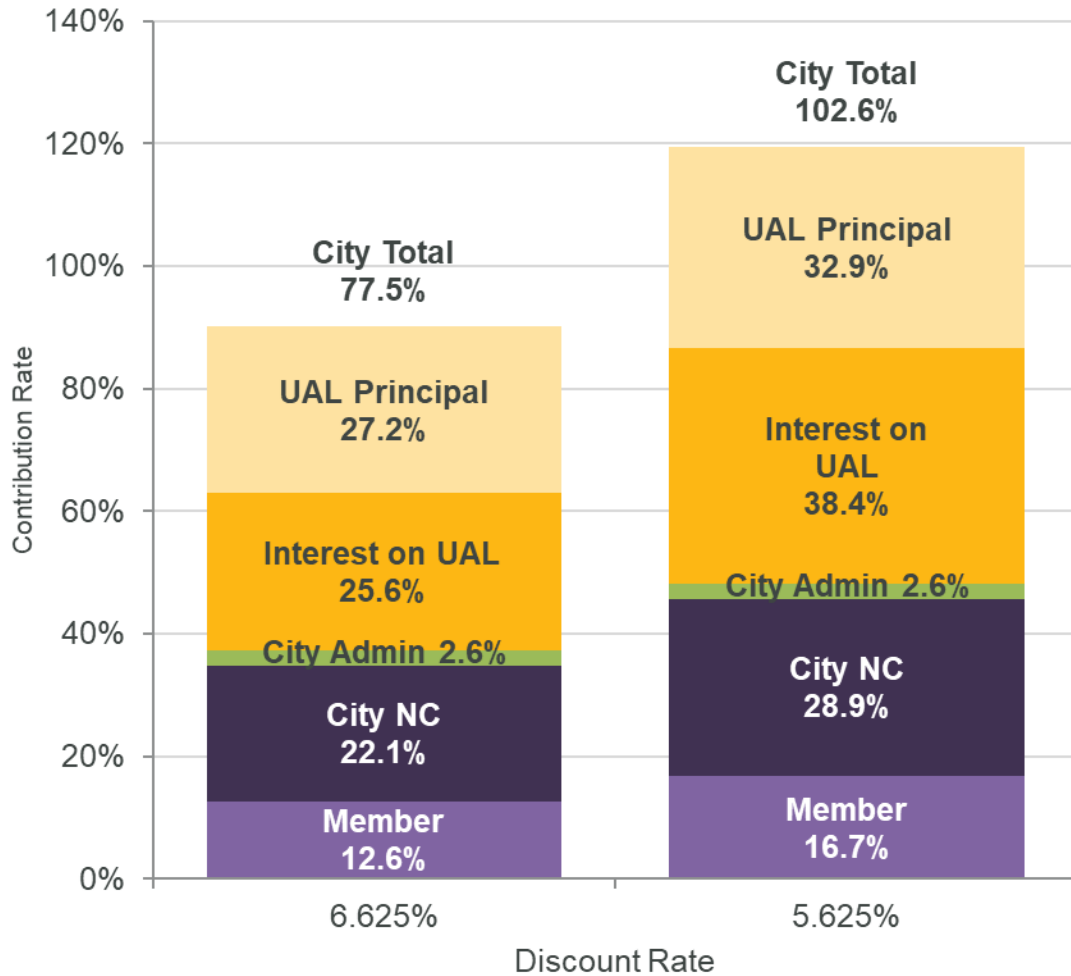


- Plan's Actuarial Liability varies depending on the expected return for Plan assets (used for discount rate)
- Under current assumptions for the Plan's assets (6.625%), the Actuarial Liability is \$5.9 billion
- If Plan invested in a low-default-risk fixed income portfolio:
 - Expected return would be ~4.9%
 - Actuarial Liability (LDROM) would be \$7.5 billion
- Difference between LDROM and current Actuarial Liability of \$1.6 billion represents:
 - Expected savings from bearing risk of diversified portfolio
 - Cost of eliminating investment risk

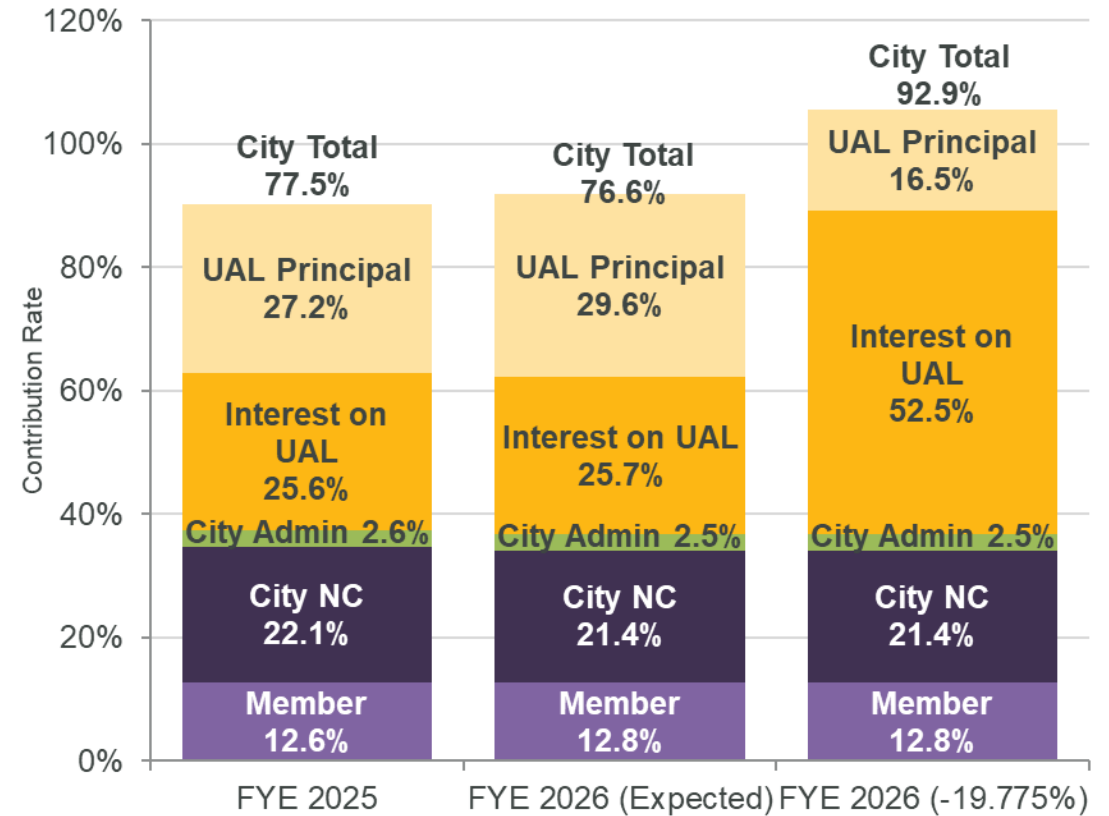
Illustration of Sensitivity



Discount Rate Change Impact



Interest Cost at Risk Impact of a Two Standard Deviation Loss



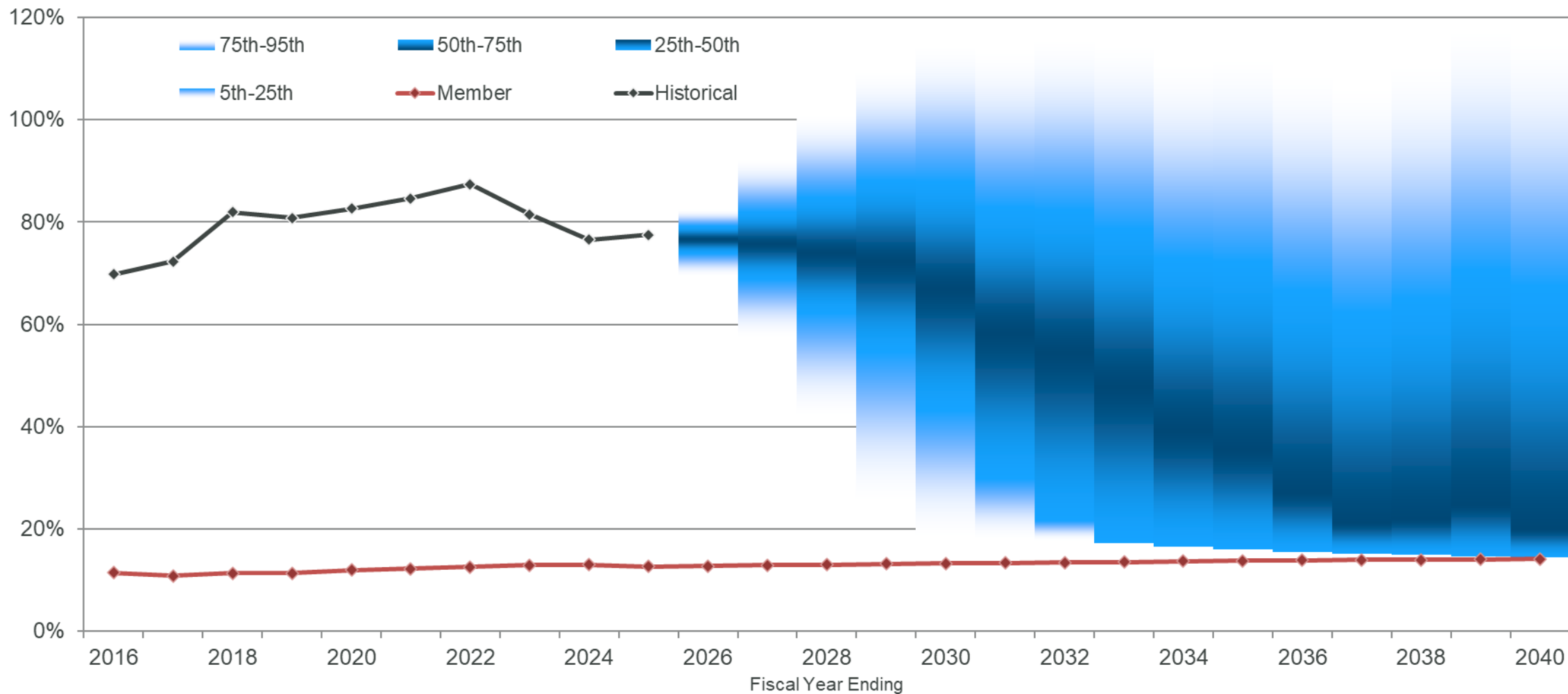
Projection Scenarios



Stochastic Contributions – Contribution Rates



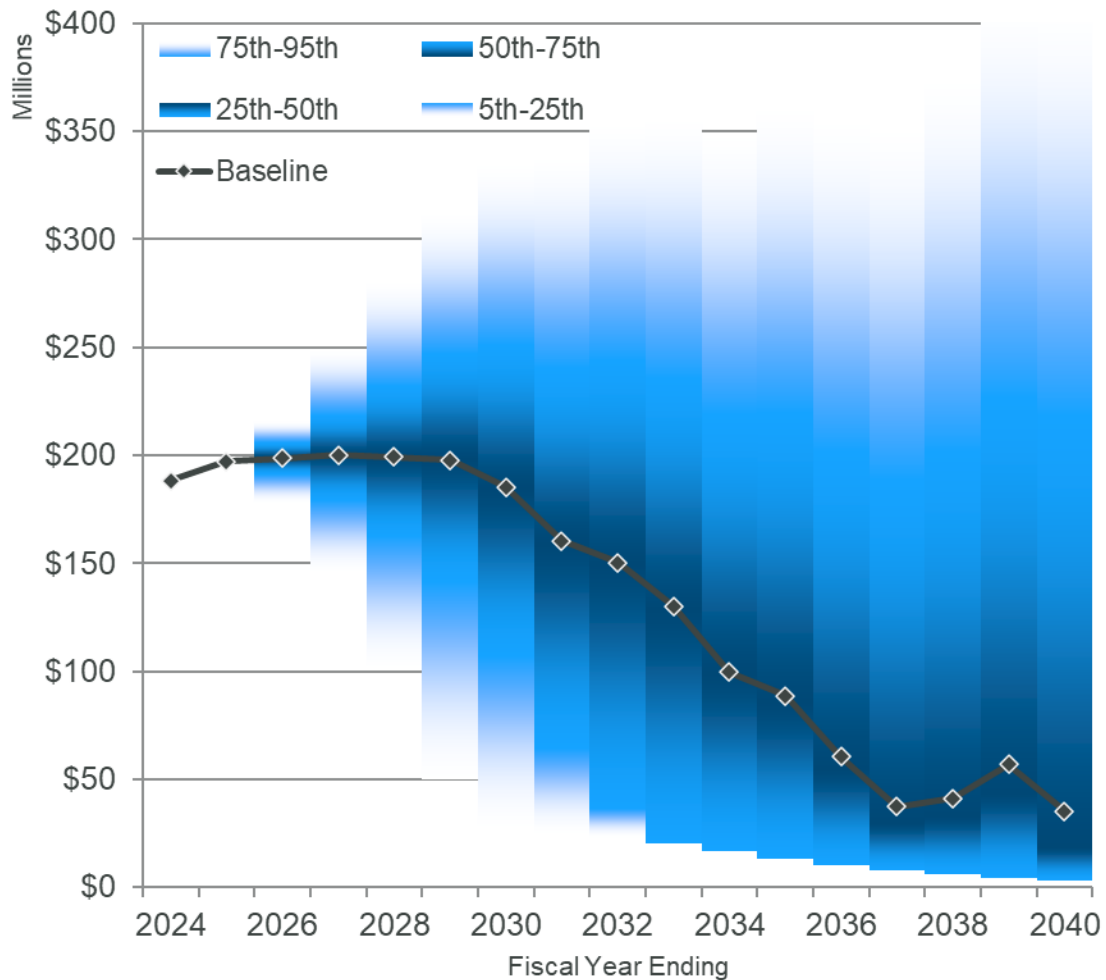
Historical and Projected City Contribution Rates



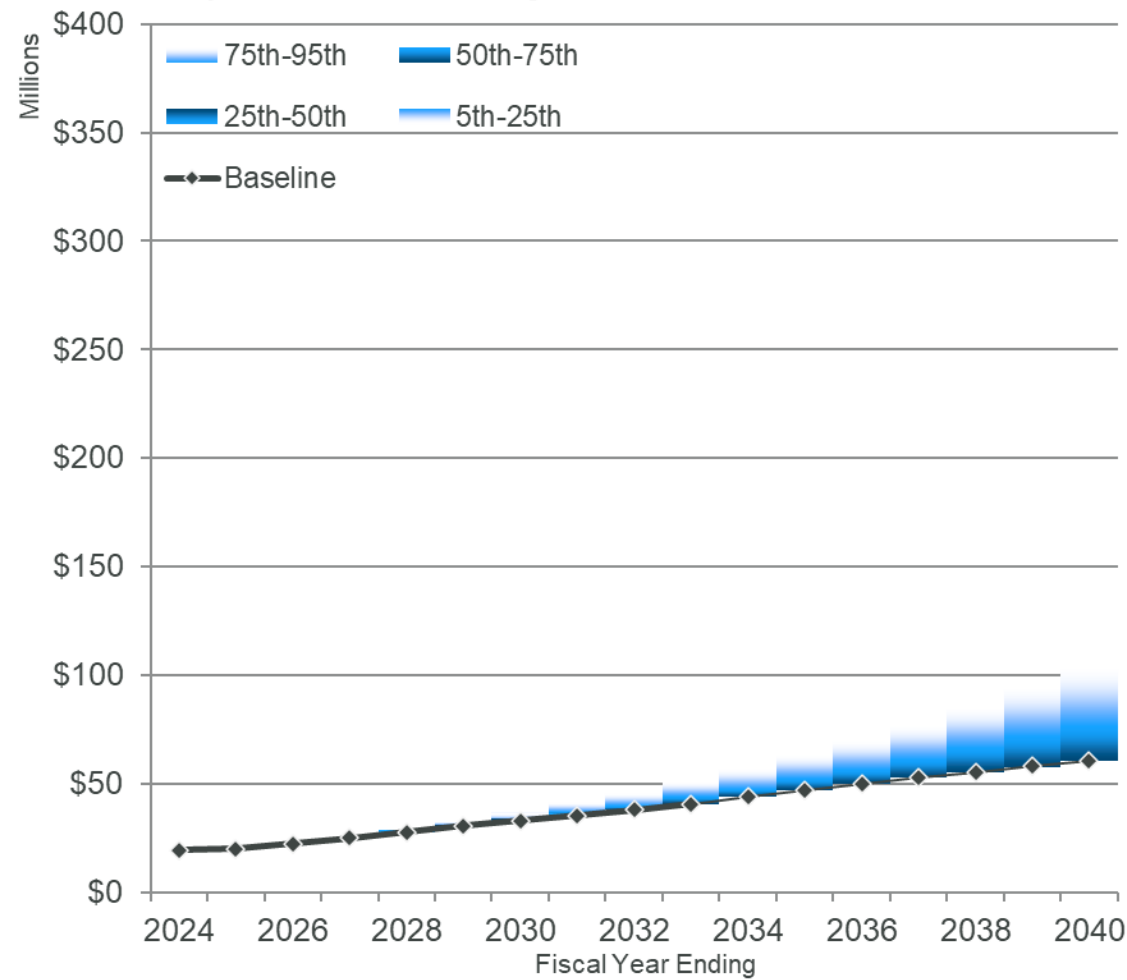
Stochastic Projections – Contributions by Tier



Projected Tier 1 City Contribution Amounts



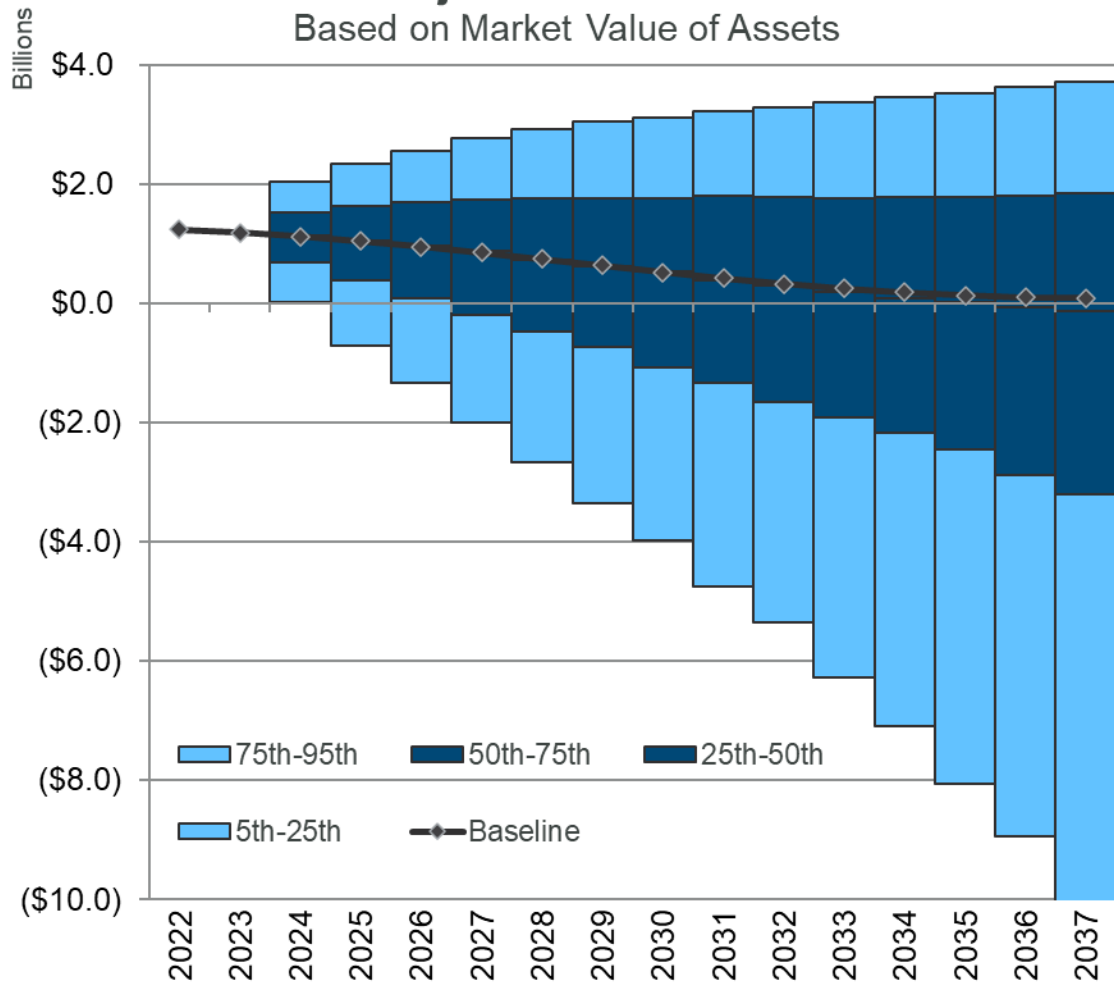
Projected Tier 2 City Contribution Amounts



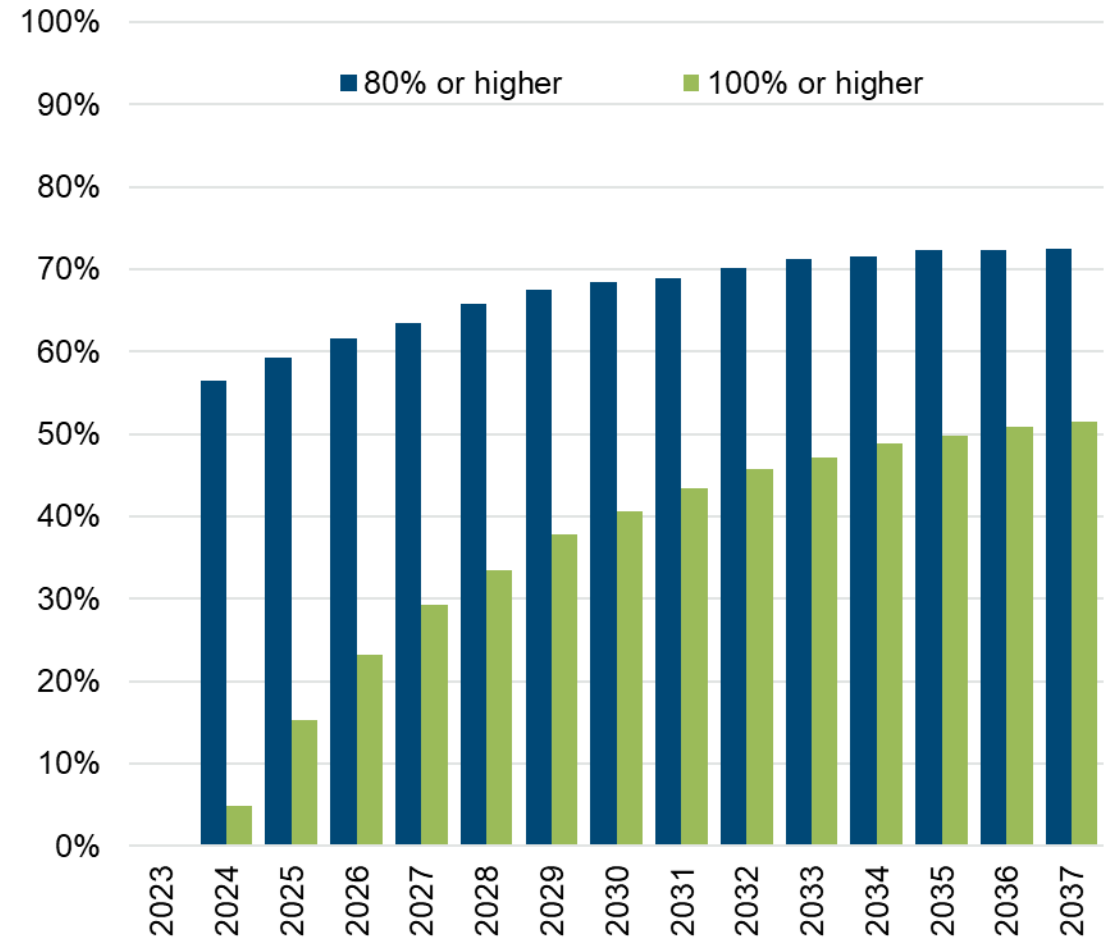
Stochastic Projections – UAL and Funded Ratio



Projected Plan UAL
Based on Market Value of Assets



Probability of Achieving Funded Ratios
Based on Market Value of Assets



Deterministic Scenarios



- Scenarios are intended to illustrate the range of potential contributions
 - Based on Meketa’s 10-year capital market assumptions
 - Impact of asset smoothing and amortization
 - Volatility due to plan maturity
- Not intended to be realistic economic scenarios

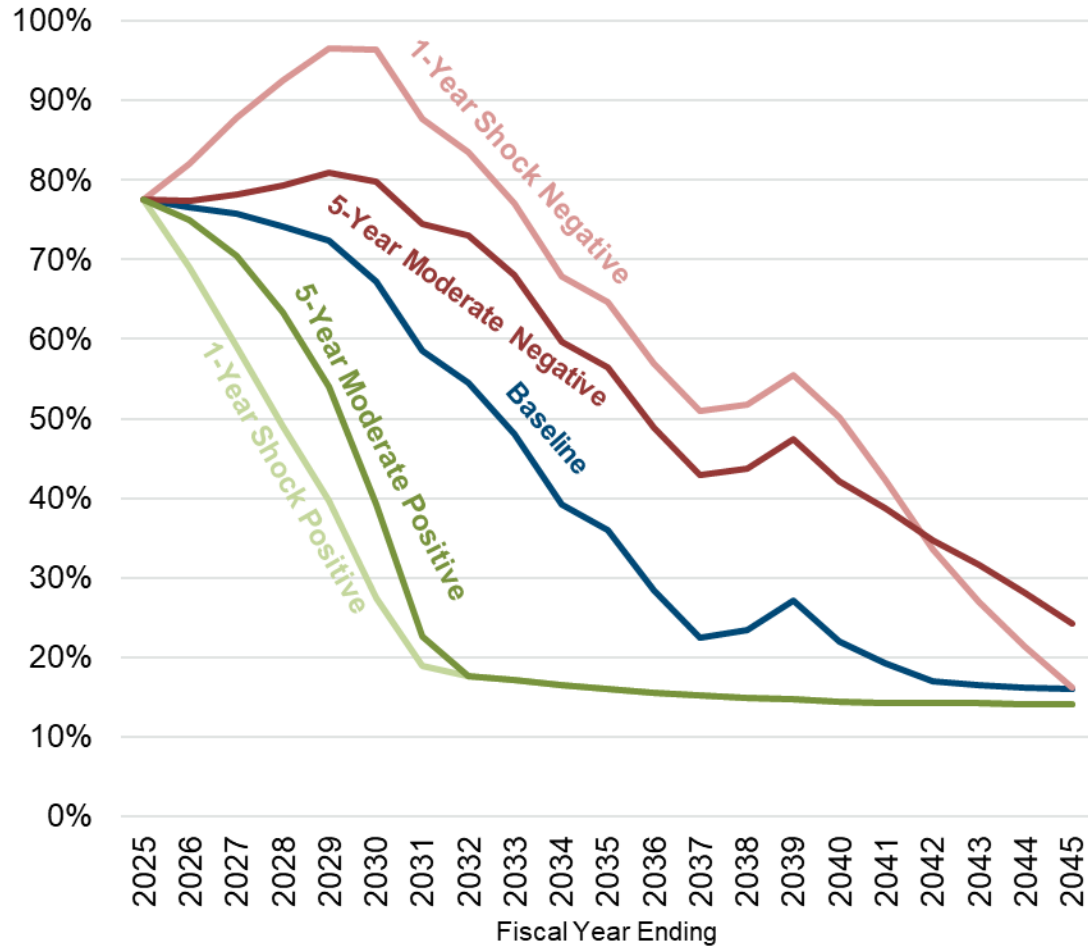
Annual Average Investment Return		
Percentile	1 Year	5 Years
95 th	31.7%	17.9%
75 th	17.1%	11.9%
25 th	-0.6%	4.0%
5 th	-11.6%	-1.3%

Deterministic Scenarios				
FYE	1-Year Shock		5-Year Moderate	
2024	-11.6%	31.7%	4.0%	11.9%
2025	6.625%	6.625%	4.0%	11.9%
2026	6.625%	6.625%	4.0%	11.9%
2027	6.625%	6.625%	4.0%	11.9%
2028	6.625%	6.625%	4.0%	11.9%
2029+	6.625%	6.625%	6.625%	6.625%

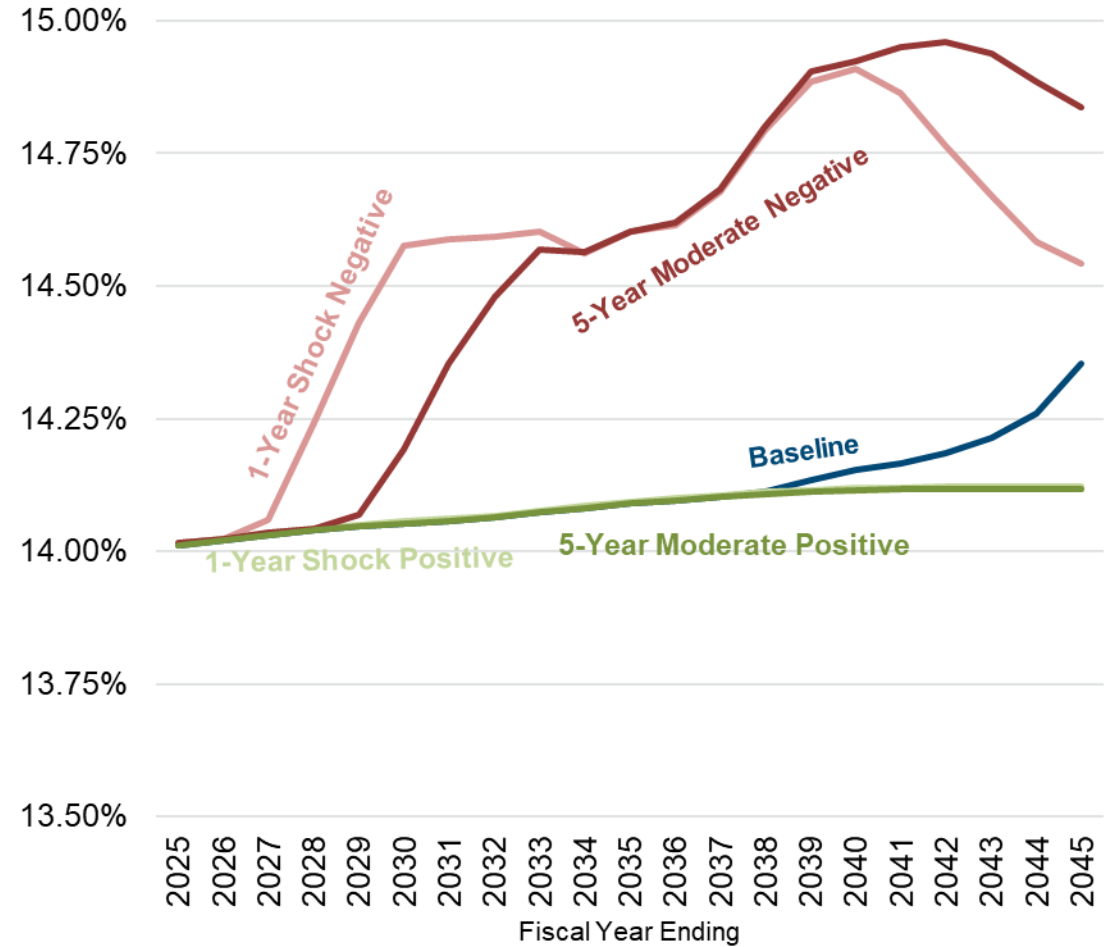
Deterministic Projections



City Aggregate Contribution Rates



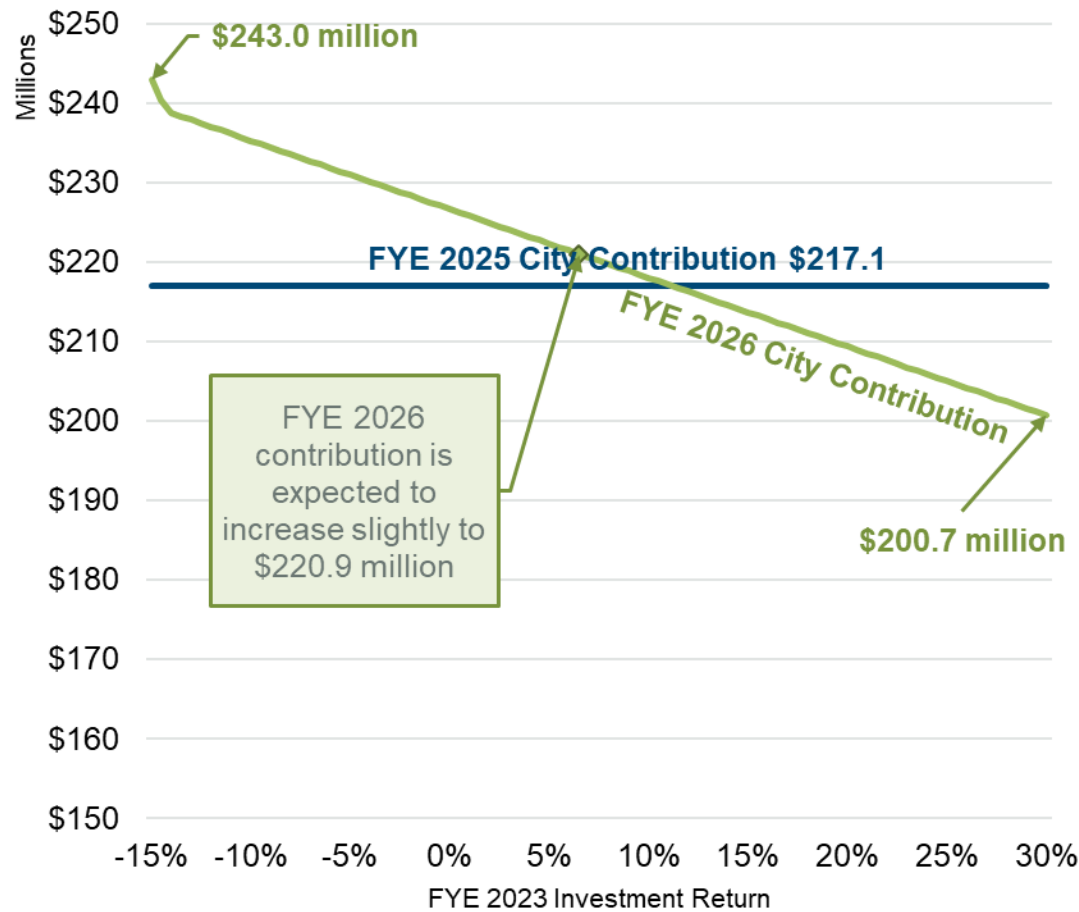
Tier 2 Member Contribution Rates



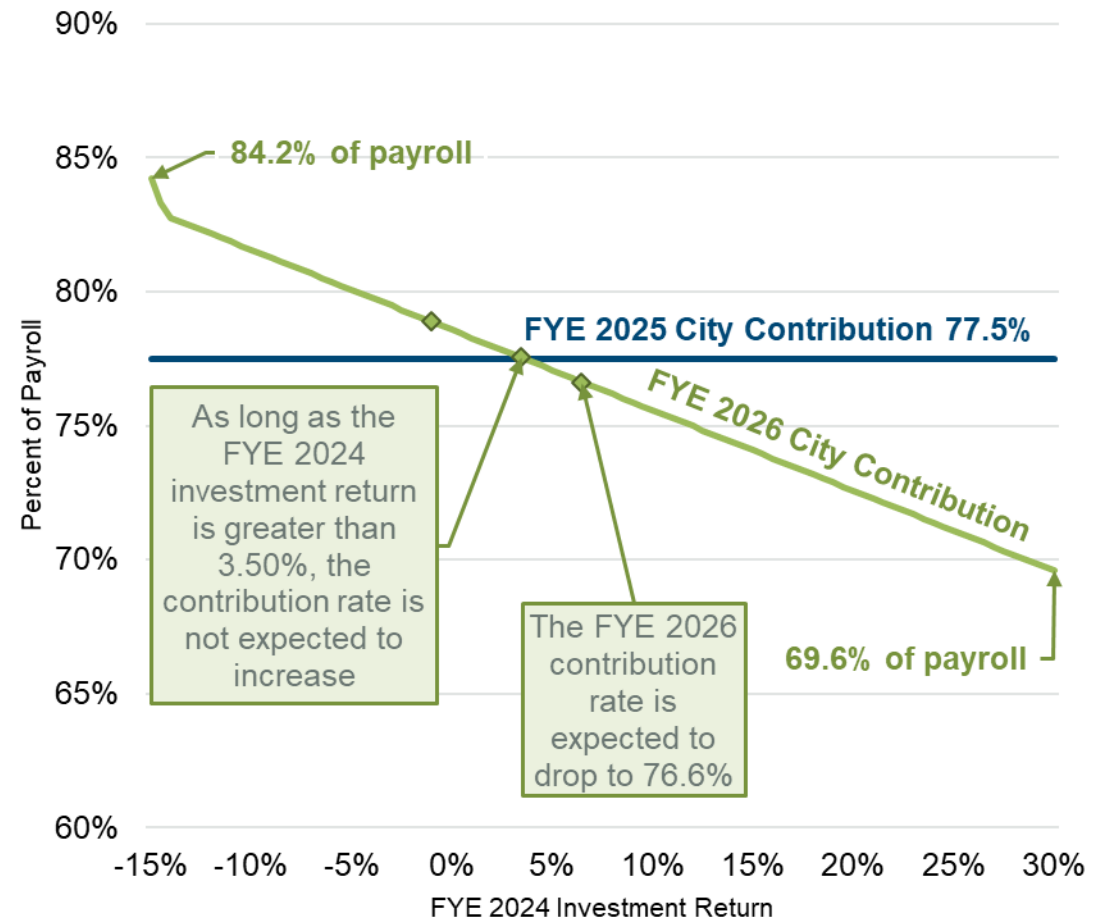
FYE 2026 Contributions by Investment Return



Projected FYE 2026 City Contribution Amount Based on FYE 2024 Investment Return



Projected FYE 2026 City Contribution Rate Based on FYE 2024 Investment Return





- The purpose of this presentation is to present the results of the June 30, 2023 Actuarial Valuation for the City of San José Police and Fire Department Retirement Plan.
- In preparing our presentation, we relied on information (some oral and some written) supplied by the City of San José Department of Retirement Services. 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. A summary of the data, assumptions, methods, and plan provisions used to prepare the valuation can be found in the June 30, 2023 actuarial valuation report.
- Future actuarial measurements may differ significantly from the current measurements 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, 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 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 Police and Fire Department Retirement Plan for the purpose described herein. This presentation is not intended to benefit any third party, and Cheiron assumes no duty or liability to any such party.

William R. Hallmark, ASA, EA, FCA, MAAA
Consulting Actuary

Anne D. Harper, FSA, EA, MAAA
Principal Consulting Actuary



- 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.
- Deterministic projections in this valuation report were developed using P-scan, a proprietary tool used to illustrate the impact of changes in assumptions, methods, plan provisions, or actual experience (particularly investment experience) on the future financial status of the System.
- P-scan uses standard roll-forward techniques that implicitly assume a stable active population. Because P-scan does not automatically capture how changes in one variable affect all other variables, some scenarios may not be consistent.
- Stochastic projections in this valuation report were developed using R-scan, our proprietary tool for assessing the probability of different outcomes based on a range of potential investment returns. We relied on Cheiron colleagues for the development of the model. The stochastic projections of investment returns assume that each future year's investment return is independent from all other years and is identically distributed according to a lognormal distribution. The standard deviation used in the stochastic projection of investment returns was provided by the System's investment consultant.

Appendix – Contribution Detail



Contribution Rates and Amounts (Throughout the Year)						
	Fire		Police		Total	
	FYE 2024	FYE 2025	FYE 2024	FYE 2025	FYE 2024	FYE 2025
Member Rates						
Tier 1	12.0%	11.8%	11.1%	10.6%	11.5%	11.2%
Tier 2	<u>15.1%</u>	<u>14.9%</u>	<u>14.4%</u>	<u>13.7%</u>	<u>14.6%</u>	<u>14.0%</u>
Aggregate	13.1%	13.0%	13.0%	12.4%	13.0%	12.6%
City Contributions						
Tier 1 UAL	\$ 69,168	\$ 68,686	\$ 72,023	\$ 79,423	\$ 141,191	\$ 148,110
Tier 1 Admin	\$ 1,824	\$ 3,116	\$ 3,012	\$ 3,909	\$ 4,836	\$ 7,026
Tier 1 Normal Cost	\$ 20,524	\$ 20,446	\$ 21,688	\$ 21,686	\$ 42,212	\$ 42,132
	31.5%	31.7%	29.7%	29.2%	30.5%	30.4%
Tier 2 Contribution	\$ 5,353	\$ 6,145	\$ 14,007	\$ 13,663	\$ 19,359	\$ 19,809
	15.1%	14.9%	14.4%	13.7%	14.6%	14.0%
Aggregate	\$ 96,869	\$ 98,393	\$ 110,730	\$ 118,682	\$ 207,598	\$ 217,075
	96.2%	93.1%	64.9%	68.1%	76.5%	77.5%

Numbers may not add due to rounding

Dollar amounts in thousands

Appendix – 5-Year Contribution Projection



Contribution Rates and Amounts (Throughout the Year)										
Fiscal Year Ending	2025		2026		2027		2028		2029	
Member Rates										
Police Tier 1	10.63%		10.62%		10.63%		10.63%		10.64%	
Police Tier 2	13.65%		13.65%		13.65%		13.65%		13.65%	
Fire Tier 1	11.82%		11.81%		11.80%		11.80%		11.80%	
Fire Tier 2	14.90%		14.90%		14.90%		14.90%		14.90%	
City Contributions										
Police										
Tier 1 UAL		\$ 79,423		\$ 80,253		\$ 81,133		\$ 80,938		\$ 79,951
Tier 1 Admin		3,909		3,951		3,997		4,036		4,067
Tier 1 Normal Cost	29.20%	21,686	29.16%	19,911	29.16%	18,012	29.15%	16,141	29.14%	14,358
Tier 2	13.65%	13,663	13.65%	15,196	13.65%	16,819	13.65%	18,452	13.65%	20,064
Total Police	68.06%	\$ 118,682	66.43%	\$ 119,311	64.85%	\$ 119,960	62.75%	\$ 119,567	60.35%	\$ 118,440
Fire										
Tier 1 UAL		\$ 68,686		\$ 71,862		\$ 75,273		\$ 77,762		\$ 80,199
Tier 1 Admin		3,116		3,232		3,340		3,453		3,570
Tier 1 Normal Cost	31.73%	20,446	31.70%	19,444	31.69%	18,222	31.69%	16,914	31.70%	15,719
Tier 2	14.90%	6,145	14.90%	7,079	14.90%	8,137	14.90%	9,253	14.90%	10,333
Total Fire	93.11%	\$ 98,393	93.36%	\$ 101,617	93.63%	\$ 104,973	92.99%	\$ 107,383	92.33%	\$ 109,820
Aggregate	77.51%	\$ 217,075	76.59%	\$ 220,928	75.71%	\$ 224,933	74.16%	\$ 226,949	72.42%	\$ 228,261
75th Percentile	77.5%	217,075	79.1%	228,261	81.9%	243,316	84.8%	259,455	88.0%	277,424
25th Percentile	77.5%	217,075	73.9%	213,024	68.8%	204,374	62.2%	190,392	54.5%	171,913

Numbers may not add due to rounding

Dollar amounts in thousands

Appendix – Tier 1 Beginning of Year Contributions



Tier 1 City Contribution Amounts (Beginning of Year Assuming Full Discount)

	Fiscal Year Ending				
	2025	2026	2027	2028	2029
Police					
Tier 1 UAL Payment	\$ 76,916	\$ 77,720	\$ 78,572	\$ 78,384	\$ 77,428
Tier 1 Administrative Expenses	3,786	3,826	3,871	3,908	3,938
Tier 1 Normal Cost	<u>21,001</u>	<u>19,282</u>	<u>17,443</u>	<u>15,632</u>	<u>13,904</u>
Total Police	\$ 101,704	\$ 100,829	\$ 99,886	\$ 97,924	\$ 95,271
Fire					
Tier 1 UAL Payment	\$ 66,518	\$ 69,594	\$ 72,897	\$ 75,308	\$ 77,668
Tier 1 Administrative Expenses	3,018	3,130	3,235	3,344	3,457
Tier 1 Normal Cost	<u>19,800</u>	<u>18,831</u>	<u>17,647</u>	<u>16,380</u>	<u>15,223</u>
Total Fire	\$ 89,336	\$ 91,554	\$ 93,779	\$ 95,032	\$ 96,347
Tier 1 Total	\$ 191,040	\$ 192,383	\$ 193,664	\$ 192,955	\$ 191,618

Numbers may not add due to rounding

Dollar amounts in thousands