CHEIRON Classic Values, Innovative Advice

City of San José Police and Fire Department Retirement Plan

Actuarial Valuation Report as of June 30, 2023

Produced by Cheiron

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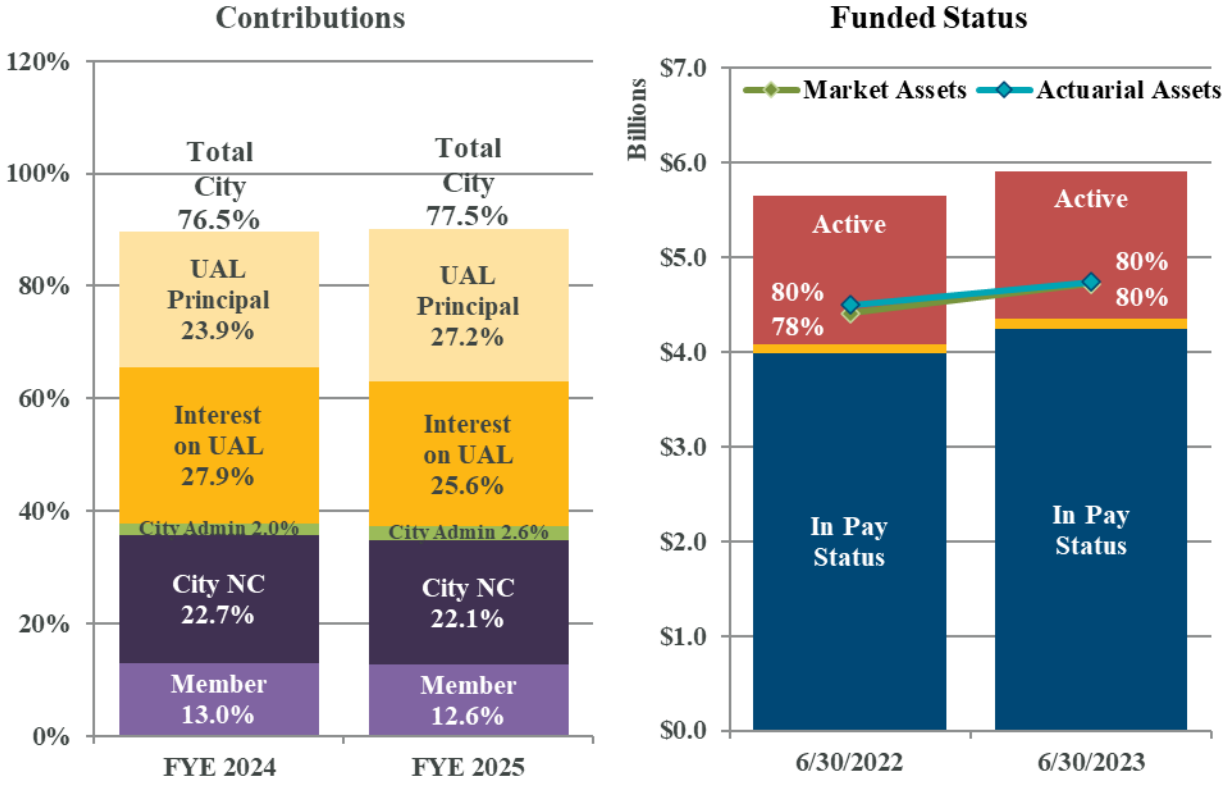
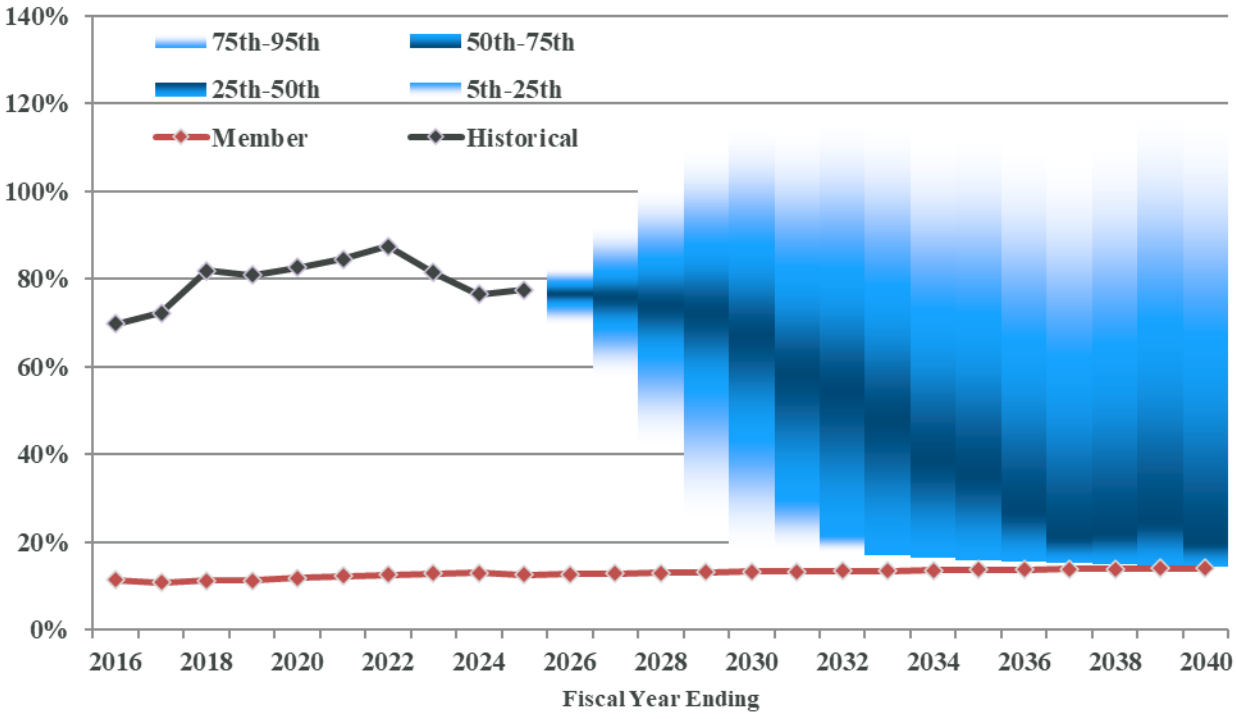
Dashboard





SECTION I – BOARD SUMMARY

Membership

As shown in Table I-1 below, total membership grew 1.2% from 2022 to 2023, while active membership decreased 2.9%. Active membership continues its shift from Tier 1 to Tier 2. Tier 1 active membership decreased by 104 members while Tier 2 active membership increased by 53 members. Total expected payroll increased by 3.2% in aggregate, with Tier 1 payroll decreasing 3.5% and Tier 2 payroll increasing 12.2%.

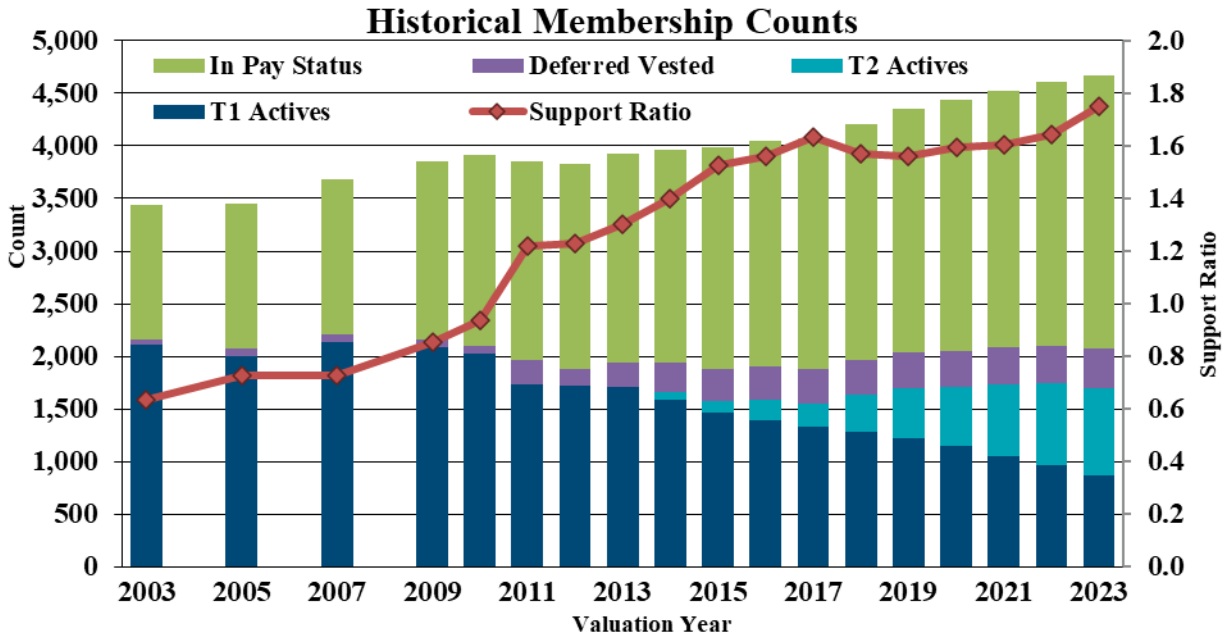
Table I-1

Total Membership	June 30, 2022	June 30, 2023	Change
Active Members			
Tier 1	966	862	-10.8%
Tier 2	780	833	6.8%
Total Actives	1,746	1,695	-2.9%
Terminated Members	348	374	7.5%
Members In Pay Status	2,518	2,598	3.2%
Total	4,612	4,667	1.2%
Annual Rate of Pay for Active Members			
Tier 1	$ 150,358	$ 145,064	-3.5%
Tier 2	113,037	126,828	12.2%
Total	$ 263,395	$ 271,892	3.2%

Dollar amounts in thousands

SECTION I – BOARD SUMMARY

As shown in the chart below, the number of active members remained around 2,000 from 2003 through 2010, at which point active membership declined significantly. The decline leveled around 2015 and has since recovered some of the lost active membership. The active membership this year, however, is lower than it was in the prior valuation. At the same time, the number of members in pay status has more than doubled from 1,272 in 2003 to 2,598 in 2023. As a result, the number of members in pay status or with deferred benefits that each active member has to support if there are actuarial losses or assumption changes has increased from approximately 0.6 in 2003 to nearly 1.8 in 2023. An increase in this ratio is to be expected for a maturing plan, but the impact of the recession in 2008-2009 accelerated the trend significantly. As there are more retirees to be supported by each active member, contributions tend to become more volatile and sensitive to changes.



SECTION I – BOARD SUMMARY

Funded Status

This report measures assets and liabilities for funding purposes. Table I-2 below summarizes the Actuarial Liability, assets, and related ratios as of June 30, 2022 and 2023.

Table I-2

Actuarial Liability, Assets and Funded Status	June 30, 2022	June 30, 2023	Change
1. Actuarial Liability			
a. Actives	$ 1,564,781	$ 1,557,513	-0.5%
b. Deferred Vested	98,177	100,324	2.2%
c. In Pay Status	3,987,523	4,250,717	6.6%
d. Total	$ 5,650,481	$ 5,908,554	4.6%
2. Market Value of Assets (MVA)	$ 4,409,869	$ 4,721,488	7.1%
3. UAL - MVA Basis (1.d. - 2.)	$ 1,240,612	$ 1,187,066	-4.3%
4. Funding Ratio - MVA Basis (2. ÷ 1.d.)	78.0%	79.9%	1.9%
5. Actuarial Value of Assets (AVA)	$ 4,495,687	$ 4,739,742	5.4%
6. UAL - AVA Basis (1.d. - 5.)	$ 1,154,794	$ 1,168,812	1.2%
7. Funding Ratio - AVA Basis (5. ÷ 1.d.)	79.6%	80.2%	0.7%
8. Expected Payroll	$ 263,395	$ 271,893	3.2%
9. Asset Leverage Ratio (2. ÷ 8.)	16.7	17.4	3.7%
10. Actuarial Liability Leverage Ratio (1.d. ÷ 8.)	21.5	21.7	1.3%

Dollar amounts in thousands

The Actuarial Liability represents the target amount of assets the Plan should have in the trust as of the valuation date based on the actuarial cost method. The Actuarial Liability increased 4.6% and the Market Value of Assets increased 7.1%. As a result, the Unfunded Actuarial Liability (UAL) measured on the Market Value of Assets decreased 4.3% from approximately $1,240.6 million to $1,187.1 million, and the funding ratio on an MVA basis increased from 78.0% to 79.9%.

The asset smoothing method defers 80% of the current year's investment gain or loss on the Market Value of Assets while recognizing 20% of the prior four years' gains and losses. This year, however, the asset smoothing method was reset by combining all prior unrecognized gains and losses with the current year's investment gain and deferring 80% of the net unrecognized loss, resulting in a 5.4% increase in the Actuarial Value of Assets. The UAL measured on the Actuarial Value of Assets increased 1.2% from approximately $1,154.8 million to $1,168.8 million and the funding ratio increased from 79.6% to 80.2%. The Market Value of

SECTION I – BOARD SUMMARY

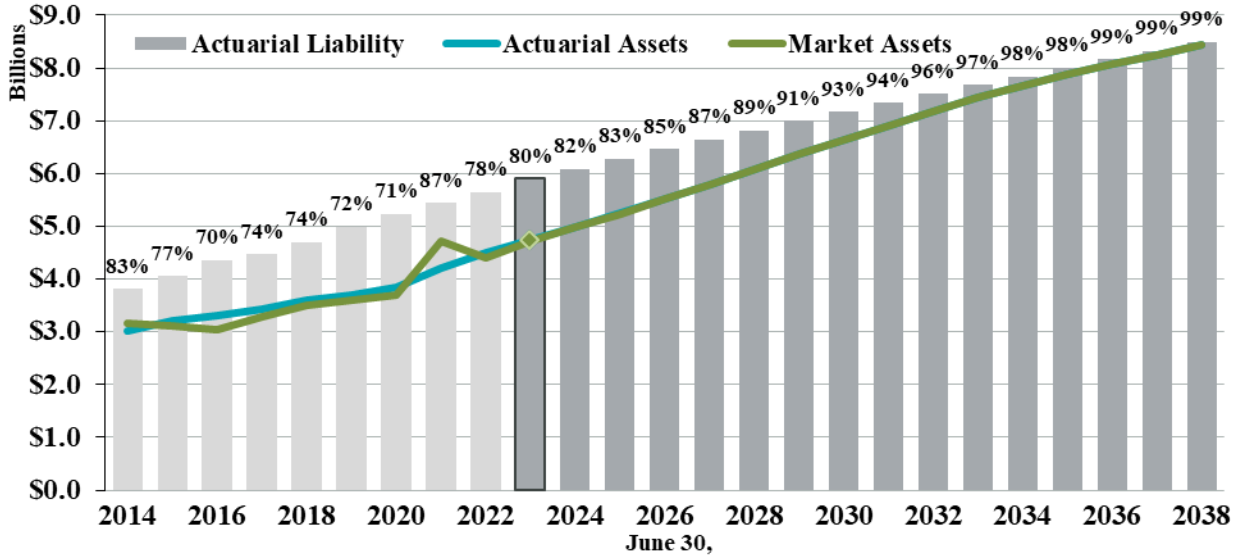
Assets is slightly smaller than the Actuarial Value of Assets, so deferred net asset losses of $18.2 million will be recognized in the Actuarial Value of Assets over the next four years.

The asset leverage ratio of 17.4 means that if the Plan experiences a 10% loss on assets compared to the discount rate of 6.625% (-3.375% return), the loss would be equivalent to 174% of payroll. Interest payments alone on such a loss would be approximately 11.5% of payroll.

As the Plan becomes better funded, the asset leverage ratio will increase, and if it was 100% funded, the leverage ratio would be 21.7. These leverage ratios are extremely high compared to other public pension plans indicating that this plan is far more sensitive to investment gains and losses and assumption changes than other large public pension plans.

The chart below shows the historical and projected trends for assets (both market and smoothed actuarial value) versus the Actuarial Liability, and also shows the progress of the funding ratios (based on the Market Value of Assets) since 2014. The historical Actuarial Liability is shown in light gray while the projected Actuarial Liability is shown in a darker gray. From 2014 to 2020, the funding ratio declined from 83% to 71% primarily due to lower-than-expected investment returns and assumption changes, including reductions of the discount rate. The exceptional investment returns in 2021 increased the funding ratio from 71% to 87% based on the Market Value of Assets. However, the investment losses in 2022 reduced the funded ratio to 78%. This year, the funded ratio improved to 80%. If all assumptions are met in the future, the funded status is expected to reach 100% by 2039.

Historical and Projected Assets and Actuarial Liability

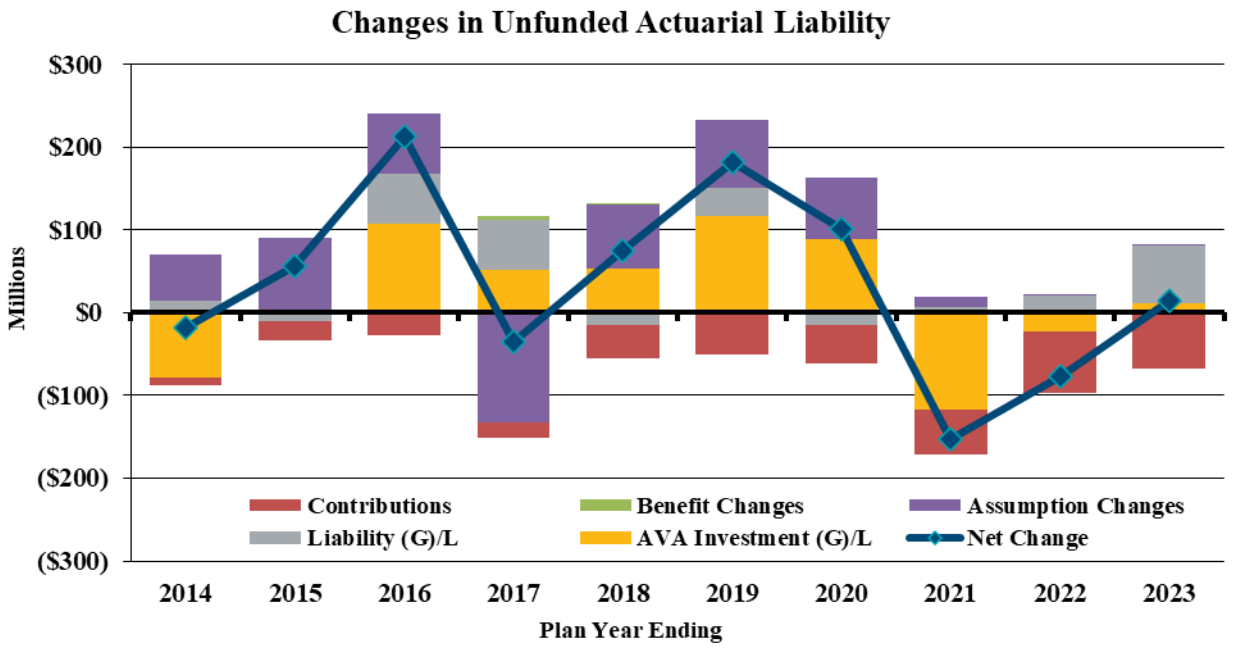


While the funded status is expected to improve, the UAL depends on actual investment returns, changes in assumptions and actuarial gains and losses, so there is potentially a wide range for the projected UAL. More detail on the assets can be found in section IV of this report, and more detail on the measures of liability can be found in section V of this report.

SECTION I – BOARD SUMMARY

Changes in UAL

The chart below and Table I-3 on the following page show the historical changes to the UAL broken out by the following sources: investment gains and losses on the Actuarial Value of Assets (AVA), liability gains and losses, assumption changes, benefit changes, and contributions compared to normal cost plus interest on the UAL.



Over the last 10 years, the UAL increased about $362 million. There have been assumption changes in each of the last 10 years, increasing the UAL by $336 million. There have been liability losses in 7 of the last 10 years, increasing the UAL by $232 million, with the net liability loss primarily due to higher-than-expected salary increases. Actuarial investment experience increased the UAL about $201 million, and benefit changes increased the UAL by about $4 million. Contributions, the only consistent source of UAL reduction, reduced the UAL by about $411 million.

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Table I-3

Changes in Unfunded Actuarial Liability

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Discount Rate	**7.000%**	**7.00%**	**6.88%**	**6.875%**	**6.750%**	**6.75%**	**6.63%**	**6.625%**	**6.625%**	**6.625%**	
Source											
AVA (G)/L	$ (78.5)	$ (2.8)	$ 106.8	$ 50.9	$ 53.6	$ 116.2	$ 89.5	$ (117.2)	$ (22.5)	$ 5.3	**$ 201.3**
Liability (G)/L	14.7	(7.3)	61.3	61.8	(15.1)	35.1	(15.4)	6.7	20.3	69.6	**231.7**
Assumptions	56.3	90.0	72.7	(131.8)	76.4	80.9	73.5	12.4	0.1	5.7	**336.1**
Benefit Changes	0.0	0.0	0.0	4.3	0.2	0.0	0.0	0.0	0.0	0.0	**4.5**
Contributions	(9.9)	(23.0)	(27.4)	(19.6)	(39.7)	(49.8)	(46.5)	(54.1)	(74.2)	(66.6)	**(410.8)**
Total UAL Change	**$ (17.4)**	**$ 56.9**	**$ 213.3**	**$ (34.4)**	**$ 75.4**	**$ 182.3**	**$ 101.3**	**$ (152.2)**	**$ (76.4)**	**$ 14.0**	**$ 362.7**

Dollar amounts in millions

Table I-4 below breaks down the changes in UAL during the last year by source. In total, the UAL increased approximately $14 million. The primary increase was due to higher-than-expected salary increases for both Police and Fire members. This increase was mostly offset by contributions greater than the normal cost and interest on the UAL. The total change in the UAL is about 0.2 percent of the Actuarial Liability.

Table I-4

Sources of FYE 2023 Change in UAL

		Amount	% of AL
Unfunded Actuarial Liability, June 30, 2023	$	1,168,812	19.8%
Unfunded Actuarial Liability, June 30, 2022		1,154,794	19.5%
Change in Unfunded Actuarial Liability	**$**	**14,018**	**0.2%**
Sources of Changes			
Plan Changes	$	0	0.0%
Assumption changes		5,679	0.1%
Normal Cost and Interest on UAL less Contributions		(66,561)	-1.1%
Investment experience		5,280	0.1%
Liability experience			
Salary experience	$	71,972	1.2%
Retirement experience		1,986	0.0%
Disability experience		(6,235)	-0.1%
Other experience		1,897	0.0%
Total Liability Experience	$	69,620	1.2%
Total Changes	**$**	**14,018**	**0.2%**

Dollar amounts in thousands

SECTION I – BOARD SUMMARY

Contribution Amounts and Rates

As shown in the upper left corner of the dashboard (page 1), the total City contribution rate increased from 76.5% to 77.5% of payroll. In the dashboard (page 1), the light purple bars are the Member contributions, and the dark purple bars are the City's portion of the normal cost, representing the expected cost of benefits attributable to the next year of service. The green bars represent the City's portion of administrative expenses. The dark gold bars represent the interest on the UAL based on the Market Value of Assets, and contributions up to this level are referred to as the tread water rate. Contributions equal to the tread water rate are needed to prevent the UAL from growing as a dollar amount if all assumptions are met. The light gold bars represent the contributions above the tread water rate and the percentage of payroll contributed that directly reduces the principal of the UAL. The favorable investment returns for FYE 2023 decreased the interest on the UAL based on the Market Value of Assets, increasing the portion of the contribution that goes directly to reducing the UAL principal.

Table I-5 and the chart on the next page summarize the contribution rates and contribution amounts by Tier for the fiscal years ending in 2024 and 2025. Tier 1 City contributions increased from 2024 to 2025, while Tier 2 City contributions also increased on a dollar basis due to the increase in active membership and payroll but decreased on a percent of pay basis.

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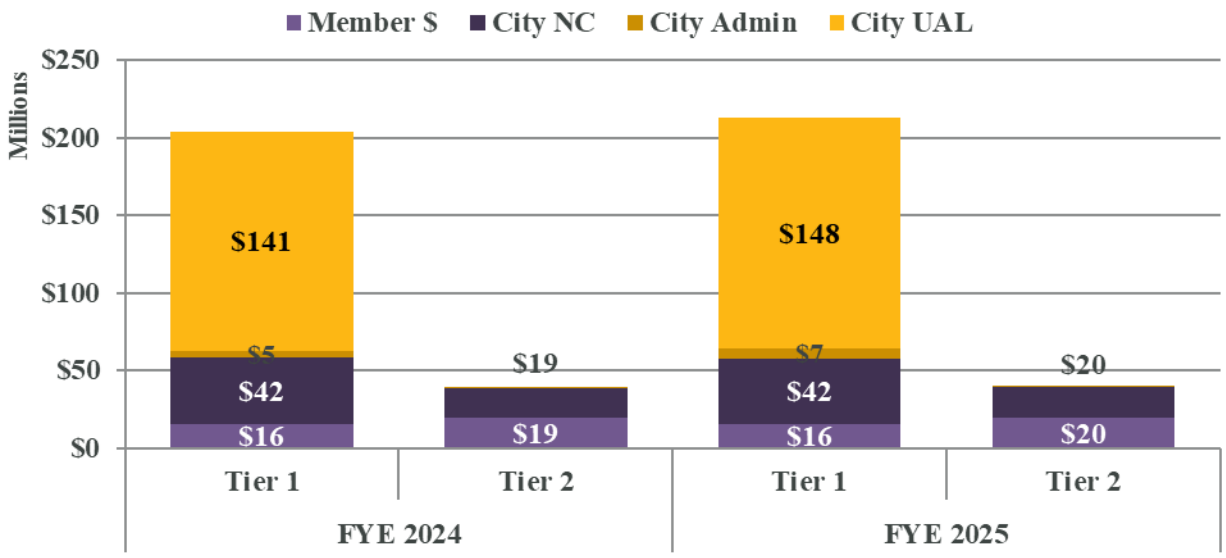
Table I-5

Contribution Rates and Amounts (Throughout the Year)	FYE 2024	FYE 2025	Change
Member Rates			
Tier 1			
Police	11.09%	10.63%	-0.46%
Fire	12.00%	11.82%	-0.18%
Tier 2			
Police	14.35%	13.65%	-0.70%
Fire	15.11%	14.90%	-0.21%
Aggregate	**13.01%**	**12.61%**	**-0.40%**
City Contributions			
Tier 1 UAL	$ 141,191	$ 148,110	$ 6,919
Tier 1 Admin Expenses	$ 4,836	$ 7,026	$ 2,190
Tier 1 Normal Cost	$ 42,212	$ 42,130	$ (82)
	30.53%	30.37%	-0.16%
Tier 2 Contribution	$ 19,359	$ 19,809	$ 450
	14.55%	14.01%	-0.54%
Aggregate	**$ 207,598**	**$ 217,075**	**$ 9,477**
	76.52%	**77.51%**	**0.99%**

Dollar amounts in thousands



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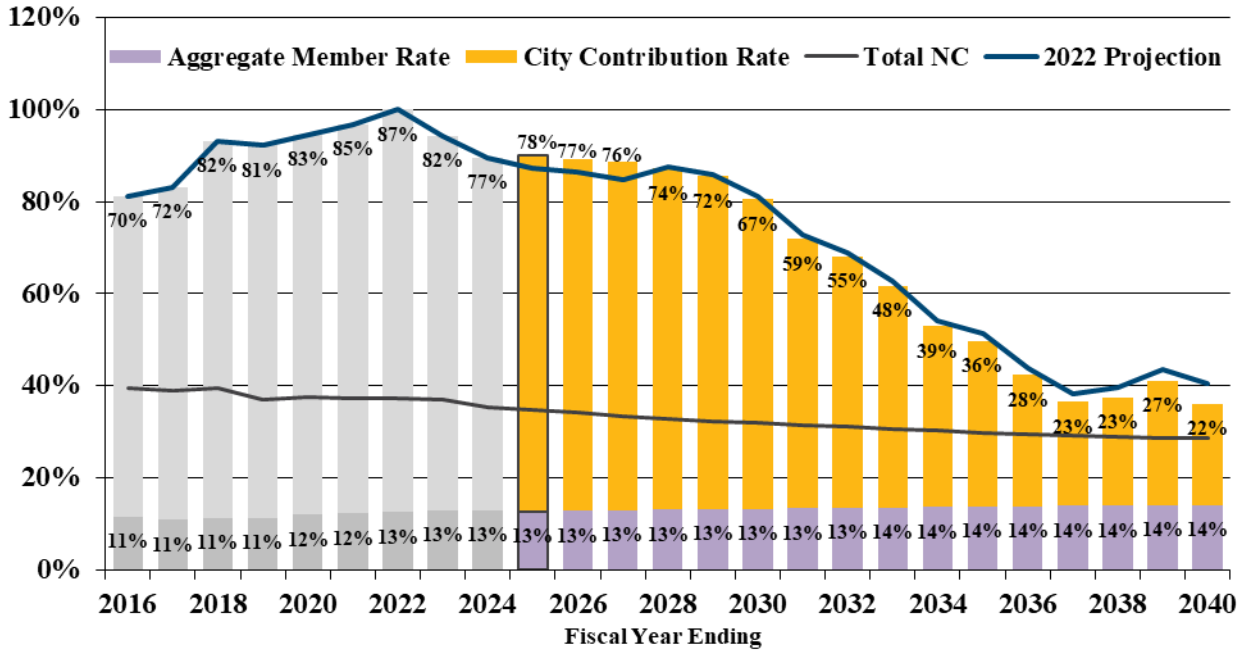
The chart below shows historical and projected aggregate contribution rates compared to those projected in the prior valuation. The purple bars are weighted-average member contribution rates for Police and Fire for both Tier 1 and Tier 2. The gold bars are weighted-average City contribution rates for Police and Fire for both Tier 1 and Tier 2. The gray bars represent historical amounts. The projected rates assume that all assumptions are met. The black line shows the weighted average normal cost rate, which is projected to decline as Tier 1 members are replaced by Tier 2 members. All contribution rates above the normal cost rate represent payments toward the UAL, both principal and interest. The blue line represents the projection from the prior valuation.

Historical and Projected Aggregate Contribution Rates



City contribution rates increased 17% of payroll from FYE 2016 to FYE 2022 but have now decreased almost 10% of payroll, from 87.4% for FYE 2022 to 77.5% for FYE 2025 due primarily to the exceptional investment returns in 2021. Future City contribution rates are expected to gradually decline for a few years and decline substantially thereafter as layers of the UAL are fully amortized.

While there will be downward pressure on City contribution rates in about five years, there is a wide range of potential future contribution rates due to the volatility of investment returns, as shown at the bottom of the dashboard (page 1). As a result, the expected range of contribution rates from the 5th to the 95th percentile in FYE 2030 is from 19% of payroll to 114% of payroll. Such a wide range is due to the combination of the size of the assets compared to payroll and the standard deviation of the investment portfolio. For these projections, we used a 6.625% expected return and 13.2% standard deviation (based on Meketa's capital market assumptions).

SECTION I – BOARD SUMMARY

Section VI of this report provides additional detail on the contribution rates and the amortization schedules separately by Tier and for Police and Fire.

SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

Actuarial valuations are based on a set of assumptions about future economic and demographic experience. These assumptions represent a reasonable estimate of future experience, but actual future experience will undoubtedly be different and may be significantly different. This section of the report is intended to identify the primary risks to the Plan, provide some background information about those risks, and provide an assessment of those risks.

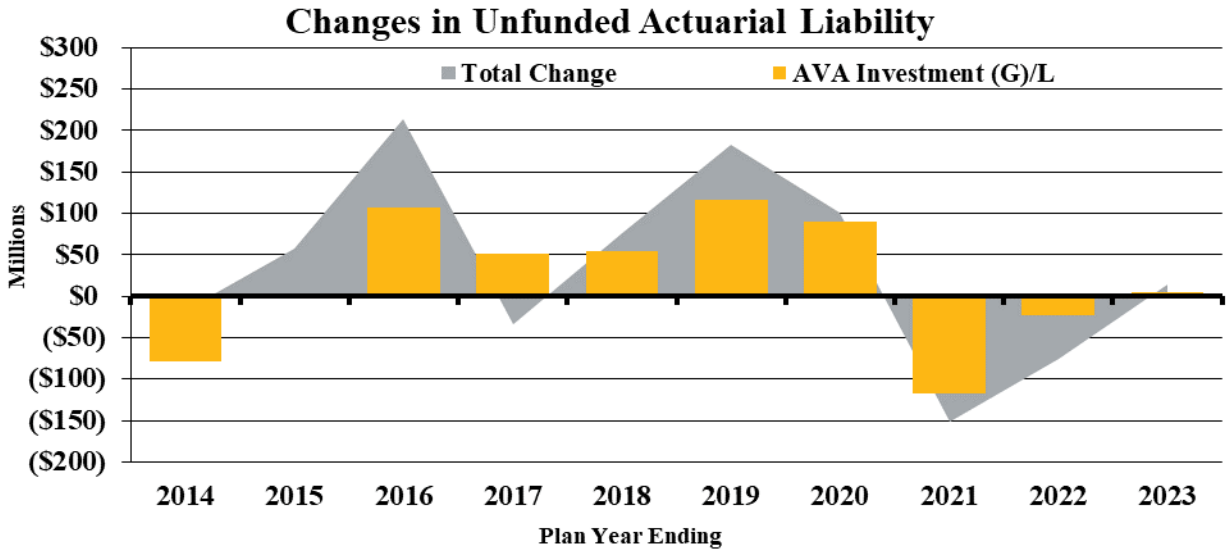
Identification of Risks

As we have discussed with the Board, the fundamental risk to the Plan is that the contributions needed to pay the benefits become unaffordable. While there are a number of factors that could lead to contribution amounts becoming unaffordable, we believe the primary risks for this Plan are:

- Investment risk,
- Interest rate risk, and
- Assumption change risk.

Other risks that we have not identified may also turn out to be important.

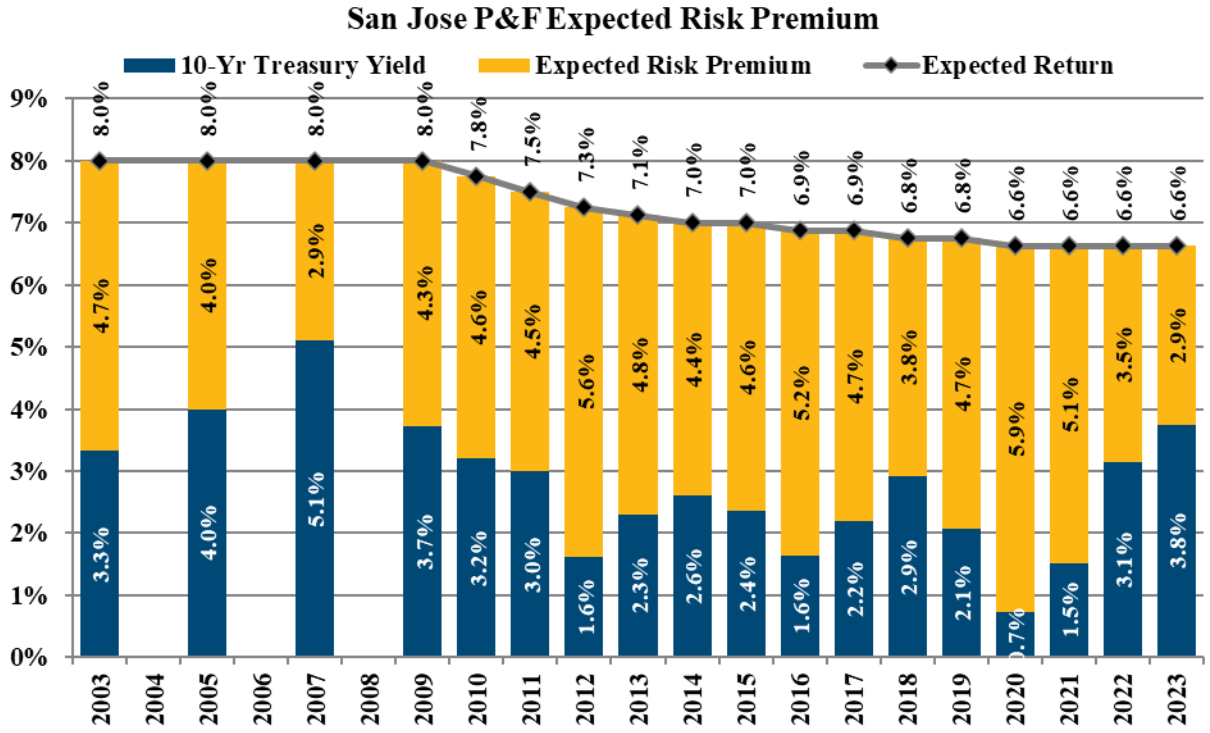
Investment Risk is the potential for investment returns to be different than expected. Lower investment returns than anticipated will increase the Unfunded Actuarial Liability necessitating higher contributions in the future unless there are other gains that offset these investment losses. The potential volatility of future investment returns is determined by the Plan's asset allocation and the affordability of the investment risk is determined by the amount of assets invested relative to the size of the Plan Sponsor.



SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

The chart on the previous page shows the impact of investment gains and losses on the smoothed Actuarial Value of Assets over the last 10 years compared to the Plan's total change in UAL. Investment losses have been a significant contributor to the growth in the UAL.

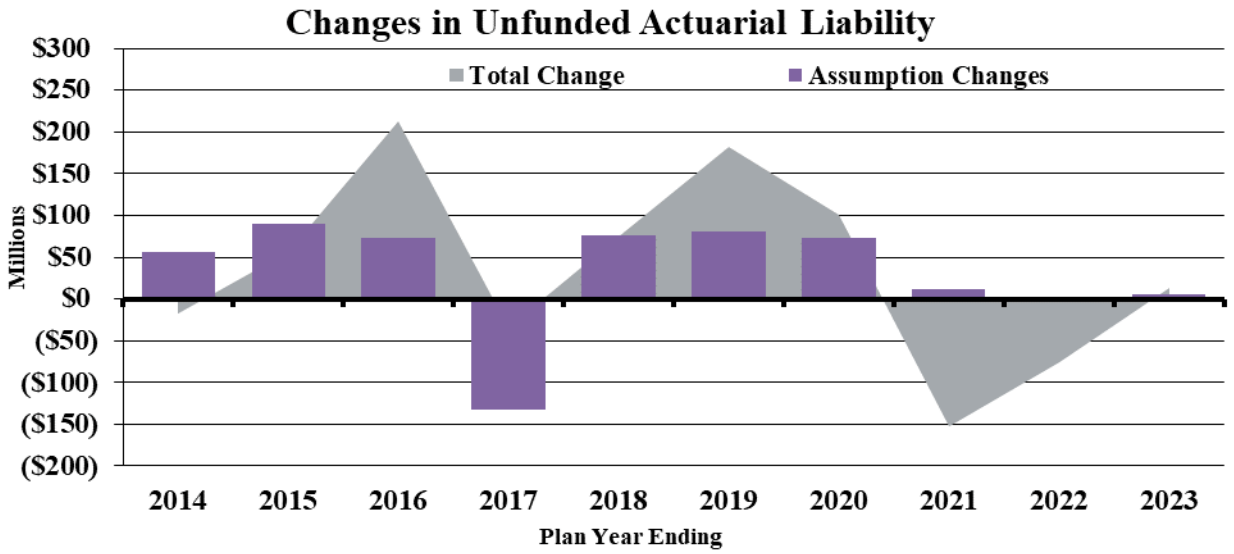
Interest rate risk is the potential for interest rates to be different than expected. For public plans, short-term fluctuations in interest rates have little or no effect as the Plan's liability is usually measured based on the expected return on assets. Longer-term trends in interest rates; however, can have a powerful effect. The chart below shows the yield on a 10-year Treasury security compared to the Plan's assumed rate of return. The difference is a simple measure of the amount of investment risk taken. As interest rates declined, plans faced a choice: maintain the same level of risk and reduce the expected rate of return; maintain the same expected rate of return and take on more investment risk; or some combination of the two strategies. If the recent rise in interest rates persists, it may ease some of the pressure on plans to reduce discount rates and require less risk to achieve expected returns.



Assumption change risk is the potential for the environment to change such that future valuation assumptions are different than the current assumptions. For example, declines in interest rates over the last three decades resulted in higher investment returns for fixed-income investments, but lower expected future returns necessitating either a change in investment policy, a reduction in discount rate, or some combination of the two. Assumption change risk is an extension of the other risks identified, but rather than capturing the risk as it is experienced, it captures the cost of recognizing a change in environment when the current assumption is no longer reasonable.

SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

As shown in the chart below, there have been consistent changes in assumptions increasing the UAL. Most of these changes are due to reducing the discount rate from 7.125% to 6.625% over this period, but it also includes changes to demographic assumptions such as mortality and retirement rates. The reductions in the discount rate largely reflect the impact of declining interest rates on future expected investment returns.



Plan Maturity Measures

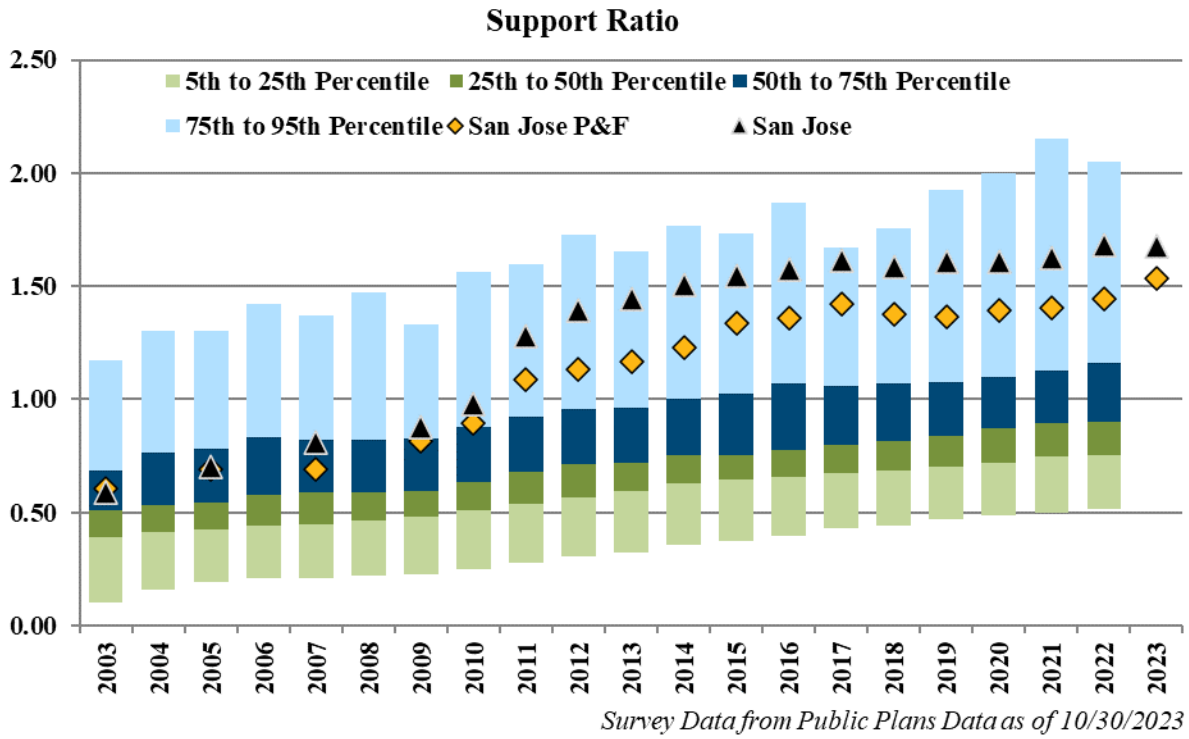
The future financial condition of a mature pension plan is more sensitive to each of the risks identified above than a less mature plan. Before assessing each of these risks, it is important to understand the maturity of the Plan compared to other plans and how the maturity has changed over time.

Plan maturity can be measured in a variety of ways, but all of the measures point to one basic dynamic – the larger the plan is compared to the contribution or revenue base that supports it; the more sensitive the plan will be to risk. The measures below have been selected as the most important in understanding the primary risks identified for the Plan.

Support Ratio (Inactives per Active)

One simple measure of plan maturity is the ratio of the number of inactive members (those receiving benefits or entitled to a deferred benefit) to the number of active members. The revenue base supporting the plan is usually proportional to the number of active members, so a relatively high number of inactives compared to actives indicates a larger plan relative to its revenue base as well.

SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK



The chart above shows the distribution from the 5th to 95th percentile of support ratios for the plans in the Public Plans Database. The gold diamond shows how San José Police and Fire compares, and the black triangle shows how the combined Federated and Police and Fire plans compare. Through 2010, the Plan was in the middle of the distribution even as the support ratio increased. However, after the Great Recession, the Plan's support ratio increased dramatically and is now in the upper quartile of plans in the database.

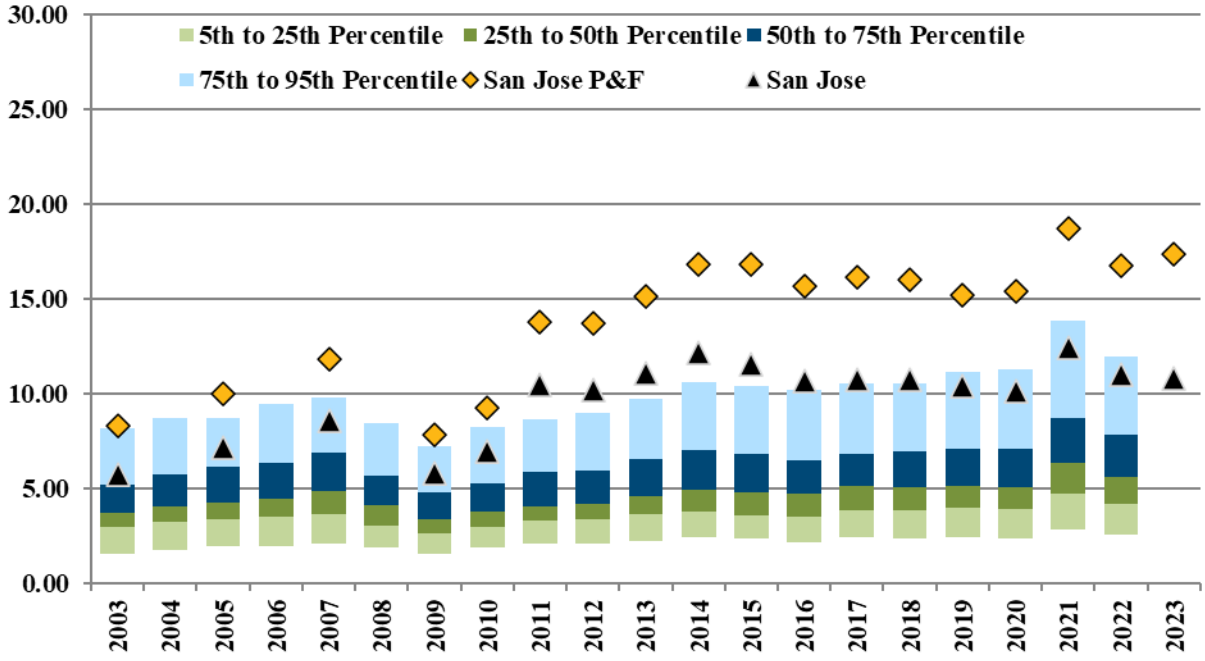
Leverage Ratios

Leverage or volatility ratios measure the size of the plan compared to its revenue base more directly. An asset leverage ratio of 5.0, for example, means that if the Plan experiences a 10% loss on assets compared to the expected return, the loss would be equivalent to 50% of payroll. The same investment loss for a plan with an asset leverage ratio of 10.0 would be equivalent to 100% of payroll.

As the Plan becomes better funded, the asset leverage ratio will increase, and if it was 100% funded, the leverage ratio would equal the Actuarial Liability (AL) leverage ratio. The AL leverage ratio also indicates how sensitive the Plan is to experience gains and losses or assumption changes. For example, an assumption change that increases the AL by 5% would add a liability equivalent to about 50% of payroll if the AL leverage ratio is 10.0.

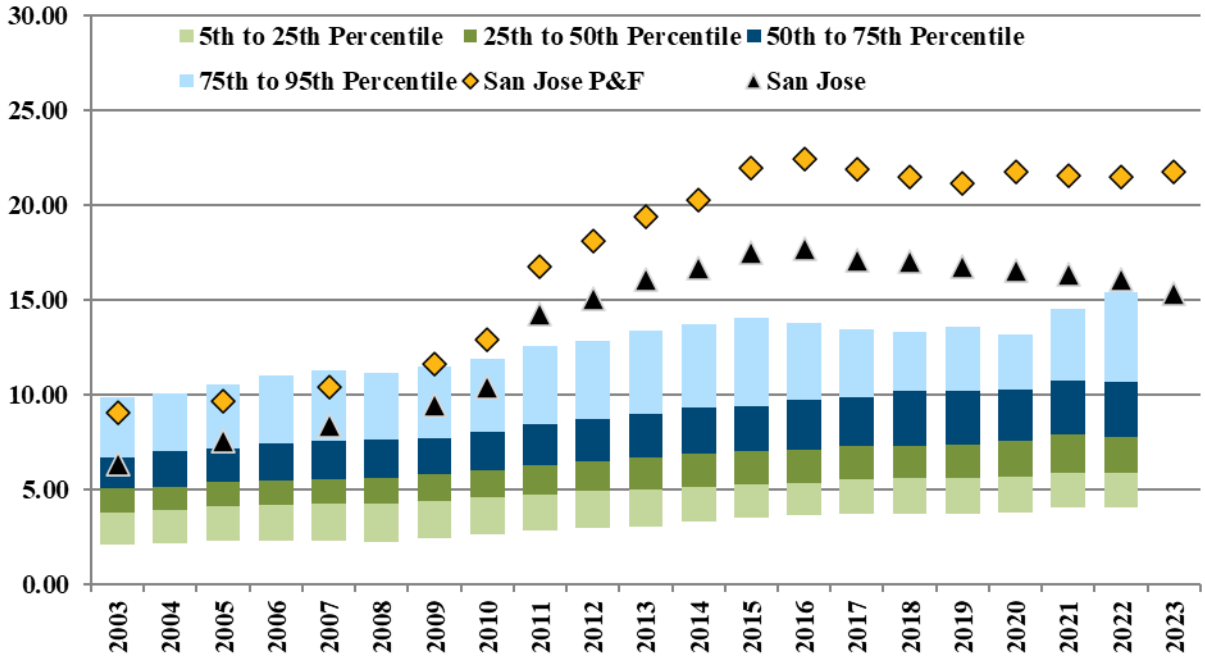
SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

Asset Leverage Ratio



Survey Data from Public Plans Data as of 10/30/2023

Liability Leverage Ratio



Survey Data from Public Plans Data as of 10/30/2023

SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

The charts on the previous page show the distribution from the 5th to 95th percentile of the Market Value of Assets and Actuarial Liability leverage ratios for the plans in the Public Plans Database. The gold diamond shows how San José Police and Fire compares, and the black triangle shows how the combined Federated and Police and Fire plans compare. As we have discussed with the Board for several years and as is shown in the charts on the previous page, the leverage ratios for the Police and Fire Plan are much higher than most plans. As a Police and Fire plan, it is not unusual to be at the high end of the distribution, but even when combined with Federated, the leverage ratios are still very high, indicating that San José is much more sensitive to risk than most plans. This sensitivity can work to San Jose's advantage or disadvantage depending on whether risks ultimately have a positive or negative impact.

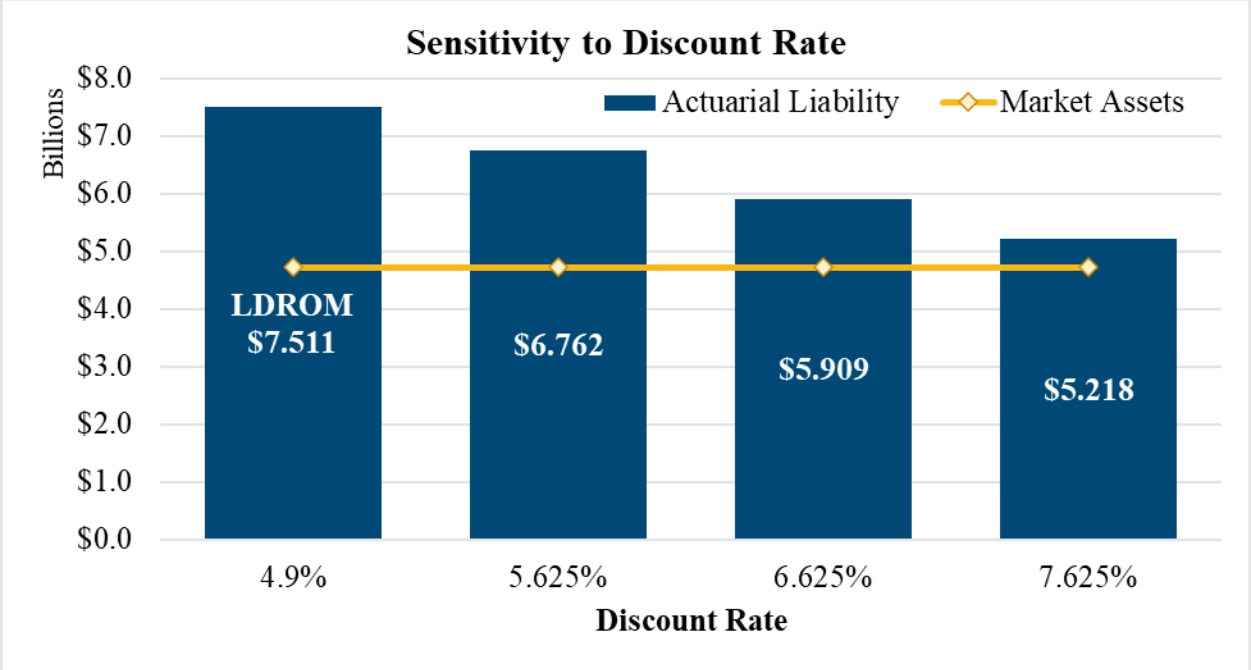
SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

Assessing Costs and Risks

The fundamental risk to the Plan is that the contributions needed to fund the benefits become unaffordable. Assessing this risk, however, is complex because there is no bright line of what is unaffordable and the contribution amounts themselves are affected not just by the experience of the Plan, but also by the interaction of that experience and decisions by the Board related to assumptions, asset smoothing methods, and amortization periods.

Sensitivity to Discount Rate

The chart below compares the Market Value of Assets (gold line) to the Actuarial Liability (blue bar) using discount rates equal to the current expected rate of return and 100 basis points above and below the expected rate of return. In addition, the chart shows the low-default-risk obligation measure (LDROM), which is the Actuarial Liability using a discount rate derived from low-default-risk fixed income securities that approximately match the benefit payments of the plan.



The Plan invests in a diversified portfolio with the objective of maximizing investment returns at a reasonable level of risk. If investments return 6.625% annually, the Plan would need approximately $5,909 million in assets today to pay all benefits attributable to past service compared to current assets of $4,721 million. If investment returns are only 5.625%, the Plan would need approximately $6,762 million in assets today, and if investment returns are 7.625%, the Plan would only need $5,218 million in assets. The lowest risk portfolio for a pension plan with fixed cash flows would be composed entirely of low-default-risk fixed income securities whose cash flows match the benefit cash flows of the Plan. As of June 30, 2023, using the FTSE Pension Liability Index, we estimate that such a portfolio would have an expected return of 4.9%, and the Plan would need $7,511 million to pay all benefits attributed to past service. This

amount is the LDROM. The $1,602 million difference between the LDROM and the Actuarial Liability at 6.625% represents the expected savings from bearing the risk of investing in the Plan's diversified portfolio. Alternatively, it also represents the cost of eliminating the investment risk.

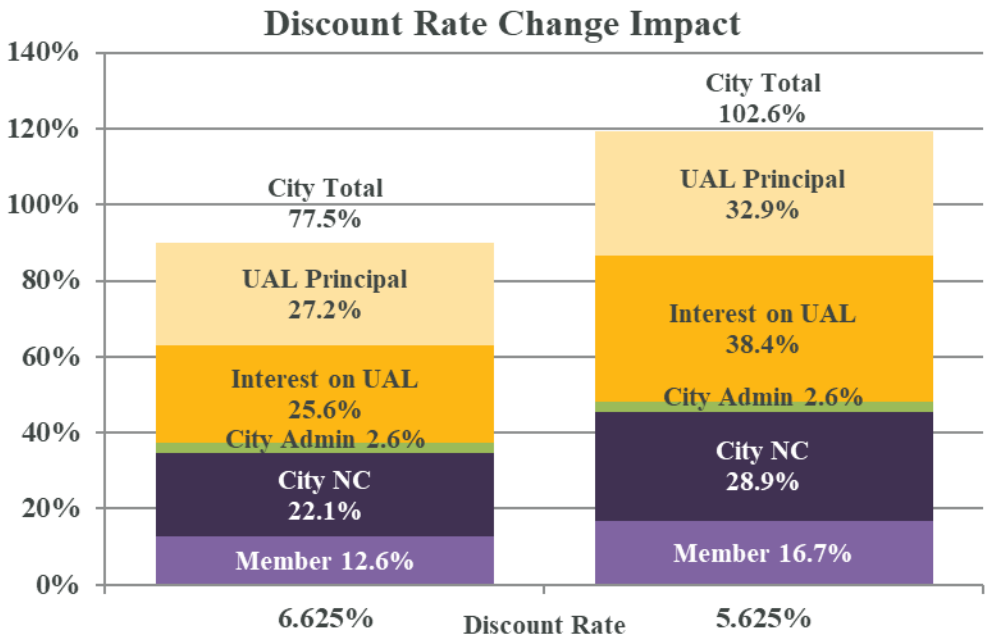
Because the Plan invests in a diversified portfolio and not the LDROM portfolio, the reported funded status is higher, and expected employer contributions are lower. Benefit security for members of the Plan depends on a combination of the Plan's assets, the investment returns generated on those assets, and the ability of San José to make any needed future contributions. An LDROM portfolio would generate more predictable but lower expected investment returns, potentially changing the level of reliance on future San José contributions to secure benefits.

Point in Time Assessments

To assess the risks of the Plan independent of the contribution strategy, there are two measures on which to focus: normal cost and interest cost. The normal cost represents the expected cost of the benefits attributable to the next year of service. The interest cost represents the interest on the UAL calculated using the discount rate. Combined, the normal cost plus the interest cost are referred to as the Tread Water Cost. If actual contributions are less than the Tread Water Cost, the UAL would be expected to grow; and, if actual contributions are greater than the Tread Water Cost, the UAL would be expected to shrink.

The stacked bars in the chart on the following page show the aggregate member and City contribution rates at the current discount rate compared to a discount rate 100 basis points lower. The light purple bars are the member contribution rates, and the dark purple bars are the City's normal cost rate, representing the expected cost of benefits attributable to the next year of service. The dark gold bars are the interest on the UAL, and the light gold bars are the contributions to reduce the principal of the UAL.

SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK



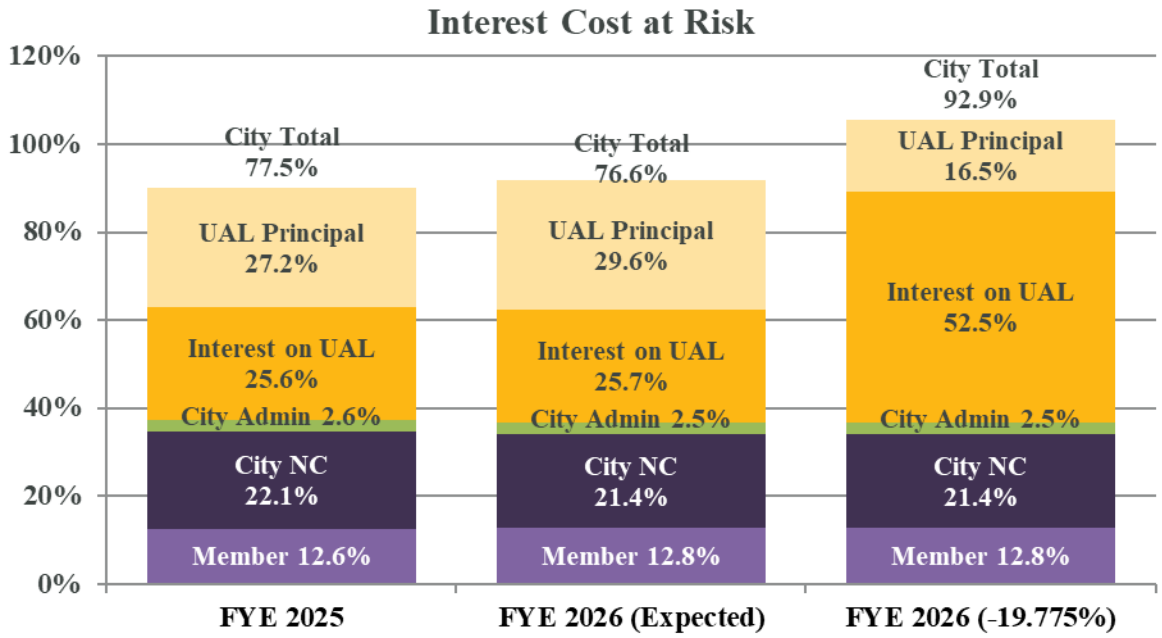
Decreasing the discount rate by 100 basis points would increase member rates about 4% of payroll and the City's normal cost rate by almost 7% of payroll. The interest on the UAL would increase by about 13% of payroll. Using the current amortization methods, the City's total contribution rate would increase by about 25% of payroll to about 103% of pay.

The declines in discount rates over the last decade or more have been largely driven by declines in interest rates that affect expectations of future investment returns. If the recent increases in interest rates persist, the pressure to continue to reduce the discount rate may ease. But if the increases in interest rates trigger a recession, discount rates may need to be reduced further and the normal cost and interest cost will increase.

Actual investment returns do not affect the normal cost, but they directly affect the UAL, and the interest on the UAL. One simple measure of the risk inherent in the investment policy is the Interest Cost at Risk (ICaR), which is the amount that the interest on the UAL would increase if the investment returns for one year were two standard deviations below the expected return. Based on the capital market assumptions of Meketa, the standard deviation for the current portfolio is 13.2%, making the investment return used to determine ICaR -19.775% (6.625% – 2 x 13.2%).

SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

The chart below shows the contribution rates for FYE 2025, determined in this valuation report in the far-left bar graph and the expected FYE 2026 contribution rates based on a 6.625% investment rate of return for FYE 2024, in the middle of the chart. The FYE 2026 bar graph on the right shows the impact of a -19.775% return for FYE 2024. The interest on the UAL would increase by 29% of pay. Using a 5-year asset smoothing with a 20% corridor and a 15-year amortization the total contribution rate would increase by 16.3% of pay. The City contribution rate for FYE 2026 in this scenario would be 92.9% of pay and expected to increase in future years.



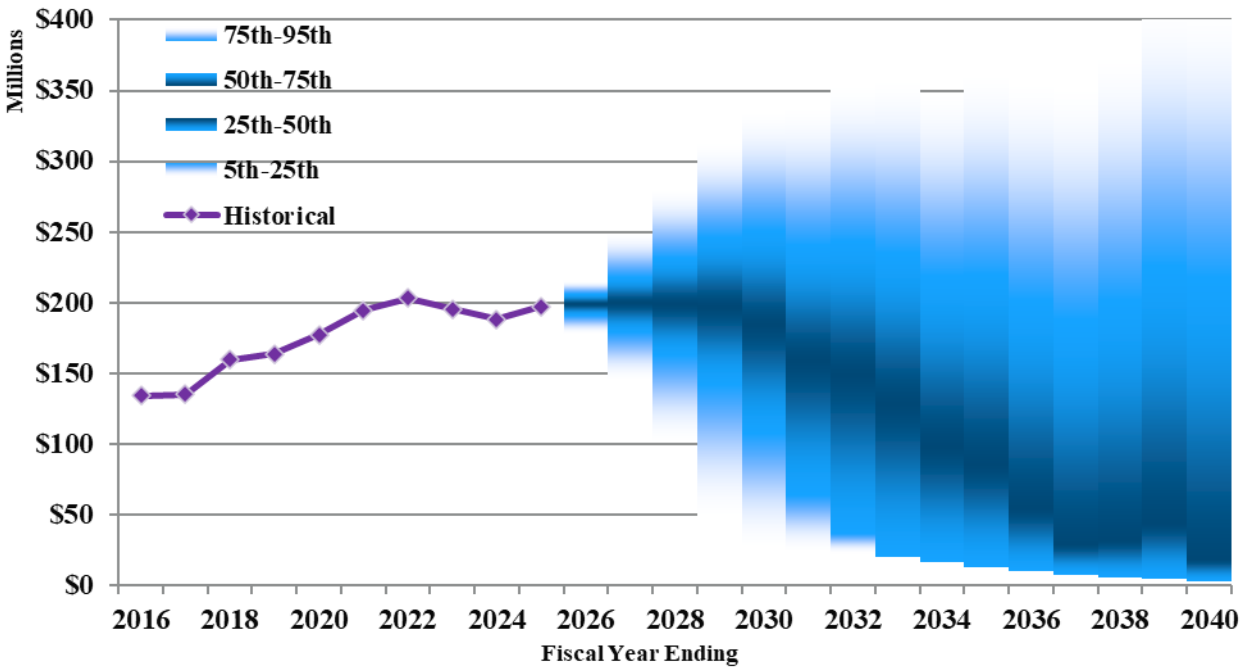
Stochastic Projections

If experience has taught us anything, it is that there is a significant level of uncertainty in projections of the future. The largest source of uncertainty is the projection of investment returns. To better understand the potential impact of investment returns on the Plan, we have included some stochastic projections in the dashboard and in this section of the report. The stochastic projections are based on a 6.625% geometric return and a 13.2% standard deviation (based on Meketa's capital market assumptions). Each projection contains 10,000 trials.

SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

The following chart shows the historical and stochastically projected City contribution amounts for Tier 1. The purple line represents the amounts paid historically or the amounts already determined by an actuarial valuation. The projected amounts are shown as bars that are dark blue at the median of the 10,000 trials and fade to white as the range extends to the 5th and 95th percentiles of the 10,000 trials. This range is intended to convey the degree of uncertainty in the projections based on future investment returns.

Historical and Stochastically Projected Tier 1 City Contribution Amounts

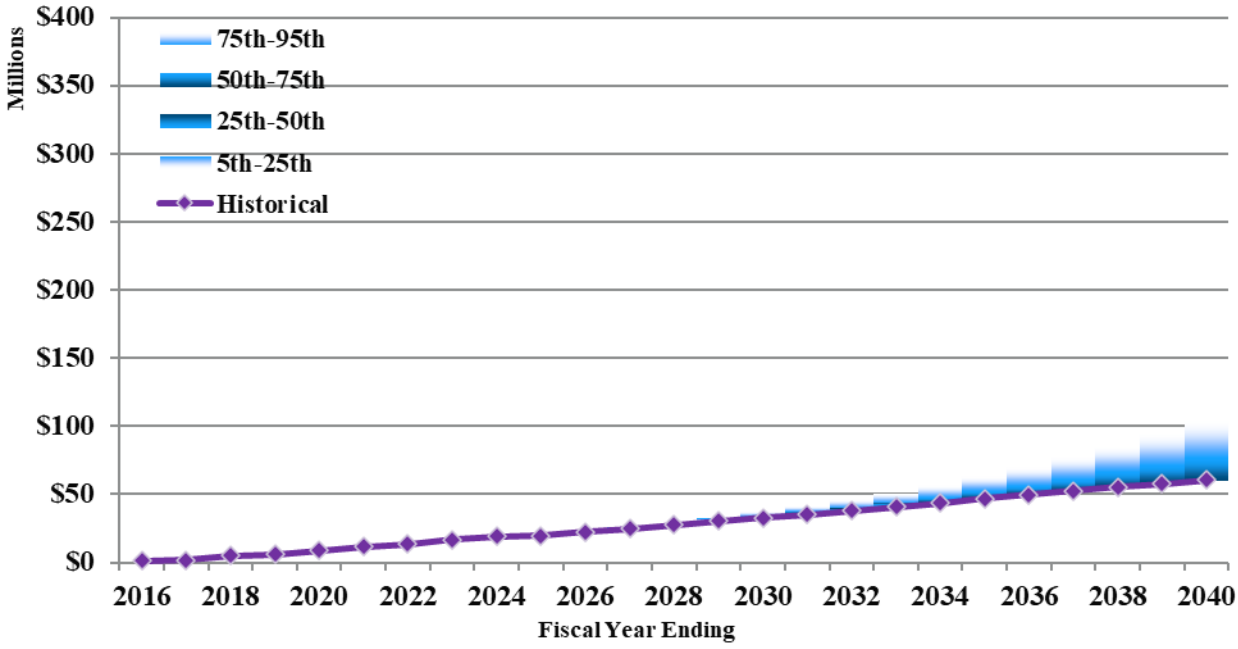


The chart shows a level to slightly increasing trend for the next few years followed by a strong downward trend. However, there is a very wide range of potential City contribution amounts depending on actual investment returns. The range between the 5th and 95th percentile for FYE 2030 (based on the 2028 actuarial valuation) is from a contribution of $27 million to a contribution of $335 million. This range is largely driven by the standard deviation of the investment portfolio.

SECTION II – IDENTIFICATION AND ASSESSMENT OF RISK

The chart below shows the historical and stochastically projected City contribution amounts for Tier 2. The range of contribution amounts is much narrower for Tier 2 than Tier 1. Tier 2 is projected to grow quickly, and assets are relatively small right now. As a result, actual investment returns have a limited impact on future contribution amounts while the rate of growth will have a larger impact.

Historical and Stochastically Projected Tier 2 City Contribution Amounts



More Detailed Assessment

A more detailed assessment is always valuable to enhance the understanding of the risks identified above. While more detail would provide some additional value, we don't believe it is necessary to perform an in-depth analysis every year. Consequently, we recommend the Board review the less detailed analysis provided above annually and consider a more detailed analysis periodically and when there is a substantial change in the financial position or maturity of the plan.

SECTION III – CERTIFICATION

The purpose of this report is to present the June 30, 2023 Actuarial Valuation of the City of San José Police and Fire Department Retirement Plan ("Plan"). This report is for the use of the Plan and the City of San José.

In preparing our report, 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.

The economic and demographic assumptions used in this report were adopted by the Board of Administration with our input at the November 2, 2023, Board meeting based on recommendations from our experience study covering plan experience for the period ending June 30, 2023. We believe these assumptions are reasonable for the purpose of the valuation.

The funding ratios in this report are for the purpose of establishing contribution rates. These measures are not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations.

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.

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.

SECTION III – CERTIFICATION

This report 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 report was prepared for the Plan for the purposes described herein. This report 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

SECTION IV – ASSETS

The Plan uses and discloses two different asset measurements which are presented in this section of the report: Market Value and Actuarial Value of Assets. The Market Value of Assets represents the value of the assets if they were liquidated on the valuation date. The Actuarial Value of Assets is a value that smooths annual investment returns over five years to reduce the impact of short-term investment volatility on contribution rates. The Market Value of Assets is used primarily for reporting and disclosure, and the Actuarial Value of Assets is used primarily to determine contribution rates.

This section shows the changes in the Market Value of Assets and develops the Actuarial Value of Assets.

Statement of Changes in the Market Value of Assets

Table IV-1 shows the changes in the Market Value of Assets by tier for the current fiscal year and in total for the prior fiscal year.

Table IV-1

Change in Market Value of Assets

	FYE 2022	Fiscal Year Ending 2023			
	Total	Tier 1	Tier 2 Fire	Tier 2 Police	Total
Beginning Market Value	$ 4,726,642	$ 4,304,874	$ 26,963	$ 78,033	$ 4,409,869
Contributions					
Member	31,660	17,534	4,004	11,123	32,661
City	212,046	186,623	4,004	11,123	201,750
Total	$ 243,706	$ 204,157	$ 8,008	$ 22,246	$ 234,411
Net Investment Earnings	(294,550)	350,026	2,539	7,297	359,863
Benefit Payments	(259,877)	(275,506)	0	(317)	(275,823)
Administrative Expenses	(6,051)	(6,666)	(39)	(126)	(6,832)
Ending Market Value	**$ 4,409,869**	**$ 4,576,885**	**$ 37,471**	**$ 107,132**	**$ 4,721,488**
Estimated Rate of Return	-6.1%	8.0%	8.2%	8.2%	8.0%

Dollar amounts in thousands

The net investment earnings for the year ended June 30, 2023, represents approximately an 8.0% return on the Market Value of Assets compared to an assumed return of 6.625%. For the year ended June 30, 2022, the net investment return was approximately -6.1% (6.625% was assumed).

SECTION IV – ASSETS

Actuarial Value of Assets

To determine on-going contribution amounts, most pension funds use an Actuarial Value of Assets that smooths year-to-year market value returns to reduce the volatility of contribution rates.

The Actuarial Value of Assets is calculated by recognizing the deviation of actual investment returns compared to the expected return (6.625% for FYE 2021, 2022, and 2023, and 6.75% for FYE's 2019 and 2020) over a five-year period. The dollar amount of the expected return on the Market Value of Assets is determined using the actual contributions, benefit payments, and administrative expenses during the year. Any difference between the expected return and the actual net investment earnings is considered a gain or loss. Table IV-2 on the next page shows the calculation of the Actuarial Value of Assets separately for each tier.

Effective for this valuation, based on our recommendation to smooth future contribution rates, the Board elected to reset the asset smoothing method by combining the remaining deferred gains and losses in the 2022 valuation from all prior years with the investment gain from 2023 and recognize the sum over the next five years.

Table IV-2 on the following page shows for FYE 2023 the actual earnings, the expected earnings, and the investment gain for the year. The prior remaining deferrals (net losses) of $85.8 million are added to the $60 million gain for FYE 2023, for a net loss of $22.8 million. Only 20 percent of this loss is recognized in the Actuarial Value of Assets for the June 30, 2023 actuarial valuation; and, 80 percent, or $18.2 million, is deferred and will be recognized in future years.

SECTION IV – ASSETS

Table IV-2

Development of Actuarial Value of Assets

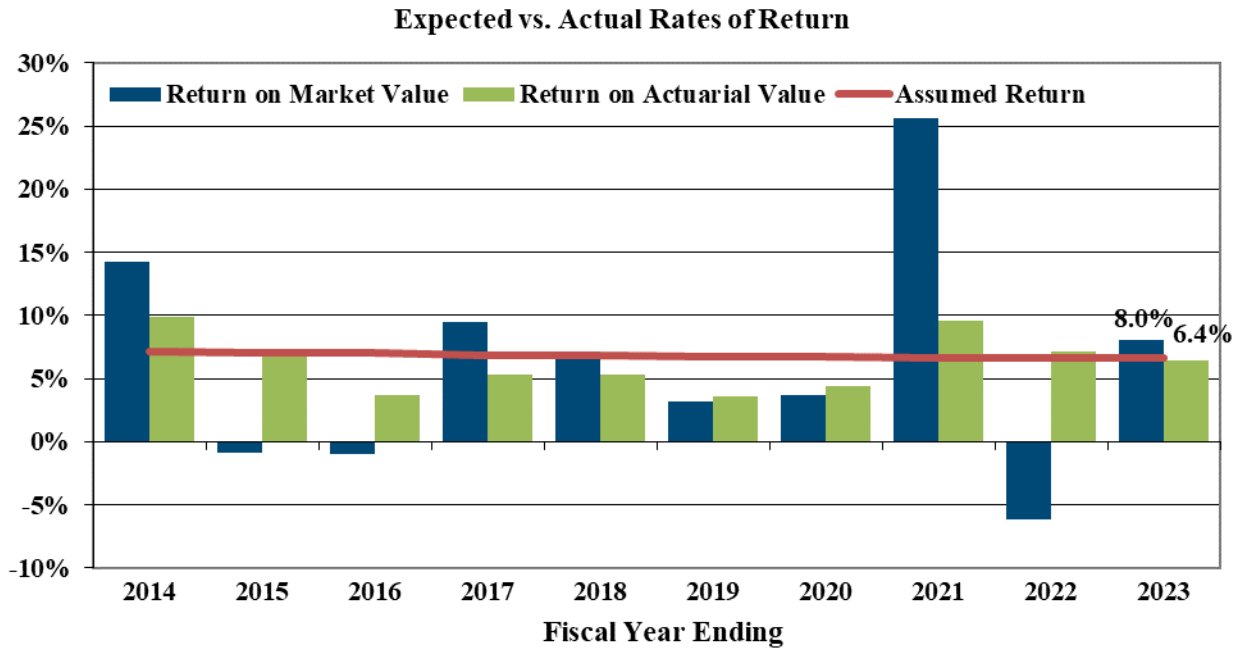
	June 30, 2023			
	Tier 1	Tier 2 Fire	Tier 2 Police	Total
Market Assets (MVA)	$ 4,576,885	$ 37,471	$ 107,132	$ 4,721,488
FYE 2023				
Actual Earnings	$ 350,026	$ 2,539	$ 7,297	$ 359,863
Expected Earnings	288,936	2,046	5,880	296,862
Investment Gain/(Loss)	$ 61,090	$ 493	$ 1,417	$ 63,000
Prior Remaining Deferrals	(82,703)	(795)	(2,319)	(85,818)
Total Investment Gain/(Loss)	$ (21,613)	$ (302)	$ (902)	$ (22,817)
Deferred (80%)	(17,291)	(241)	(722)	(18,254)
Preliminary Actuarial Value of Assets	$ 4,594,176	$ 37,712	$ 107,854	$ 4,739,742
Minimum (80% of MVA)	3,661,508	29,977	85,705	3,777,190
Maximum (120% of MVA)	5,492,262	44,965	128,558	5,665,785
Actuarial Value of Assets	**$ 4,594,176**	**$ 37,712**	**$ 107,854**	**$ 4,739,742**
Ratio of Actuarial to Market	100.4%	100.6%	100.7%	100.4%
Estimated Rate of Return	6.4%	6.3%	6.2%	6.4%

Dollar amounts in thousands

Based on the smoothed Actuarial Value of Assets, the return for the year ending June 30, 2023 was approximately 6.4%, compared to the assumed return of 6.625%. The estimated rate of return varies by tier, reflecting the different cash flows for each tier and the different levels of assets for each tier in each of the last four years.

SECTION IV – ASSETS

The chart below shows the historical rates of return on both the Market and Actuarial Values of Assets compared to the assumed rates of return (the red line). Because of the 5-year smoothing, the return on the actuarial value is less volatile than the return on the market value. While the return on the market value exceeded the assumed return in 5 of the 10 years, the return on the Actuarial Value of Assets only exceeded the assumed return in 4 of the 10 years.



SECTION V – MEASURES OF LIABILITY

This section presents detailed information on liability measures for the Plan for funding purposes, including:

- Present Value of Future Benefits,
- Normal cost
- Actuarial Liability, and
- Analysis of changes in Unfunded Actuarial Liability during the year.

Present Value of Future Benefits

The present value of future benefits represents the amount of money today that is expected to be needed to pay all benefits both earned as of the valuation date and expected to be earned in the future by current plan members under the current plan provisions if all assumptions are met. Table V-1 below shows the present value of future benefits as of June 30, 2022 and June 30, 2023, separately by Tier for Police and Fire. Police Tier 2 members entered the Plan beginning August 4, 2013. Fire Tier 2 members entered the Plan beginning January 2, 2015. The assumption changes this year increased the present value of future benefits by approximately $76 million.

Table V-1

Present Value of Future Benefits

	Fire			Police		
	6/30/2022	6/30/2023	% Change	6/30/2022	6/30/2023	% Change
Tier 1						
Actives	$ 846,969	$ 842,753	-0.5%	$ 996,699	$ 965,078	-3.2%
Deferred Vested	13,247	12,572	-5.1%	82,739	84,092	1.6%
In Pay Status						
Service Retirees	$ 683,113	$ 770,747	12.8%	$ 1,809,999	$ 1,982,176	9.5%
Beneficiaries	102,162	112,047	9.7%	125,878	129,969	3.2%
Disabled Retirees	621,357	611,509	-1.6%	645,013	644,270	-0.1%
Total	$ 1,406,632	$ 1,494,303	6.2%	$ 2,580,890	$ 2,756,415	6.8%
Tier 1 Total	**$ 2,266,848**	**$ 2,349,628**	**3.7%**	**$ 3,660,328**	**$ 3,805,585**	**4.0%**
Tier 2						
Actives	$ 137,871	$ 178,129	29.2%	$ 307,829	$ 424,456	37.9%
Deferred Vested	302	373	23.5%	1,888	3,288	74.2%
In Pay Status	0	0	N/A	0	0	N/A
Tier 2 Total	**$ 138,173**	**$ 178,502**	**29.2%**	**$ 309,717**	**$ 427,744**	**38.1%**
Plan Total	**$ 2,405,021**	**$ 2,528,130**	**5.1%**	**$ 3,970,045**	**$ 4,233,329**	**6.6%**

Dollar amounts in thousands

SECTION V – MEASURES OF LIABILITY

Normal Cost

Under the Entry Age Actuarial Cost Method, the present value of future benefits at plan entry for each individual is spread over the individual's expected working career under the Plan as a level percentage of the individual's expected pay. The normal cost of the Plan is the sum of the normal costs for each individual in the Plan. The normal cost represents the amount of money today that is expected to be needed to pay the benefits attributed to the next year of service if all assumptions are met. Table V-2 below shows the EA normal cost and total normal cost rates as of June 30, 2022 and June 30, 2023, separately by Tier for Police and Fire, as well as a breakdown of the normal cost rate between the Retirement and COLA funds. The assumption changes increased the Tier 1 Fire normal cost rate by 0.2% of pay, decreased the Tier 1 Police normal cost rate by 1.3% of pay, decreased the Tier 2 Fire normal cost rate by 0.3% of pay, and decreased the Tier 2 Police normal cost rate by 1.5% of pay.

Table V-2

Entry Age Normal Cost By Group

	Fire			Police		
	6/30/2022	6/30/2023	% Change	6/30/2022	6/30/2023	% Change
Tier 1						
Retirement	$ 16,924	$ 21,784	28.7%	$ 14,619	$ 19,888	36.0%
Termination	1,207	1,175	-2.6%	4,909	3,827	-22.0%
Death	281	281	-0.2%	272	277	1.9%
Disability	10,583	5,341	-49.5%	11,023	4,938	-55.2%
Reciprocity	162	156	-3.8%	770	705	-8.5%
Tier 1 Total	**$ 29,157**	**$ 28,736**	**-1.4%**	**$ 31,594**	**$ 29,635**	**-6.2%**
Expected Payroll	$ 67,570	$ 66,003	-2.3%	$ 78,042	$ 74,482	-4.6%
Normal Cost Rate	**43.15%**	**43.54%**	**0.39%**	**40.48%**	**39.79%**	**-0.69%**
Retirement	29.41%	29.61%	0.20%	27.84%	27.19%	-0.65%
COLA	13.74%	13.93%	0.19%	12.64%	12.60%	-0.04%
Tier 2						
Retirement	$ 3,073	$ 6,193	101.5%	$ 7,352	$ 14,372	95.5%
Termination	258	305	18.2%	3,813	3,357	-12.0%
Death	93	121	29.8%	235	288	22.4%
Disability	3,540	2,071	-41.5%	9,250	4,679	-49.4%
Tier 2 Total	**$ 6,964**	**$ 8,690**	**24.8%**	**$ 20,650**	**$ 22,695**	**9.9%**
Expected Payroll	$ 23,299	$ 29,174	25.2%	$ 72,200	$ 83,120	15.1%
Normal Cost Rate	**29.89%**	**29.79%**	**-0.10%**	**28.60%**	**27.30%**	**-1.30%**
Retirement	23.57%	23.52%	-0.05%	22.50%	21.52%	-0.98%
COLA	6.32%	6.27%	-0.05%	6.10%	5.78%	-0.32%

Dollar amounts in thousands

SECTION V – MEASURES OF LIABILITY

Actuarial Liability

The Actuarial Liability represents the amount of money today that is expected to be needed to pay for benefits attributed to service prior to the valuation date under the Entry Age method if all assumptions are met. It is the difference between the present value of future benefits and the present value of future normal costs. Table V-3 below shows the Actuarial Liability as of June 30, 2022 and June 30, 2023, separately by Tier for Police and Fire, as well as a breakdown of the Actuarial Liability between the Retirement and COLA funds. The assumption changes this year increased the Actuarial Liability by approximately $5.7 million for Tier 1 Police, and decreased the Actuarial Liability by $1.9 million for Tier 1 Fire, $1.5 million for Tier 2 Police, and $1.5 million for Tier 2 Fire.

Table V-3

Actuarial Liability

	Fire			Police		
	6/30/2022	6/30/2023	% Change	6/30/2022	6/30/2023	% Change
Tier 1						
Actives						
Retirement	$ 483,613	$ 602,884	24.7%	$ 674,014	$ 733,533	8.8%
Termination	4,964	5,026	1.2%	3,612	6,350	75.8%
Death	1,468	1,500	2.2%	1,578	1,588	0.6%
Disability	163,477	37,778	-76.9%	137,003	40,934	-70.1%
Total Actives	$ 653,522	$ 647,188	-1.0%	$ 816,207	$ 782,405	-4.1%
Deferred Vested	13,247	12,572	-5.1%	82,739	84,092	1.6%
In Pay Status	1,406,632	1,494,303	6.2%	2,580,890	2,756,415	6.8%
Tier 1 Total	**$ 2,073,401**	**$ 2,154,063**	**3.9%**	**$ 3,479,836**	**$ 3,622,912**	**4.1%**
Retirement	1,177,661	1,218,358	3.5%	1,939,103	2,003,331	3.3%
COLA	895,740	935,705	4.5%	1,540,733	1,619,581	5.1%
Tier 2						
Actives						
Retirement	$ 12,618	$ 28,009	122.0%	$ 34,448	$ 72,214	109.6%
Termination	117	110	-6.0%	6,997	7,375	5.4%
Death	178	247	38.8%	470	632	34.5%
Disability	12,662	5,497	-56.6%	27,564	13,834	-49.8%
Total Actives	$ 25,575	$ 33,863	32.4%	$ 69,479	$ 94,055	35.4%
Deferred Vested	$ 302	$ 373	23.5%	$ 1,888	$ 3,288	74.2%
Tier 2 Total	**$ 25,877**	**$ 34,236**	**32.3%**	**$ 71,367**	**$ 97,343**	**36.4%**
Retirement	20,264	26,959	33.0%	54,621	75,547	38.3%
COLA	5,613	7,277	29.6%	16,746	21,796	30.2%
Plan Total	**$ 2,099,278**	**$ 2,188,299**	**4.2%**	**$ 3,551,203**	**$ 3,720,255**	**4.8%**

Dollar amounts in thousands

SECTION V – MEASURES OF LIABILITY

Table V-4 below shows the development of the expected Unfunded Actuarial Liability as of June 30, 2023 and the sources of experience gains and losses for each tier.

Table V-4

Development of Experience Gain or (Loss)	Tier 1	Tier 2	Total
Unfunded actuarial liability, 6/30/2022	$ 1,165,659	$ (10,865)	$ 1,154,794
Interest	77,225	(720)	76,505
Expected unfunded actuarial liability payment with interest	(150,846)	1,037	(149,809)
Change in assumptions/methods	8,466	(2,787)	5,679
Expected unfunded actuarial liability, 6/30/2023	$ 1,100,504	$ (13,335)	$ 1,087,169
Actual unfunded actuarial liability	1,182,798	(13,986)	1,168,812
Experience Gain or (Loss)	**$ (82,294)**	**$ 651**	**$ (81,643)**
Portion due to investment experience	(5,077)	(203)	$ (5,280)
Portion due to salary experience	(67,777)	(4,195)	(71,972)
Portion due to retirement experience	(1,986)	0	(1,986)
Portion due to termination experience	(3,167)	(1,659)	(4,826)
Portion due to mortality experience	3,749	185	3,934
Portion due to disability experience	2,301	3,934	6,235
Portion due to other asset and liability experience	(10,337)	2,589	(7,748)
Total	**$ (82,294)**	**$ 651**	**$ (81,643)**

Dollar amounts in thousands

SECTION V – MEASURES OF LIABILITY

Table V-5 below shows a five-year history of sources of liability gain and loss. Salary increases have been the primary source of losses and disability rates have been the primary source of gains.

Table V-5

Historical Sources of Liability Gain or (Loss)

Source	Year Ending June 30th 2019	2020	2021	2022	2023	Total
Salary increases	(29,392)	14,405	(9,202)	(24,411)	(71,972)	(120,572)
Retirement	1,275	1,099	(2,685)	(4,524)	(1,986)	(6,821)
Termination	(3,238)	(4,229)	(6,401)	(2,269)	(4,826)	(20,963)
Mortality	(7,072)	(2,648)	5,753	2,043	3,934	2,010
Disability	7,130	7,377	3,353	7,701	6,235	31,796
Other	(3,756)	(653)	2,456	1,196	(1,005)	(1,762)
Total	(35,053)	15,351	(6,726)	(20,264)	(69,620)	(116,312)

Dollar amounts in thousands

SECTION VI – CONTRIBUTIONS

Under the contribution allocation procedure employed by the Plan, there are three components to the total contribution: the normal cost, assumed administrative expenses, and the Unfunded Actuarial Liability contribution. The normal cost rate was developed in Section V. This section develops the UAL and administrative expense contribution rates and divides the contributions between the members and the City.

Table VI-1 below shows the outstanding balance, remaining period, and amortization payments for each component of the Tier 1 member UAL as of June 30, 2023.

Table VI-1

Tier 1 Member UAL Amortization Bases and Payments

Source	Date	Balance	Remaining Period	Amortization Payment Fire	Police	Total
Reclassified Classics	6/30/2016	$ 44	11.0	$ 2	$ 3	$ 5
Reclassified Fed Svc	6/30/2016	15	N/A	0	3	3
Reclassified Rehires	6/30/2016	180	N/A	5	20	25
Total Members		**$ 239**		**$ 7**	**$ 26**	**$ 33**
Retirement		120		3	13	16
COLA		119		4	13	17

Dollar amounts in thousands

The components attributable to reclassifying members from Tier 2 to Tier 1 due to rehire or prior Federated service are paid by the individually affected members at fixed special contribution rates of 1.96% and 0.87%, respectively. These special contribution rates cease for an individual member when their portion of the UAL has been paid off. The payments for reclassified classic members are paid by all classic members. Table VI-2 below shows the calculation of the classic member special contribution rate for FYE 2024 and FYE 2025.

Table VI-2

Classic Member Contribution Rate

	Fiscal Year Ending 2024 Retirement	COLA	Total	Fiscal Year Ending 2025 Retirement	COLA	Total
Classic UAL Payment	$ 2.6	$ 2.9	$ 5.5	$ 2.5	$ 2.8	$ 5.3
Expected Classic Payroll			$ 3,570			$ 3,972
Classic Member Rate	**0.07%**	**0.08%**	**0.15%**	**0.06%**	**0.07%**	**0.13%**

Dollar amounts in thousands

SECTION VI – CONTRIBUTIONS

Table VI-3 on the following page shows the outstanding balance, remaining period, and amortization payments for each component of the Tier 1 City UAL as of June 30, 2023. Each component is amortized over the remaining period shown in the table with payments assumed to increase 2.50% each year. At the bottom of the table, the total is divided into the portion attributable to the basic retirement benefits and the portion attributable to COLA benefits. These amounts are used to set separate contribution rates for the basic retirement benefits and the COLA benefits portions of the Plan.

SECTION VI – CONTRIBUTIONS

Table VI-3

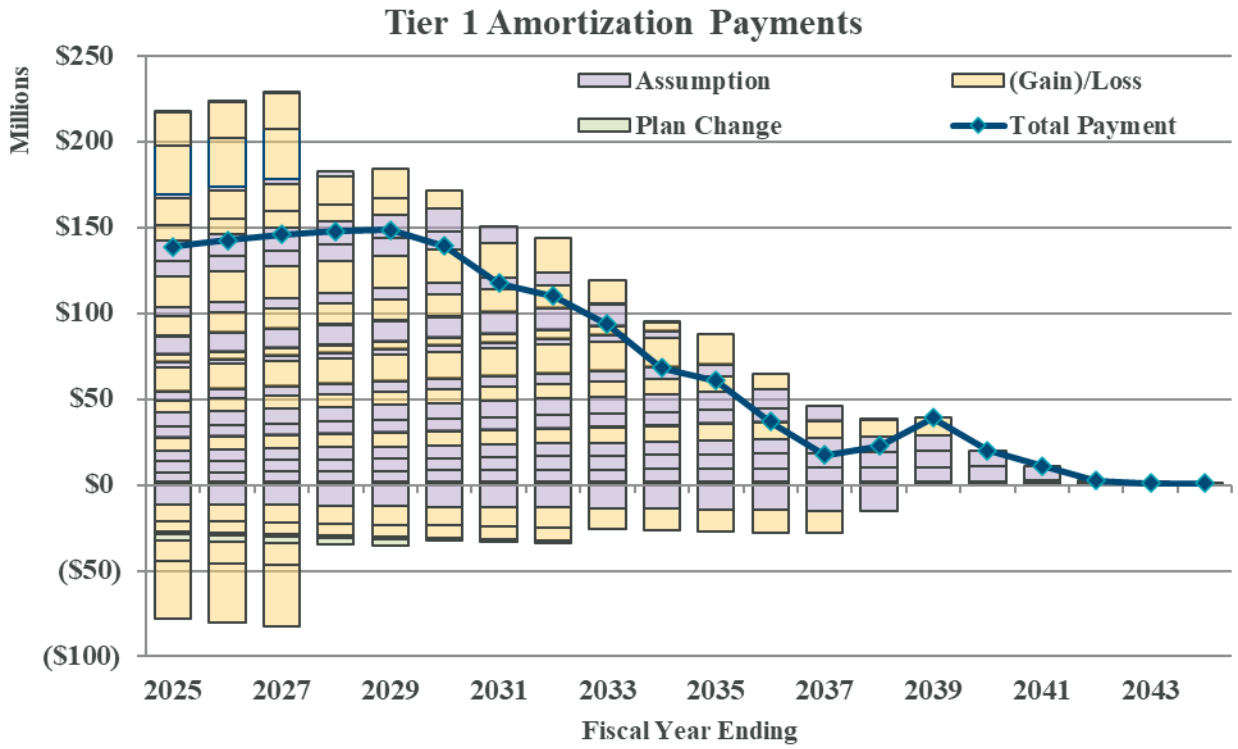
Tier 1 City UAL Amortization Bases and Payments

Source	Date	Balance	Remaining Period	Amortization Payment Fire	Police	Total
Experience Gain	6/30/2007	(33,872)	3.0	(5,814)	(6,702)	(12,517)
Assumption Change	6/30/2007	9,182	4.0	1,205	1,389	2,594
Experience Loss	6/30/2009	77,493	3.0	13,302	15,333	28,636
Assumption Change	6/30/2009	64,646	6.0	5,876	6,774	12,650
Experience Loss	6/30/2010	55,740	3.0	9,568	11,029	20,598
Assumption Change	6/30/2010	54,071	7.0	4,293	4,949	9,242
Experience Gain	6/30/2011	(94,298)	3.0	(16,187)	(18,659)	(34,846)
Assumption Change	6/30/2011	39,030	8.0	2,763	3,185	5,948
Experience Loss	6/30/2012	69,636	5.0	7,453	8,591	16,044
SRBR Elimination	6/30/2012	(16,983)	5.0	(1,818)	(2,095)	(3,913)
Assumption Change	6/30/2012	80,623	9.0	5,169	5,958	11,127
Experience Loss	6/30/2013	48,436	6.0	4,403	5,075	9,478
Assumption Change	6/30/2013	22,302	10.0	1,311	1,511	2,822
Experience Gain	6/30/2014	(44,040)	8.0	(3,118)	(3,594)	(6,711)
Assumption Change	6/30/2014	46,078	11.0	2,508	2,891	5,398
Experience Gain	6/30/2015	(7,295)	8.0	(516)	(595)	(1,112)
Assumption Change	6/30/2015	77,245	12.0	3,925	4,524	8,448
Experience Gain	6/30/2016	117,851	8.0	8,343	9,617	17,960
Assumption Change	6/30/2016	64,268	13.0	3,069	3,538	6,607
Measure F (Rehires)	6/30/2016	2,384	9.0	45	284	329
Experience Loss	6/30/2017	84,125	9.0	5,393	6,217	11,610
Assumption Change	6/30/2017	(119,248)	14.0	(5,384)	(6,206)	(11,590)
Measure F (Classic/Fed)	6/30/2018	79	10.0	1	9	10
Experience Loss	6/30/2018	34,536	10.0	2,030	2,340	4,370
Assumption Change	6/30/2018	70,420	15.0	3,021	3,482	6,503
Experience Loss	6/30/2019	124,729	11.0	6,788	7,825	14,613
Assumption Change	6/30/2019	76,556	16.0	3,134	3,612	6,746
Experience Loss	6/30/2020	66,165	12.0	3,362	3,875	7,237
Assumption Change	6/30/2020	70,448	17.0	2,762	3,184	5,947
Experience Gain	6/30/2021	(98,892)	13.0	(4,723)	(5,444)	(10,166)
Assumption Change	6/30/2021	11,986	18.0	452	521	972
Experience Loss	6/30/2022	1,605	14.0	72	84	156
Assumption Change	6/30/2022	58	19.0	2	2	5
Experience Loss	6/30/2023	82,294	15.0	3,530	4,069	7,600
Assumption Change	6/30/2023	8,466	20.0	297	343	640
2023 UAL Payment		136,734				
Total City		**$ 1,182,559**		**$ 66,518**	**$ 76,916**	**$ 143,434**
Retirement		625,669		36,337	42,005	78,343
COLA		556,890		30,181	34,911	65,091

Dollar amounts in thousands

SECTION VI – CONTRIBUTIONS

The chart below shows the future payment schedule for the Tier 1 amortization bases. Assumption changes are shown in purple; experience gain or loss bases are shown in gold, and plan changes are shown in green. The blue line shows the net scheduled payment for each year.



SECTION VI – CONTRIBUTIONS

Table VI-4 below shows the outstanding balance, remaining period, and amortization payments for each component of the Tier 2 UAL as of June 30, 2023. Each component is amortized from the valuation date in which it was first recognized with payments assumed to increase 2.50% each year. All components of the Tier 2 UAL are split evenly between the members and the City.

Table VI-4

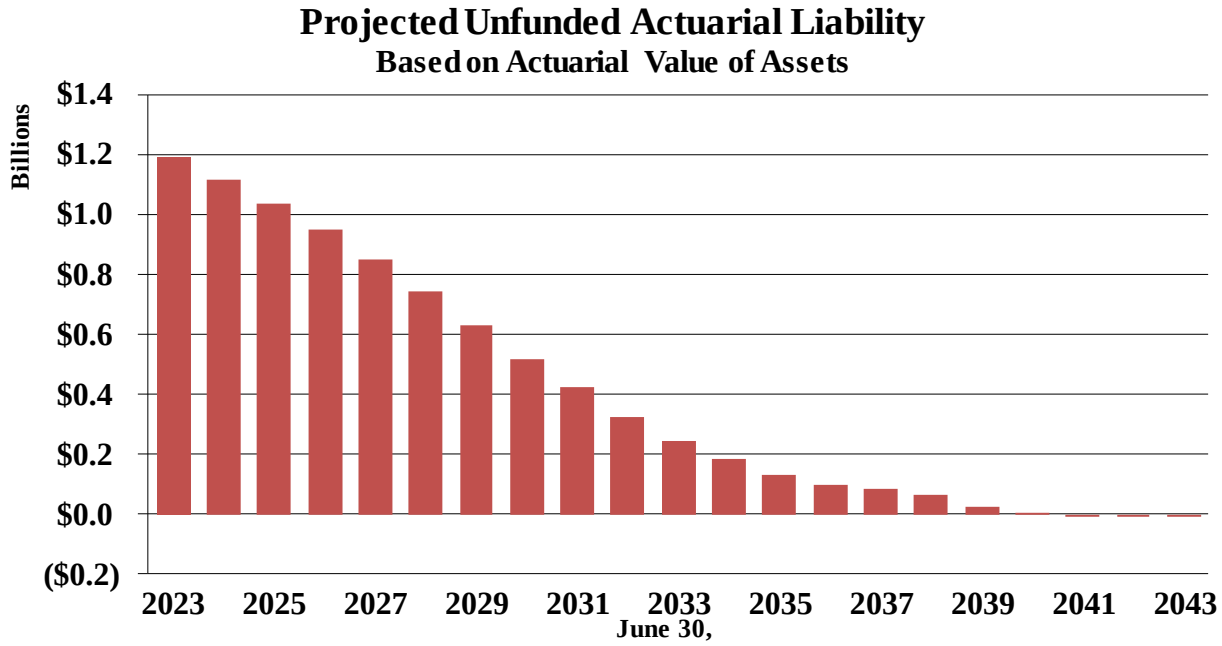
Tier 2 UAL Amortization Bases

Source	Date	Outstanding Balance Fire	Outstanding Balance Police	Remaining Period	Amortization Payment Fire	Amortization Payment Police
Members and City						
Experience Gain	6/30/2014	$ 0	$ (19)	8.0	$ 0	$ (3)
Assumption Change	6/30/2014	0	(4)	11.0	0	(0)
Experience Gain	6/30/2015	33	14	8.0	5	2
Assumption Change	6/30/2015	6	(15)	12.0	1	(2)
Experience Gain	6/30/2016	(45)	(103)	8.0	(7)	(16)
Assumption Change	6/30/2016	16	78	13.0	2	8
Measure F (Rehires)	6/30/2016	169	547	9.0	23	76
Experience Loss	6/30/2017	354	641	9.0	49	88
Assumption Change	6/30/2017	(132)	(447)	14.0	(13)	(43)
Experience Loss	6/30/2018	(416)	(870)	10.0	(53)	(110)
Assumption Change	6/30/2018	132	390	15.0	12	36
Experience Loss	6/30/2019	(68)	13	11.0	(8)	2
Assumption Change	6/30/2019	(198)	(10)	16.0	(17)	(1)
Experience Loss	6/30/2020	(145)	(2,096)	12.0	(16)	(229)
Assumption Change	6/30/2020	(157)	389	17.0	(13)	33
Experience Gain	6/30/2021	(1,031)	(4,293)	13.0	(106)	(441)
Assumption Change	6/30/2021	16	106	18.0	1	9
Experience Loss	6/30/2022	(368)	(3,037)	14.0	(36)	(295)
Assumption Change	6/30/2022	0	0	19.0	0	0
Experience Loss	6/30/2023	(218)	(434)	15.0	(20)	(40)
Assumption Change	6/30/2023	(1,425)	(1,362)	20.0	(108)	(103)
Total Tier 2		**$ (3,476)**	**$ (10,510)**		**$ (303)**	**$ (1,031)**
Retirement		(2,871)	(9,913)		(262)	(1,006)
COLA		(605)	(597)		(41)	(25)

Dollar amounts in thousands

SECTION VI – CONTRIBUTIONS

The chart below shows the projected aggregate balance of the UAL based on the Actuarial Value of Assets for the Plan under the amortization schedules shown above assuming all expected payments are made, and all assumptions are met. This projection includes new amortization bases for the unrecognized investment gains and losses that will be recognized over the next four years.



SECTION VI – CONTRIBUTIONS

In addition to the UAL payments shown in Table VI-1 (page 35), Tier 1 members pay 3/11ths of the normal cost (excluding reciprocity normal cost). Tier 2 members pay half of the normal cost, half of the administrative expenses, and half of the UAL payments shown in Table VI-4 on page 39.

Assumed administrative expenses equal the prior year's actual administrative expenses increased by the wage inflation assumption to the year of the contribution. Administrative expenses are allocated to tier groups in proportion to each groups' Market Value of Assets. Table VI-5 below shows the development of the administrative expense rates for FYE 2025.

Table VI-5

Administrative Expense By Group

	Fire		Police		
	Tier 1	Tier 2	Tier 1	Tier 2	Total
Market Assets	$ 2,030,163	$ 37,471	$ 2,546,723	$107,132	$ 4,721,488
Retirement	1,157,276	29,640	1,430,411	84,894	2,702,221
COLA	872,887	7,830	1,116,312	22,238	2,019,267
Total Admin Expense	$ 3,116	$ 58	$ 3,909	$ 160	$ 7,244
Member Expense Rate	**0.00%**	**0.07%**	**0.00%**	**0.08%**	**0.04%**
Retirement	0.00%	0.06%	0.00%	0.07%	0.03%
COLA	0.00%	0.01%	0.00%	0.01%	0.01%
City Expense Rate	**4.84%**	**0.07%**	**5.26%**	**0.08%**	**2.55%**
Retirement	2.76%	0.06%	2.96%	0.07%	1.45%
COLA	2.08%	0.01%	2.30%	0.01%	1.10%

Dollar amounts in thousands

SECTION VI – CONTRIBUTIONS

Table VI-6 below shows the member contribution rates for FYE 2025 by Tier split between Police and Fire groups. All Tier 1 members contribute the normal cost rate. Certain Tier 1 members also pay a portion of the cost under Measure F either individually or as a part of a designated group as described above. The Measure F UAL rates shown in the table are averaged over the entire Tier 1 payroll. Individuals may pay at a substantially higher rate.

Table VI-6

Fiscal Year Ending 2025 Member Contribution Rates

	Fire			Police		
	Retirement	COLA	Total	Retirement	COLA	Total
Tier 1						
Normal Cost	8.02%	3.79%	11.81%	7.22%	3.37%	10.59%
Measure F UAL	0.01%	0.00%	0.01%	0.02%	0.02%	0.04%
Total	**8.03%**	**3.79%**	**11.82%**	**7.24%**	**3.39%**	**10.63%**
Tier 2						
Normal Cost	11.76%	3.14%	14.90%	10.76%	2.89%	13.65%
Admin Expense	0.06%	0.01%	0.07%	0.07%	0.01%	0.08%
UAL	-0.06%	-0.01%	-0.07%	-0.07%	-0.01%	-0.08%
Total	**11.76%**	**3.14%**	**14.90%**	**10.76%**	**2.89%**	**13.65%**

SECTION VI – CONTRIBUTIONS

Table VI-7 below shows the estimated dollar amounts of the City's contributions assuming contributions are made throughout the fiscal year.

Table VI-7

Fiscal Year Ending 2025 Estimated City Contributions
Contribution Amounts Throughout the Year

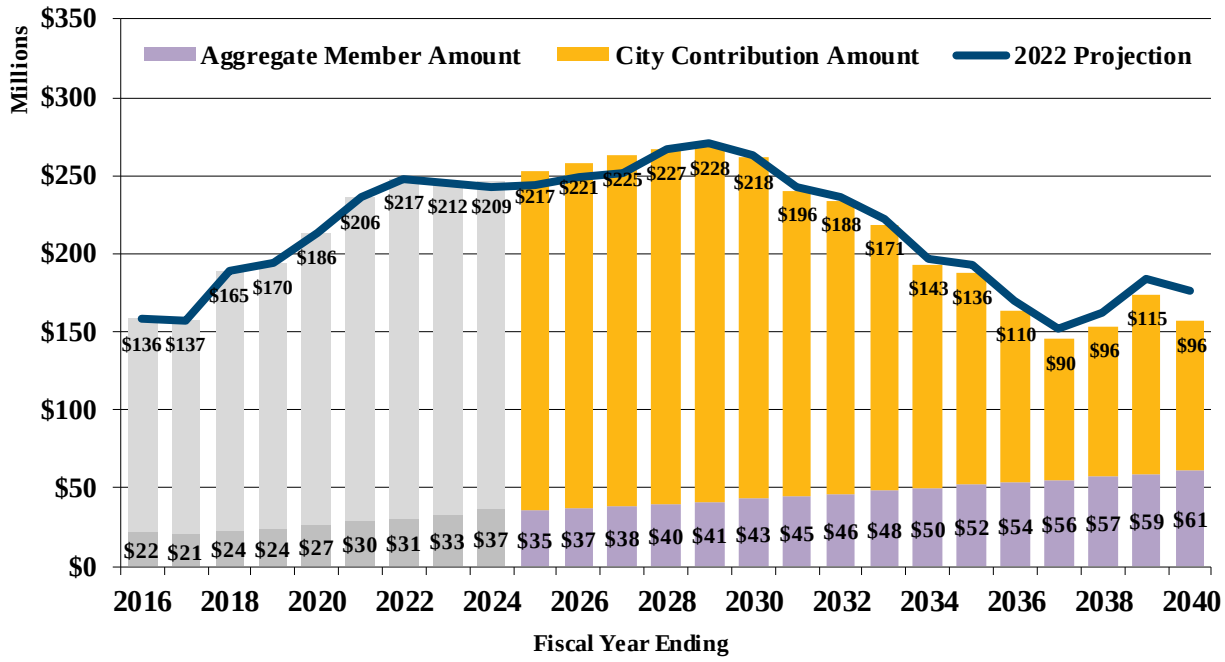
	Fire			Police		
	Retirement	COLA	Total	Retirement	COLA	Total
Tier 1 UAL Payment	$ 37,522	$ 31,165	$ 68,686	$ 43,374	$ 36,049	$ 79,423
Tier 1 Normal Cost	$ 13,907 21.58%	$ 6,538 10.15%	$ 20,446 31.73%	$ 14,831 19.97%	$ 6,855 9.23%	$ 21,686 29.20%
Tier 1 Admin Expenses	$ 1,776 2.76%	$ 1,340 2.08%	$ 3,116 4.84%	$ 2,196 2.96%	$ 1,714 2.30%	$ 3,909 5.26%
Tier 2 Contribution	$ 4,850 11.76%	$ 1,295 3.14%	$ 6,145 14.90%	$ 10,771 10.76%	$ 2,893 2.89%	$ 13,663 13.65%
Total Contribution	**$ 58,056 54.94%**	**$ 40,338 38.17%**	**$ 98,393 93.11%**	**$ 71,172 40.82%**	**$47,510 27.25%**	**$118,682 68.06%**

Dollar amounts in thousands

SECTION VI – CONTRIBUTIONS

The chart below shows historical and projected aggregate contribution amounts for the Plan compared to those projected in the prior valuation. The purple bars are member contribution amounts for Police and Fire for both Tier 1 and Tier 2. The gold bars are city contribution amounts for Police and Fire for both Tier 1 and Tier 2. The gray bars represent historical amounts. The projected amounts assume that all assumptions are met. The blue line represents the projection from the prior valuation.

Historical and Projected Aggregate Contribution Amounts



SECTION VII – ACTUARIAL SECTION OF THE ACFR

The Government Finance Officers Association (GFOA) maintains a checklist of items to be included in the System's Annual Comprehensive Financial Report (ACFR) in order to receive recognition for excellence in financial reporting. The schedules in this section are listed by the GFOA for inclusion in the Actuarial Section of the System's ACFR.

Table VII-1

Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Liability (AL)	Unfunded Actuarial Liability	Funded Ratio	Covered Payroll	Unfunded AL as a % of Covered Payroll
6/30/2023	$ 4,739,742	$ 5,908,554	$ 1,168,812	80.2%	$ 271,893	430%
6/30/2022	4,495,687	5,650,481	1,154,794	79.6%	263,395	438%
6/30/2021	4,210,447	5,441,660	1,231,213	77.4%	252,558	487%
6/30/2020	3,851,948	5,235,335	1,383,387	73.6%	240,798	575%
6/30/2019	3,706,302	4,988,427	1,282,125	74.3%	235,818	544%
6/30/2018	3,596,590	4,696,428	1,099,838	76.6%	218,429	504%
6/30/2017	3,439,922	4,464,402	1,024,480	77.1%	203,816	503%
6/30/2016	3,303,550	4,355,990	1,052,440	75.8%	194,072	542%
6/30/2015	3,212,776	4,058,410	845,634	79.2%	184,733	458%
6/30/2014	3,025,101	3,813,825	788,724	79.3%	188,189	419%

Dollar amounts in thousands

SECTION VII – ACTUARIAL SECTION OF THE ACFR

Table VII-2

Schedule of Funded Liabilities by Type

Actuarial Valuation Date	Actuarial Liability For: Active Member Contributions (A)	Retirees, Beneficiaries and Other Inactives (B)	Remaining Active Members' Liability (C)	Reported Assets	Portion of Actuarial Liability Covered by Reported Assets (A)	(B)	(C)
6/30/2023	$ 312,277	$ 4,351,041	$ 1,245,236	$ 4,739,742	100%	100%	6%
6/30/2022	316,682	4,085,699	1,248,100	4,495,687	100%	100%	7%
6/30/2021	315,820	3,875,560	1,250,280	4,210,447	100%	100%	2%
6/30/2020	315,240	3,655,447	1,264,648	3,851,948	100%	97%	0%
6/30/2019	308,023	3,446,977	1,233,427	3,706,302	100%	99%	0%
6/30/2018	304,454	3,227,859	1,164,115	3,596,590	100%	100%	6%
6/30/2017	299,933	3,050,871	1,113,598	3,439,922	100%	100%	8%
6/30/2016	294,535	2,999,773	1,061,682	3,303,550	100%	100%	1%
6/30/2015	285,538	2,819,410	953,462	3,212,776	100%	100%	11%
6/30/2014	288,227	2,585,611	939,987	3,025,101	100%	100%	16%

Dollar amounts in thousands

SECTION VII – ACTUARIAL SECTION OF THE ACFR

In the exhibit below, non-recurring items include changes in assumptions and changes in plan provisions.

Table VII-3

Analysis of Financial Experience

Actuarial Valuation Date	Gain or (Loss) for Year(s) Ending on Valuation Date Due To: Investment Income	Combined Liability Experience	Total Financial Experience	Non-Recurring Items	Total Experience
6/30/2023	$ (5,280)	$ (70,885)	$ (76,165)	$ (5,679)	$ (81,844)
6/30/2022	22,550	(20,703)	1,847	(58)	1,789
6/30/2021	117,195	(6,608)	110,587	(12,389)	98,198
6/30/2020	(89,538)	19,032	(70,506)	(73,524)	(144,030)
6/30/2019	(116,232)	(27,406)	(143,638)	(80,853)	(224,491)
6/30/2018	(53,615)	13,448	(40,167)	(76,425)	(116,592)
6/30/2017	(50,882)	(57,971)	(108,853)	127,571	18,718
6/30/2016	(106,785)	(54,528)	(161,313)	(72,680)	(233,993)
6/30/2015	2,806	7,291	10,097	(90,004)	(79,907)
6/30/2014	78,462	(14,678)	63,784	(55,787)	7,997

Dollar amounts in thousands

APPENDIX A – MEMBERSHIP INFORMATION

Data Assumptions and Methods

In preparing our data, we relied on information supplied by the San José Department of Retirement Services. This information includes, but is not limited to, plan provisions, employee data, and financial information. Our methodology for obtaining the data used for the valuation is based upon the following assumptions and practices:

- Records on the "Active" data file are considered to be Active if they do not have a reason for termination.

- Records on any of the data files are considered to be Inactive if they have a reason for termination of deferred vested or leave of absence/inactive.

- Records on the "Retiree" and "Beneficiary/QDRO" files are considered in pay status if they do not have a date of death, are not inactive, and have not withdrawn from the plan.

- All active employees are assumed to accrue a full year of service in all future years.

- Salary for the year commencing on the valuation date is defined as the greater of:

    - Annualized "compensation rate 2," increased with one year of wage inflation and one-half year of merit increase; and,
    - "Pensionable compensation" for the year ending on the valuation date, increased with one year of wage inflation and one year of merit increase.

- The annual benefit for deferred vested members is set to be the accrued benefit provided. If an accrued benefit is not provided, then an annual benefit is estimated at the later of their current age and assumed retirement age, using the benefit service provided and annualized "compensation rate 2."

- We assume any member found in last year's "Retiree" file and not in this year's file is deceased without a beneficiary and should be removed from the valuation data.

- We assume all deceased members with payments continuing to a beneficiary have already been accounted for in the "Retiree" file.

- If a spouse continuance amount is not provided on a Tier 1 retiree or disabled member's record, it is assumed to equal the member's benefit, multiplied by 37.5%, and divided by the member's benefit multiplier at retirement.

APPENDIX A – MEMBERSHIP INFORMATION

Table A-1

Active Member Data	June 30, 2022	June 30, 2023			
	Total	Fire	Police	Total	% Change
Tier 1					
Count	966	422	440	862	-10.8%
Averages					
Current Age	47.1	47.7	47.1	47.4	0.6%
Eligibility Service	18.8	18.5	19.5	19.0	1.3%
Benefit Service	18.0	17.7	18.7	18.2	1.3%
Expected Pensionable Earnings	$ 166,322	$ 170,732	$ 184,007	$ 177,508	6.7%
Tier 2					
Count	780	226	607	833	6.8%
Averages					
Current Age	32.3	35.0	32.2	33.0	2.0%
Eligibility Service	3.6	4.5	4.1	4.2	17.1%
Benefit Service	3.5	4.1	4.1	4.1	16.6%
Expected Pensionable Earnings	$ 131,703	$ 135,179	$ 145,519	$ 142,714	8.4%
Total					
Count	1,746.0	648	1,047	1,695	-2.9%
Averages					
Current Age	40.5	43.3	38.5	40.3	-0.5%
Eligibility Service	12.0	13.6	10.6	11.8	-2.1%
Benefit Service	11.5	13.0	10.2	11.3	-2.0%
Expected Pensionable Earnings	$ 150,856	$ 158,332	$ 161,694	$ 160,409	6.3%

APPENDIX A – MEMBERSHIP INFORMATION

Table A-2

Schedule of Active Member Data

Valuation Year	Active Count	Annual Payroll	Monthly Average Pay	Percent Change in Average Pay
2023	1,695	$ 271,893,000	$ 13,367	6.33%
2022	1,746	263,395,000	12,571	3.81%
2021	1,738	252,558,000	12,110	3.13%
2020	1,709	240,798,000	11,742	5.66%
2019	1,638	218,429,000	11,113	1.02%
2018	1,544	203,816,000	11,000	12.69%
2017	1,577	184,733,000	9,762	2.96%
2016	1,654	188,189,000	9,481	5.18%
2015	1,707	184,645,000	9,014	-1.13%
2014	1,718	187,959,000	9,117	-11.51%

APPENDIX A – MEMBERSHIP INFORMATION

Table A-3

Payee Member Data	June 30, 2022	June 30, 2023	%Change
Retired			
Count	1,261	1,347	6.8%
Average Age	65.0	65.0	0.1%
Average Annual Benefit	$ 122,482	$ 125,951	2.8%
Service Disability			
Count	838	820	-2.1%
Average Age	70.2	70.6	0.6%
Average Annual Benefit	$ 108,184	$ 111,269	2.9%
Non-Service Disability			
Count	28	28	0.0%
Average Age	59	59.9	1.7%
Average Annual Benefit	$ 55,503	$ 57,168	3.0%
Beneficiaries & SADROs			
Count	391	403	3.1%
Average Age	70.0	70.1	0.1%
Average Annual Benefit	$ 51,080	$ 53,152	4.1%
Total			
Count	2,518	2,598	3.2%
Average Age	67.4	67.5	0.1%
Average Annual Benefit	$ 105,892	$ 109,283	3.2%

APPENDIX A – MEMBERSHIP INFORMATION

Table A-4

Schedule of Retirees and Beneficiaries Added to and Removed from Rolls

Period	Beginning Count	Beginning Annual Allowances	Added to Rolls Count	Added to Rolls Annual Allowances	Removed from Count	Removed from Annual Allowances	End of Period Count	End of Period Annual Allowances	% Increase in Annual Allowances	Average Annual Allowances
2022-2023	2,518	$ 266,635	143	$ 22,750	63	$ 5,467	2,598	$ 283,918	6.5%	$ 109,283
2021-2022	2,438	251,318	146	21,212	66	5,895	2,518	266,635	6.1%	105,892
2020-2021	2,380	237,230	121	18,787	63	4,699	2,438	251,318	5.9%	103,084
2019-2020	2,318	224,303	112	16,936	50	4,009	2,380	237,230	5.8%	99,676
2018-2019	2,250	211,220	122	17,005	54	3,922	2,318	224,303	6.2%	96,766
2017-2018	2,192	200,197	120	15,558	62	4,535	2,250	211,220	5.5%	93,876
2016-2017	2,149	190,897	87	11,816	44	2,516	2,192	200,197	4.9%	91,331
2015-2016	2,108	182,185	72	10,843	31	2,131	2,149	190,897	4.8%	88,831
2014-2015	2,032	170,872	115	13,700	39	2,387	2,108	182,185	6.6%	86,426
2013-2014	1,994	162,716	73	10,142	35	1,986	2,032	170,872	5.0%	84,091

Annual Allowances in Thousands

APPENDIX A – MEMBERSHIP INFORMATION

Table A-5

Inactive Member Data	June 30, 2022	June 30, 2023	%Change
Tier 1			
Terminated Vested / Reciprocal			
Count	190	185	-2.6%
Average Age	47.1	47.8	1.6%
Average Annual Benefit	$ 26,628	$ 27,041	1.6%
Average Contribution Balance with Interest	$ 133,263	$ 134,508	0.9%
Non-Vested Terminated			
Count	27	26	-3.7%
Average Age	42.1	43.5	3.3%
Average Annual Benefit	$ 10,412	$ 10,916	4.8%
Average Contribution Balance with Interest	$ 59,769	$ 62,990	5.4%
Total			
Count	217	211	-2.8%
Average Age	46.5	47.3	1.8%
Average Annual Benefit	$ 24,610	$ 25,054	1.8%
Average Contribution Balance with Interest	$ 124,119	$ 125,695	1.3%
Tier 2			
Terminated Vested / Reciprocal			
Count	16	29	81.3%
Average Age	34.5	34.6	0.3%
Average Annual Benefit	$ 10,084	$ 11,768	16.7%
Average Contribution Balance with Interest	$ 54,699	$ 62,798	14.8%
Non-Vested Terminated			
Count	115	134	16.5%
Average Age	34.1	34.9	2.2%
Average Annual Benefit	$ 1,790	$ 1,814	1.3%
Average Contribution Balance with Interest	$ 11,759	$ 15,061	28.1%
Total			
Count	131	163	24.4%
Average Age	34.2	34.9	2.0%
Average Annual Benefit	$ 2,835	$ 3,585	26.4%
Average Contribution Balance with Interest	$ 17,003	$ 23,554	38.5%
Total			
Count	348	374	7.5%
Average Age	41.9	41.9	0.0%
Average Annual Benefit	$ 16,571	$ 15,697	-5.3%
Average Contribution Balance with Interest	$ 83,797	$ 81,179	-3.1%

For inactive members, benefit is calculated using the assumptions and methods outlined in Appendix A if not provided in the data

APPENDIX A – MEMBERSHIP INFORMATION

Table A-6

Distribution of Active Members as of June 30, 2023

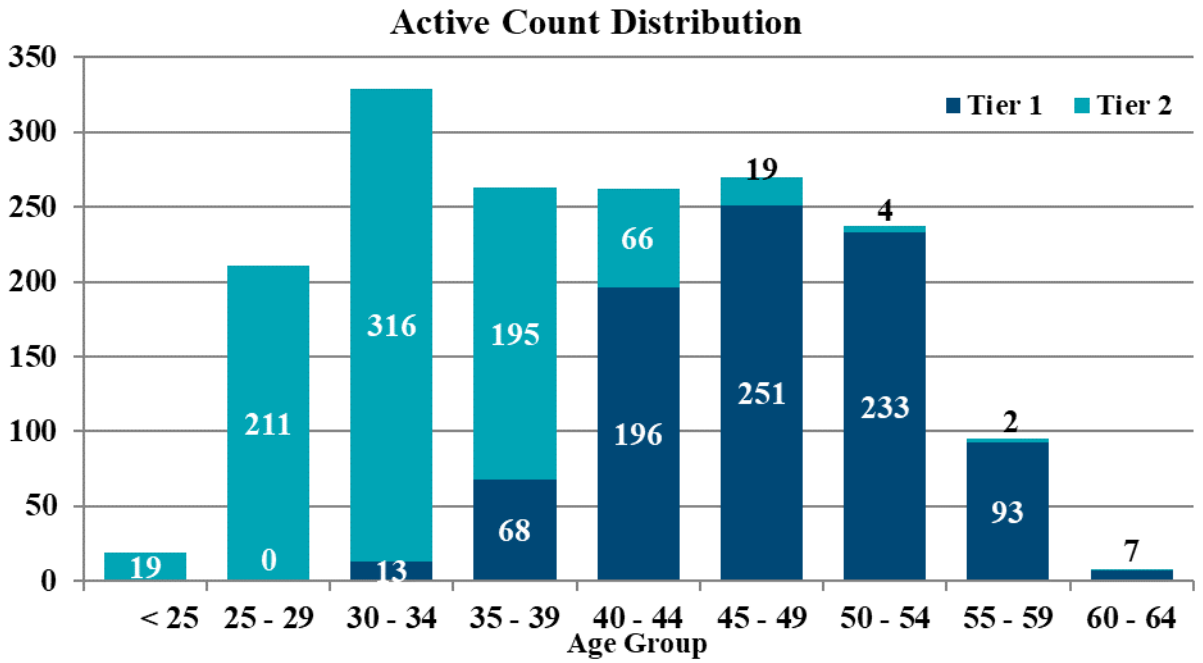
	Years of Benefit Service								
Age	**Under 1**	**1 to 4**	**5 to 9**	**10 to 14**	**15 to 19**	**20 to 24**	**25 to 29**	**30 and Up**	**Total**
Under 25	9	10	0	0	0	0	0	0	19
25 to 29	42	152	17	0	0	0	0	0	211
30 to 34	26	172	123	8	0	0	0	0	329
35 to 39	14	80	112	44	13	0	0	0	263
40 to 44	9	17	55	77	91	13	0	0	262
45 to 49	2	11	10	39	94	105	9	0	270
50 to 54	0	4	2	15	43	111	62	0	237
55 to 59	0	3	2	1	13	43	31	2	95
60 to 64	0	0	1	1	1	2	3	0	8
65 to 69	0	0	0	0	1	0	0	0	1
70 and up	0	0	0	0	0	0	0	0	0
Total Count	102	449	322	185	256	274	105	2	1,695

Distribution of Average Expected Salary as of June 30, 2023

	Years of Benefit Service								
Age	**Under 1**	**1 to 4**	**5 to 9**	**10 to 14**	**15 to 19**	**20 to 24**	**25 to 29**	**30 and Up**	**Total**
Under 25	$118,641	$124,807	$0	$0	$0	$0	$0	$0	$121,887
25 to 29	118,496	134,794	158,717	0	0	0	0	0	133,478
30 to 34	118,234	138,517	160,456	168,160	0	0	0	0	145,837
35 to 39	122,067	137,941	159,230	167,182	187,093	0	0	0	153,483
40 to 44	114,303	138,599	160,291	165,069	176,932	195,163	0	0	166,218
45 to 49	126,876	143,545	157,686	169,406	176,825	186,911	198,580	0	177,966
50 to 54	0	143,916	156,618	168,185	169,608	181,330	192,127	0	180,356
55 to 59	0	203,203	152,995	144,740	175,830	173,178	190,304	245,936	180,885
60 to 64	0	0	144,587	146,011	194,582	181,343	178,263	0	172,832
65 to 69	0	0	0	0	155,537	0	0	0	155,537
70 and up	0	0	0	0	0	0	0	0	0
Avg. Salary	$ 118,726	$ 137,455	$ 159,704	$ 166,659	$ 176,108	$ 182,846	$ 191,746	$ 245,936	$ 160,409

APPENDIX A – MEMBERSHIP INFORMATION

Chart A-1



APPENDIX A – MEMBERSHIP INFORMATION

Table A-7

Retirees and Disabled by Attained Age and Benefit Effective Date

Benefit Effective	Age										Total
	Under 50	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to 79	80 to 84	85 to 89	90 and up	
Pre-2005	0	1	2	14	21	104	237	175	86	24	664
PYE 2005	0	0	1	2	6	40	19	3	1	0	72
PYE 2006	0	0	0	0	8	9	13	1	0	0	31
PYE 2007	0	0	2	1	21	31	6	0	0	0	61
PYE 2008	0	2	2	0	26	23	5	0	0	0	58
PYE 2009	0	0	2	9	68	51	14	2	0	0	146
PYE 2010	1	0	1	31	67	28	1	0	0	0	129
PYE 2011	3	1	4	47	44	10	0	0	0	0	109
PYE 2012	2	4	3	34	20	4	1	0	0	0	68
PYE 2013	4	3	7	26	10	2	1	0	0	0	53
PYE 2014	2	7	3	31	9	0	0	0	0	0	52
PYE 2015	5	4	27	49	8	2	0	0	0	0	95
PYE 2016	2	4	33	13	4	0	0	0	0	0	56
PYE 2017	6	5	28	26	2	0	0	0	0	0	67
PYE 2018	2	5	39	19	2	1	0	0	0	0	68
PYE 2019	1	5	52	20	1	0	1	0	0	0	80
PYE 2020	1	19	42	18	2	1	0	0	0	0	83
PYE 2021	6	33	49	10	1	0	0	0	0	0	99
PYE 2022	5	41	47	5	0	0	0	0	0	0	98
PYE 2023	1	57	39	9	0	0	0	0	0	0	106
Total	41	191	383	364	320	306	298	181	87	24	2,195

Average Age at Retirement/Disability		52.5
Average Current Age		67.1
Average Annual Pension	$	119,589

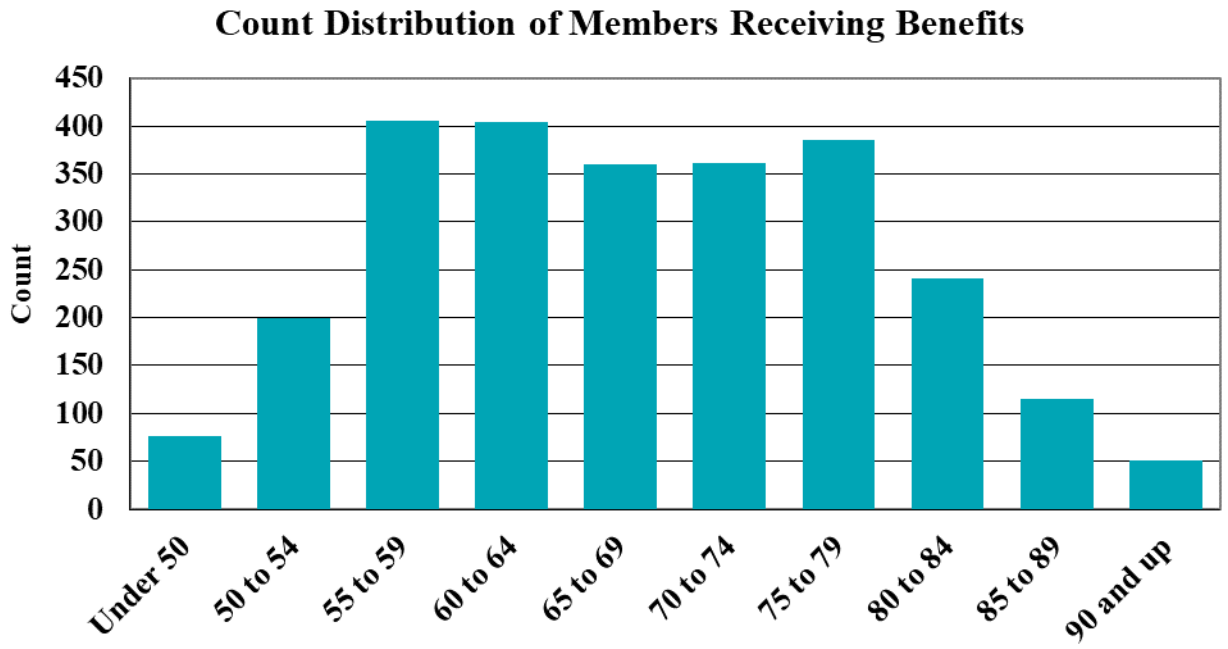
APPENDIX A – MEMBERSHIP INFORMATION

Table A-8

Distribution of Retirees, Disabled Members, and Beneficiaries as of June 30, 2020

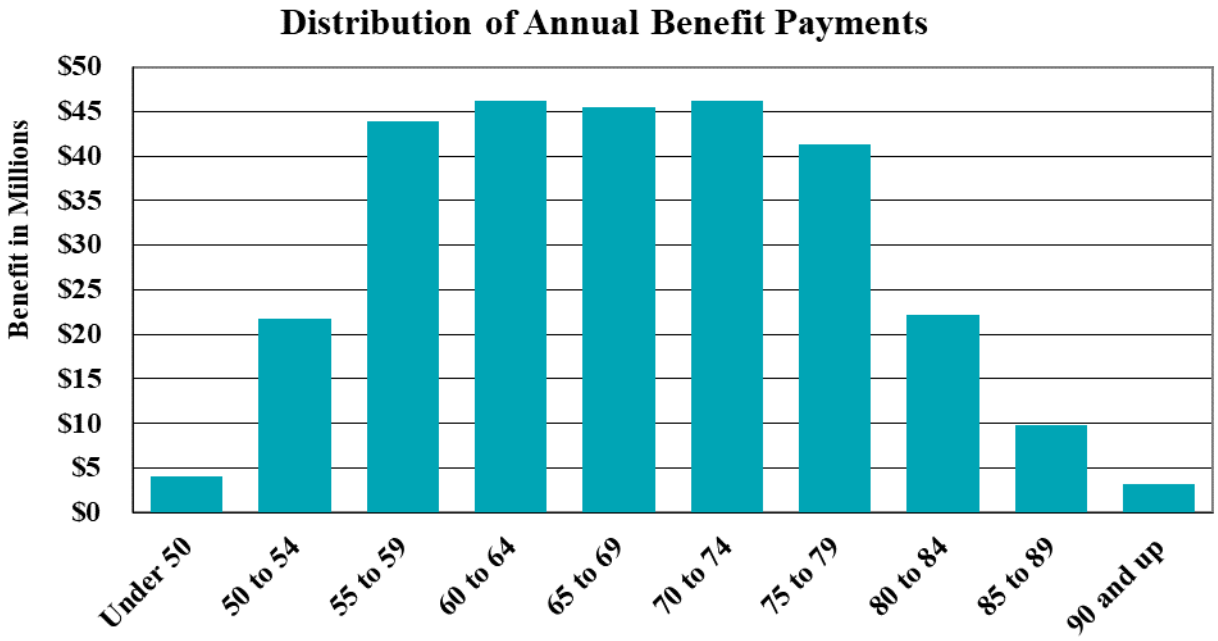
Age	Count		Annual Benefit
Under 50	76	$	4,020,750
50 to 54	199		21,815,580
55 to 59	406		43,849,528
60 to 64	404		46,152,845
65 to 69	360		45,491,759
70 to 74	361		46,140,935
75 to 79	385		41,259,678
80 to 84	241		22,194,003
85 to 89	115		9,795,829
90 and up	51		3,197,291
Total	**2,598**	**$**	**283,918,198**

Chart A-2



APPENDIX A – MEMBERSHIP INFORMATION

Chart A-3



APPENDIX A – MEMBERSHIP INFORMATION

Table A-9

Changes in Plan Membership

TIER 1	Active	Vested Terminated / Reciprocal	Non-Vested Terminated	In-Pay Retired	In-Pay Disabled	In-Pay Beneficiary / SADRO	Total
June 30, 2022	**966**	**190**	**27**	**1,261**	**866**	**391**	**3,701**
New Entrants	2	0	0	0	1	2	5
Rehires	1	(1)	0	0	0	0	0
Non-Vested Terms	0	0	0	0	0	0	0
Vested Deferrals	(7)	7	0	0	0	0	0
Refunds	(2)	(1)	(1)	0	0	0	(4)
Disabilities	(2)	(2)	0	(4)	8	0	0
Retirements	(95)	(6)	0	101	0	0	0
SADROs	0	(3)	0	0	0	3	0
Deaths	(1)	(2)	0	(11)	(27)	27	(14)
Beneficiary Deaths	0	0	0	0	0	(18)	(18)
Benefits Expiring	0	0	0	0	0	(2)	(2)
Adjustments	0	3	0	0	0	0	3
June 30, 2023	**862**	**185**	**26**	**1,347**	**848**	**403**	**3,671**
	0	0	0	0	0	0	0
TIER 2							
June 30, 2022	**780**	**16**	**115**	**0**	**0**	**0**	**911**
New Entrants	93	0	2	0	0	0	95
Rehires	4	(1)	(3)	0	0	0	0
Non-Vested Terms	(25)	0	25	0	0	0	0
Vested Deferrals	(13)	13	0	0	0	0	0
Refunds	(6)	0	(4)	0	0	0	(10)
Disabilities	0	0	0	0	0	0	0
Retirements	0	0	0	0	0	0	0
Deaths	0	0	0	0	0	0	0
Beneficiary Deaths	0	0	0	0	0	0	0
Benefits Expiring	0	0	0	0	0	0	0
Adjustments	0	1	(1)	0	0	0	0
June 30, 2023	**833**	**29**	**134**	**0**	**0**	**0**	**996**
	0	0	0	0	0	0	0
TOTAL							
June 30, 2022	**1,746**	**206**	**142**	**1,261**	**866**	**391**	**4,612**
New Entrants	95	0	2	0	1	2	100
Rehires	5	(2)	(3)	0	0	0	0
Non-Vested Terms	(25)	0	25	0	0	0	0
Vested Deferrals	(20)	20	0	0	0	0	0
Refunds	(8)	(1)	(5)	0	0	0	(14)
Disabilities	(2)	(2)	0	(4)	8	0	0
Retirements	(95)	(6)	0	101	0	0	0
SADROs	0	(3)	0	0	0	3	0
Deaths	(1)	(2)	0	(11)	(27)	27	(14)
Beneficiary Deaths	0	0	0	0	0	(18)	(18)
Benefits Expiring	0	0	0	0	0	(2)	(2)
Adjustments	0	4	(1)	0	0	0	3
June 30, 2023	**1,695**	**214**	**160**	**1,347**	**848**	**403**	**4,667**

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

A. Actuarial Assumptions

The economic and demographic assumptions used in this report were adopted by the Board of Administration at the November 2, 2023 Board meeting based on our input and recommendations from our experience study covering plan experience through June 30, 2023. Please refer to the experience study report and presentations for both the October 5, 2023 and November 2, 2023 Board meetings for the rationale for each of the assumptions.

1. Discount Rate

6.625% net of investment expenses. The long-term expected return on assets based on Meketa's capital market assumptions for the 10-year and 20-year time horizons are 7.9% and 8.5%, respectively. The Board applied a margin for adverse deviation to maintain the assumption of 6.625%.

2. Price Inflation

2.50% per annum.

3. Amortization Payment Growth

2.50% per annum.

4. Wage Inflation

Reflect currently bargained across-the-board increases and 3.00% per annum (0.50% real wage growth) thereafter. For this valuation, Police and Fire members have bargained increases of 4.00% for FYE 2024. Police members have an ongoing non-pensionable 4.00% retention pay that becomes pensionable as well as a bargained increase of 3.00% for FYE 2025.

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

5. Merit Salary Increase Rate

The following merit component is added to wage inflation, based on an individual member's years of service:

Table B-1

Merit Salary Increases	
Years of Service	Increase
0	6.50%
1	6.50
2	6.25
3	5.75
4	5.25
5	4.25
6	2.50
7	1.50
8	1.00
9	0.80
10+	0.60

6. Rates of Retirement

Rates of retirement are based on age and service according to the following Tables B-2, B-3, and B-4. Tier 1 rates only apply when the member is eligible for unreduced benefits.

Table B-2

Tier 1 Rates of Retirement						
	Police Years of Service			Fire Years of Service		
Age	<25	25 – 29	30+	<25	25 – 29	30+
50	0.0%	55.0%	60.0%	0.0%	45.0%	50.0%
51	0.0	45.0	60.0	0.0	30.0	50.0
52	0.0	35.0	60.0	0.0	40.0	50.0
53	0.0	35.0	60.0	0.0	40.0	50.0
54	0.0	35.0	60.0	0.0	40.0	50.0
55	30.0	40.0	60.0	30.0	40.0	100.0
56	30.0	45.0	60.0	25.0	40.0	100.0
57	30.0	50.0	60.0	20.0	40.0	100.0
58 – 61	45.0	50.0	60.0	27.5	40.0	100.0
62+	100.0	100.0	100.0	100.0	100.0	100.0

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

Table B-3

Police Tier 2 Rates of Retirement				
	Years of Service			
Age	5 - 19	20 - 24	25 – 29	30+
50 – 56	2.0%	2.0%	2.0%	5.0%
57 – 59	7.5	10.0	20.0	100.0
60 – 61	10.0	20.0	35.0	100.0
62 – 64	25.0	50.0	75.0	100.0
65+	100.0	100.0	100.0	100.0

Table B-4

Fire Tier 2 Rates of Retirement				
	Years of Service			
Age	5 - 19	20 - 24	25 – 29	30+
50 – 56	1.0%	1.0%	1.0%	2.5%
57 – 59	5.0	7.5	15.0	100.0
60 – 61	7.5	15.0	25.0	100.0
62 – 64	20.0	35.0	50.0	100.0
65+	100.0	100.0	100.0	100.0

Tier 1 vested terminated members are assumed to retire at age 50 if they have 25 or more years of service or at age 55 if they have less than 25 years of service. Tier 2 vested terminated members are assumed to retire at age 60.

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

7. Rates of Termination

Rates of termination are shown in Table B-5 below.

Table B-5

Rates of Termination		
Service	Police	Fire
0	11.00%	8.50%
1	8.00	4.00
2	6.25	2.75
3	5.00	1.75
4	4.25	1.25
5	3.75	1.00
6	3.55	0.90
7	3.40	0.80
8	3.30	0.70
9	3.25	0.60
10	3.25	0.50
11	3.25	0.50
12	3.15	0.50
13	2.95	0.50
14	2.75	0.50
15	2.25	0.50
16	1.75	0.50
17	1.50	0.50
18	1.25	0.50
19+	1.00	0.50

Termination rates do not apply once retirement rates apply.

Tier 1 members who terminate with less than 10 years of service and Tier 2 members who terminate with less than 5 years of service are assumed to receive a refund of contributions. For terminating employees who are not assumed to receive a refund, 75% are assumed to subsequently work for a reciprocal employer and receive 3.00% pay increases per year.

8. Rates of Disability

For Police and Fire, disability rates are equal to the CalPERS Police Officers & Firefighters (POFF) industrial and non-industrial rates multiplied by 104%. Sample disability rates of active participants are provided in Table B-6.

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

Table B-6

Rates of Disability at Selected Ages	
Age	**Rate**
25	0.12%
30	0.20
35	0.33
40	0.52
45	0.80
50	1.17
55	1.65
60	2.24
65	2.96

All disabilities are assumed to be duty related.

9. Rates of Mortality

Mortality rates for actives, retirees, beneficiaries, terminated vested, and reciprocals are based on the sex-distinct employee and annuitant mortality tables shown below. Future mortality improvements are reflected by applying the SOA MP-2021 projection scale on a generational basis from the base year of 2010.

Table B-7

Category	Base Mortality Tables Male	Female
Healthy Retirees	0.972 times the 2010 Public Safety Above Median Income Mortality Table (Pub(s)-2010(A)) for Healthy Retirees	0.972 times the 2010 Public Safety Above Median Income Mortality Table (Pub(s)-2010(A)) for Healthy Retirees
Disabled Retiree	0.915 times the Public Safety Mortality Table (PubS-2010) for Disabled Retirees	0.915 times the Public Safety Mortality Table (PubS-2010) for Disabled Retirees
Beneficiaries	1.032 times the 2010 General Member Mortality Table (PubG-2010) for Healthy Retirees	1.032 times the 2010 General Member Mortality Table (PubG-2010) for Healthy Retirees
Healthy non-annuitant	0.979 times the 2010 Public Safety Above Median Income Mortality Table (Pub(s)-2010(A)) for Healthy Employees	0.979 times the 2010 Public Safety Above Median Income Mortality Table (Pub(s)-2010(A)) for Healthy Employees

It is assumed that 50% of active deaths are service related.

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

10. Family Composition

Percentage married is shown in the following Table B-8. Women are assumed to be three years younger than men.

Table B-8

Percentage Married	
Gender	**Percentage**
Males	85%
Females	85%

11. Administrative Expenses

Administrative expenses are assumed to equal the prior year's actual administrative expenses increased by the wage inflation assumption to the year of the contribution. Administrative expenses are allocated to tier groups in proportion to each groups' Market Value of Assets.

12. Changes Since Last Valuation

Retirement, termination, mortality, and disability rates as well as administrative expenses were updated for this valuation. Please refer to our demographic experience study report for an explanation of the rationale for these changes.

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

B. Contribution Allocation Procedure

The contribution allocation procedure primarily consists of an actuarial cost method, an asset smoothing method, and an amortization method as described below. This contribution allocation procedure, combined with reasonable assumptions, produces a Reasonable Actuarially Determined Contribution as defined in Actuarial Standard of Practice No. 4. The contribution allocation procedure was selected to balance benefit security, intergenerational equity, and the stability of actuarially determined contributions. The selection also considered the demographics of plan members, the funding goals and objectives of the Board, and the need to accumulate assets to make benefit payments when due.

1. Actuarial Cost Method

The Entry Age Actuarial Cost Method was used for active employees, whereby the normal cost is computed as the level annual percentage of pay required to fund the retirement benefits between each member's date of hire and assumed retirement. The Actuarial Liability is the difference between the present value of future benefits and the present value of future normal cost. The Unfunded Actuarial Liability is the difference between the Actuarial Liability and the Actuarial Value of Assets.

2. Asset Valuation Method

For the purposes of determining contributions, we use a smoothed Actuarial Value of Assets that dampens the effects of volatility in the market value of assets on the pattern of contributions.

The Actuarial Value of Assets is calculated by recognizing the deviation of actual investment returns compared to the expected return over a five-year period. The dollar amount of the expected return on the Market Value of Assets is determined using the actual contributions and benefit payments during the year. Any difference between this amount and the actual net investment earnings is considered a gain or loss. Finally, the Actuarial Value of Assets is restricted to a corridor between 80 percent and 120 percent of the Market Value of Assets.

As adopted by the Board at their November 2, 2023 meeting based on our input, effective for this valuation, the remaining unrecognized investment gains and losses were combined with the investment gain for 2023 and will be recognized over five years. The primary impact of this change is to align the recognition of the large gain for 2021 with the large loss for 2022 to produce a smoother pattern of contributions.

3. Amortization Method

Actuarial gains and losses and plan changes are amortized over a 15-year period (16 years prior to June 30, 2016) beginning with the valuation date in which they first arise. Changes in methods and assumptions are amortized over a 20-year period (16 years prior to June 30, 2011) beginning with the valuation date on which they are effective. Amortization payments are assumed to increase 2.5% each year. Some prior amortization periods have been adjusted in prior years to smooth the pattern of future contributions.

APPENDIX C – SUMMARY OF PLAN PROVISIONS
TIER 1

1. Membership Requirement

Participation in the plan is immediate upon the first day of employment with the City of San José as a police officer or firefighter except for the following:

- Independent contractors,
- Person in City service principally for training or educational purposes,
- Auxiliary or voluntary police officers or firefighters,
- Part-time or non-salaried employees, and
- Employees receiving credit in any other retirement or pension system.

Persons eligible for Tier 1 membership include:

- Any police officer hired prior to August 4, 2013 or any firefighter hired prior to January 2, 2015.
- Any person who was a member of this plan as an employee of the police department prior to August 4, 2013, and terminated employment with the city, and returned to employment with the city in a position covered by this plan on or after August 4, 2013.
- Any person who was a member of this plan as an employee of the fire department prior to January 2, 2015, and terminated employment with the city, and returned to employment with the city in a position covered by this plan on or after January 2, 2015.
- Any person accepting employment in the police department or fire department of the city on or after January 1, 2013, who is otherwise eligible for this plan and who was an active member in another California public retirement system with which this plan has reciprocity under Part 16, and who has a break in service of less than six months from that covered employment and employment with the city.

2. Final Compensation

The highest twelve consecutive months of compensation in covered employment. However, in determining Final Compensation, no compensation in the last 12 months of employment that exceeds 108% of compensation during the 12 months immediately preceding the last 12 months shall be considered. Compensation excludes overtime pay and expense allowances.

3. Credited Service

Years of service in covered employment plus service purchased for military leave of absence, Federated service, and unpaid leaves of absence.

APPENDIX C – SUMMARY OF PLAN PROVISIONS
TIER 1

4. Contributions

a. Member:

The amount needed to fund 3/11ths of normal cost (excluding normal cost for reciprocal benefits and excluding administrative expenses) calculated under the Entry Age actuarial cost method.

b. Employer:

The Employer contributes the remaining amounts necessary to fund the Plan in accordance with the Board's funding policy.

5. Service Retirement

Eligibility

Age 55 with 20 years of service, age 50 with 25 years of service, age 70 with no service requirement, or any age with 30 years of service. Reduced benefits are also available at age 50 with 20 years of service.

Benefit

Police: 2.5% of Final Compensation for each year of credited service up to 20 years plus 4.0% of Final Compensation for each year of credited service in excess of 20, subject to a maximum of 90% of Final Compensation.

Fire: For members with less than 20 years of service, 2.5% of Final Compensation for each year of credited service. For members with 20 or more years of service, 3.0% of Final Compensation for each year of service, subject to a maximum of 90% of Final compensation.

6. Service-Connected Disability Retirement

Eligibility

No age or service requirement.

Benefit

Police: 50% of Final Compensation plus 4.0% of Final Compensation for each year of credited service in excess of 20, subject to a maximum of 90% of Final Compensation.

APPENDIX C – SUMMARY OF PLAN PROVISIONS
TIER 1

Fire: For members with less than 20 years of service, 50% of Final Compensation. For members with 20 or more years of service, 3.0% of Final Compensation for each year of service, subject to a maximum of 90% of Final Compensation.

7. Non-Service-Connected Disability Retirement

Eligibility

Two years of service.

Benefit

For members with less than 20 years of service, 32% of Final Compensation plus 1% of Final Compensation for each year of service in excess of two. For members with 20 or more years of service, the benefit amount equals the amount that would be calculated under the service retirement formula.

8. Non-Service-Connected Death

Less than 2 Years of Service:
Lump sum benefit equal to the greater of accumulated employee contributions with interest or $1,000.

Active members ineligible for service retirement and disabled retirees on a non-service-connected disability:
Spouse receives 24% of Final Compensation plus 0.75% of Final Compensation for each year of service in excess of two, subject to a maximum of 37.5% of Final Compensation. If a member has eligible dependent children, an additional benefit is payable as follows:

1 Child: 25% of Final Compensation
2 Children: 37.5% of Final Compensation
3+ Children: 50% of Final Compensation

The total benefit payable to a family is limited to 75% of Final Compensation.

If a member does not have a spouse or eligible dependent children, a lump sum benefit equal to the greater of accumulated employee contributions with interest or $1,000.

Active members eligible for service retirement, service retirees, and disabled retirees on a service-connected disability:
Spouse receives the greater of 37.5% of Final Compensation or 50% of the member's service retirement benefit, subject to a maximum of 42.5% of Final Compensation for Police and 45% of Final Compensation for Fire. Eligible dependent children will receive

the same benefit as defined under the non-service-connected death for disabled retirees or members ineligible for service retirement. The total benefit payable to a family is limited to 75% of Final Compensation.

If a member does not have an eligible surviving spouse or surviving domestic partner or eligible surviving children, the member's estate receives a lump sum death benefit of $1,000.

Deferred vested members eligible for service retirement:
Spouse receives 1.875% of Final Compensation for each year of service, subject to a maximum of 37.5% of Final Compensation. Eligible dependent children receive the same benefit as defined under the non-service-connected death for active members ineligible for service retirement. The total benefit payable to a family is limited to 75% of Final Compensation.

If a member does not have a spouse or eligible dependent children, a lump sum benefit is paid to the member's estate equal to the greater of accumulated employee contributions with interest or $1,000.

9. Service-Connected Death

Spouse receives the greater of 37.5% of Final Compensation or 50% of the member's service retirement benefit, subject to a maximum of 42.5% of Final Compensation for Police and 45% of Final Compensation for Fire. If a member has eligible dependent children, an additional benefit of 25% of Final Compensation is payable for each eligible dependent child. The total benefit payable to a family is limited to 75% of Final Compensation.

If a member does not have a spouse or eligible dependent children, a lump sum benefit equal to the greater of accumulated employee contributions with interest or $1,000 is paid to the member's estate.

10. Termination Benefits

Less than 10 Years of Service:
Lump sum benefit equal to the accumulated employee contributions with interest at 2% per annum. For members not covered by the VEBA, the lump sum also includes an amount equal to the employee contributions made to the 401(h) account accumulated with interest at 2% per annum.

10 or more years of credited service:
The amount of the service retirement benefit, payable at the later of age 55 or 20 years from date of membership.

APPENDIX C – SUMMARY OF PLAN PROVISIONS
TIER 1

11. Post-retirement Cost-of-Living Benefit

Benefits are increased every February 1 by 3.0%.

12. Changes Since Last Valuation

None.

APPENDIX C – SUMMARY OF PLAN PROVISIONS
TIER 2

1. Membership Requirement

Any police officer who is hired by the City on or after August 4, 2013, or any firefighter who is hired by the City on or after January 2, 2015, and who does not meet the eligibility requirements for Tier 1.

2. Final Compensation

The highest average monthly compensation of the member during any thirty-six consecutive months of covered employment. Compensation excludes overtime pay and expense allowances.

3. Credited Service

One year of service credit is given for 2,080 or more hours of city service rendered in any calendar year. A partial year (fraction with the numerator equal to the hours worked, and the denominator equal to 2,080) is given for each calendar year with less than 2,080 hours worked.

4. Member Contributions

50% of total Tier 2 contributions to the pension plan, including, but not limited to administrative expenses, normal cost, and Unfunded Actuarial Liability. Increases in members' Unfunded Actuarial Liability contribution are limited to one-third of one percent of compensation each year. Contributions cannot be less than 50% of normal cost.

5. Unreduced Service Retirement

Eligibility

Age 57 with five years of service.

Benefit – Member

2.4% of Final Compensation for each year of credited service up to 20 years, plus 3.0% of Final Compensation for each year of credited service between 20 years and 25 years, plus 3.4% of Final Compensation for each year of credited service in excess of 25 years, subject to a maximum of 80% of Final Compensation.

Benefit – Survivor

50% joint and survivor annuity.

APPENDIX C – SUMMARY OF PLAN PROVISIONS
TIER 2

6. Early Service Retirement

Eligibility

Age 50 with five years of service.

Benefit – Member

Reduced 7% per year for each year between age 57 and the member's age at retirement.

7. Service-Connected Disability Retirement

Eligibility

No age or service requirement.

Benefit – Member

The greater of:

- Monthly benefit equivalent to 50% of Final Compensation,
- The service retirement benefit, if eligible for service retirement,
- A service retirement benefit actuarially reduced from age 50, if not eligible for service retirement.

8. Non-Service-Connected Disability Retirement

Eligibility

Five years of service.

Benefit – Member

1.8% of Final Compensation for each year of credited service if less than age 50, or the service pension benefit if older than age 50.

APPENDIX C – SUMMARY OF PLAN PROVISIONS
TIER 2

9. Death Before Retirement

If death occurs before retirement eligibility is reached and after two years of service

Monthly benefit equal to 24% of Final Compensation plus 0.75% of Final Compensation for each year of service in excess of two, up to a maximum of 37.5% of Final Compensation

If death occurs after retirement eligibility is reached

Benefit equivalent to what the spouse would have received if the employee was retired at the time of death.

Employees killed in the line of duty

Monthly benefit equal to the greater of:

- 37.5% of Final Compensation or
- 50% of what the employee would have received if retired at the time of death.

10. Withdrawal Benefits

Less than five years of credited service

Lump sum benefit equal to the accumulated employee contributions with interest.

Five or more years of credited service

The amount of the service retirement benefit, actuarially reduced for early retirement, and payable when retirement eligibility is reached.

11. Benefit Forms

Retiree may choose an optional settlement at retirement that reduces their allowance to provide a higher survivorship allowance to their spouse/domestic partner.

12. Post-retirement Cost-of-Living Benefit

Benefits are increased every February 1 by the change in the December CPI-U for San José-San Francisco-Oakland, subject to a cap of 2.0%. The first COLA after retirement shall be prorated based on the number of months retired.

13. Changes Since Last Valuation

There have been no changes in plan provisions since the last valuation.

APPENDIX C – SUMMARY OF PLAN PROVISIONS
TIER 2

Note: **The summary of major plan provisions is designed to outline principal plan benefits. If the Department of Retirement Services should find the plan summary not in accordance with the actual provisions, the actuary should immediately be alerted so the proper provisions are valued.**

APPENDIX D – GLOSSARY OF TERMS

1. Actuarial Liability

The Actuarial Liability is the difference between the present value of future benefits and the present value of total future normal costs. This is also referred to by some actuaries as the "accrued liability" or "actuarial accrued liability." The Actuarial Liability represents the amount of assets a plan should have as of a valuation date according to the actuarial cost method.

2. Actuarial Assumptions

Estimates of future experience with respect to rates of mortality, disability, turnover, retirement rate or rates of investment income, and salary increases. Demographic actuarial assumptions (rates of mortality, disability, turnover, and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (price inflation, wage inflation, and investment income) are generally based on expectations for the future that may differ from the Plan's past experience.

3. Actuarial Cost Method

A mathematical budgeting procedure for allocating the dollar amount of the present value of future benefits between future normal cost and Actuarial Liability.

4. Actuarial Gain (Loss)

The difference between actual experience and the anticipated experience based on the actuarial assumptions during the period between two actuarial valuation dates.

5. Actuarial Present Value

The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting future payments at the discount rate and by probabilities of payment.

6. Actuarially Determined Contribution

The payment to the Plan as determined by the actuary using a contribution allocation procedure. It may or may not be the actual amount contributed to the Plan.

7. Amortization Method

A method for determining the amount, timing, and pattern of payment of the Unfunded Actuarial Liability.

APPENDIX D – GLOSSARY OF TERMS

8. Asset Valuation Method

The method used to develop the Actuarial Value of Assets from the Market Value of Assets typically by smoothing investment returns above or below the assumed rate of return over a period of time.

9. Contribution Allocation Procedure

A procedure typically using an actuarial cost method, an asset valuation method, and an amortization method to develop the Actuarially Determined Contribution.

10. Discount Rate

The rate of interest used to discount future benefit payments to determine the actuarial present value. For purposes of determining an Actuarially Determined Contribution, the discount rate is typically based on the long-term expected return on assets.

11. Funded Status or Funding Ratio

Either the Market or Actuarial Value of Assets divided by the Actuarial Liability. For purposes of this report, the funded status represents the proportion of the actual assets as of the valuation date compared to the assets expected by the actuarial cost method. These measures are for contribution budgeting purposes and are not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations.

12. Normal Cost

The portion of the present value of future benefits allocated to the current year by the actuarial cost method.

13. Present Value of Future Benefits

The actuarial present value of all benefits both earned as of the valuation date and expected to be earned in the future by current plan members based on current plan provisions and actuarial assumptions.

14. Unfunded Actuarial Liability (UAL)

The Unfunded Actuarial Liability is the difference between Actuarial Liability and either the Market or the Actuarial Value of Assets. This value is sometimes referred to as "unfunded actuarial accrued liability." It represents the difference between the actual assets and the amount of assets expected by the actuarial cost method as of the valuation date.

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