San José Police & Fire Department Retirement Plan

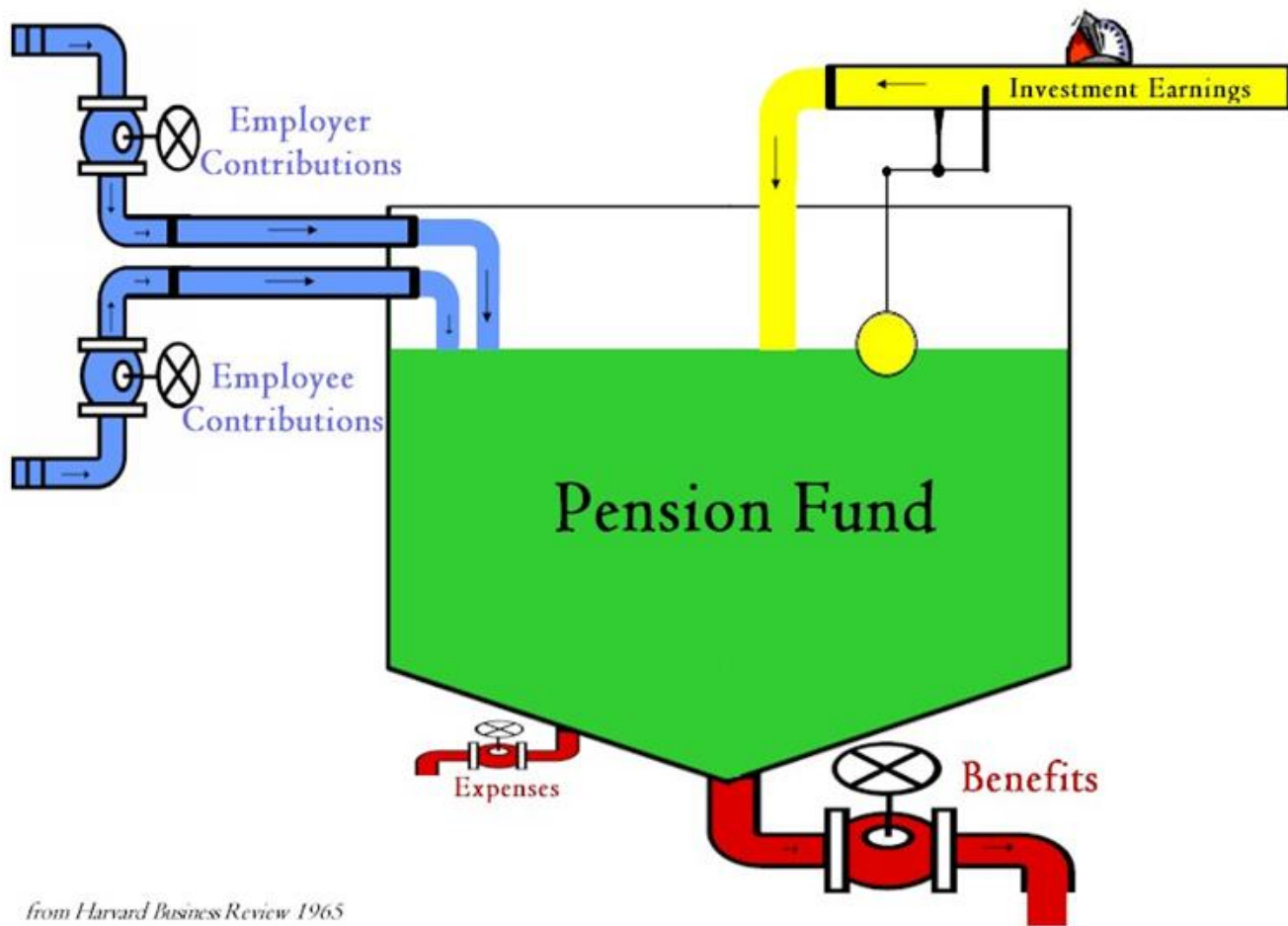**CHEIRON**
Classic Values, Innovative Advice

Actuarial Funding Background

October 3, 2024

Bill Hallmark, ASA, EA, MAAA, FCA

Anne Harper, FSA, EA, MAAA

from Harvard Business Review 1965

Contributions + Investments

=

Expenses + Benefits

- **Benefit Policy** – Established in statute and/or bargaining agreements

- **Investment Policy** – Assessment of appropriate level of risk versus expected level of investment return

- **Contribution Policy** – How much and when to contribute. Division between employees and City is defined in statute
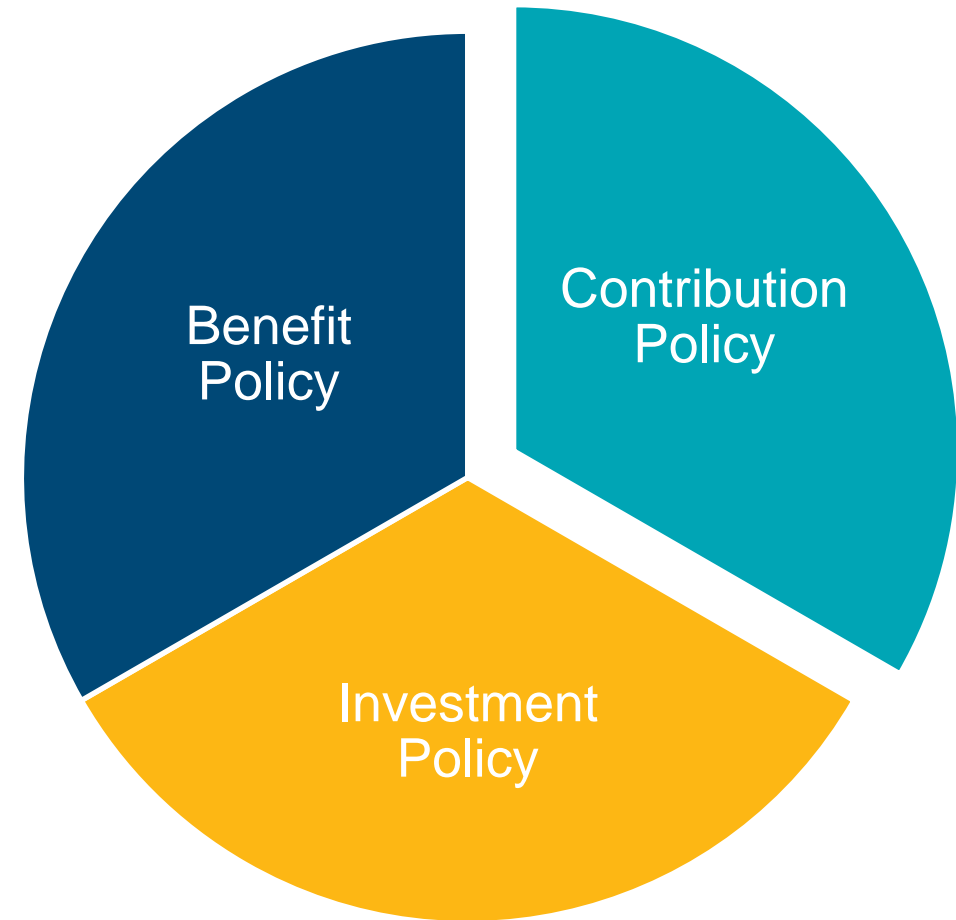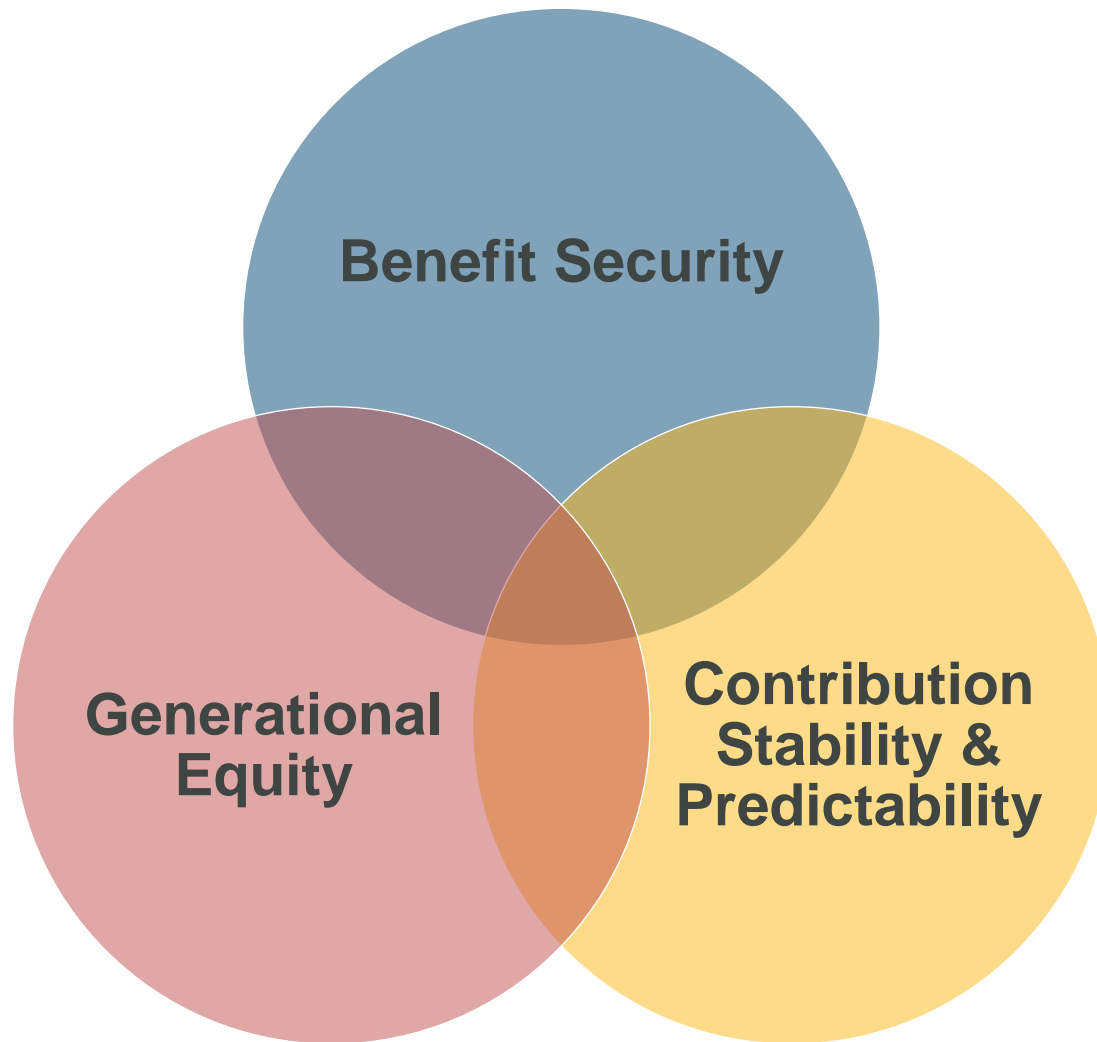
- **Benefit Security** – The primary objective is to make sure the benefits can be paid when due

- **Generational Equity** – Ideally, each generation of taxpayers pays for the retirement benefits of the employees who provided services to that generation

- **Contribution Stability and Predictability** – Volatility in contributions, particularly if it is unexpected, is difficult to manage within the budget process

- Project future pension benefits based on:

  – Demographic information on plan members

  – Details on plan benefits/provisions

  – Assumptions regarding member behavior and benefits (Pay increases, COLAs, etc.)

- Discount cash flows to determine the Present Value of Benefits (i.e., value in today's dollars)

- Allocate value of benefits for active members between past and future service
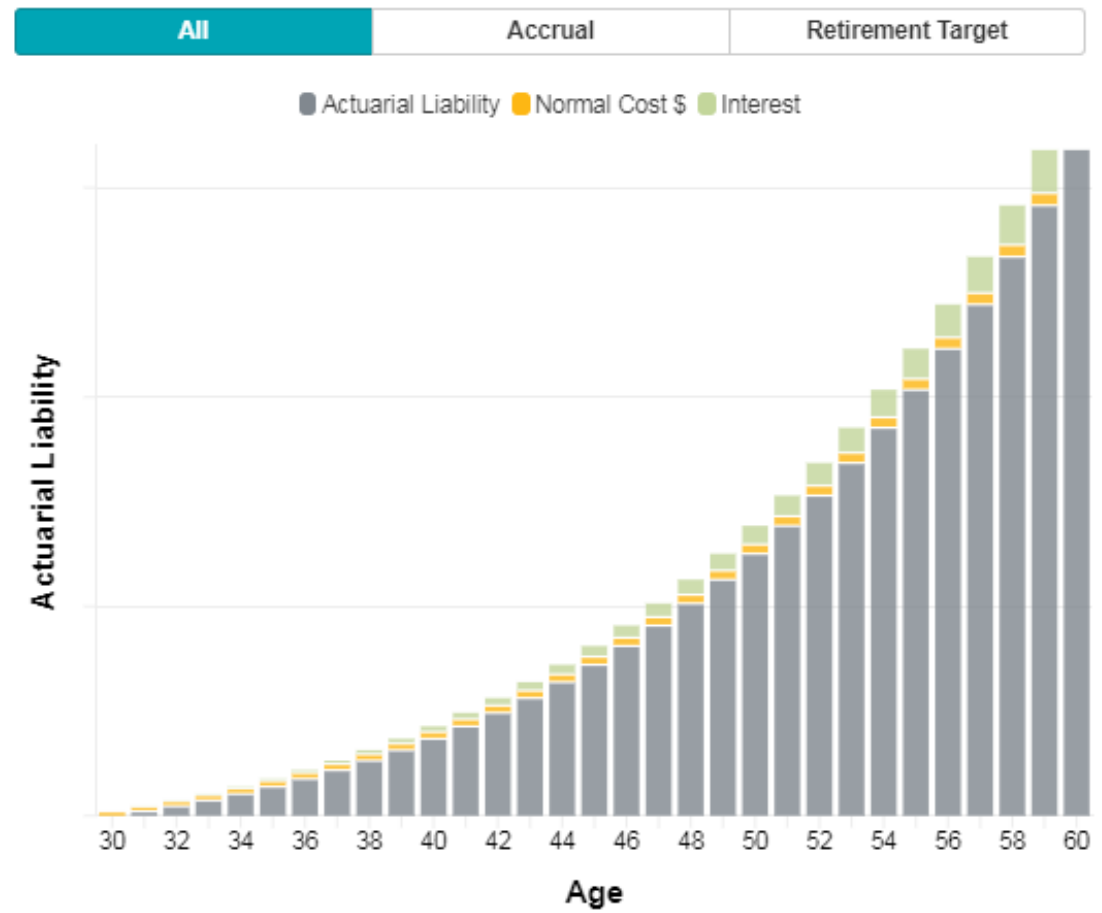
Actuarial Cost Method

Normal Cost Example
Member Hired at Age 30, Retired at Age 60
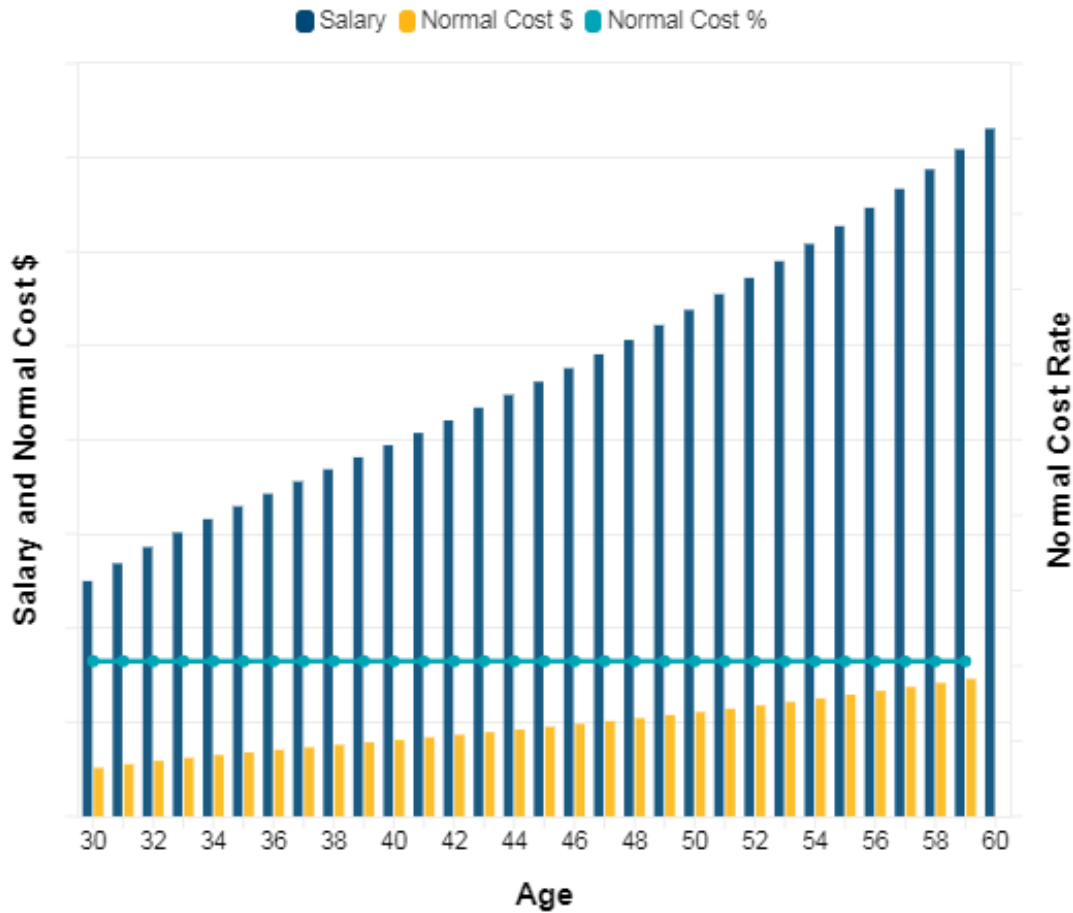
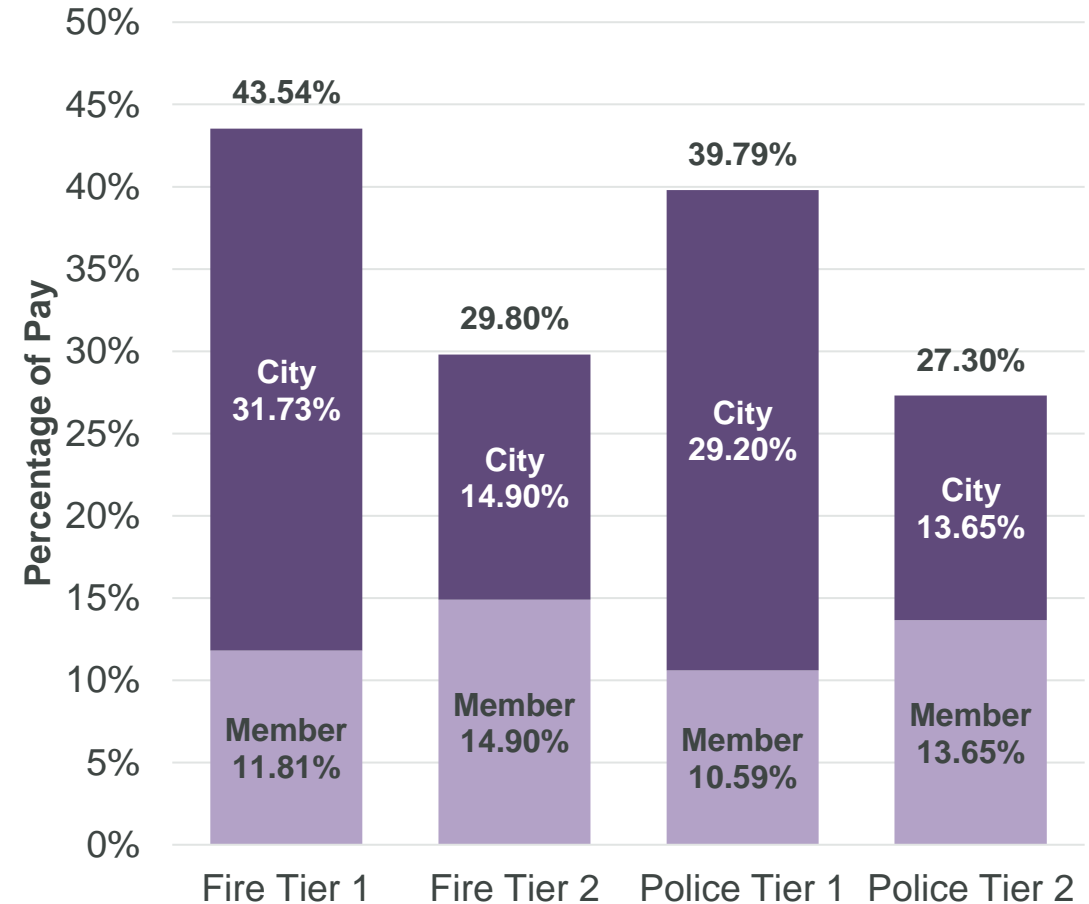Actuarial Liability Example
Member Hired at Age 30, Retired at Age 60

Classic Values, Innovative Advice

- Total normal cost rate = the sum of the individual normal cost amounts divided by total payroll

- Municipal Code defines the proportion paid by members and City
  - Tier 1 members pay 3/11
  - Tier 2 members pay ½

- Normal cost rates change when:
  - Weighted average changes
 - Assumptions change
  - Plan provisions change

Normal Cost Rates
2023 Actuarial Valuation

Chart: Normal Cost Rates by category (Percentage of Pay)

Category	Total	City	Member
Fire Tier 1	43.54%	City 31.73%	Member 11.81%
Fire Tier 2	29.80%	City 14.90%	Member 14.90%
Police Tier 1	39.79%	City 29.20%	Member 10.59%
Police Tier 2	27.30%	City 13.65%	Member 13.65%

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- If all assumptions are met every year, contributions will always equal the normal cost
- That doesn't happen
  - Experience doesn't match assumptions
  - Assumptions change
- The objective is to get assets back to the funding target within a reasonable period while limiting the volatility of contributions
  - Asset smoothing
  - Amortization

Funding Target | Assets | Contribution

Legend:
- UAL Payment
- Normal Cost Payment
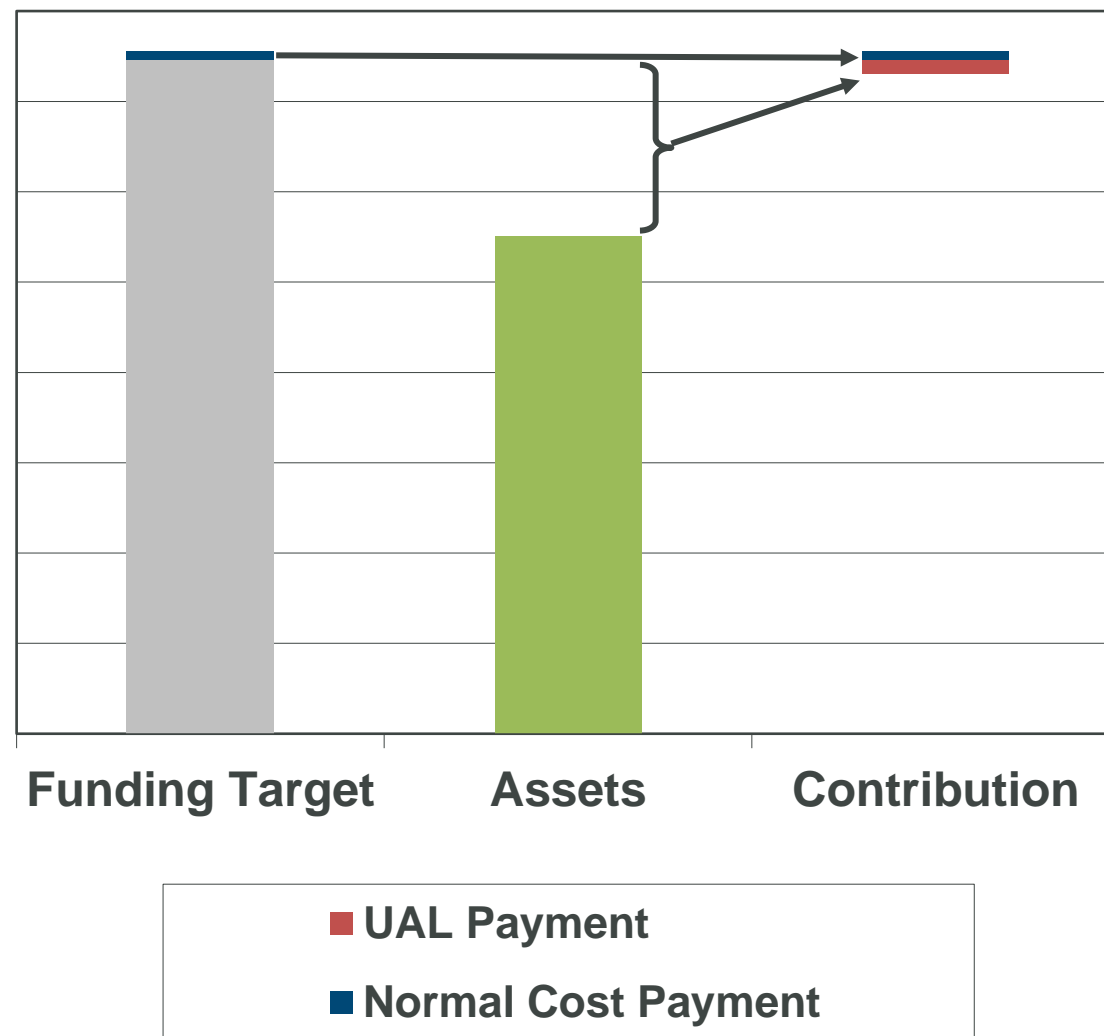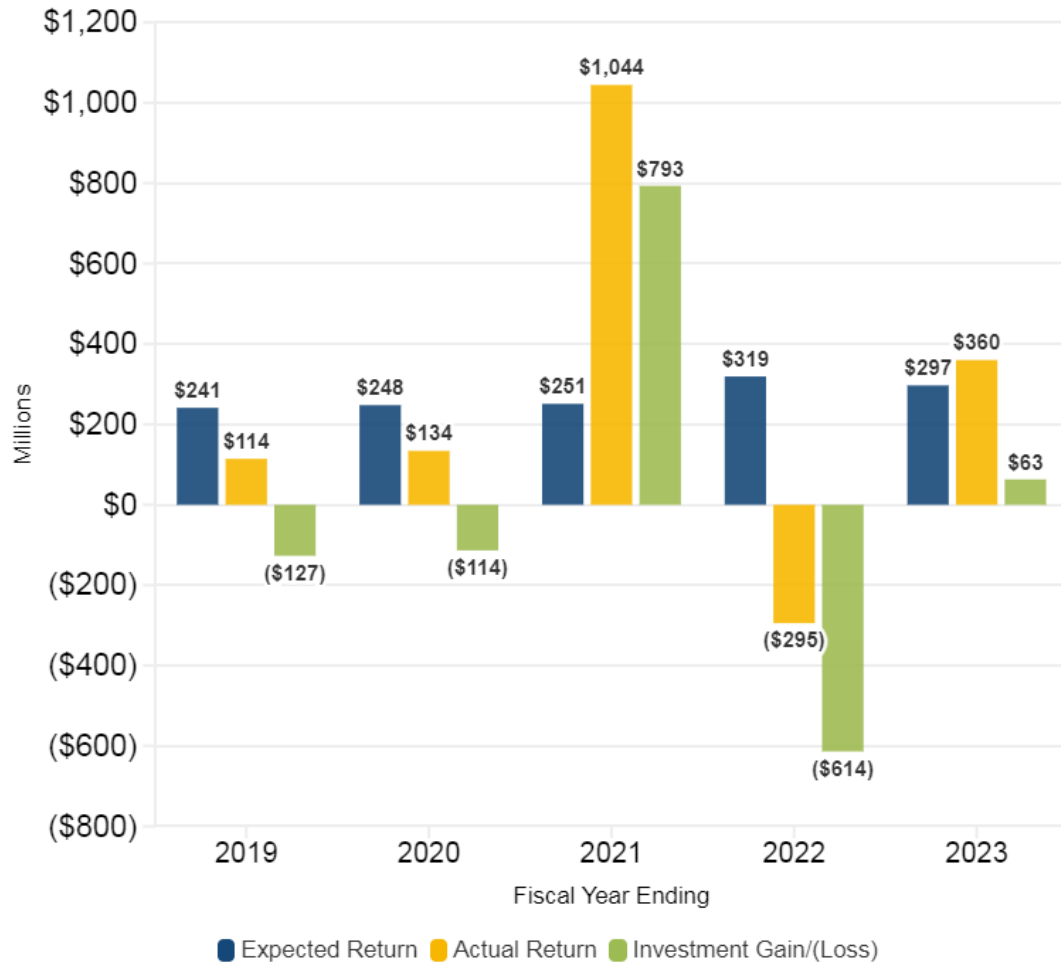
Asset Smoothing

- Investment returns cause most contribution volatility

- Asset smoothing dampens the year-to-year volatility while following long-term trends

  - Investment gains and losses are recognized over 5 years

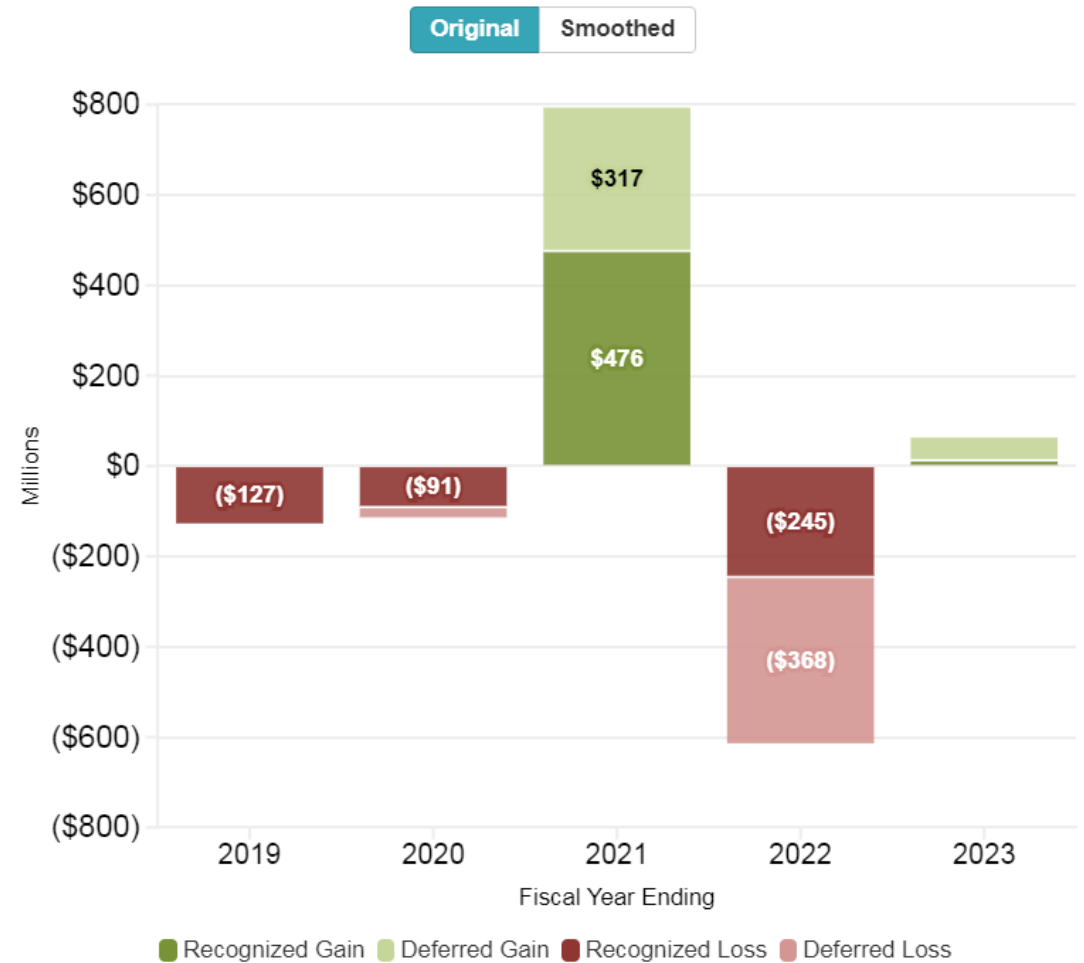 - Actuarial assets limited to 20% corridor around market assets

Market vs. Actuarial Assets

October 3, 2024

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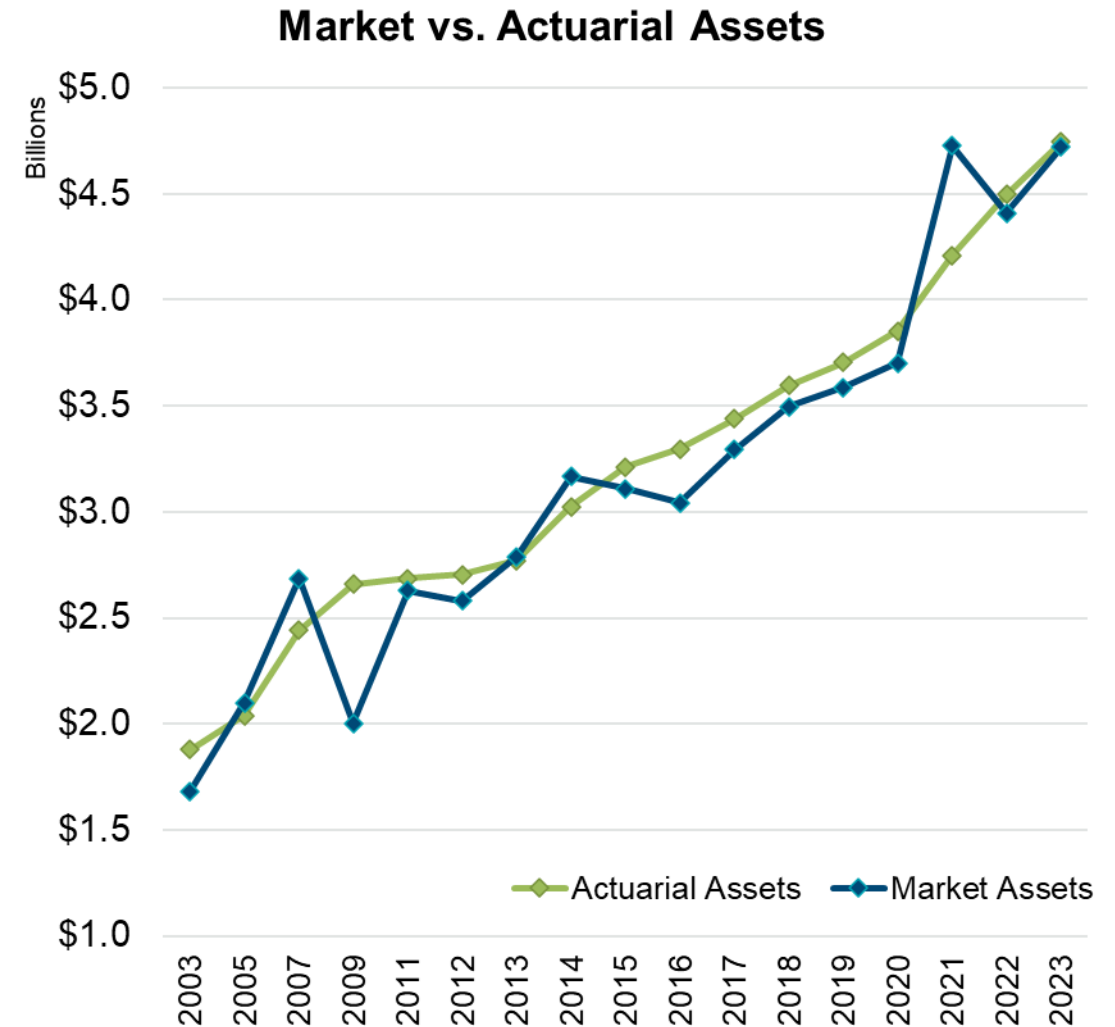
Asset Smoothing

Investment Gains and Losses

Deferred Investment Returns

Amortization Policy

- Amortization policy balances:
  - Period to return plan to 100% funded
  - Stability of contributions
- When combined with 5-year asset smoothing, it takes an additional 4 years to amortize an investment gain or loss
- Municipal Code splits payments
  - Tier 1: 100% City
 - Tier 2: 50% City / 50% Members

Amortization	"Model" Policy	Police & Fire
Type	Layered	Layered
Period		
Experience	15 – 20 Years	15 Years
Assumption Changes	15 – 25 Years	20 Years
Plan Changes	Demographics	Not Defined
Surplus	Long (e.g., 30 Years)	Not Defined
Payment Growth	0% to Payroll Growth Rate (3.0%)	Inflation Rate 2.5%

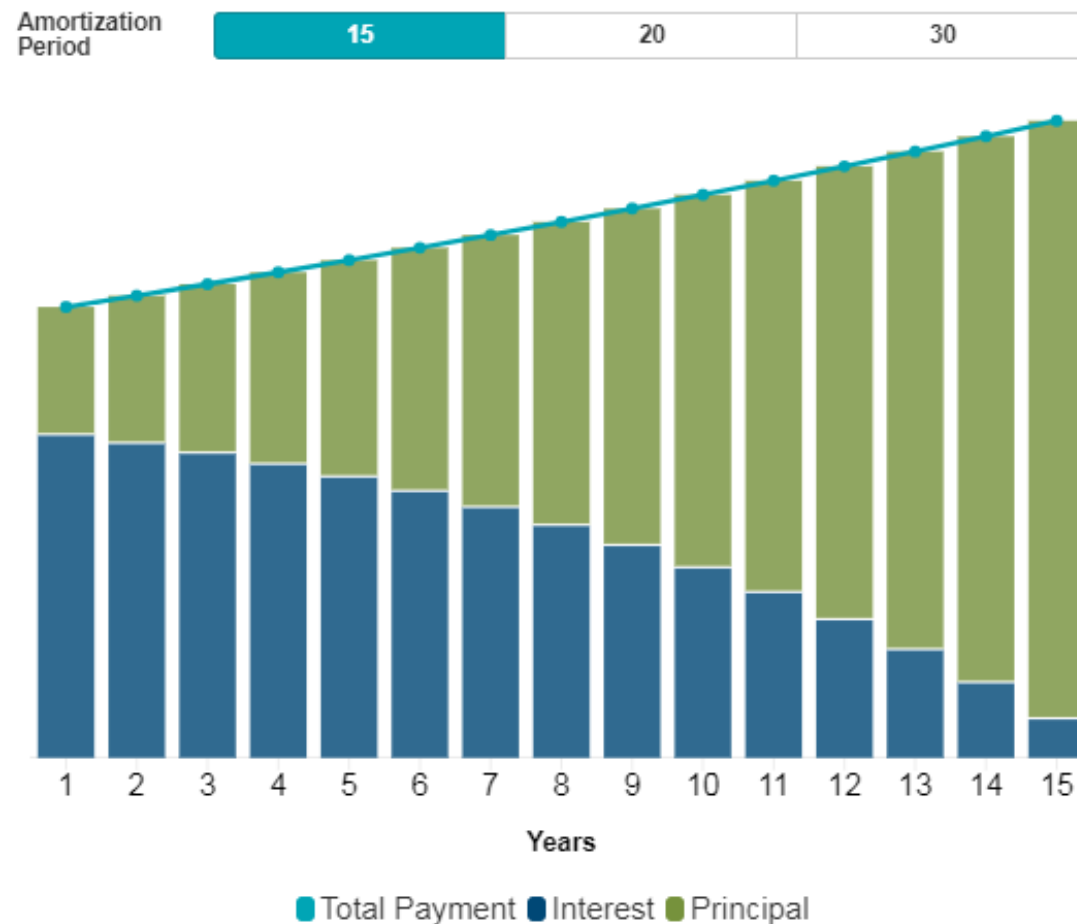Classic Values, Innovative Advice

Impact of Amortization Periods

Remaining Amortization Balance
2.5% Annual Payment Increase
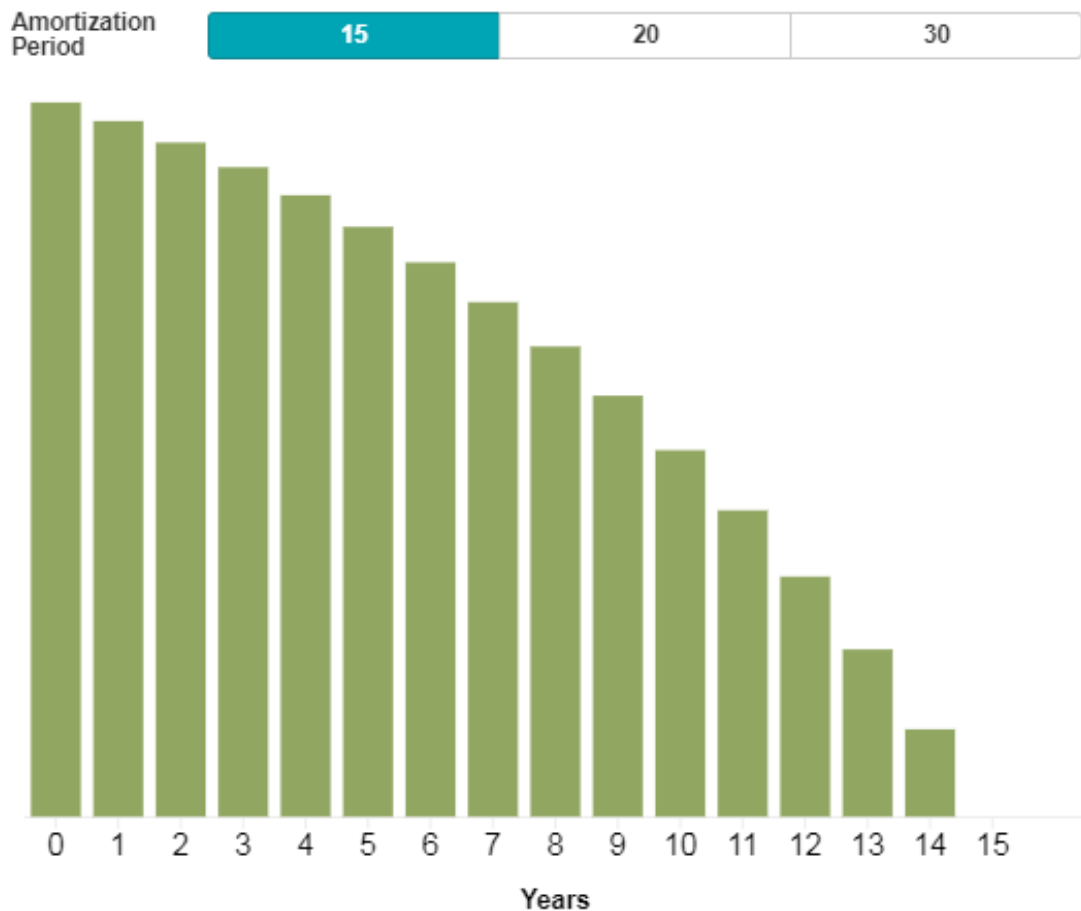
Amortization Payments
2.5% Annual Payment Increase

Classic Values, Innovative Advice
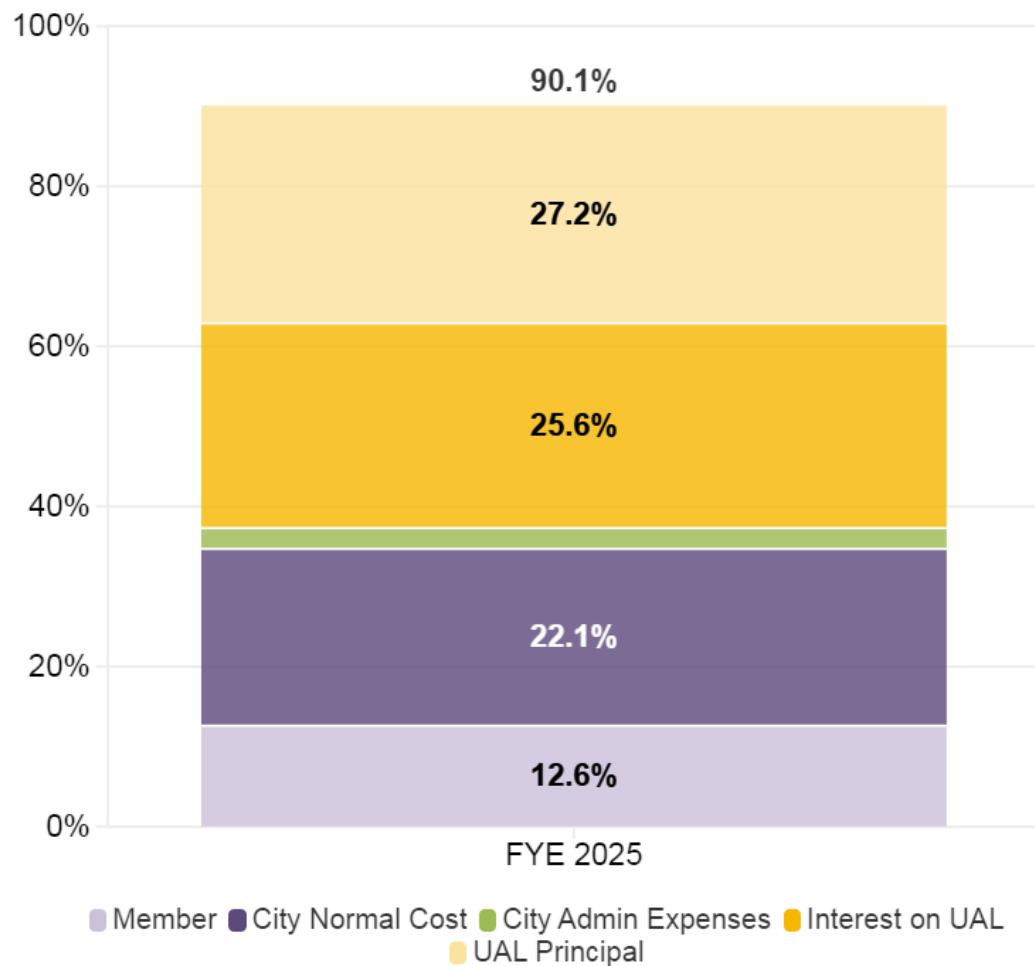
Layered Amortization Schedule

Tier 1 Amortization Payment Layers

All | 2023

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FYE 2025 Contribution Rates

90.1%

27.2%

25.6%

22.1%

12.6%

FYE 2025

Member · City Normal Cost · City Admin Expenses · Interest on UAL
UAL Principal
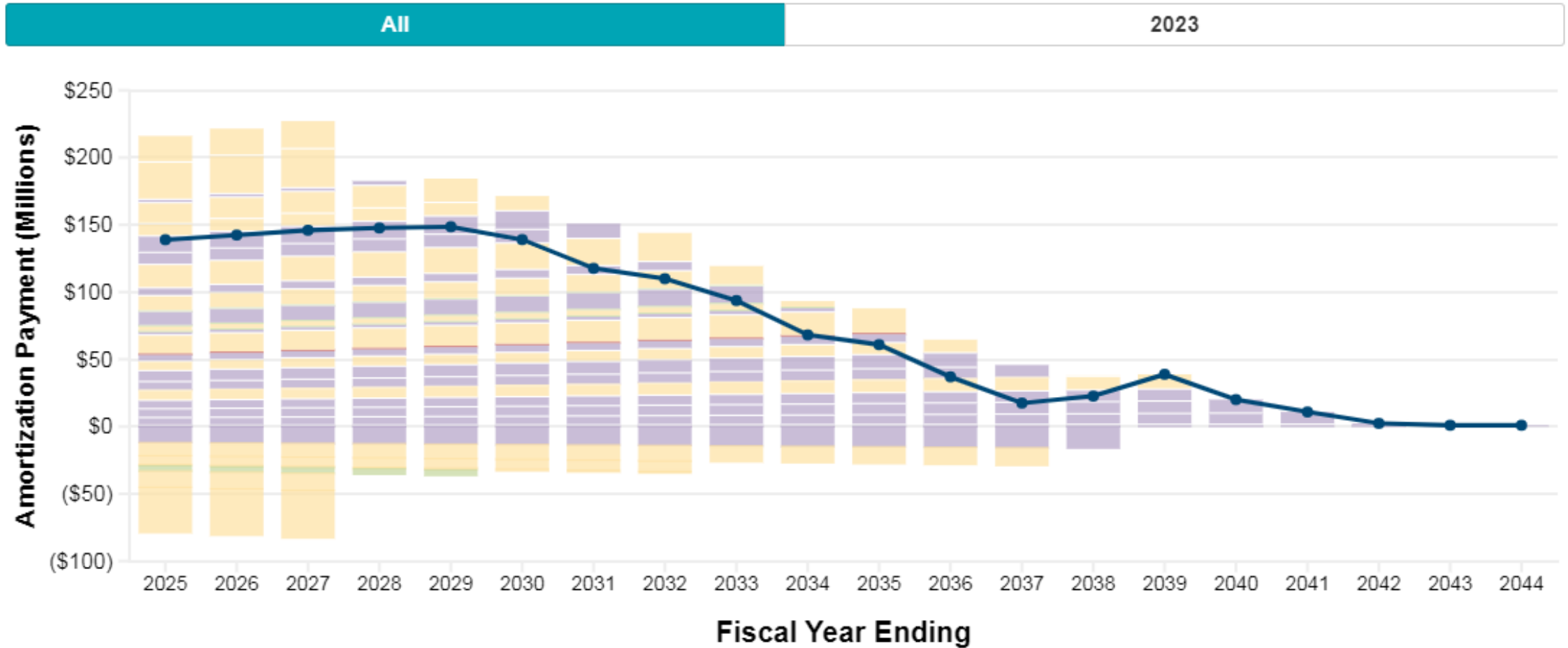
FYE 2025 Contribution Amounts

$252.3

$76.2

$71.8

$61.9

$35.3

FYE 2025

Member · City Normal Cost · City Admin Expenses · Interest on UAL
UAL Principal
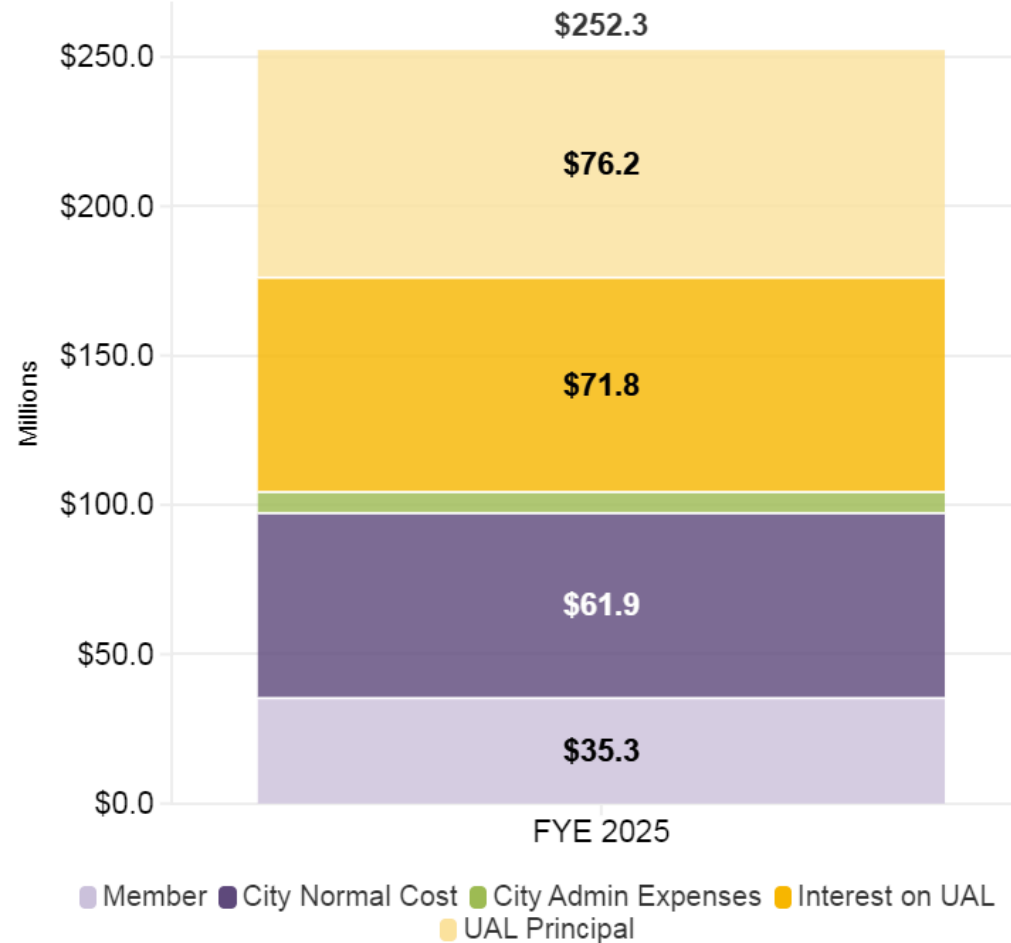
Funded Ratio vs. Interest Cost

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Changes in UAL

- Contribution policy is strong
  - Annual contributions pay normal cost, interest on the UAL, and substantial principal on the UAL
  - Contributions are high
- In 2007, the Plan was fully funded. The emergence of the UAL is primarily attributable to the following:
  - Lower investment returns than assumed
  - Reductions in assumed investment returns and other assumption changes
- Reasonable assumptions are critical for maintaining costs at expected levels
  - Maintain a neutral to conservative bias in selecting assumptions

- The purpose of this presentation is to provide education about actuarial funding policies for the trustees of the City of San José Police and Fire Department Retirement Plan.

- In preparing our presentation, we relied on information (some oral and some written) supplied by the City of San José Department of Retirement Services. This information includes, but is not limited to, the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23. A summary of the data, assumptions, methods, and plan provisions used to prepare the valuation can be found in the June 30, 2023 actuarial valuation report.

- Future actuarial measurements may differ significantly from the current measurements due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions, changes in economic or demographic assumptions, and changes in plan provisions or applicable law.

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

- This presentation was prepared exclusively for the City of San José Police and Fire Department Retirement Plan for the purpose described herein. This presentation is not intended to benefit any third party, and Cheiron assumes no duty or liability to any such party.

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

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

- Cheiron utilizes ProVal actuarial valuation software leased from Winklevoss Technologies (WinTech) to calculate liabilities and project benefit payments. We have relied on WinTech as the developer of ProVal. We have a basic understanding of ProVal and have used ProVal in accordance with its original intended purpose. We have not identified any material inconsistencies in the 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.