

# Pension Funding

Austin, TX

December 6, 2023



# Agenda

## Pension Basics

- How are pensions funded?
- How to speak like an actuary

## Historical Information

- Review key metrics impacting pension funding

## Projections

- Where are we going?
- Looking at projections on a plan by plan basis

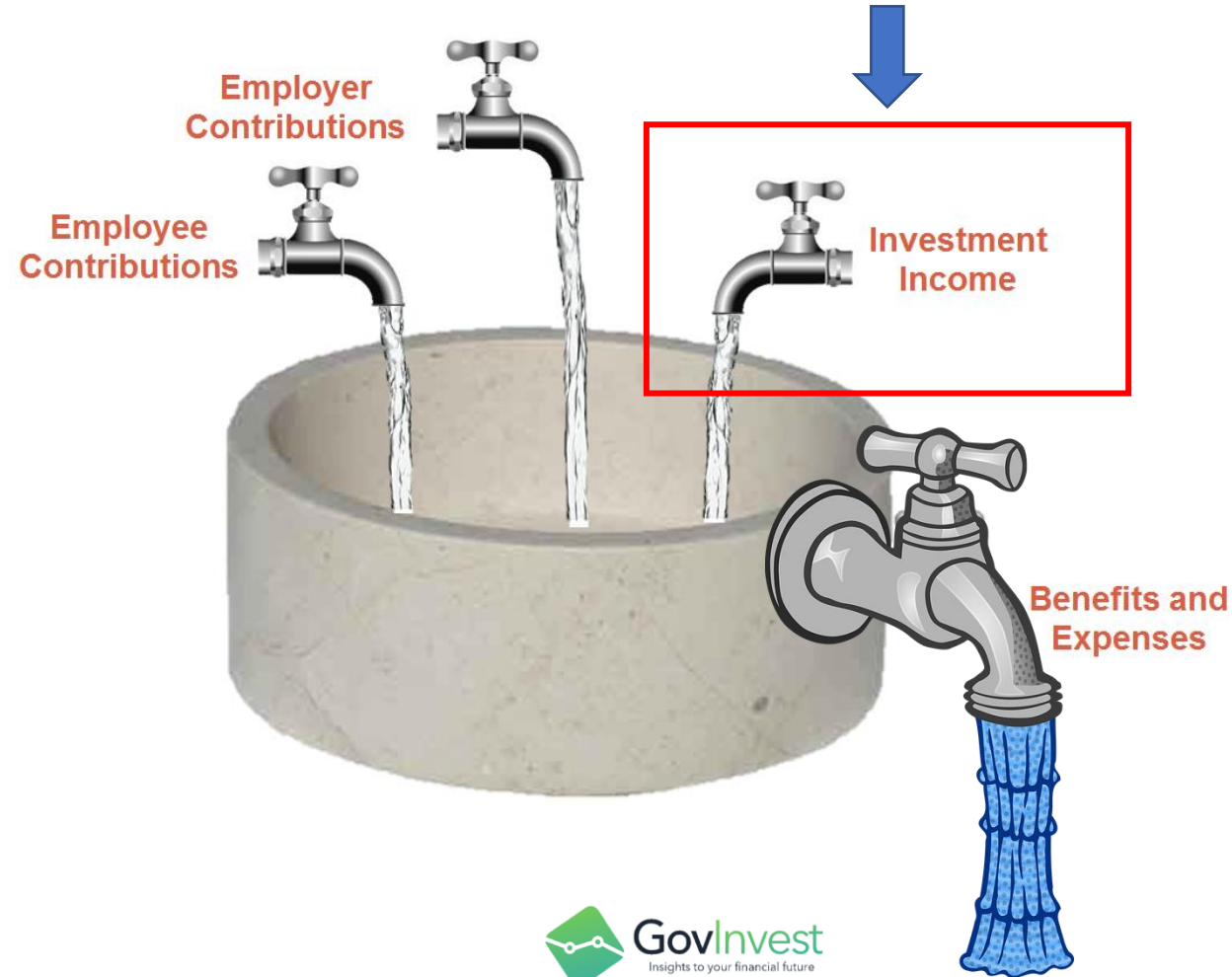
# Pension Basics

How do pension plans work?

# Money going into the Pension Fund is equal to the Money coming out of the Pension Fund

Major Driver of  
Plan Cost

## Funding a Pension Plan

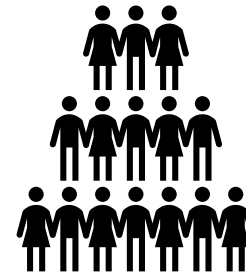


# The Actuary Projects Future Benefit Payments using a Series of Assumptions



## Economic

- Inflation
- Investment Return
- Salary Growth



## Demographic

- Retirement
- Disability
- Death
- Termination

# Pension Terminology

# Normal Cost

- The Plan's Normal Cost is the value of benefits attributed to the current year.
- Normal Cost is designed to be a level percentage of pay for each active employee.
- Normal Cost is based on:
  - The plan's actuarial assumptions
  - The benefit earned
  - The age at which the employee is hired
  - The employee's pay
  - Employee contributions (subtracted from Total Normal Cost)

# Actuarial Accrued Liability

- The Plan's Actuarial Accrued Liability is the value of benefits attributed to past service.
- Normally, Actuarial Accrued Liability
  - Increases due to benefits accrued and interest earned, and
  - Decreases due to benefits paid during the year
- Actuarial Accrued Liability also reflects
  - Changes in actuarial assumptions
  - Differences between actual experience and actuarial assumptions



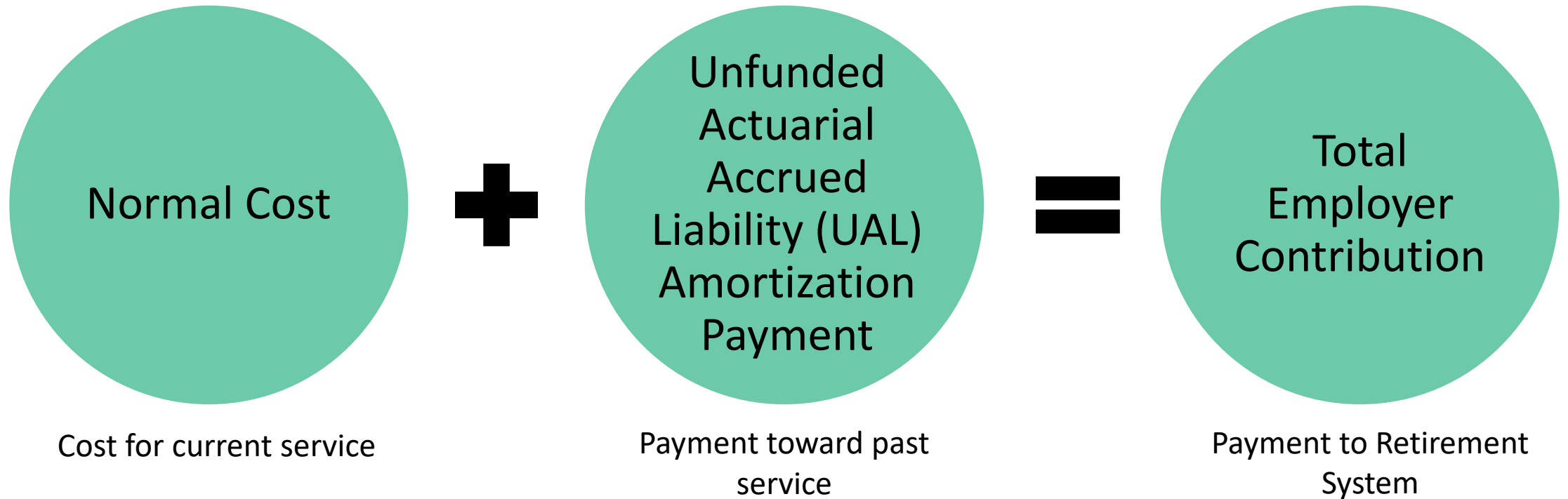
# Unfunded Actuarial Accrued Liability

- The Plan's Unfunded Actuarial Accrued Liability is the difference between the Actuarial Accrued Liability and the Actuarial Value of Assets.
- This is the portion of past liability not yet funded.
- In addition to the changes in Actuarial Accrued Liability, Unfunded Actuarial Accrued Liability reflects changes in asset values different than expected:
  - Investment return different than assumed
  - Contributions other than the Actuarially Recommended Contribution

# Amortization Period

- The number of years needed to pay off the Unfunded Actuarial Accrued Liability.

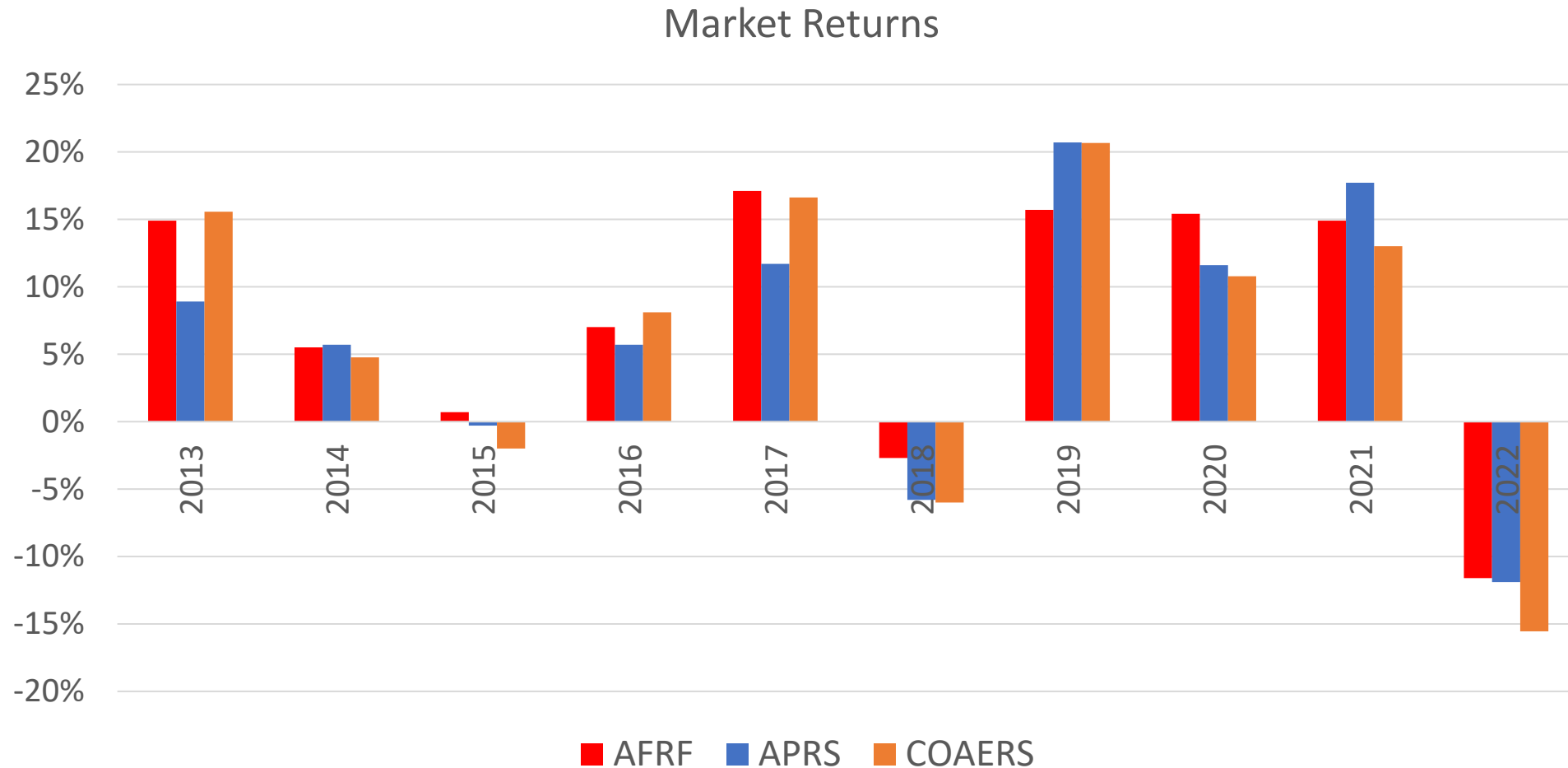
# Actuarially Determined Contribution



# Historical Data

Where have we been?

# Investment Return – Market Value Basis



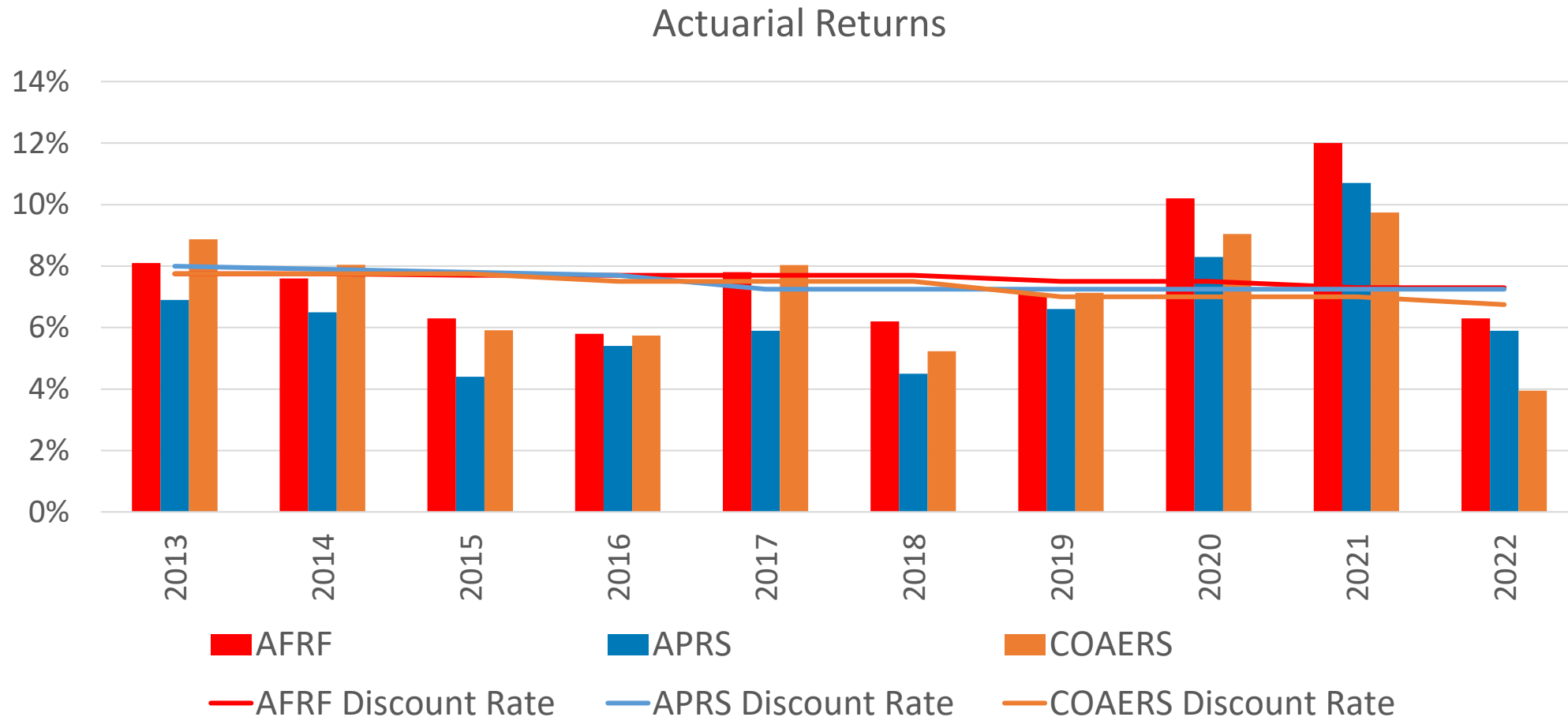
# Average Investment Return through December 31, 2022

	Net Rolling Rate of Return		
	AFRF	APRS	COAERS
1 Year	-10.78%	-11.54%	-15.58%
3 Year	5.80%	5.14%	1.86%
10 Year	7.57%	6.27%	6.02%

# Asset Smoothing

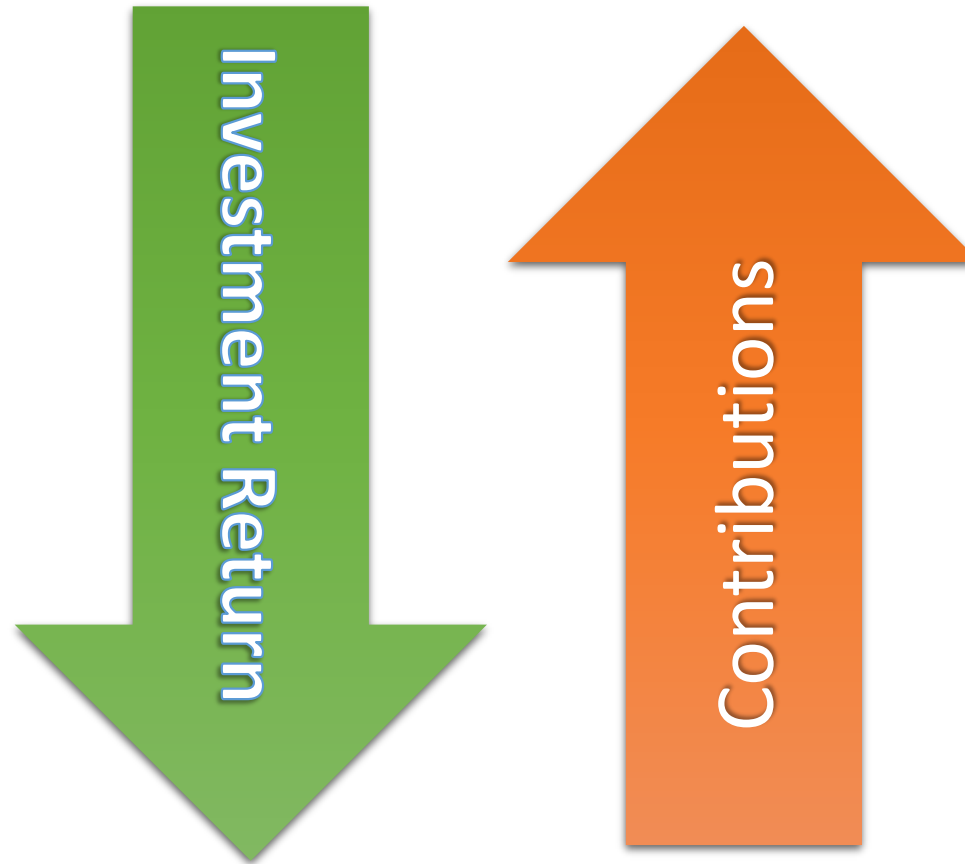
- Investment volatility is the most significant source of volatility in a Plan's funded percentage and the City's Actuarially Determined Contribution on a year-to-year basis.
- In order to lower the volatility of these measures, many actuaries recognize investment returns different than those assumed over a short period of time, typically 5 years.
- The Actuarial Value of Assets is the asset value used to determine the Plan's Unfunded Actuarial Accrued Liability and the City's Actuarially Determined Contribution.

# Investment Return – Actuarial Value Basis

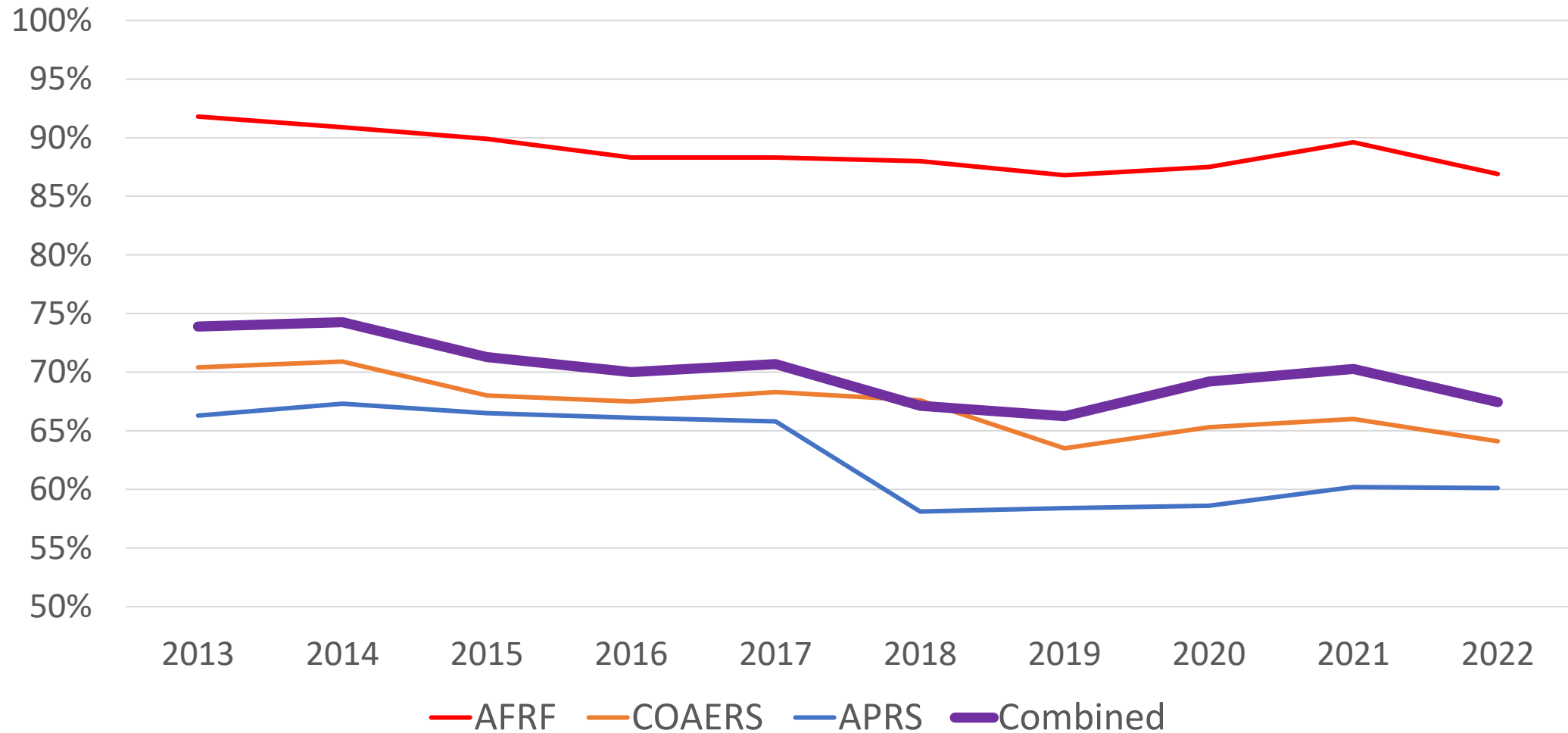




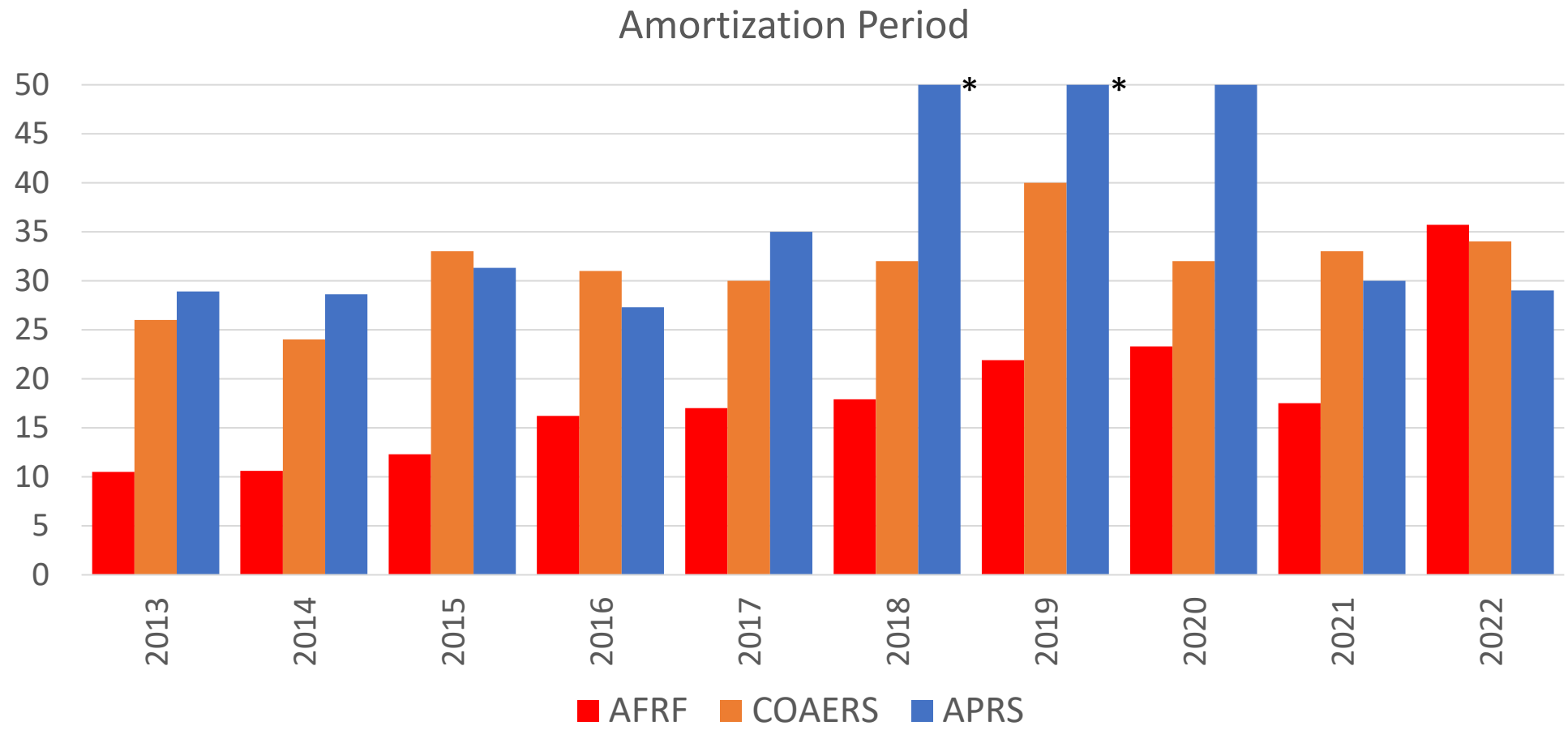
# Less Money from Investment Return means More Money Required from Contributions



# Funded Percentage



# Amortization Period



\*APRS years 2018 & 2019 have infinite remaining amortization periods due to insufficient funding to fully fund the plan

# Projections

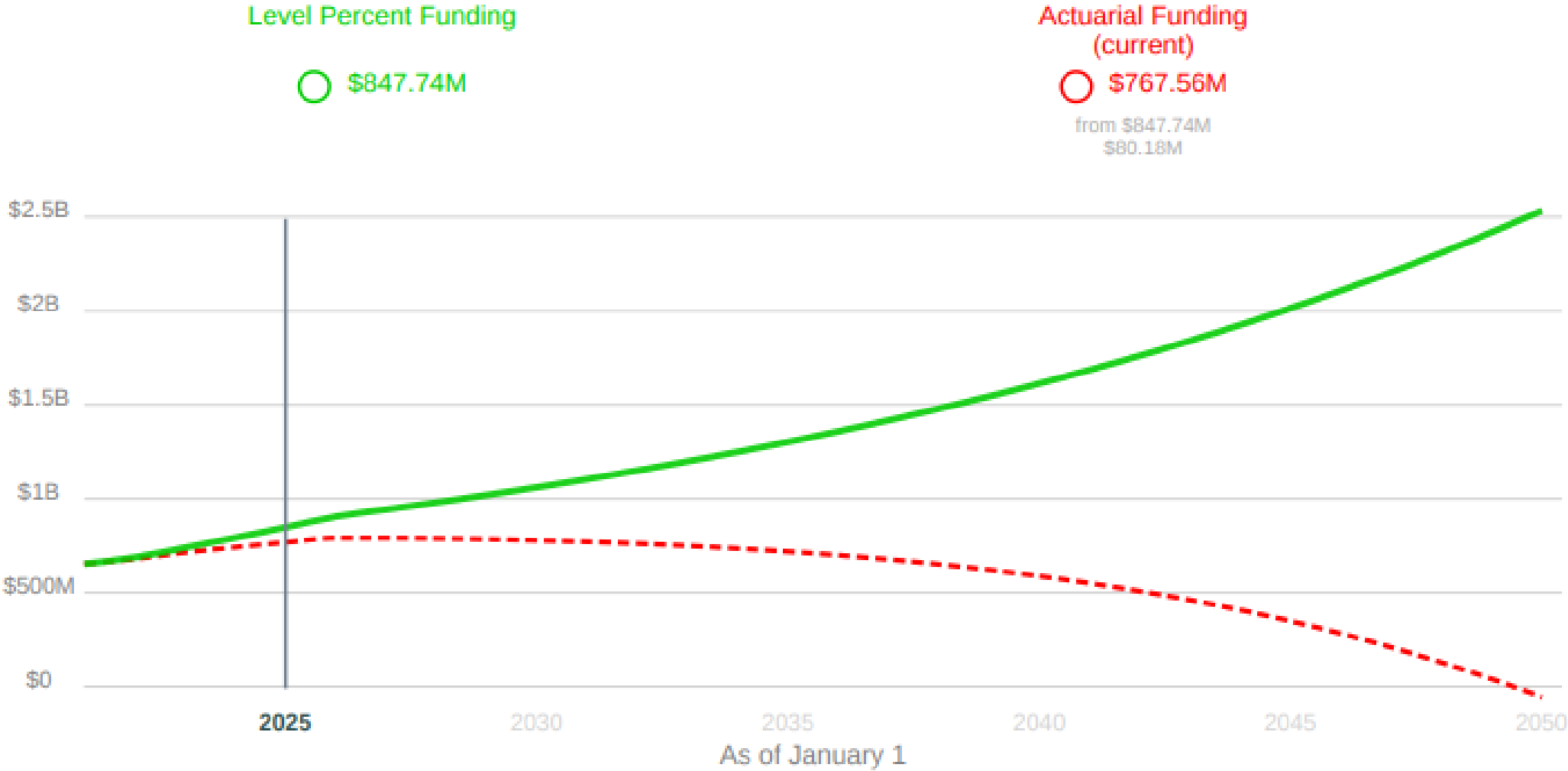
For each Plan, where are we going?

# Austin Police Retirement System (APRS)

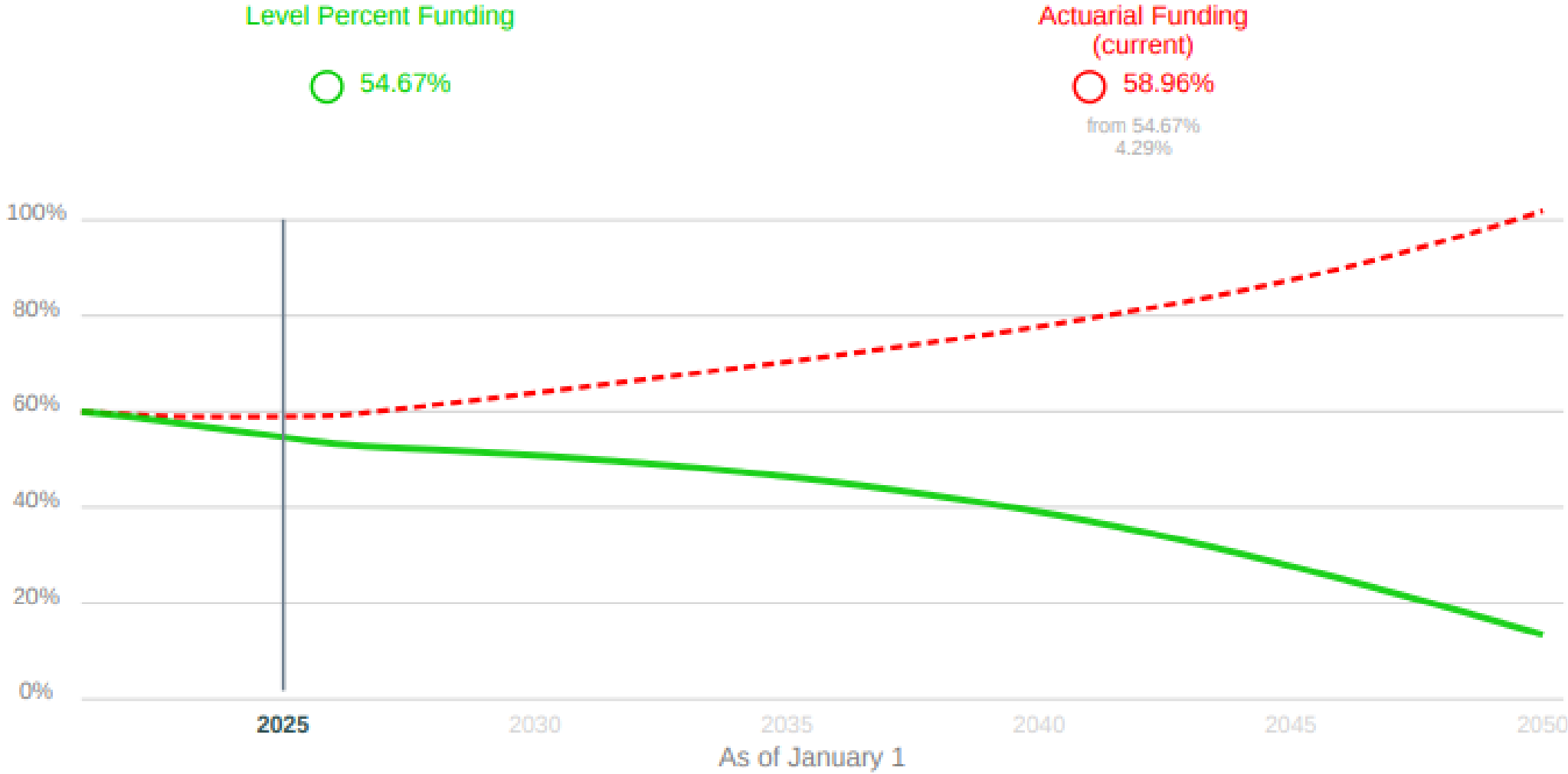
# APRS Contributions

- City Contributions
  - City previously paid 21.313% of pensionable compensation
  - Switch to Actuarial Funding approach beginning in 2021
- Employee Contributions
  - Currently 15% of pay

# APRS: Unfunded Actuarial Accrued Liability

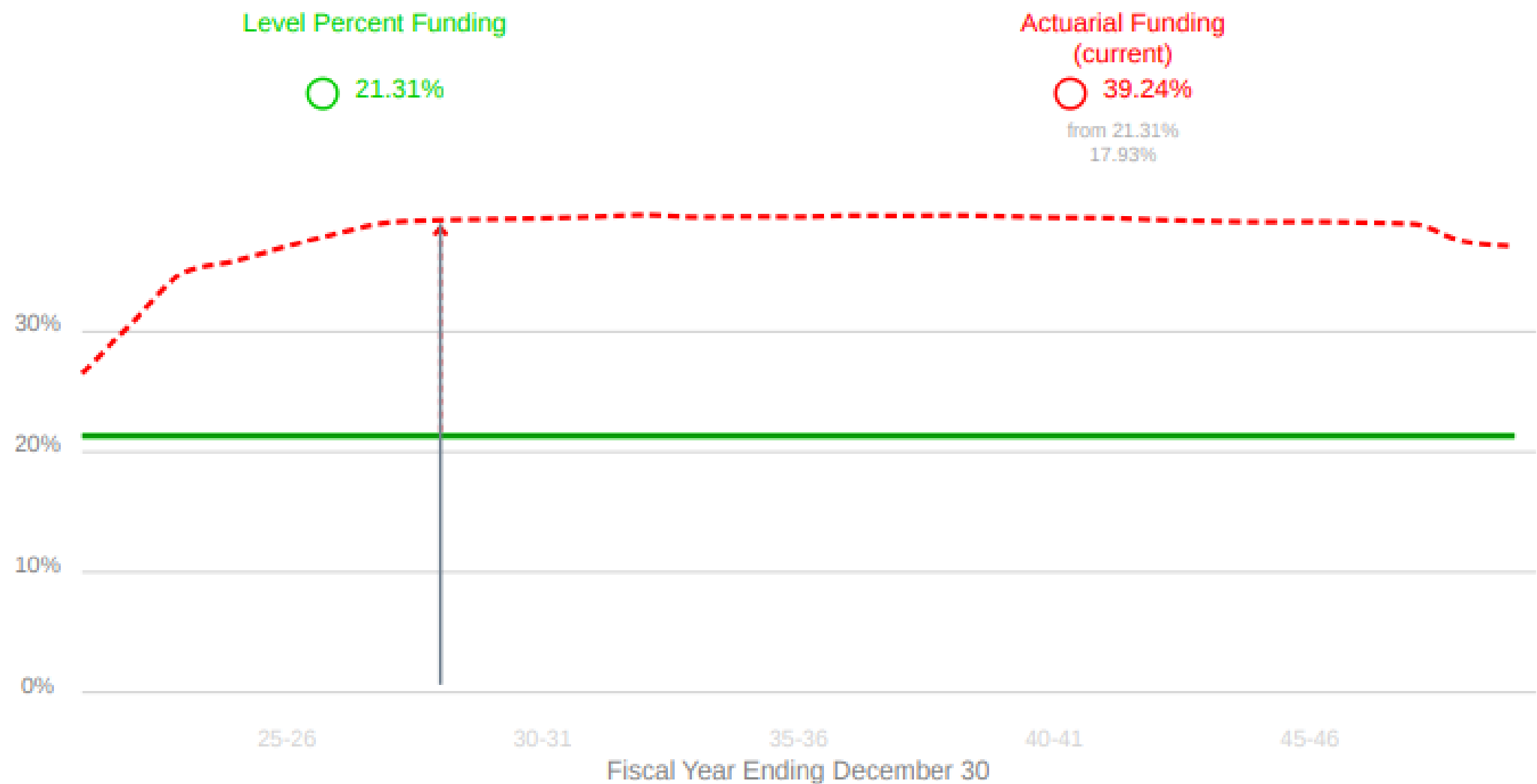


# APRS: Funded Percentage

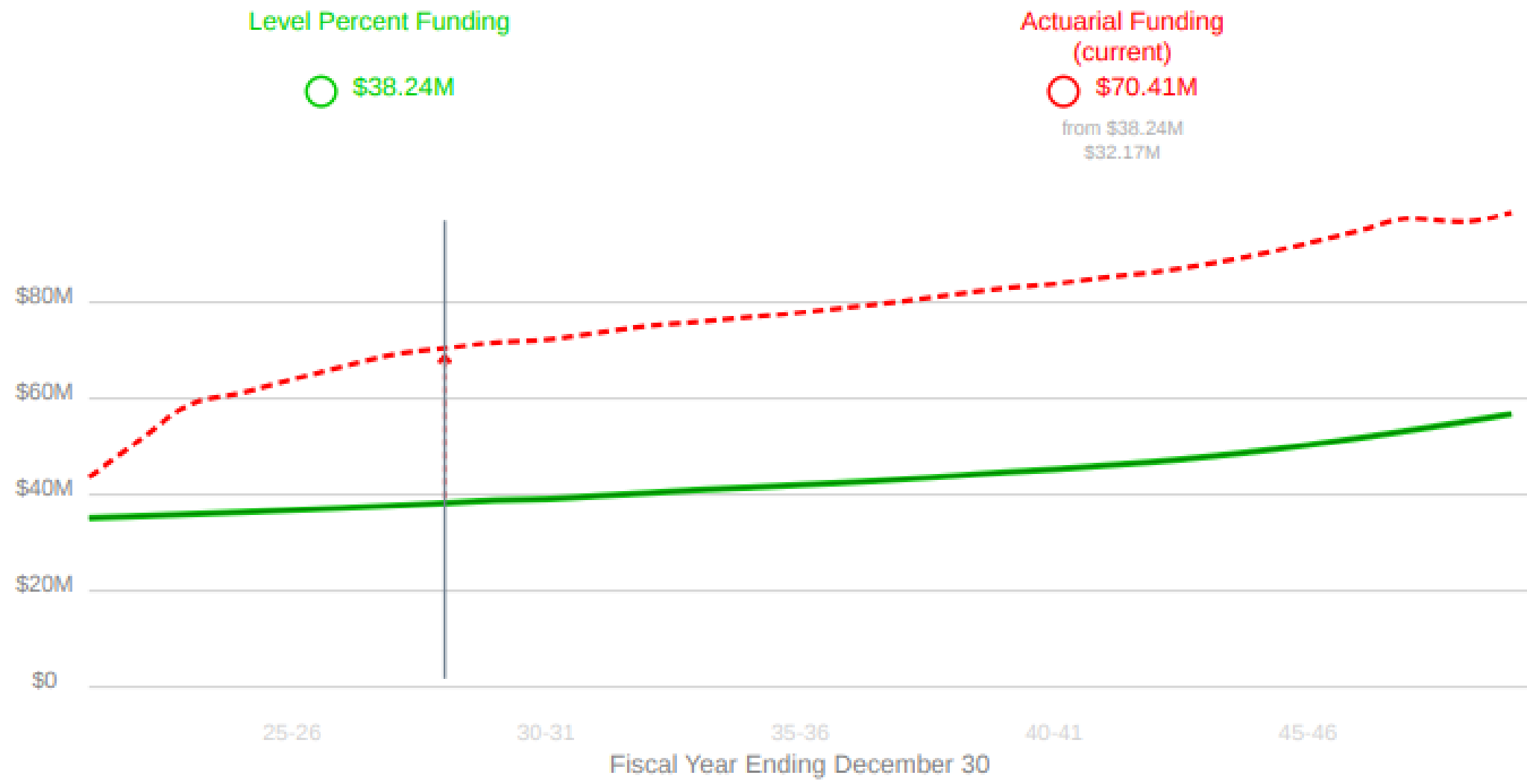




# APRS: Employer Contribution (Percent)



# APRS: Employer Contribution (Dollars)

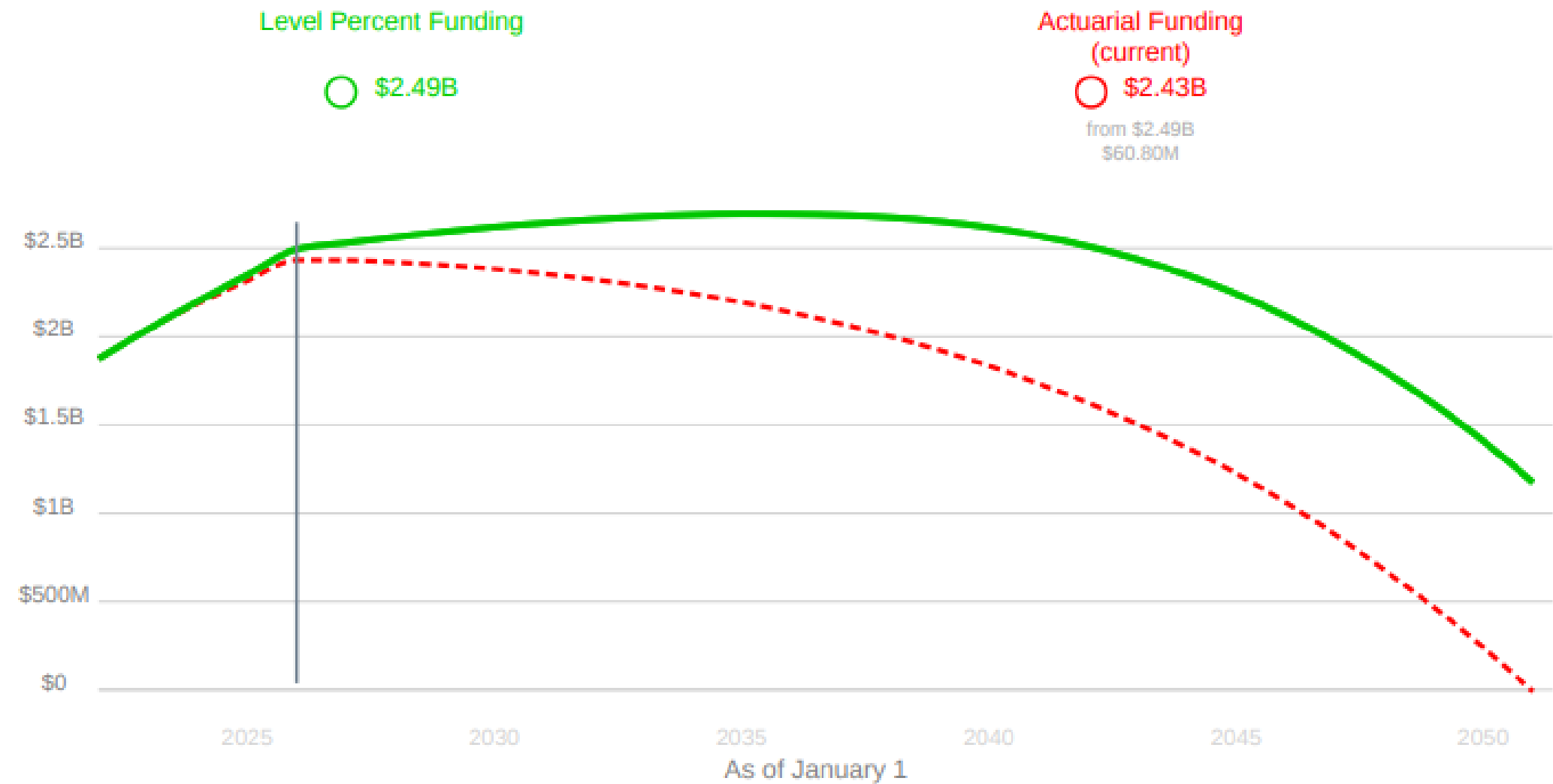


# City of Austin Employees' Retirement System (COAERS)

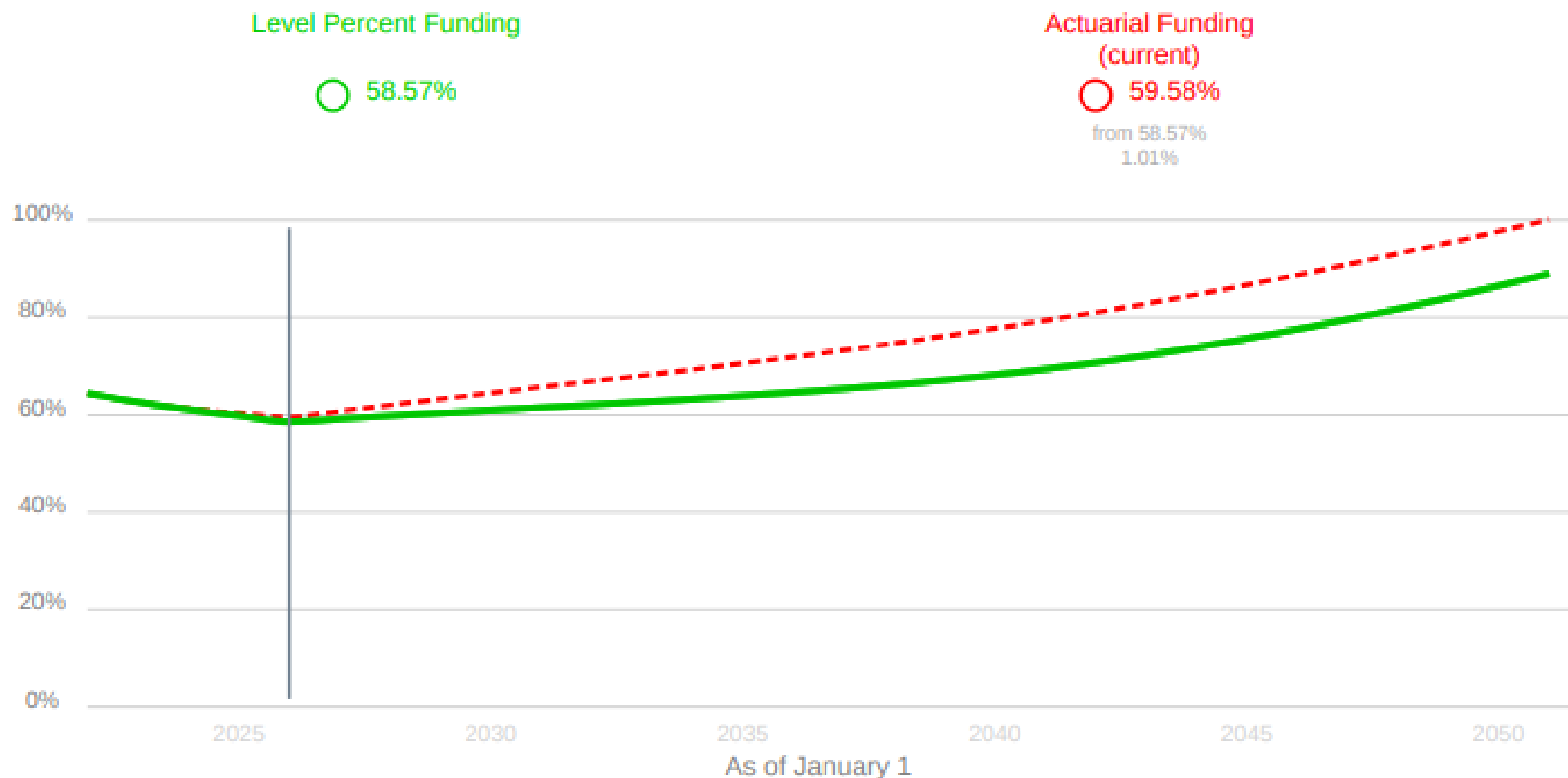
# COAERS Contributions

- City Contributions
  - City pays 19% of pensionable compensation
  - Will switch to Actuarial Funding approach January 1, 2024
- Employee Contributions
  - Currently 8% of pay
  - Effective January 1, 2024: 9% of pay
  - Effective January 1, 2025: 10% of pay

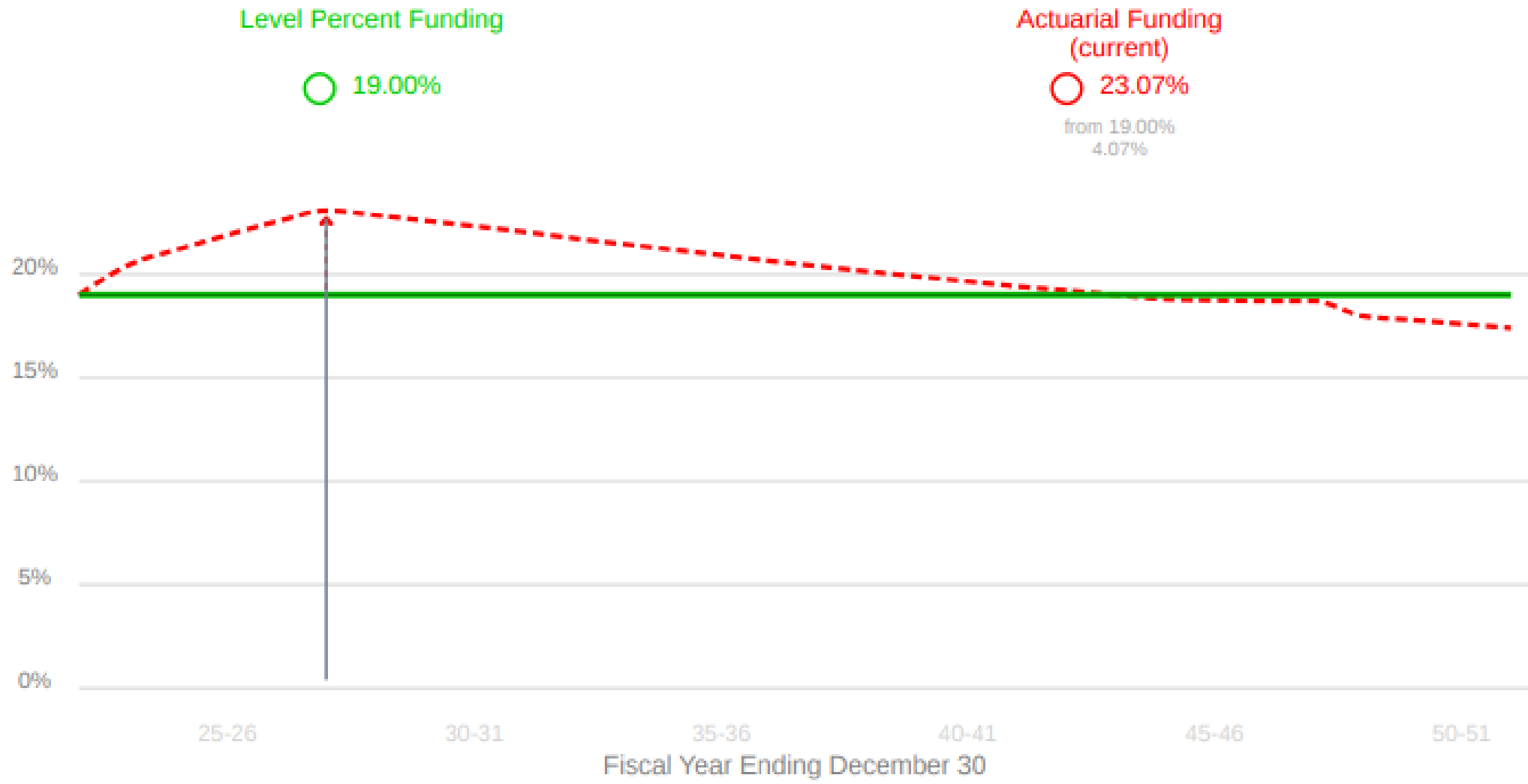
# COAERS: Unfunded Actuarial Accrued Liability



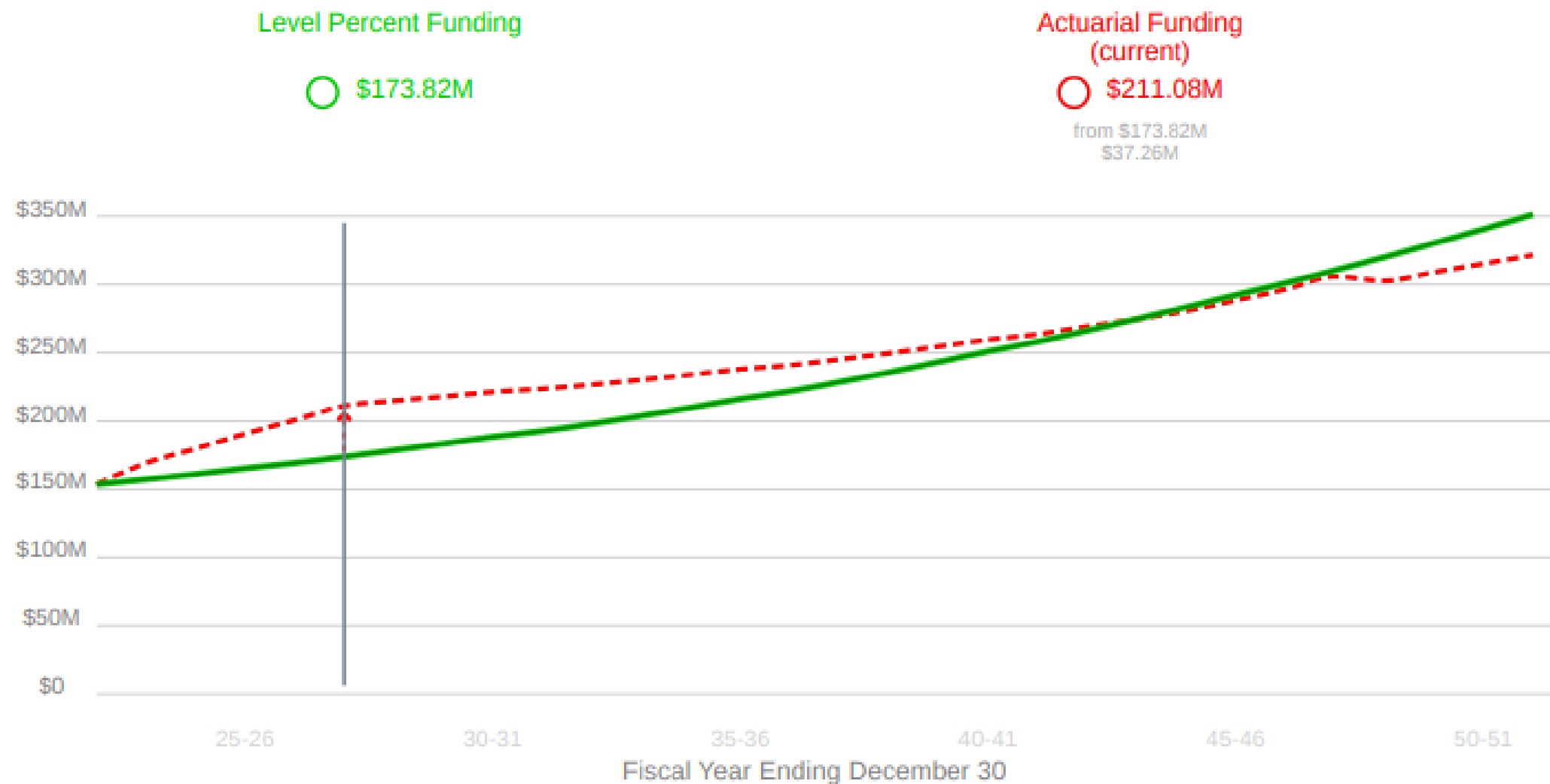
# COAERS: Funded Percentage



# COAERS: Employer Contribution (Percent)



# COAERS: Employer Contribution (Dollars)



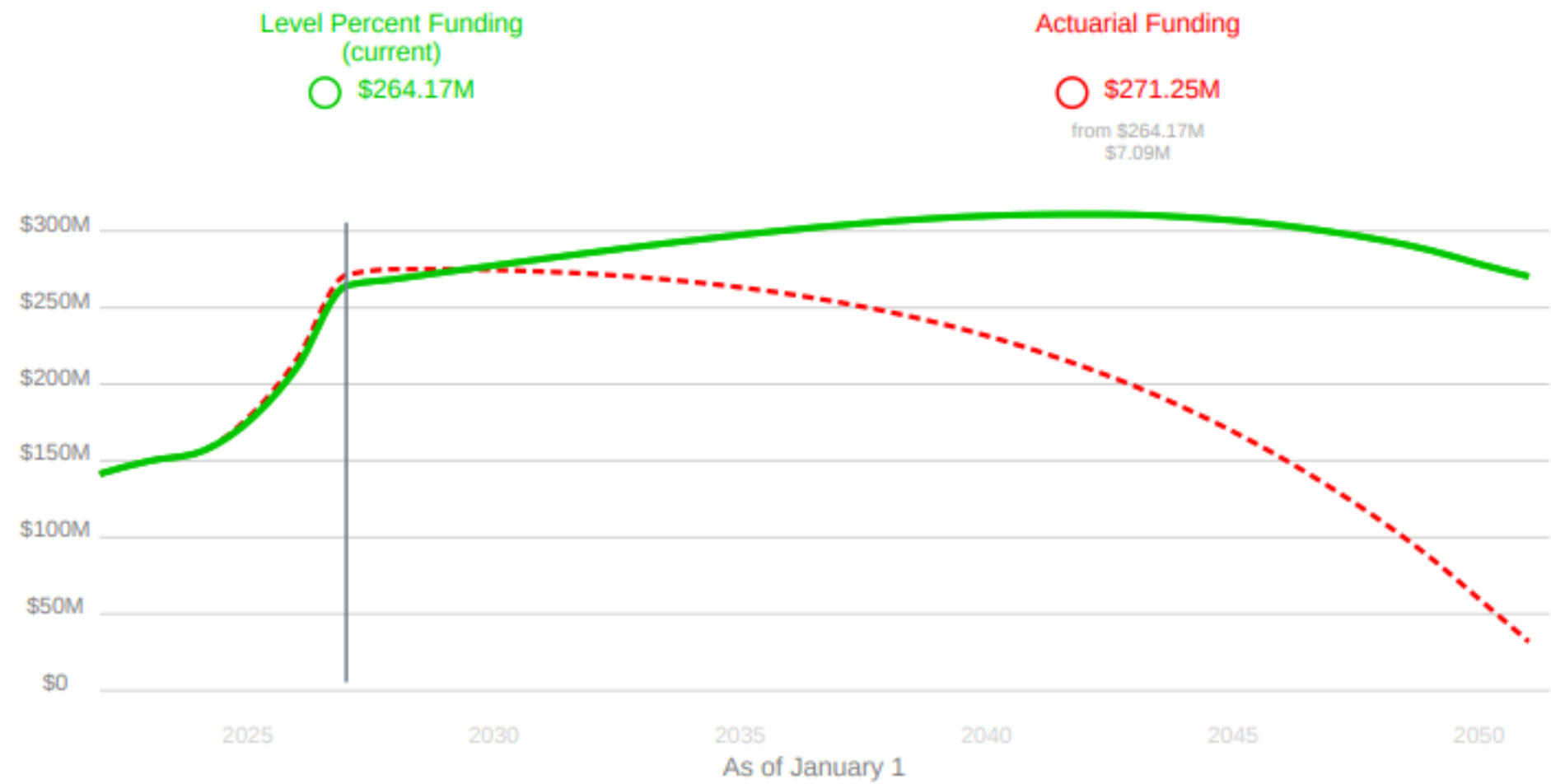


# Austin Firefighters Retirement Fund (AFRF)

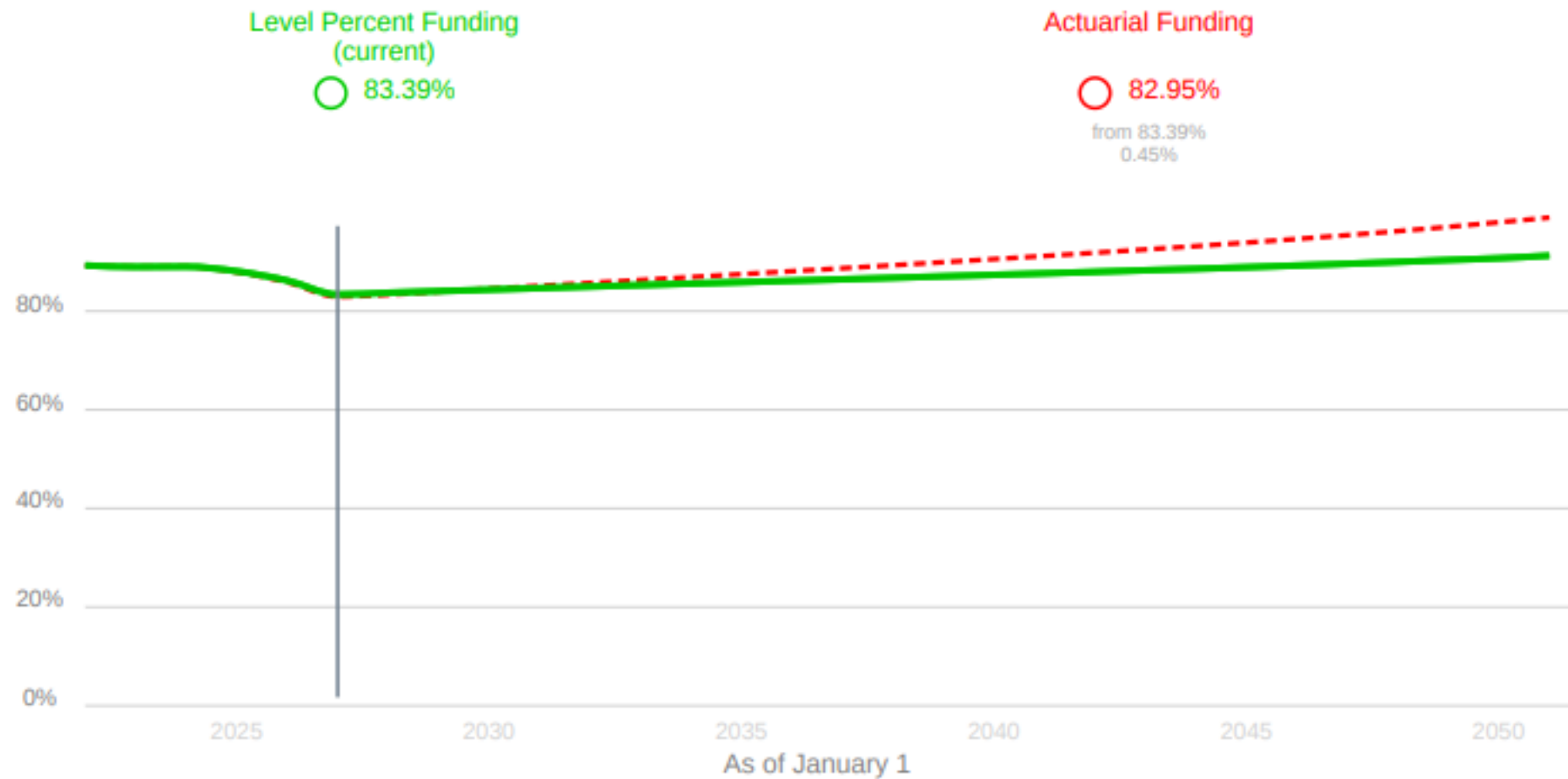
# AFRF Contributions

- City Contributions
  - City pays 22.05% of pensionable compensation
- Employee Contributions
  - Currently 18.7% of pay
- No current agreement to go to actuarial funding
- For illustrative purposes only, we show what funding would be like if an actuarial funding approach similar to that adopted for COAERS and APRS would look like

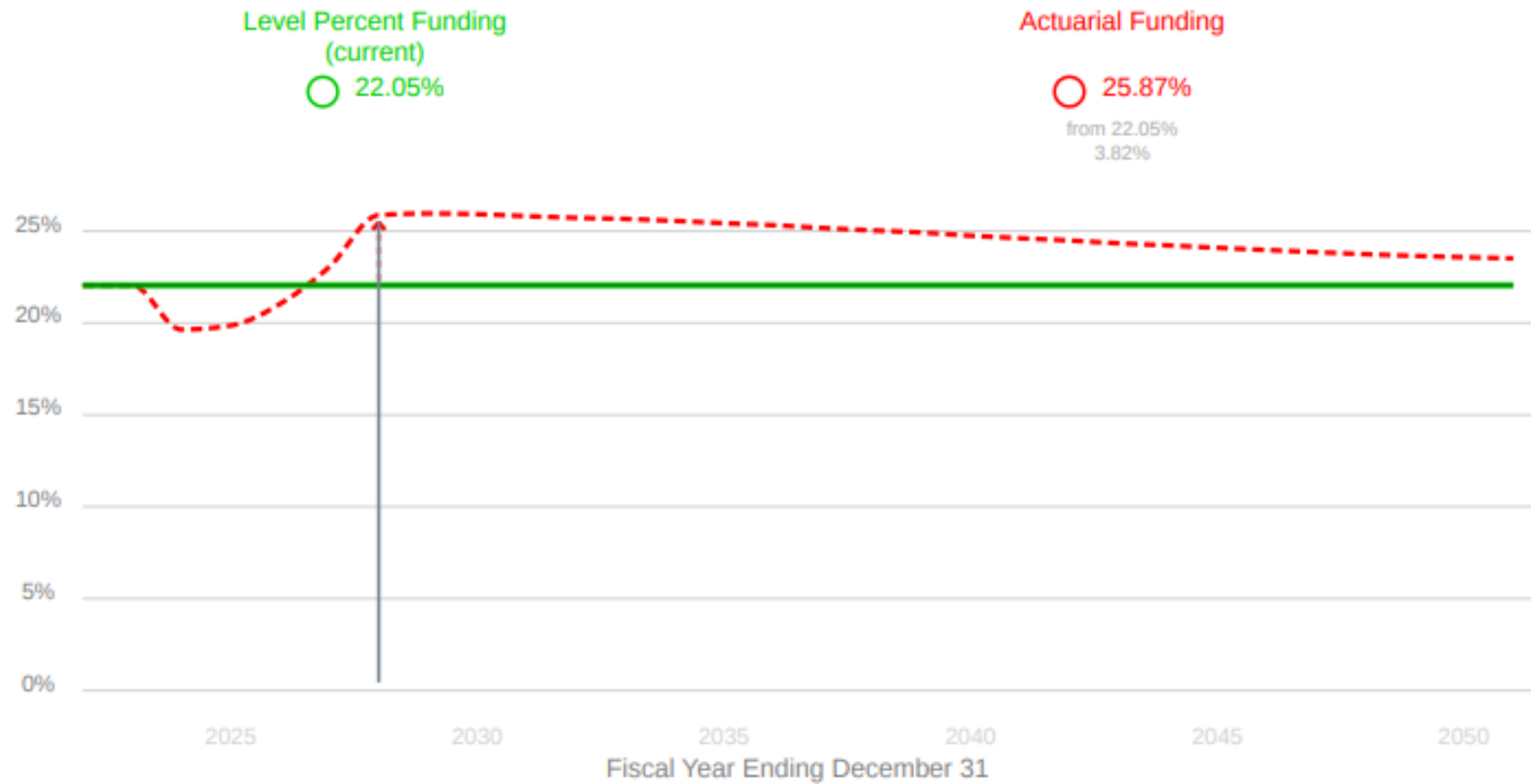
# AFRF: Unfunded Actuarial Accrued Liability



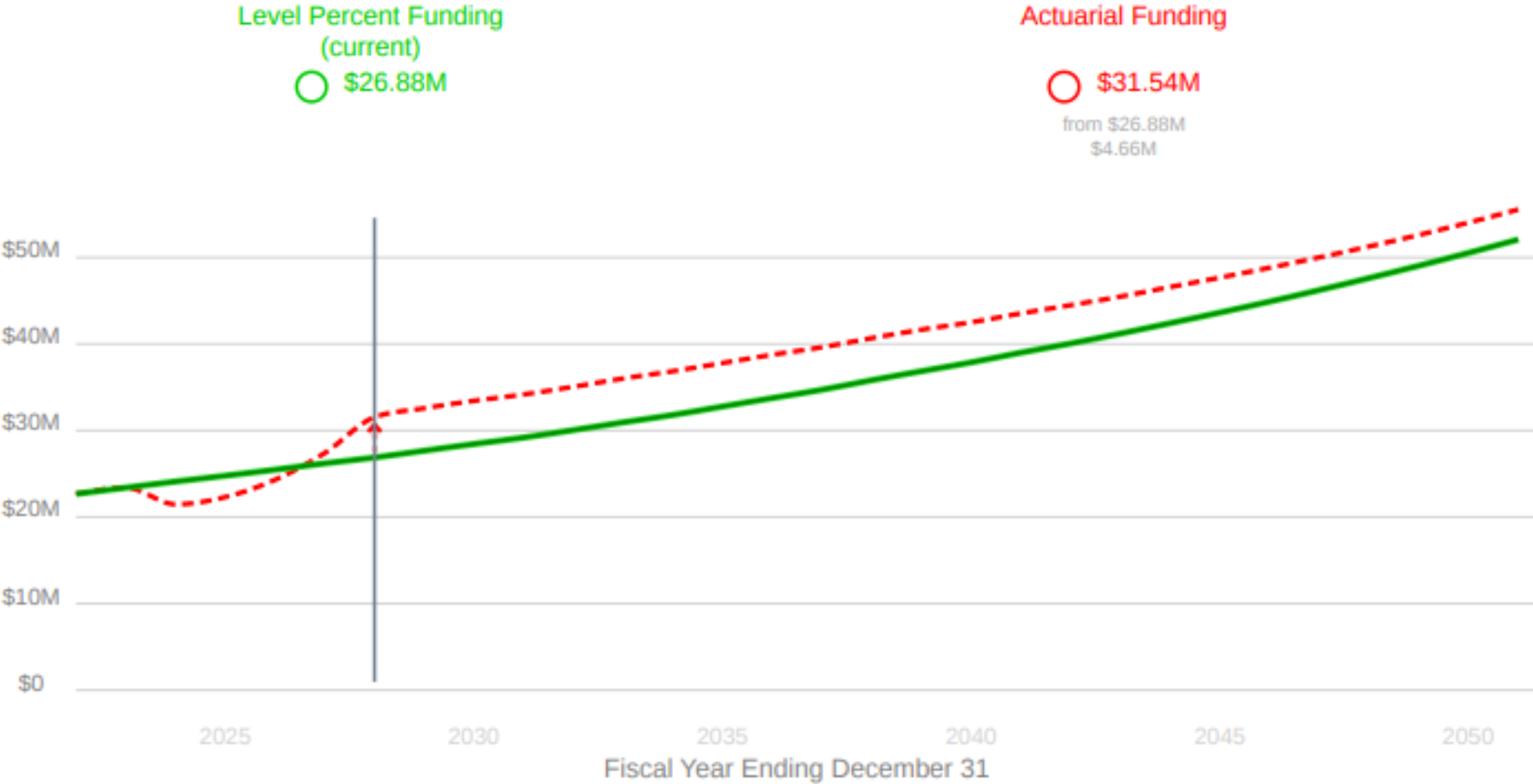
# AFRF: Funded Percentage



# AFRF: Employer Contribution (Percent)



# AFRF: Employer Contribution (Dollars)



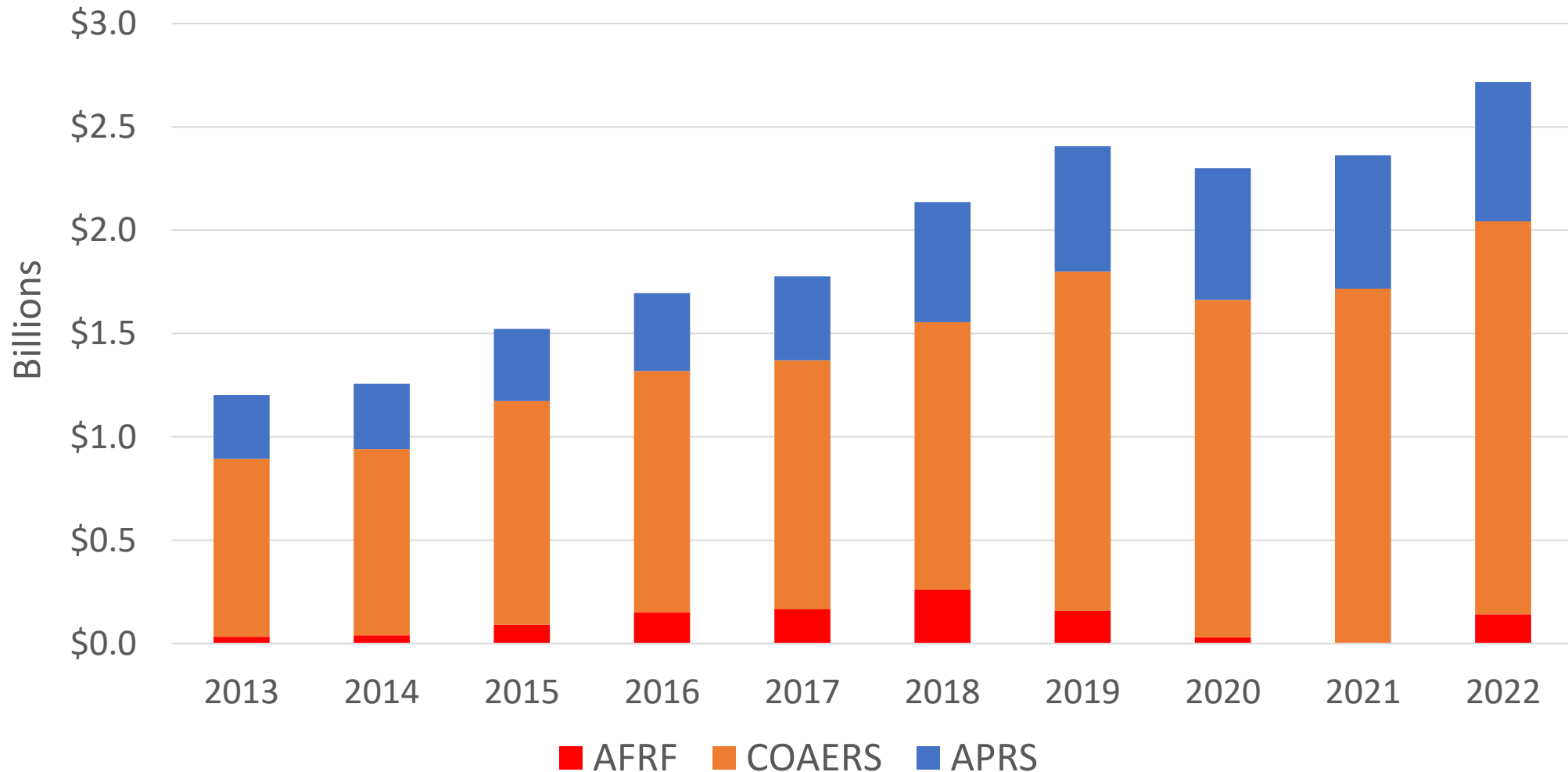
# Questions

# Additional Information

Additional graphs, tables and information



# City's Total Unfunded Actuarial Accrued Liability



# Plan Membership as of December 31, 2022

	Active	Retirees	Other	Total
<b>AFRF</b>	1,175	756	197	2,128
<b>COAERS</b>	10,438	7,530	1,529	19,497
<b>APRS</b>	1,633	1,258	157	3,048
<b>Total</b>	13,246	9,544	1,883	24,673

Membership information from December 31, 2022 actuarial valuation reports

# Key Economic Assumptions as of December 31, 2022

	Discount Rate	Salary Growth	Inflation	Amortization Period
AFRF	7.3%	2.5%	3.0%	35.7
COAERS	6.75%	3.5%	2.5%	34
APRS	7.25%	3.0%	2.5%	29

# Starting Point of Analysis

- We received the plan participant data, and asset information, that was used by the actuaries for each of the pension plan in their December 31, 2021 actuarial valuations.
- Each pension plan's results were rolled forward one year based on
  - Actual 2022 investment return for each plan,
  - Actual average pay increases for active employees in each plan, and
  - Demographic experience matches the Plans' actuarial assumptions
  - There were no changes in benefit levels or eligibility
  - The number of active employees in each plan remains the same
  - The City made a contribution to each plan each year as required

# Projection Methodology

- The valuation results were projected forward assuming:
  - Future economic experience matches the Plans' actuarial assumptions
  - Future demographic experience matches the Plans' actuarial assumptions
  - There are no future changes in benefit levels or eligibility
  - The number of active employees in each plan remains the same
  - The City makes a contribution to each plan each year as required

# APRS Contribution Methodology

- Calculate Actuarially Determined Contribution (ADC)
  - Employer Normal Cost = Total Normal Cost less Employee Contributions
  - Total Unfunded Actuarial Accrued Liability (UAL) reduced by Legacy UAL
  - New UAL Payments = New UAL amortized over 30 years
  - $ADC = \text{Employer Normal Cost} + \text{New UAL Payments}$
- Determine Employer Contribution
  - ADC compared to contribution corridor to get Adjusted ADC
    - City will pay the greater of midpoint or ADC, but no more than maximum
  - Legacy Amortization Period: Originally set at 30 years, reducing by one each year
  - $\text{Total Employer Contribution} = \text{Adjusted ADC} + \text{Legacy Amortization Payment}$

# COAERS Contribution Methodology

- Calculate Actuarially Determined Contribution (ADC)
  - Employer Normal Cost = Total Normal Cost less Employee Contributions
  - Total Unfunded Actuarial Accrued Liability (UAL) reduced by Legacy UAL
  - New UAL Payments = New UAL amortized over greater of 20 years or remaining period of Legacy UAL payments
  - $ADC = \text{Employer Normal Cost} + \text{New UAL Payments}$
- Determine Employer Contribution
  - ADC compared to contribution corridor to get Adjusted ADC
    - City will pay the greater of midpoint or ADC, but no more than maximum
  - Legacy Amortization Period: Originally set at 30 years, reducing by one each year
  - $\text{Total Employer Contribution} = \text{Adjusted ADC} + \text{Legacy Amortization Payment}$



# Disclaimer

While tested against actuarial valuation results, the software results will not necessarily match actuarial valuation results, as no two actuarial models are identical. The software offers financially sound projections and analysis; however, outputs do not guarantee compliance with standards under the Government Accounting Standards Board or Generally Accepted Accounting Principles. The software and this presentation are not prepared in accordance with standards as promulgated by the American Academy of Actuaries, nor do outputs or this presentation constitute Statements of Actuarial Opinion. GovInvest has used census data, plan provisions, and actuarial assumptions provided by Customer and/or Customer's actuary to develop the software for Customer. GovInvest has relied on this information without audit.