Via Electronic Mail

November 13, 2023

Board of Trustees
Austin Firefighters Retirement Fund
4101 Parkstone Heights Drive, Suite 270
Austin, Texas 78746

Re: Austin Firefighters Retirement Fund
2024 COLA Adjustment Analysis

Dear Board:

As requested by the Board, Cheiron has completed the Cost-of-Living Adjustment (COLA) analysis for the 2024 calendar year. To fulfill this requirement, the Board adopted the attached COLA Adjustment Policy, which sets forth the criteria that must be satisfied prior to any COLAs being granted.

As stated in Section VII of the Fund Rules, the Collective Adjustment Amount is to be based on the increase in the CPI-U for the 12-month period ending on September 30. We have determined that the increase in the CPI-U for this period ending September 30, 2023 is 3.70%. This would be the amount of the increase effective as of January 1, 2024 for all benefits eligible for COLA as of that date as specified by Section 9.04 if determined that this amount could be paid based on the Fund's COLA Adjustment Policy.

The COLA Adjustment Policy as described in Section VIII of the Fund Rules identifies two parameters that need to be satisfied in assessing the actuarial soundness and financial stability of the Fund.

1) The funding period to amortize the unfunded accrued actuarial liability after the cost-of-living adjustment may not exceed 25 years for any year during the 10-year projection period, and
2) The funding ratio (determined as the ratio of the Actuarial Value of Assets divided by the Actuarial Accrued Liability) after the cost-of-living adjustment would not be less than 80% for any year in the 10-year projection period.

The methodology for the projection is to use the most recent actuarial valuation results (for the 2024 COLA, this is 12/31/2022) and to complete a projection assuming all assumptions are met each year except for the current year asset return. For this year's analysis, the current year asset return is based on asset returns through September 30, 2023 and assumes the Fund earns a 7.3% annual return for the 4th quarter of 2023. As provided by Meketa, the Board's investment advisor, the Fund's year-to-date investment return through September 30, 2023 was 1.9%. Assuming the Fund earns a 7.3% annual return for the 4th quarter, it results in an estimated return of 3.71% for 2023.

The attached projection provides the results of the two parameters prior to the granting of any 2024 COLA. The projection shows that during the 10-year projection period, the funding period to amortize the unfunded accrued actuarial liability exceeds 25 years for the entire period (shown in the bottom graph), and the funded ratio falls below 80% during the period (this percentage is shown along the top of the graph).

We have determined that, based on the criteria outlined in the attached policy, a COLA (payable January 1, 2024) will not be supported.

The attached COLA Adjustment Policy also sets forth the criteria for a "de minimis" cost-of-living adjustment. The de minimis cost-of-living adjustment has no impact on the normal cost rate as a percentage of covered payroll. The criteria for a "de minimis" adjustment are as follows:

1) The increase in the normal cost rate arising from the cost-of-living adjustment is 0.1% of covered payroll or less, and
2) The increase in the funding period to amortize the unfunded accrued actuarial liability is 0.2 years or less.

Currently, no non-zero COLA granted through the Fund can be deemed "de minimis" because the amortization period is undefined through the projection period. We have determined that for eligible retirees no "de minimis" COLA payable on January 1, 2024 would be supported.

This letter was prepared exclusively for the Board for the purpose described herein. Other users of this letter are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to any other user.

Future results may differ significantly from the current results presented in this letter due to such factors as the following: Plan experience differing from that anticipated by the assumptions, changes in assumptions, and changes in Plan provisions or applicable law.

In preparing our letter, we relied on information (some oral and some written) supplied by the Fund's staff and in the December 31, 2022 Actuarial Valuation dated July 18, 2023. This information includes, but is not limited to, the Plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

This letter 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 a credentialed actuary, I meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this letter. This letter does not address any contractual or legal issues. I am not an attorney, and our firm does not provide any legal services or advice.

If you have any questions regarding this analysis, please let me know.

Sincerely,
Cheiron

Elizabeth Wiley, FSA, EA, MAAA, FCA
Consulting Actuary

Attachments

Austin Firefighters Retirement Fund

10-Year Projection of Estimated Results

Current Plan Provisions and Assumptions (No COLA Payable on January 1, 2024)

Determined as of December 31, 2022

Based upon a 1.9% net-of-fees investment return as of September 30, 2023 and assuming the actuarial annual rate of 7.3% for the three month period October 1, 2023 through December 31, 2023 we utilized a 3.71% return in 2023.

Stress Testing

Employee Contribution: 18.70%

Baseline

Historical

2004

Funding Policy: Fixed

Amort Type: Layers

Amort Period: 20

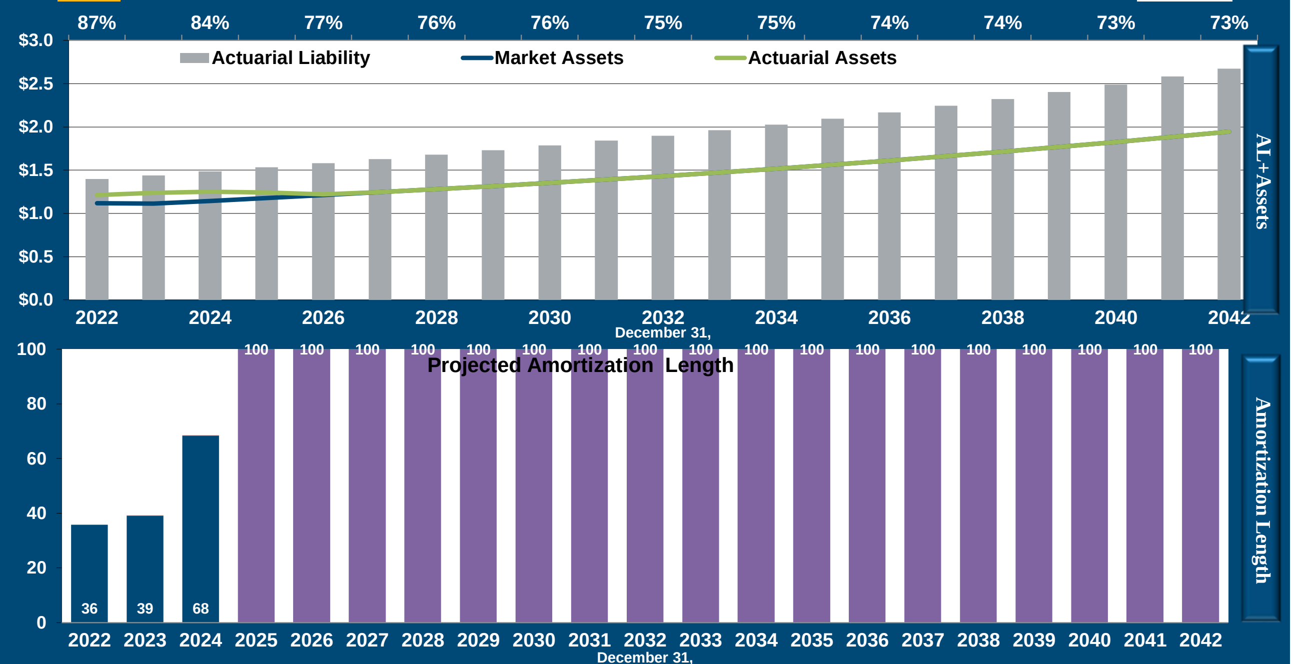
Discount Rate: 7.30%

2022 Baseline

Payroll Growth: 2.50%

Yrs to Fully Funded: > 40

PYE		ER Contr. %
2023	3.71%	22.05%
2024	7.30%	22.05%
2025	7.30%	22.05%
2026	7.30%	22.05%
2027	7.30%	22.05%
2028	7.30%	22.05%
2029	7.30%	22.05%
2030	7.30%	22.05%
2031	7.30%	22.05%
2032	7.30%	22.05%
2033	7.30%	22.05%
2034	7.30%	22.05%
2035	7.30%	22.05%
2036	7.30%	22.05%
2037	7.30%	22.05%
2038	7.30%	22.05%
2039	7.30%	22.05%
2040	7.30%	22.05%
2041	7.30%	22.05%
2042	7.30%	22.05%
Avg	7.12%	



AUSTIN FIREFIGHTERS RETIREMENT FUND

COLA ADJUSTMENT POLICY

1. Background. The purpose of the policy in this Section VIII is to provide the actuarial basis for the determination of the collective adjustment amount available for cost-of-living adjustments under Section 9.04 of the Act. Satisfaction of actuarial soundness and financial stability of the Fund must be met prior to any post-retirement adjustments under Section 9.04 of the Act.

2. Methodology. Subject to the terms of the Act, including without limitation, Section 9.04(a-4) and (b-1), a projection to measure the liabilities associated with a cost-of-living adjustment under a specified set of actuarial assumptions will be performed to demonstrate the soundness and stability of the Fund over an extended period following such adjustment.

The period for the projection will be a ten-year period beginning with the effective date of most recent actuarial valuation (which must be no more than 12 months prior to the effective date of the cost-of-living adjustment). Such projection will be based on the actuarial methods and assumptions typically utilized by the Plan, except for the following:

(A) the investment rate of return assumed for the experience on plan assets for the initial year of the projection will be equal to the product of the actual rate of return on Plan assets realized from January 1 through September 30 of such year and the Plan's actuarial rate of return for the period October 1 through December 31 of such year; and

(B) the applicable determination period for the increase in the CPI-U under Section 9.04 (a-2)(1) shall be the 12 month period ending on the September 30 of the initial year of the projection.

3. Standards. Actuarial soundness and financial stability for purposes of adoption of a cost-of-living adjustment will be demonstrated by satisfying the following two parameters for all years in the projection period:

(A) the funding period to amortize the unfunded accrued actuarial liability after the cost-of-living adjustment may not exceed 25 years for any year during the ten-year projection period; and

(B) the ratio of the actuarial value of assets divided by the actuarial accrued liability after the cost-of-living adjustment would not be less than 80% for any year in the ten-year projection period

4. De Minimus Adjustment. A "de minimis" cost-of-living adjustment will not be considered to adversely impact actuarial soundness or financial stability of the Fund and will not subject to the requirements in paragraph 3 above. A cost-of-living adjustment will be defined as de minimis if the following criteria are satisfied:

(A) the increase in the normal cost rate arising from the cost-of-living adjustment is 0.1% of covered payroll or less; and

(B) the increase in the funding period to amortize the unfunded accrued actuarial liability is 0.2 years or less.

5. <u>Policy for Minimum Benefits</u>. In its discretionary allocation of the collective adjustment amount among persons eligible for a cost-of-living adjustment under Section 9.04 of the Act, the Board may, in its sole discretion, allocate a portion of an available collective adjustment amount in a manner to ensure that the monthly retirement benefit of identified retirees, surviving spouses, or beneficiaries is equal to or greater than an identified minimum amount (the "Minimum Benefit"). Under this discretion provided by the Act, the Board through resolution previously established a Minimum Benefit of $2,000.00 to specifically identified retirees and surviving spouses at its meeting of May 15, 2012. A copy of this resolution is attached to these Rules as Appendix C.

Beginning in 2018, the Board intends to consider no less than every three (3) years at its August meeting whether an allocation of the collective adjustment amount for a given year should be applied toward establishing or increasing the Minimum Benefit for identified retirees, surviving spouses or beneficiaries. In determining whether to establish or increase the Minimum Benefit, the Board may, but is not required to, consider how any existing Minimum Benefit compares to the amount equal to 50% of a current entry-level firefighter's monthly base pay.

Any Minimum Benefit established or increased is subject to the requirements of Section 9.04 of the Act and compliance with the actuarial soundness and financial stability requirements of this Section VIII prior to the approval of such amount. The persons eligible for the Minimum Benefit will be determined by the Board in its sole discretion and applied in a uniform manner.

This paragraph 5 does not intend to and should not be interpreted as (A) obligating the Board to consider the Minimum Benefit or to establish or increase the Minimum Benefit in any given year, (B) providing rights to any person to a future Minimum Benefit, or (C) limiting the Board's discretion to allocate any available collective adjustment amount among eligible persons in any amounts.

Austin Firefighters Retirement Fund

Classic Values, Innovative Advice

Annual Cost-of-Living Adjustment (COLA) Analysis

November 17, 2023

Coralie Taylor, FSA, EA, MAAA, FCA

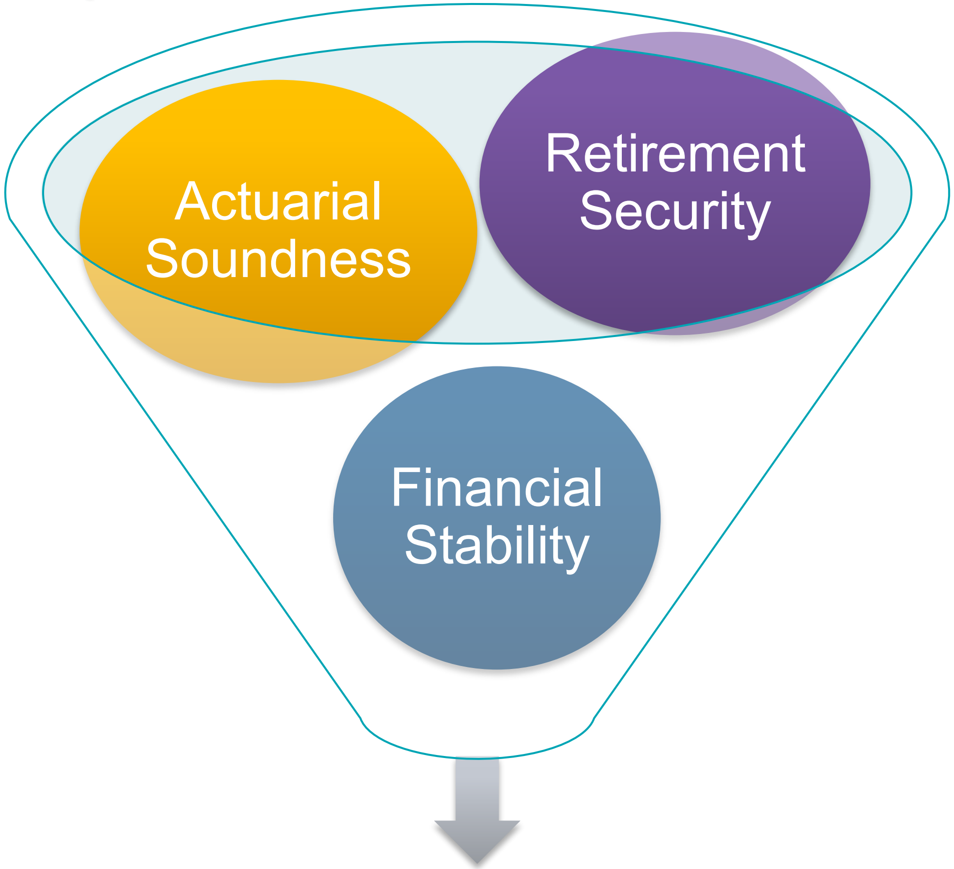
Elizabeth Wiley, FSA, EA, MAAA, FCA

Today's Discussion

- Review Annual COLA Analysis
  – Process and Objectives
  – For Calendar Year 2024
    - Determines COLA Amounts Effective 1/1/2024
    - Goal: 12-Mo. CPI-U Change Ending 9/30/2023
- COLA and Inflation Recent History
- Future COLA Expectations
- Appendix:
  – COLA Analysis Reference Materials
  – 12/31/2022 Valuation Background
  – COLA History
  – Governance Reminders

COLA Analysis Process & Purpose

Goal: appropriate, actuarial basis for COLAs



Annual Approved and Allocated Cost-of-Living Adjustment (COLA)

Process Overview

1. **Determine Inflation-based Objective** — Collective Adjustment Amount (CAA)
2. **Assess Financial Stability** — Assess necessary reductions to inflation-based objective to maintain financial stability objective
3. **Approve COLA Amount** — Board action based on CAA and Financial Stability
4. **Allocate Approved Annual COLA Amount**

Inflation-Based Information

Applicable CPI-U Change × **COLA Eligible Benefits** → **Collective Adjustment Amount (CAA)**

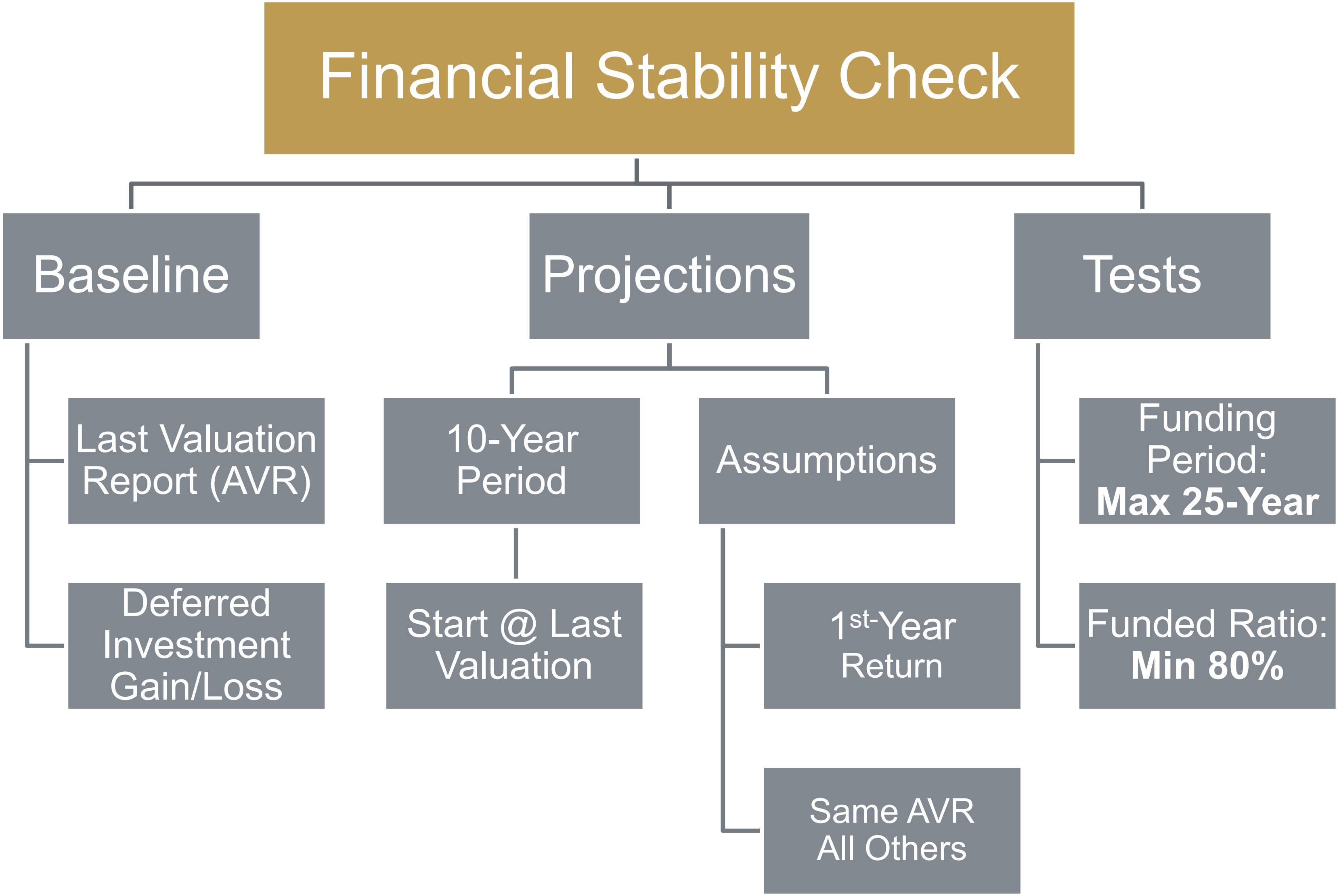
Applicable CPI-U Change:

- 12-month
- Ending 9/30

COLA Eligible Benefits:

- Receiving monthly benefit by 1/1 COLA effective date
- EXCEPT Early Retirements not yet eligible

Financial Stability Assessment



Board Approval: COLA Amount

*Minimum of $0

COLA amount approved by Board thus reflects both the inflation and financial stability objectives

12/31/2022 Valuation Recap

CHEIRON

Stress Testing

PYE		ER Contr. %
2023	7.30%	22.05%
2024	7.30%	22.05%
2025	7.30%	22.05%
2026	7.30%	22.05%
2027	7.30%	22.05%
2028	7.30%	22.05%
2029	7.30%	22.05%
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2041	7.30%	22.05%
2042	7.30%	22.05%
Avg	7.30%	

Employee Contribution 18.70%

Baseline

Historical

2004

Funding Policy: Fixed

Amort Type: Layers

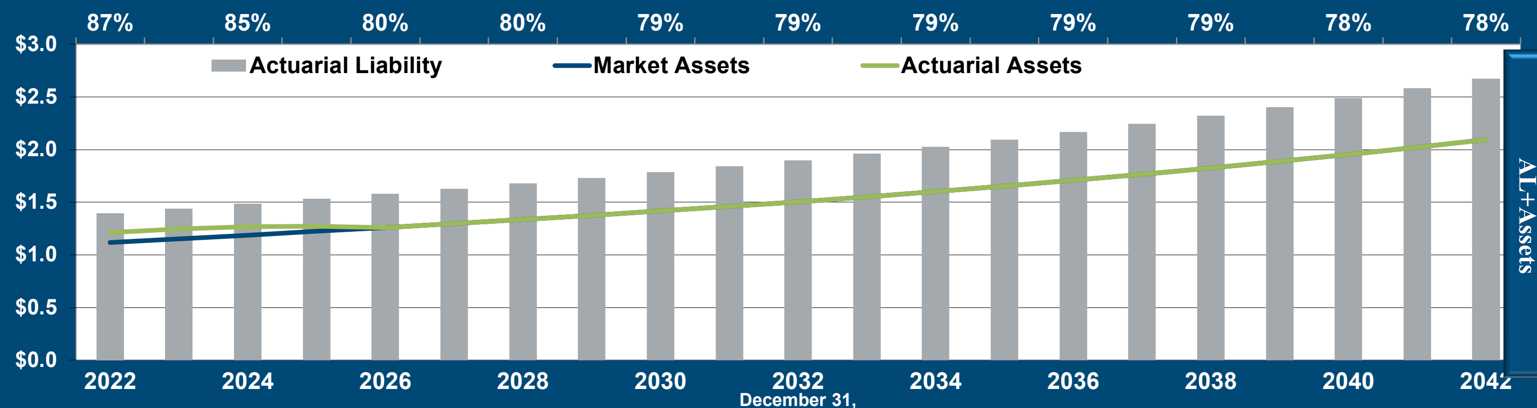
Amort Period: 20

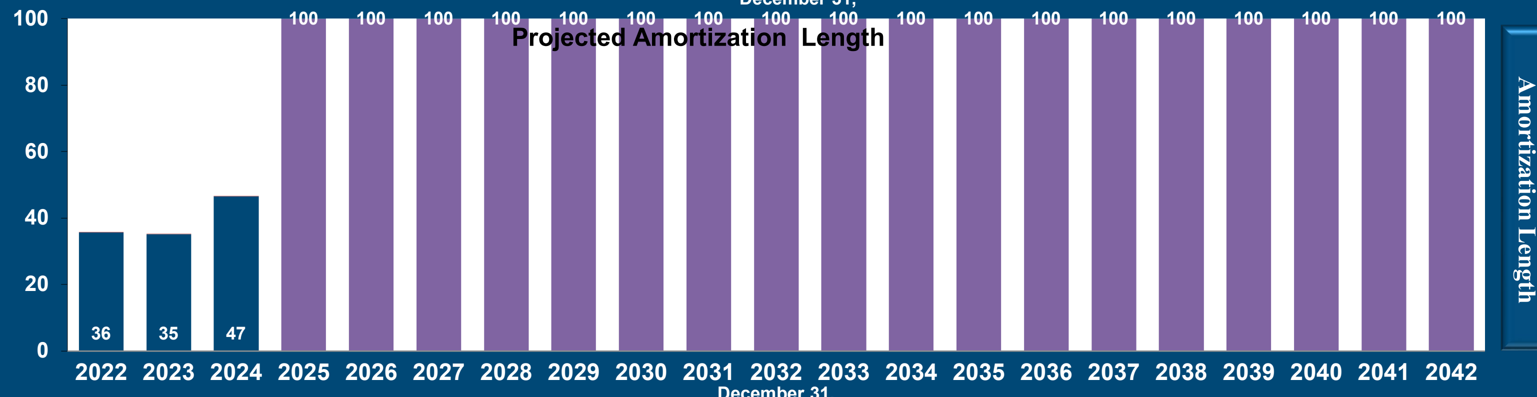
Discount Rate: 7.30%

2022 Baseline

Payroll Growth: 2.50%

Yrs to Fully Funded: > 40





2024 COLA Analysis – CAA/Inflation

Applicable CPI-U Change × **COLA Eligible Benefits** → **Collective Adjustment Amount (CAA)**

12-mo.: **3.70%**

Ending **9/30/2023**

Receiving monthly benefit by **1/1/2024** COLA effective date

EXCEPT Early Retirements not yet eligible

CAA prior to adjustments estimate: **$2.3 million** annual benefit increase, a liability increase of **$31 million**

2024 COLA Analysis – Financial Stab.

- 2024 COLA Analysis Financial Stability Assessment Projections basis:
  - 12/31/2022 Actuarial Valuation
  - Assumptions and methods unchanged except for 3.71% return for 1/1/2023-12/31/2023
    - First nine months based on actual YTD reported by Meketa of 1.9%
    - Remainder of year assumed at current 7.3% annual rate of return
- Appendix includes details of financial stability analysis as reference

Projection Updated for 2023 Return

Stress Testing

Employee Contribution	18.70%
Funding Policy	Fixed
Amort Type	Layers
Amort Period	20
Discount Rate	7.30%
	2022 Baseline
Payroll Growth	2.50%
Yrs to Fully Funded	> 40

Baseline

Historical

2004

PYE		ER Contr. %
2023	3.71%	22.05%
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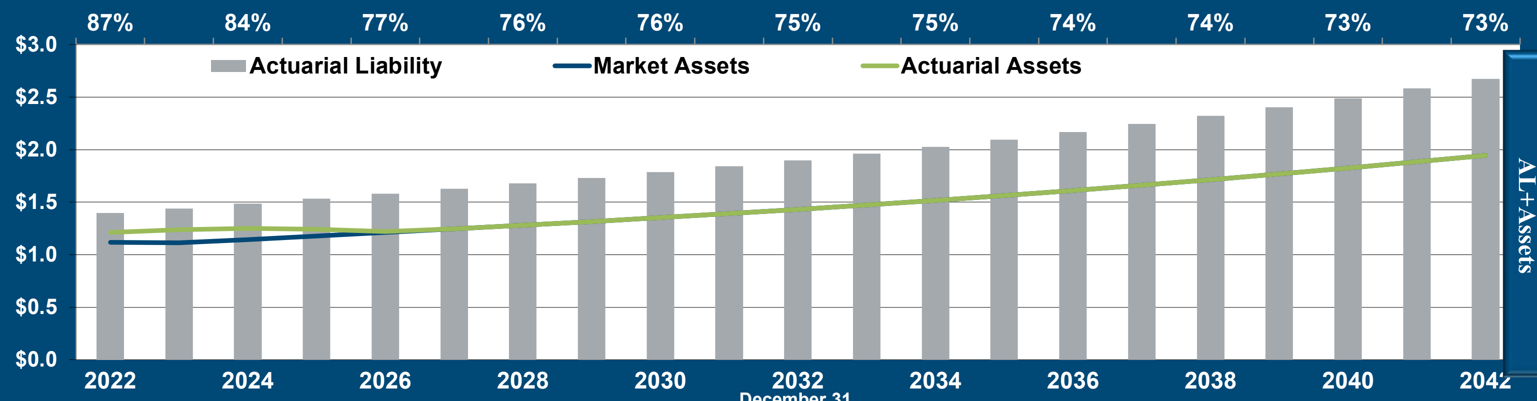
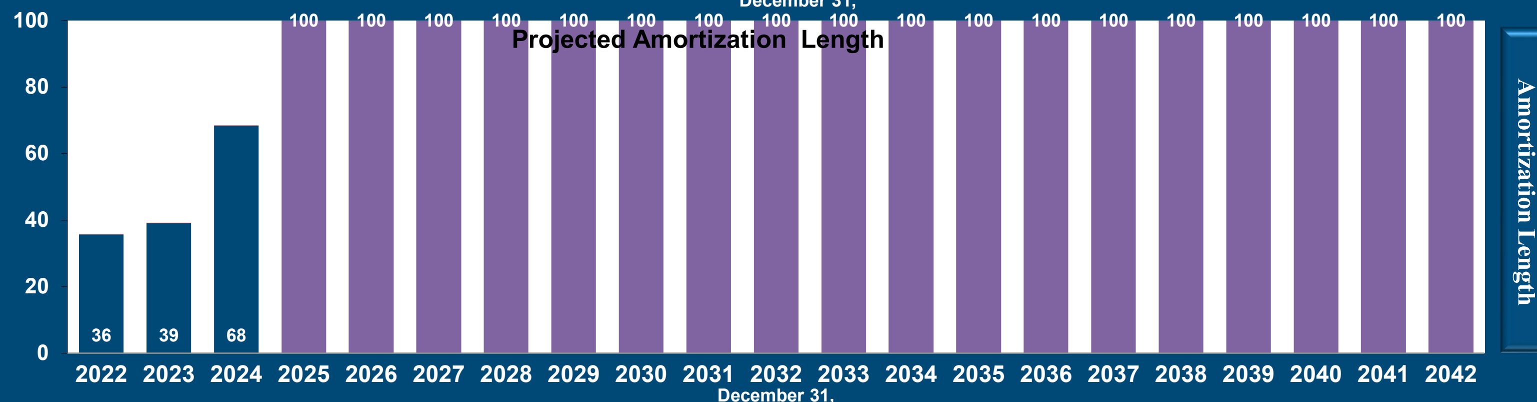
Avg	7.12%	





2024 COLA Analysis – Financial Stab.

2024 Financial Stability Assessment:

- All years of 10-year projection meet/exceed:
  - Funding period maximum of 25 years
  - Funded ratio minimum of 80% (actuarial value of assets/actuarial liability)
- Must include liability of current year COLA amount being assessed
- Must **not** include future COLAs

For 2024 COLA analysis, failing standard with $0 COLA under both tests

∴ no COLA can be adopted for 2024

De Minimis COLA Considerations

COLA Policy includes provisions for a "de minimis" COLA

- Board can approve a "de minimis" COLA without having to satisfy the actuarial soundness and financial stability assessment methodology
- To be deemed "de minimis," the liability created by approving such COLA amount must increase the Fund's projected amortization period by a **maximum of 0.2 years** in the applicable projection period

Currently, no non-zero COLA granted through the Fund can be deemed "de minimis" since the baseline amortization period is undefined within the 10-year projection period

Board Approval: 2024 COLA Allocation

Approved COLA Amount for 2024: **$0 (anticipated)**
(minimum $0)

Board Allocation Methodology

COLA Eligible Members	Minimum Benefits	Other Objectives

Annual Approved and Allocated COLA Amount
(Effective January 1, 2024)
$0 (anticipated)

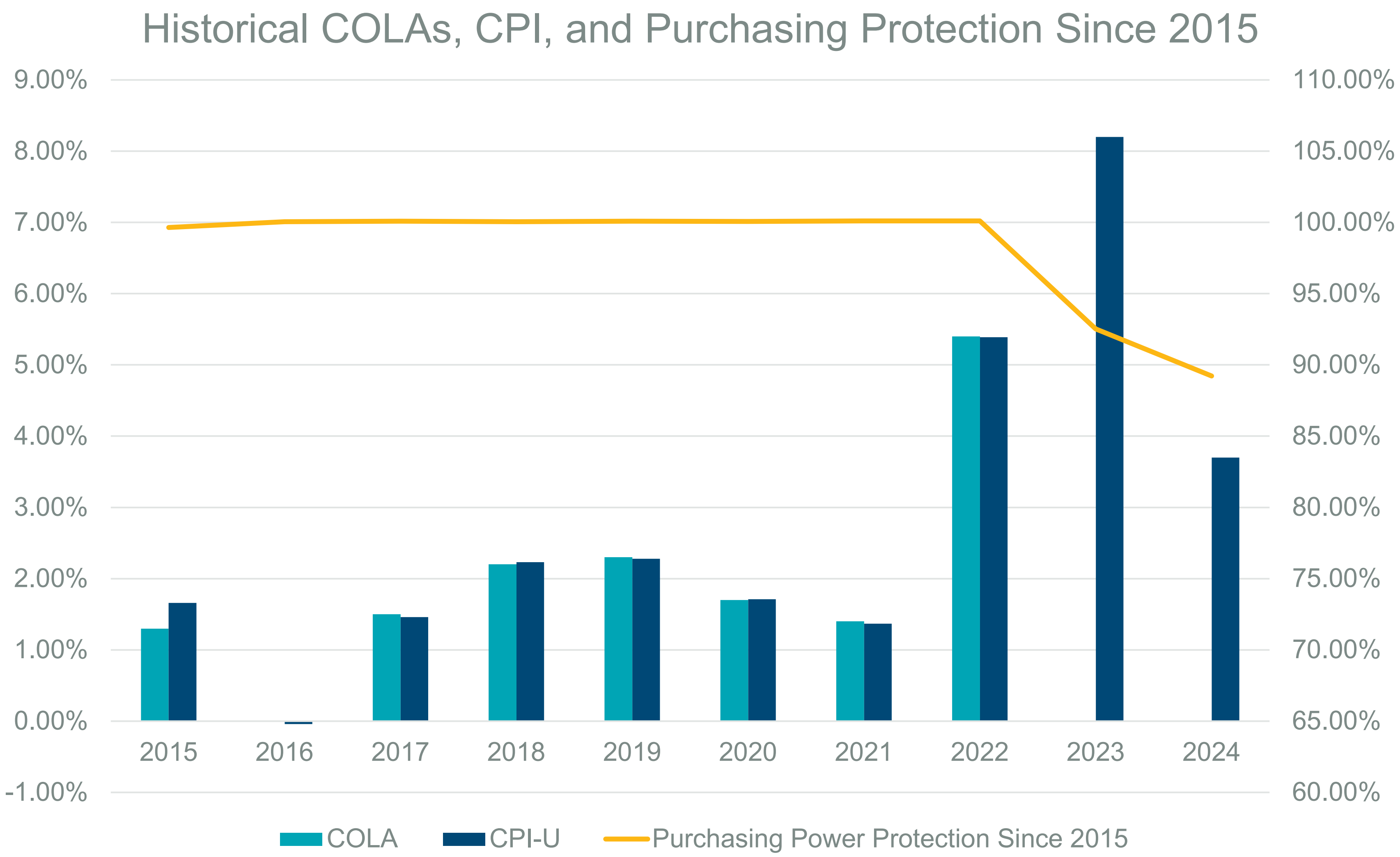
Historical COLAs and CPI

Year	COLA	CPI-U
2015	1.3%	1.66%
2016	0.0%	-0.04%
2017	1.5%	1.46%
2018	2.2%	2.23%
2019	2.3%	2.28%
2020	1.7%	1.71%
2021	1.4%	1.37%
2022	5.4%	5.39%
2023	0.0%	8.20%
2024	0.0%*	3.70%

* Anticipated

- Recent COLA Adjustments
  - COLA granted 8 out of 8 times from 2015 – 2022
  - None in 2023
  - Anticipate none for 2024 also
- 2015-2022 COLAs
  - Increased the Fund’s liability by approximately $70 million
  - Same magnitude of purchasing power protection provided to members

Historical COLAs and CPI



Future COLA Policy Expectations

- Current conditions suggest approving inflation-based COLAs will continue to be challenging in the near-term
  - Existing unfunded liabilities relative to contributions
  - Deferred investment losses of almost $100 million
- While market recoveries are possible, it is unlikely such will sufficiently relieve Fund conditions to permit near-term COLAs
  - Ex: for non-$0 2025 COLA, Fund would need a return of approximately 40% in 2024
- However, 13th checks fully funded through City contributions permitted under policy

Required Disclosures

In preparing this presentation, we relied on information, some oral and some written, supplied by the Austin Firefighters Retirement Fund. This information includes, but is not limited to, the Plan provisions, Fund Rules, 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 actuarial assumptions, data, and methods are those used in the preparation of the Actuarial Valuation Report as of December 31, 2022, unless noted within this report. The assumptions reflect our understanding of the likely future experience of the Fund, and the assumptions as a whole represent our best estimate for the future experience of the Fund. The results of this presentation are dependent upon future experience conforming to these assumptions. Future results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the assumptions; changes in assumptions; and changes in plan provisions or applicable law. For more information related to risks of the Fund, please see the Identification and Assessment of Risk section of the December 31, 2022 actuarial valuation report.

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 an attorneys, and our firm does not provide any legal services or advice.

As part of the review process for this presentation, we have performed a number of tests to verify that the results are reasonable and appropriate. We are not aware of any material inconsistencies, unreasonable output resulting from the aggregation of assumptions, material limitations, or known weaknesses that would affect this report.

Cheiron utilizes and relies on the actuarial software program known as ProVal for the intended purpose of calculating liabilities and projected benefit payments. ProVal is a product of Winklevoss Technologies. The projected expected results of future valuations in this report were developed using P-Scan, our proprietary tool for the intended purpose of developing projections.

This presentation was prepared exclusively for the Austin Firefighters Retirement Fund for the purpose described herein. Other users of this presentation are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to any other user.

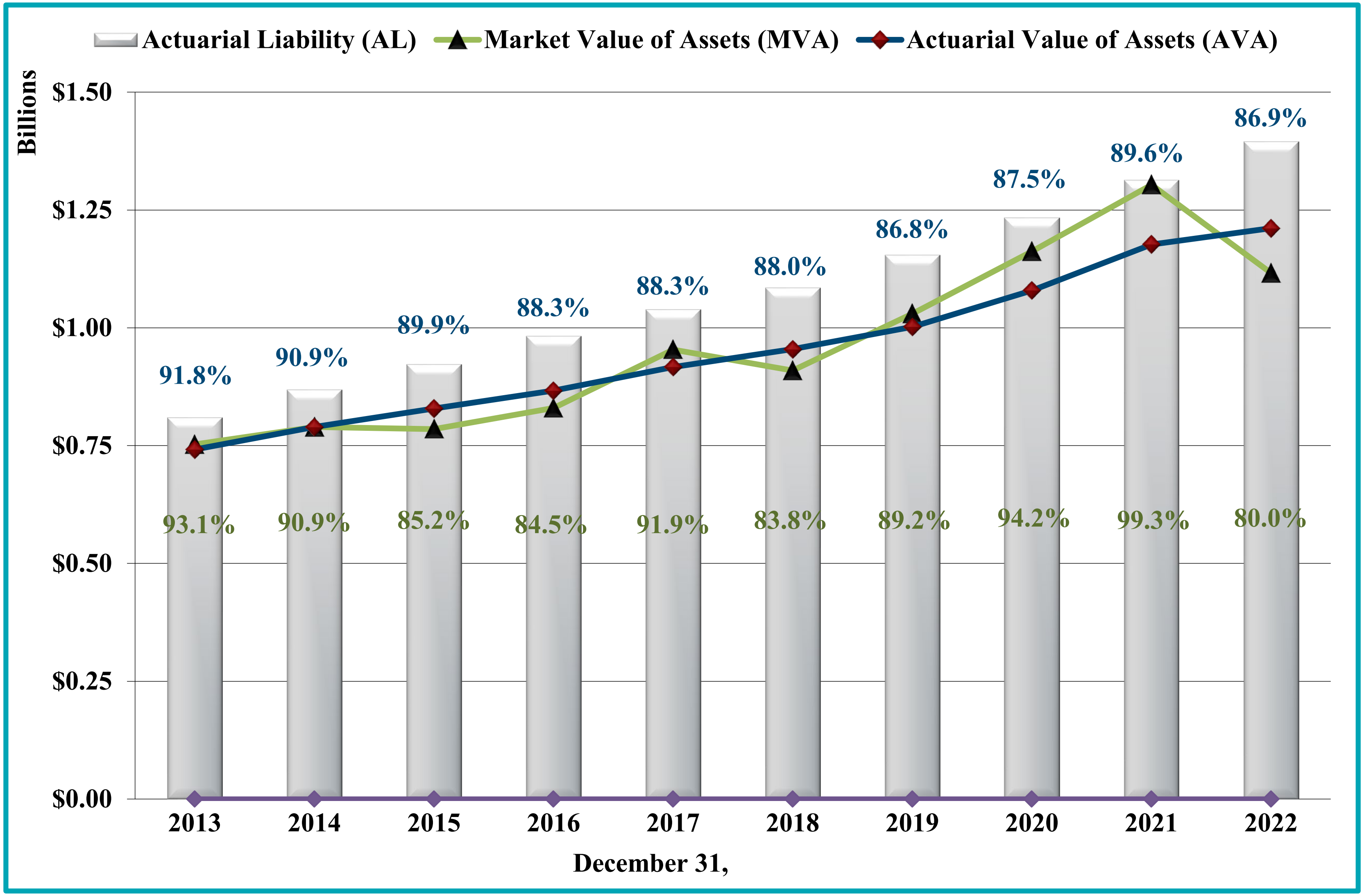
Coralie Taylor, FSA, EA, MAAA, FCA
Consulting Actuary

Elizabeth Wiley, FSA, EA, MAAA, FCA
Consulting Actuary

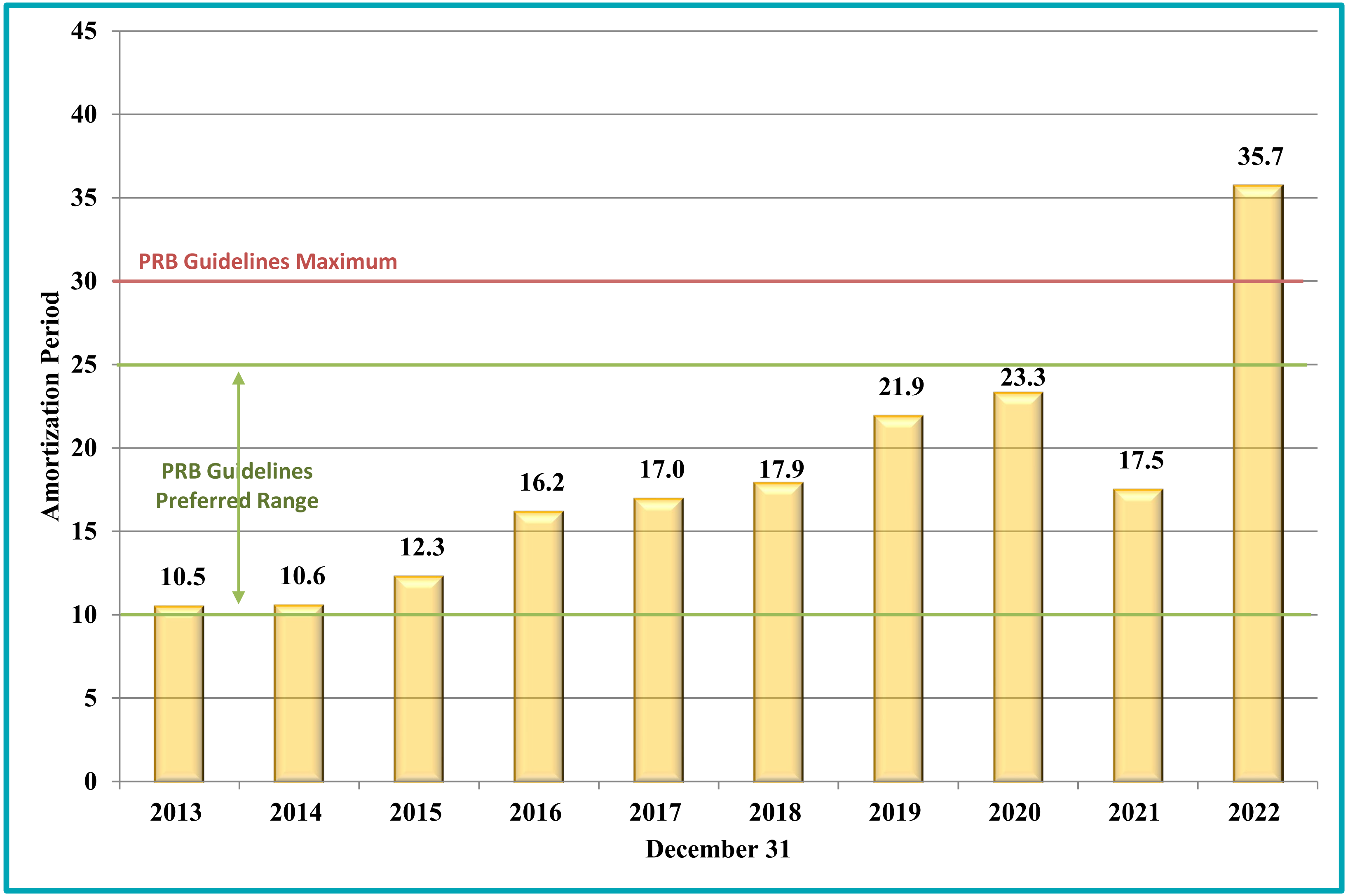
Fund Governance of COLAs

- Article 6243e.1, Vernon's Texas Civil Statutes - Governing Statute
  - Primarily Section 9.04
  - Section 5.04 re: COLA eligibility for early retirements
- Fund Rules
  - Section VII: Procedures for Adoption of Annual COLA
  - Section VIII: COLA Adjustment Policy

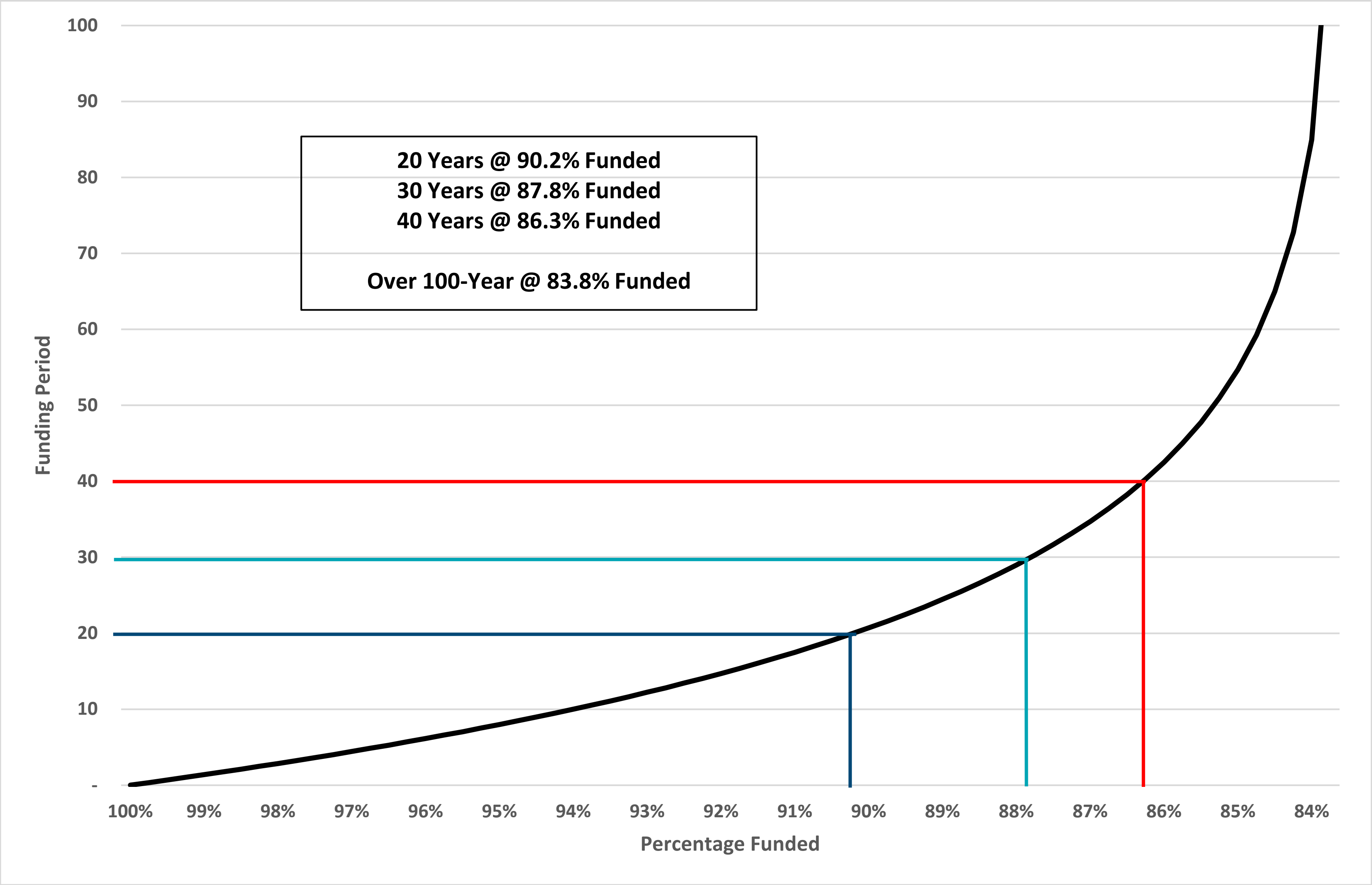
Recap of the 12/31/2022 Valuation



Recap of the 12/31/2022 Valuation



Funding Period Leverage



Financial Stability Check

Baseline

- Last Valuation Report (AVR) @ **12/31/2022**
- Deferred Investment **$95.5 million Loss**

Projections

- 10-Year Period
  - Start @ **1/1/2023**
  - End @ **12/31/2033**
- Assumptions
  - **2023** Assumed Return: **3.71%**
    - Actual 1st 9-mo.: 1.9%
    - 3-mo. Assumed Basis: 7.3%
  - Same AVR All Others

Tests

- Funding Period: Max 25-Year
  - Unfunded liab. **w/ CAA** amortized in max 25 years in projections
- Funded Ratio: Min 80%
  - $\frac{AVA}{AL\ w/CAA} \geq 80\%$

Historical COLAs and CPI

Year	COLA ($ monthly)	CPI-U Prior
1975	2.0%	11.96%
1976	2.0%	7.84%
1977	2.0%	5.50%
1978	2.0%	6.60%
1979	2.0%	8.21%
1980	2.0%	12.20%
1981	2.0%	12.67%
1982	2.0%	10.97%
1983	2.0%	5.01%
1984	2.0%	2.90%
1985	4.0%	4.21%
1986	3.0%	3.18%
1987	1.5%	1.76%
1988	4.0%	4.30%
1989	4.3%	4.20%
1990	4.5%	4.34%
1991	6.3%	6.16%
1992	2.9%	3.39%
1993	3.2%	2.99%
1994	2.8%	2.69%
1995	2.6%	2.96%
1996	2.9%	2.54%
1997	3.0%	3.00%
1998	2.1%	2.15%
1999	1.5%	1.49%
2000	2.6%	2.63%
2001	3.4%	3.45%
2002	2.1%	2.65%
2003	0.0%	1.51%
2004	0.0%	2.32%
2005	$ 32	3.15%
2006	$ 100	5.38%
2007	0.0%	2.06%
2008	0.0%	3.16%
2009	0.0%	4.94%
2010	0.0%	-1.29%

Historical COLAs and CPI

Year	COLA ($ monthly)	CPI-U Prior
2011	0.0%	1.14%
2012	0.0%	3.87%
2013	$ 93	1.99%
2014	$ 64	1.18%
2015	1.3%	1.66%
2016	0.0%	-0.04%
2017	1.5%	1.46%
2018	2.2%	2.23%
2019	2.3%	2.28%
2020	1.7%	1.71%
2021	1.4%	1.37%
2022	5.4%	5.39%

Year	COLA ($ monthly)	CPI-U Prior
2023	0.0%	8.20%
2024	0.0%	3.70%

Funding Period

- Given the actuarial valuation and the statutory contributions, how long until the current unfunded actuarial liability is anticipated to be paid off?
- Texas Pension Review Board (PRB) Funding Guidelines
  - “as brief a period as possible”
  - “not to exceed 30 years, with 10-25 years” preferred

Funding Soundness Restoration Plan

- Funding Soundness Restoration Plan (FSRP) triggered if:
  1. Funding period > 30 for three consecutive valuations
  2. Funding period > 40 at any valuation*
  3. Funding period > 30 & funded ratio < 65%*
- Given the “leverage,” or rapidly increasing nature of funding periods, vitally important to assess and manage risk

** Effective after 9/1/2025.*