



Updated Actuarial Calculations and Contributions for Fiscal Year 2025

Presentation to the Retirement and Independent Entities Interim Committee

September 11, 2023



Trust • Commitment • Value • Innovation • Excellence

Topics

- 1. Overview of the consulting actuary's role with URS and actuarial methods, valuations, and assumptions.**
- 2. 2023 actuarial experience study and FY 2024-25 retirement contribution rate normal cost changes.**
- 3. FY 2024-25 amortization rate reductions.**



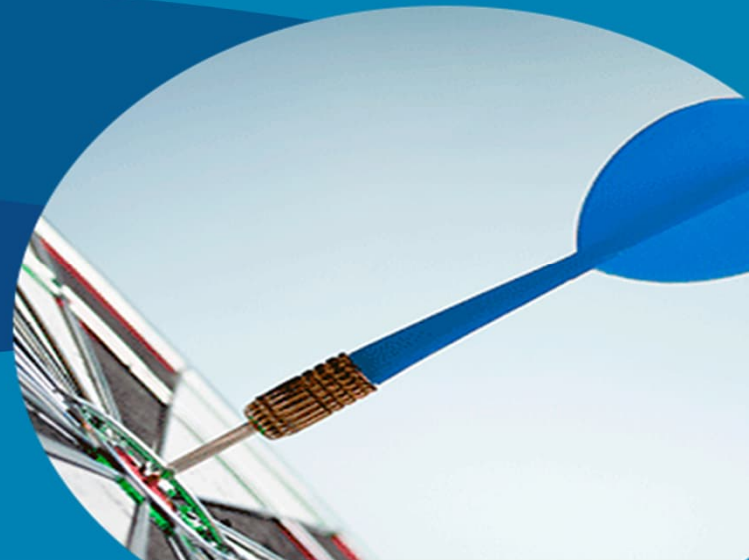
1.

Overview of the consulting actuary's role with URS and actuarial methods, valuations, and assumptions.



Retirement and Independent Entities Interim Committee Meeting September 11, 2023

Danny White, Senior Consultant



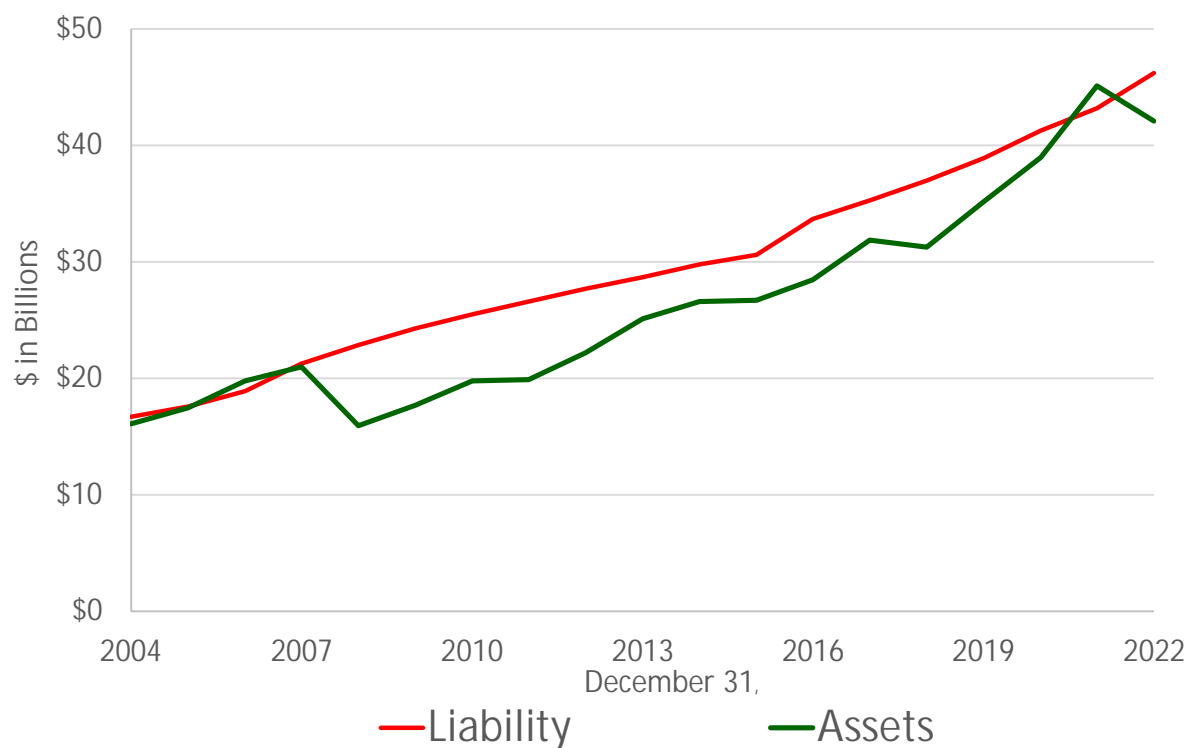
Liability and Assets – All Funds Combined

Reasons to Pre-Fund Benefits:

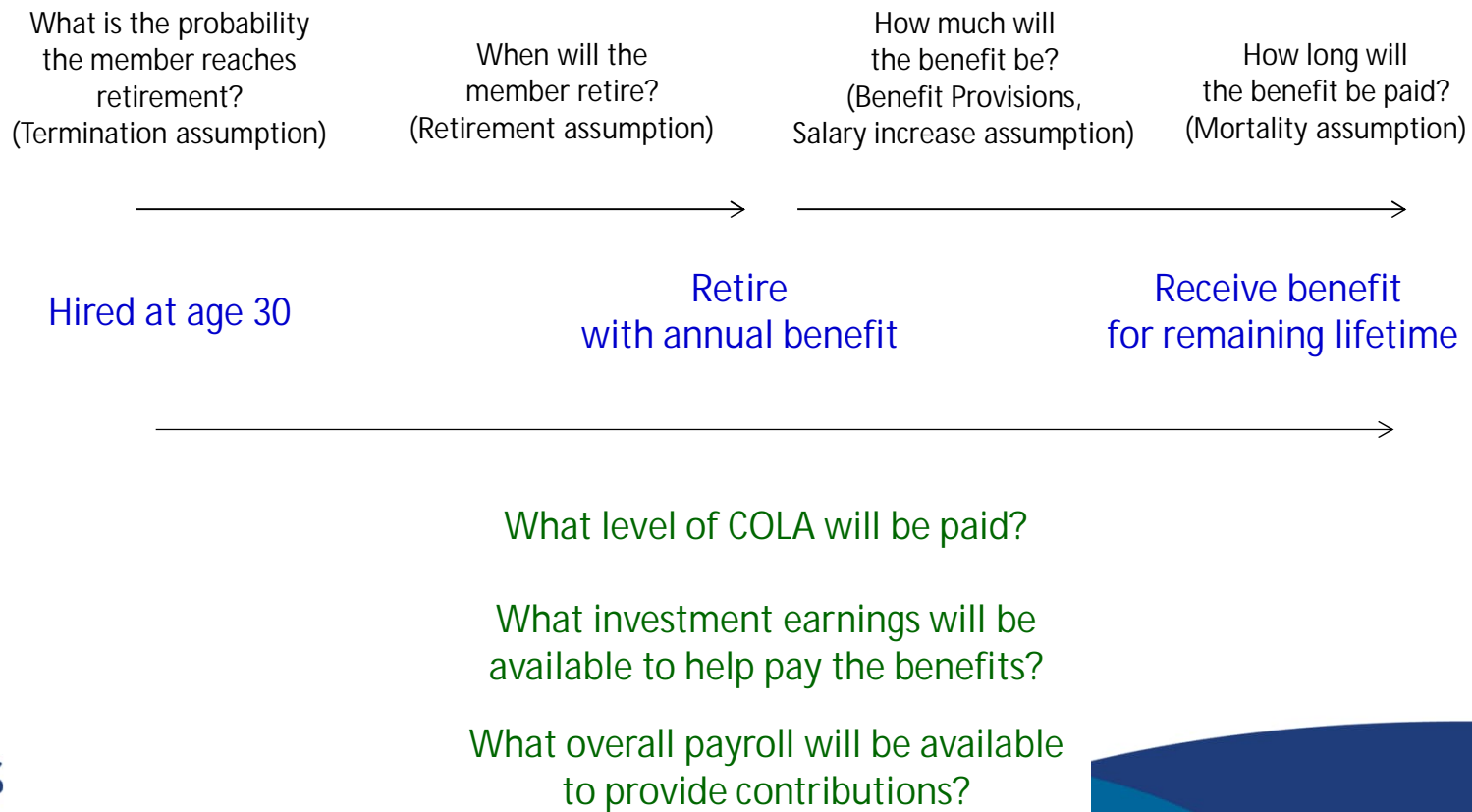
- Set aside funds as the benefits are earned
- Cost management and stability
- Reduced dependency on future contributions

As of January 1, 2023 URS has:

110,100 active members
78,400 retired members



Actuarial Valuation - Determining the Plan Liability



Assumptions Used in a Valuation

- Economic assumptions
 - Price inflation
 - Investment return
- Demographic assumptions
 - Salary increases (for individuals)
 - Mortality (active, post-employment, disability)
 - Disability incidence
 - Retirement rate
 - Other terminations
- Valuation methodologies
 - Amortization policy
 - Actuarial cost method and asset valuation method





2.

2023 actuarial experience
study and FY 2024-25
retirement contribution rate
normal cost changes.

Membership Experience

- Total number of active members increased by 2,315 to 110,124 (2.1% increase)
 - 54% of public employees and 54% of public safety and firefighters are Tier II members (up from 50% and 50% last year, respectively)
 - Approximately 82% of Tier II members are in the Hybrid Plans
- Total payroll increased 8.8% to \$7.1 billion
 - average increase in payroll for last 5 and 10 year period was 6.0% and 4.7%, respectively
- Number of annuitants increased 3.4%, from 75,876 to 78,422
 - Average benefit increased from \$2,117/month to \$2,149/month
 - 1.4 actives for each annuitant (2.0 ten years ago)



Summary of Experience Investigation

- Economic assumptions
 - No change to 2.50% price inflation
 - No change to the 6.85% investment return assumption
- Demographic assumptions
 - Recommended an upward shift in the salary increase assumption
 - No change to base mortality assumption
 - Minor update to the assumed rate of improvement in mortality
 - Minor adjustments to certain other demographic assumptions:
 - termination rates
 - retirement rates,
 - disability incidence rates



Year over Year Salary Increase

Year	State	Average Increases for Continuing Members			
		Teachers	Local	Public Safety	Firefighters
2007	7.8%	9.8%	7.1%	7.7%	6.8%
2008	6.9%	7.4%	6.8%	7.5%	6.4%
2009	2.9%	3.9%	3.4%	4.0%	4.0%
2010	1.4%	1.2%	1.4%	0.8%	2.1%
2011	2.3%	3.2%	2.7%	2.3%	2.5%
2012	2.7%	2.5%	3.0%	2.6%	2.7%
2013	3.0%	3.4%	3.9%	3.4%	3.4%
2014	3.4%	3.7%	3.7%	3.9%	3.7%
2015	4.6%	4.5%	4.6%	4.6%	4.7%
2016	4.8%	6.0%	4.6%	5.4%	5.1%
2017	4.6%	6.7%	4.9%	5.7%	5.4%
2018	5.2%	7.8%	5.4%	6.1%	5.1%
2019	5.3%	7.5%	5.8%	7.1%	6.1%
2020	4.2%	7.7%	4.9%	5.2%	5.5%
2021	6.0%	8.6%	6.0%	7.7%	6.1%
2022	7.9%	7.0%	9.9%	16.4%	9.4%
Last 10	4.9%	6.3%	5.4%	6.6%	5.5%
Last Exp Study	3.7%	4.7%	4.0%	4.2%	4.1%

Prior
Experience
Study

Current
Experience
Study





Impact on Contribution Rates

- » General comments on Tier 1 systems' impacts
- » Comments on Tier 2 impacts:
 - › Public Employees' System
 - › Public Safety and Firefighter System

Preliminary Tier 2 FY 25 Contribution Rates

Public Employees Contributory Retirement System

Public Employees Noncontributory Retirement System

Public Safety Contributory Retirement System

Public Safety Noncontributory Retirement System

Firefighters' Retirement System

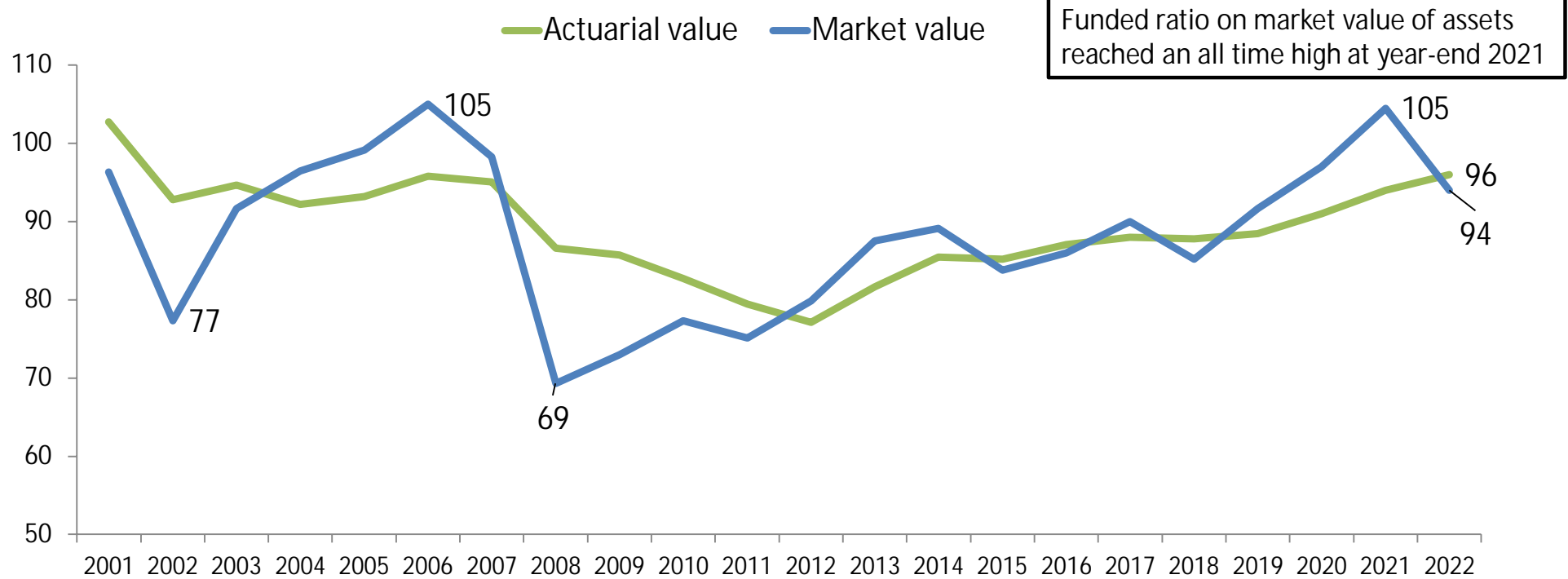
Preliminary Tier 2 Hybrid Retirement System							
(1) Employee Tier 2 DB Rate	(2) Employer Hybrid Plan DB Plan Rate	(3) Employer Hybrid Plan DC Plan Rate	(4) Death Benefit*	(5) Tier I Amortization %	(6) Total Employer Rate (2) + (3) + (4) + (5)	(7) Total Required Contribution (1) + (6)	Employee Increase (Decrease) From Prior Year
0.70	10.00	0.00	0.08	6.87	16.95	17.65	0.70
0.70	10.00	0.00	0.08	5.11	15.19	15.89	0.70
0.70	10.00	0.00	0.08	9.44	19.52	20.22	0.70
0.70	10.00	0.00	0.08	9.94	20.02	20.72	0.70
4.73	14.00	0.00	0.08	11.27	25.35	30.08	2.14
4.73	14.00	0.00	0.08	17.96	32.04	36.77	2.14
4.73	14.00	0.00	0.08	11.25	25.33	30.06	2.14
4.73	14.00	0.00	0.08	12.41	26.49	31.22	2.14
4.73	14.00	0.00	0.08	24.20	38.28	43.01	2.14
4.73	14.00	0.00	0.08	26.30	40.38	45.11	2.14
4.73	14.00	0.00	0.08	19.61	33.69	38.42	2.14
4.73	14.00	0.00	0.08	18.87	32.95	37.68	2.14
4.73	14.00	0.00	0.08	26.89	40.97	45.70	2.14
4.73	14.00	0.00	0.08	9.95	24.03	28.76	2.14
4.73	14.00	0.00	0.08	13.94	28.02	32.75	2.14
4.73	14.00	0.00	0.08	0.00	14.08	18.81	2.14
4.73	14.00	0.00	0.08	0.00	14.08	18.81	2.14



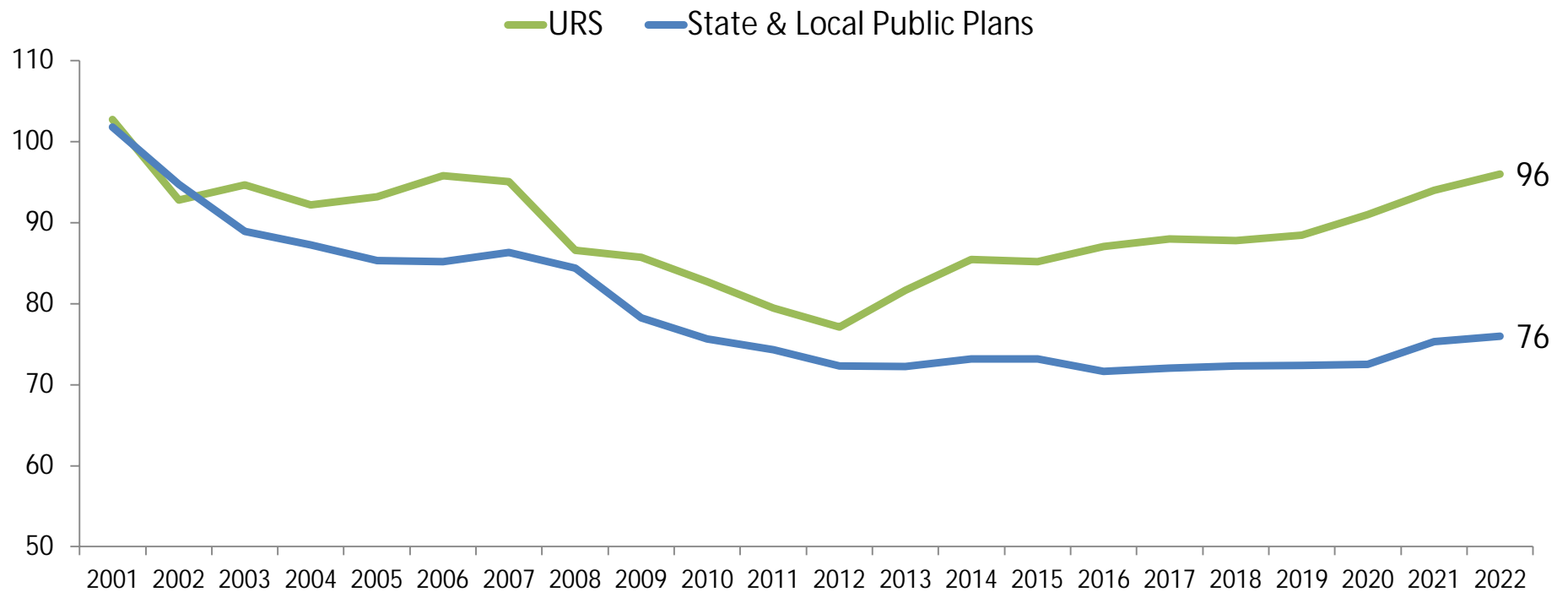
3.

FY 2024-25 amortization
rate reductions.

DB Plan Funded Ratio (at Dec. 31)



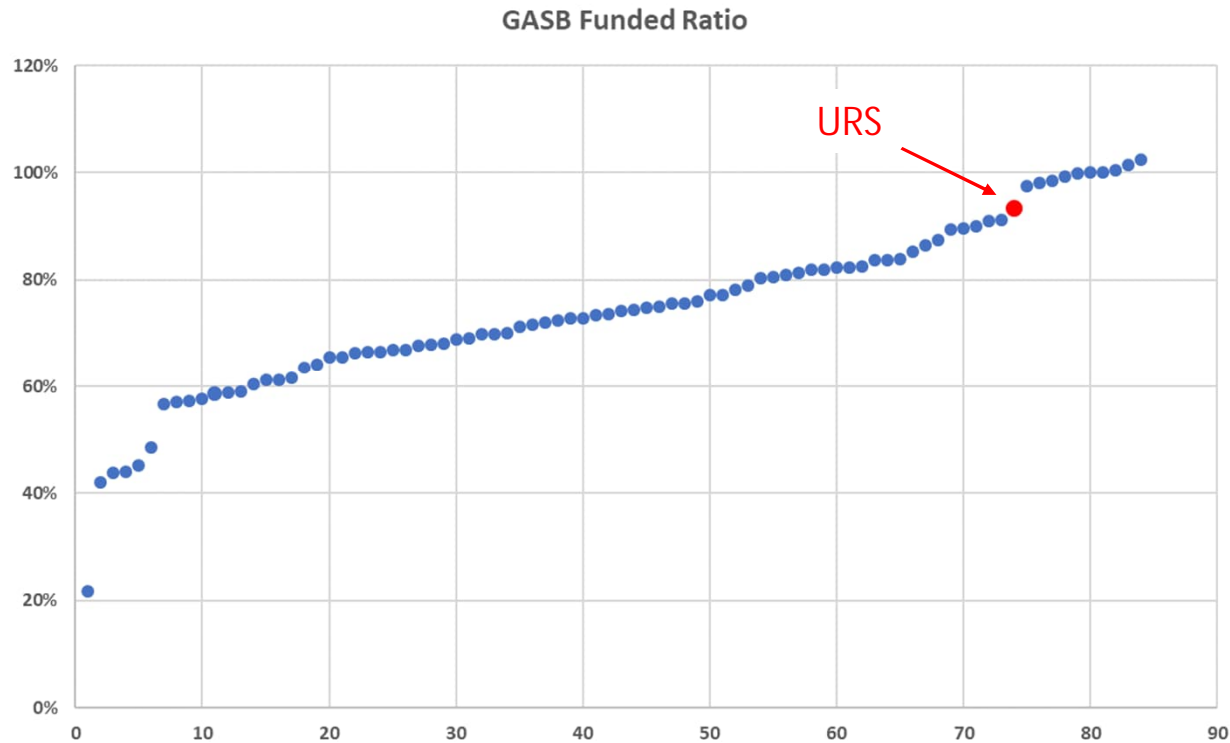
Actuarial Funded Ratio Smoothed (at Dec. 31, 2022)



Aggregate funded ratio of state and local public plans – *Public Plans Database*
National data averages are weighted by plan size (April 2023)



Comparison of Funded Ratio



Source: Public Plan Database, Aug 2023
N: 84



Contribution Rate Management

- » The State Retirement Board and consulting actuary designed a prudent method for managing the reduction of the contribution rate in accordance with the 110% funding rule adopted by the legislature.
- » Smooths rate decreases to mitigate impact of large decreases in the future and possible contribution rate increases.
- » Factors include:

Funded Ratio Actuary Basis	Projected Years to 100% Funding	Contribution Rate Change from Prior Year Required Actuary Rate	Contribution Rate Margin Difference between Board certified rate and actuarially determined rate
-------------------------------	------------------------------------	--	---

Preliminary Tier 1 FY 25 Contribution Rates

	Preliminary Tier 1 2024-2025 RATES						Increase (Decrease) From Prior Year
	(1) Employee	(2) Employer	(3) Normal cost (1) + (2)	(4) Amortization of UAAAL *	(5) Net Employer (2) + (4)	(6) Total (3) + (4)	
Public Employees							
Contributory Retirement System							
11- Local Government	6.00	6.09	12.09	6.87	12.96	18.96	(1.00)
12- State and School **	6.00	5.45	11.45	11.75	17.20	23.20 1	(0.50)
17- Higher Education	6.00	5.45	11.45	12.25	17.70	23.70 1	0.00
Public Employees							
Noncontributory Retirement System							
15- Local Government	-	11.86	11.86	5.11	16.97	16.97	(1.00)
16- State and School **	-	12.25	12.25	9.44	21.69	21.69 1,2	(0.50)
18- Higher Education	-	12.25	12.25	9.94	22.19	22.19 1,2	0.00
Public Safety							
Contributory Retirement System							
Division A							
23- Other Division A With 2.5% COLA	12.29	11.02	23.31	11.27	22.29	34.58	(0.50)
Public Safety							
Noncontributory Retirement System							
Division A							
42- State With 4% COLA	-	22.89	22.89	17.96	40.85	40.85 1	(0.50)
43- Other Division A With 2.5% COLA	-	22.29	22.29	11.25	33.54	33.54	(0.50)
75- Other Division A With 4% COLA	-	22.80	22.80	12.41	35.21	35.21	(0.50)
48- Bountiful With 2.5% COLA	-	23.49	23.49	26.89	50.38	50.38	0.00
Division B							
44- Salt Lake City With 2.5% COLA	-	22.51	22.51	24.20	46.71	46.71	0.00
45- Ogden With 2.5% COLA	-	22.42	22.42	26.30	48.72	48.72	0.00
46- Provo With 2.5% COLA	-	22.62	22.62	19.61	42.23	42.23	0.00
47- Logan With 2.5% COLA	-	22.60	22.60	18.87	41.47	41.47	(0.50)
49- Other Division B With 2.5% COLA	-	22.62	22.62	9.95	32.57	32.57	0.29
76- Other Division B With 4% COLA	-	23.03	23.03	13.94	36.97	36.97	(1.00)
Firefighters' Retirement System							
Division A							
Gross Rate	15.05	11.68	26.73	0.99	12.67	27.72	(2.00)
Insurance Premium Offset	0.00	(10.07)	(10.07)	(0.99)	(11.06)	(11.06)	0.00
31- Net rate	15.05	1.61	16.66	-	1.61	16.66	(2.00)
Division B							
Gross Rate	16.71	9.83	26.54	5.57	15.40	32.11	(2.00)
Insurance Premium Offset	0.00	(5.49)	(5.49)	(5.57)	(11.06)	(11.06)	0.00
32- Net rate	16.71	4.34	21.05	-	4.34	21.05	(2.00)

Preliminary Tier 2 FY 25 Contribution Rates

Preliminary Tier 2 Hybrid Retirement System									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	Employee	Employer
	Employee	Employer	Employer	Death	Tier I	Total Employer	Total	Increase	Increase
	Tier 2	Hybrid Plan	Hybrid Plan	Benefit*	Amortization %	Rate	Required	(Decrease)	(Decrease)
	DB Rate	DB Plan	DC Plan			(2) + (3) + (4) + (5)	Contribution	From	From
		Rate	Rate				(1) + (6)	Prior Year	Prior Year
Public Employees									
Contributory Retirement System									
11- Local Government ***	0.70	10.00	0.00	0.08	6.87	16.95	17.65	0.70	(1.00)
Public Employees									
Noncontributory Retirement System									
15- Local Government ***	0.70	10.00	0.00	0.08	5.11	15.19	15.89	0.70	(1.00)
16- State and School ¹	0.70	10.00	0.00	0.08	9.44	19.52	20.22	0.70	(0.50)
18- Higher Education	0.70	10.00	0.00	0.08	9.94	20.02	20.72	0.70	0.00
Public Safety									
Contributory Retirement System									
23- Other Division A (2.5% COLA)	4.73	14.00	0.00	0.08	11.27	25.35	30.08	2.14	(0.50)
Public Safety									
Noncontributory Retirement System									
42- State	4.73	14.00	0.00	0.08	17.96	32.04	36.77	2.14	(0.50)
43- Other Division A (2.5% COLA)	4.73	14.00	0.00	0.08	11.25	25.33	30.06	2.14	(0.50)
75- Other Division A (4.0% COLA)	4.73	14.00	0.00	0.08	12.41	26.49	31.22	2.14	(0.50)
44- Salt Lake City	4.73	14.00	0.00	0.08	24.20	38.28	43.01	2.14	0.00
45- Ogden	4.73	14.00	0.00	0.08	26.30	40.38	45.11	2.14	0.00
46- Provo	4.73	14.00	0.00	0.08	19.61	33.69	38.42	2.14	0.00
47- Logan	4.73	14.00	0.00	0.08	18.87	32.95	37.68	2.14	(0.50)
48- Bountiful	4.73	14.00	0.00	0.08	26.89	40.97	45.70	2.14	0.00
49- Other Division B (2.5% COLA)	4.73	14.00	0.00	0.08	9.95	24.03	28.76	2.14	0.29
76- Other Division B (4.0% COLA) ***	4.73	14.00	0.00	0.08	13.94	28.02	32.75	2.14	(1.00)
Firefighters' Retirement System									
31- Division A**	4.73	14.00	0.00	0.08	0.00	14.08	18.81	2.14	0.00
32- Division B**	4.73	14.00	0.00	0.08	0.00	14.08	18.81	2.14	0.00



Questions?

Disclaimers

- This presentation is intended to be used in conjunction with the actuarial valuation report issued on August 10, 2023. This presentation should not be relied on for any purpose other than the purpose described in the valuation report.
- This presentation shall not be construed to provide tax advice, legal advice or investment advice.