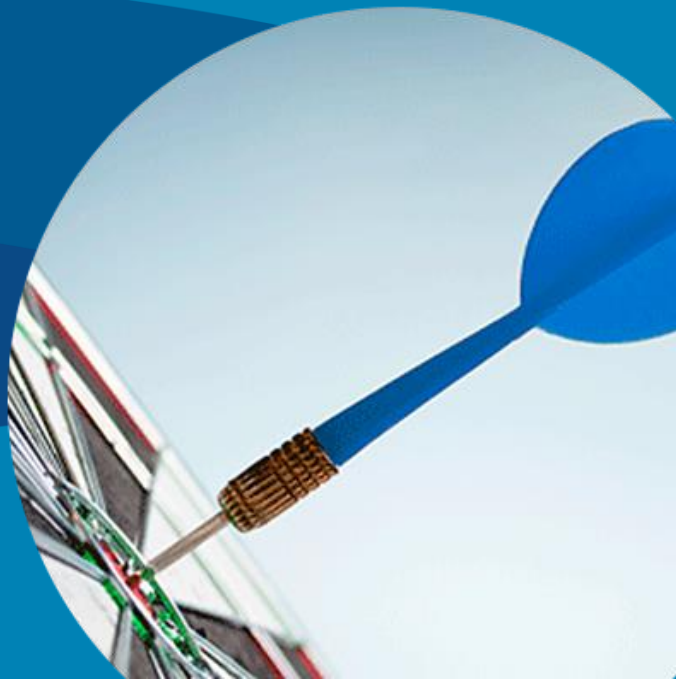
Arizona State Retirement System

Actuarial Valuations as of June 30, 2024

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Agenda

- 2024 Valuation Results – Plan
  - Contribution Rates and Liabilities
  - Sources of Change
  - Long Term Projections
- 2024 Valuation Results – LTD and System

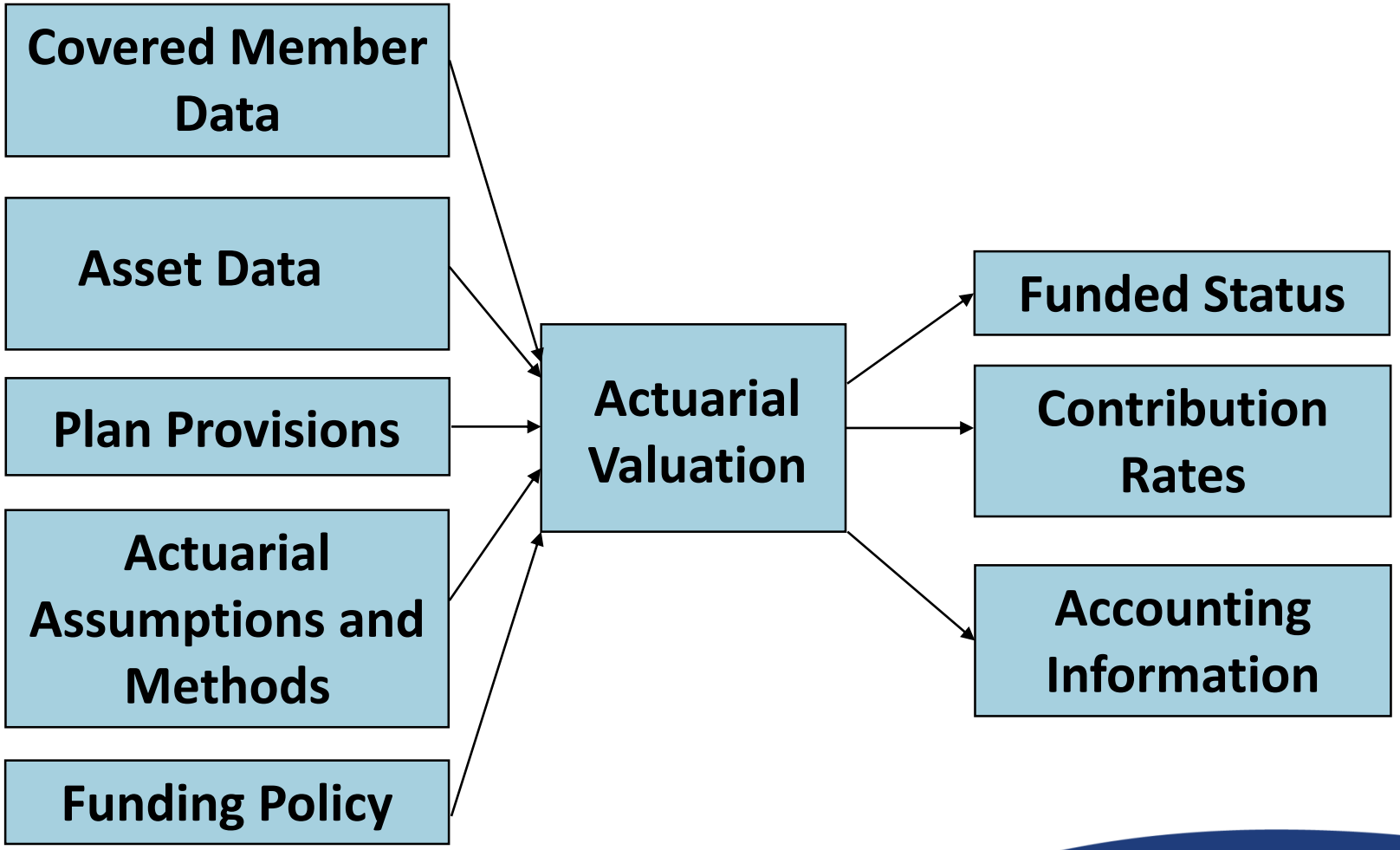
2024 Plan Actuarial Valuation Results

Actuarial Valuation

- Prepared as of June 30, 2024 using member data, financial data, benefit and contribution provisions, actuarial assumptions and methods as of that date
- Purposes:
  - Measure the actuarial liabilities
  - Determine contribution rates based on funding policy
  - Provide other information for reporting
    - Annual Comprehensive Financial Report (ACFR)
    - Accounting results provided under separate report
  - Explain changes in actuarial condition of ASRS
  - Track changes over time
  - Warn about possible future problems and issues

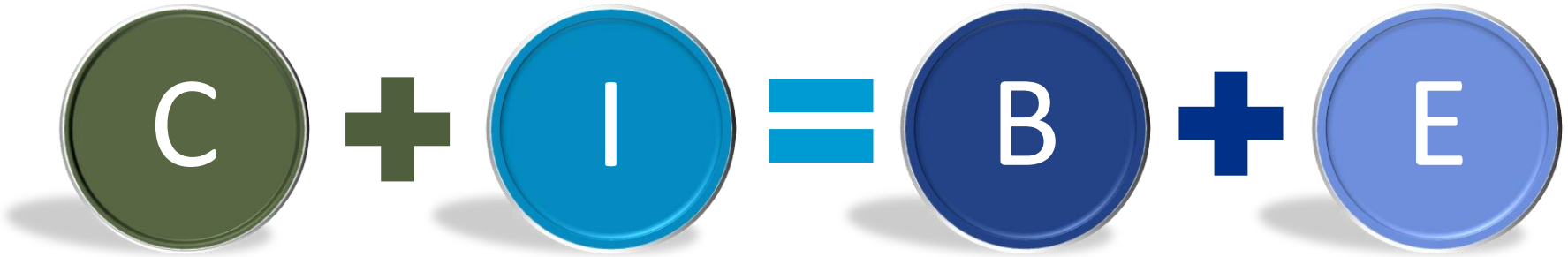
2024 Plan Actuarial Valuation Results

Actuarial Valuation Process



2024 Plan Actuarial Valuation Results

Basic Retirement Funding Equation



Contributions	Investment Income	Benefits	Expenses
• Funding Policy	• Investment Strategy	• Plan Design	• Administrative Policy

"Money In = Money Out"

2024 Plan Actuarial Valuation Results

Actuarially Determined Contribution (ADC)

- The contribution is set to be the sum of:
  - The normal cost for the year and
  - The amortization of the Unfunded Actuarial Accrued Liability (UAAL)

- Another way to look at it:
  - The contribution for the current year

    plus
  - The contribution to make up any shortfall that may have occurred due to past experience or changing expectations

2024 Plan Actuarial Valuation Results

Current ASRS Amortization Policy

- Current funding policy utilizes a process of "laddering" new gains and losses over an individual closed amortization period
  - 20 years as of the June 30, 2024 valuation
    - Gain/Loss from Current Year: 20 years remaining
    - UAAL from 2017 Experience Study: 23 years remaining
    - Initial UAAL from 2013: 19 years remaining
  - 15 years for 401(h) and LTD
  - Change in 401(a) UAAL from 2021 Experience Study was phased in over 3 years (21 years remaining)
- The amortization schedules are based on level percent of pay financing over the amortization period
  - Expected to remain stable as a percent of a growing payroll
- This methodology ensures the Plan will move towards 100% funding over a closed period of time

2024 Plan Actuarial Valuation Results

Key Changes and Issues

- Fiscal year 2024 investment performance on a market value basis above the current expectation
  - Approximately 8.9% return on market value of assets
    - GRS dollar weighted calculation, net of investment-related expenses
  - 7.9% return on actuarial (smoothed) basis
    - Actual returns smoothed over 10-year period
    - Excess earnings reserves for future PBIs not created
  - Currently over $2.3 billion in deferred investment gains
    - Without offsetting future losses, will be incorporated into contribution rates over the next nine years
- Funded ratio increased
- UAAL increased by $278 million since prior valuation
- CPP currently valued at $82 million (three employers)

2024 Plan Actuarial Valuation Results

Census Data

401(a) and 401(h) – Combined

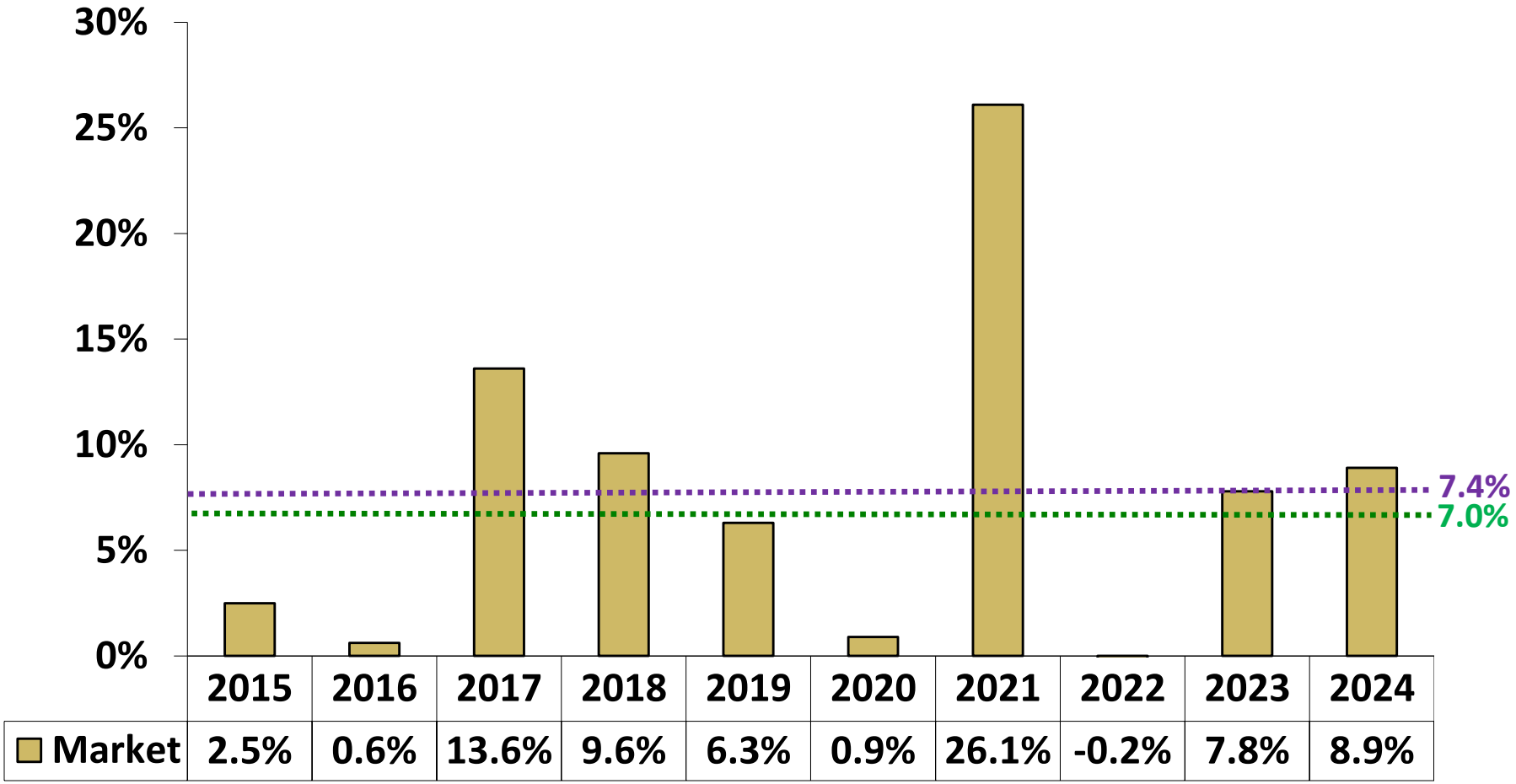
	2022 Valuation	2023 Valuation	2024 Valuation
Active Members	208,393	215,299	220,738
Projected Payroll[1]	$12.1 billion	$13.3 billion	$14.4 billion
Inactive Members	255,622	261,016	265,561
Annuitants[2]	164,753	168,760	172,712
Annual Benefits	$3.6 billion	$3.7 billion	$3.8 billion

[1]Valuation payroll for subsequent fiscal year used to calculate contribution rate

[2]Excludes Health Benefit Supplement (HBS) benefits and members currently on LTD

2024 Plan Actuarial Valuation Results

Estimated Market Value Asset Returns

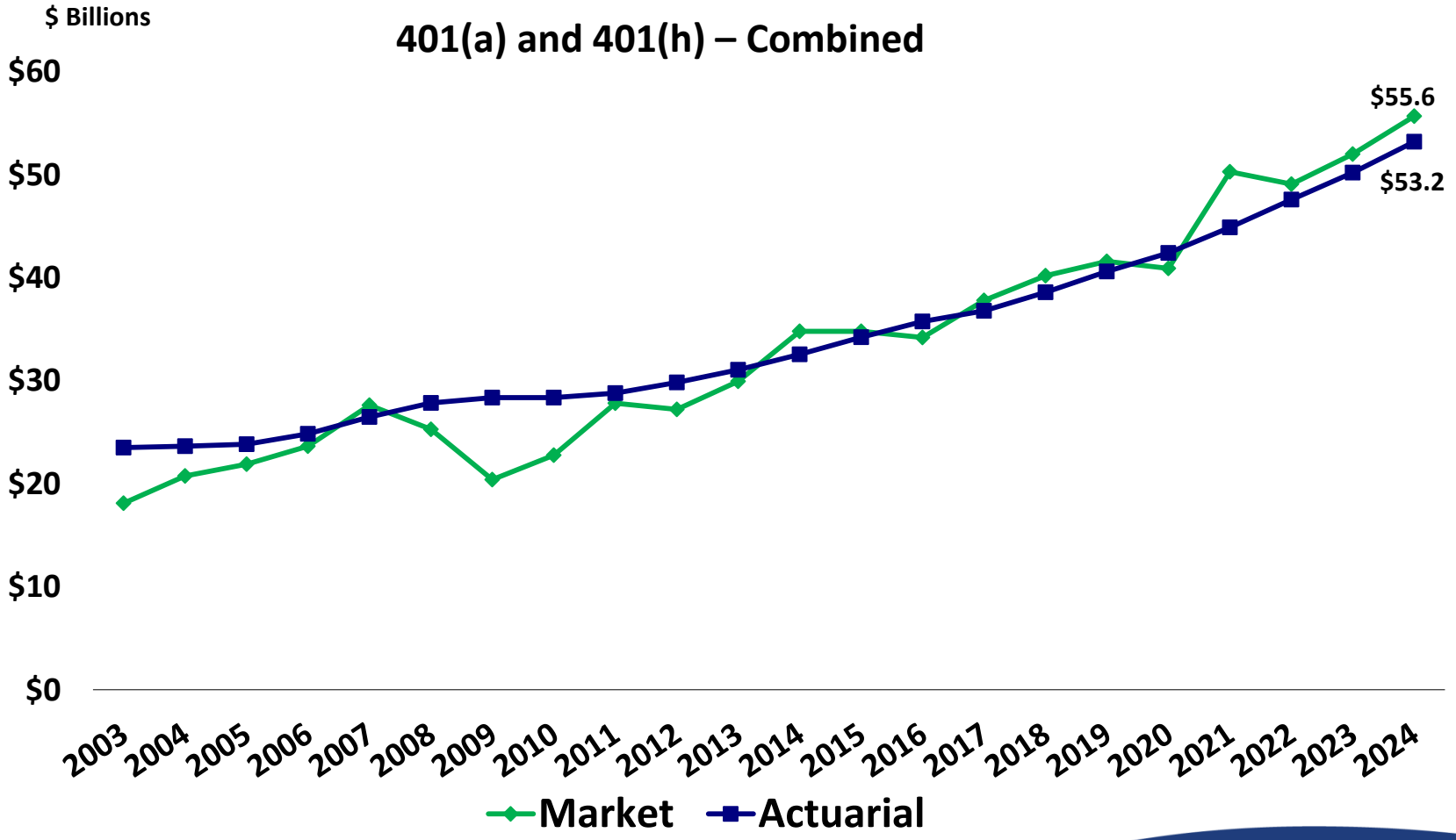


	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Market	2.5%	0.6%	13.6%	9.6%	6.3%	0.9%	26.1%	-0.2%	7.8%	8.9%

7.4% average compound return (on market value) over last 10 years.

2024 Plan Actuarial Valuation Results

Market and Actuarial Values of Assets



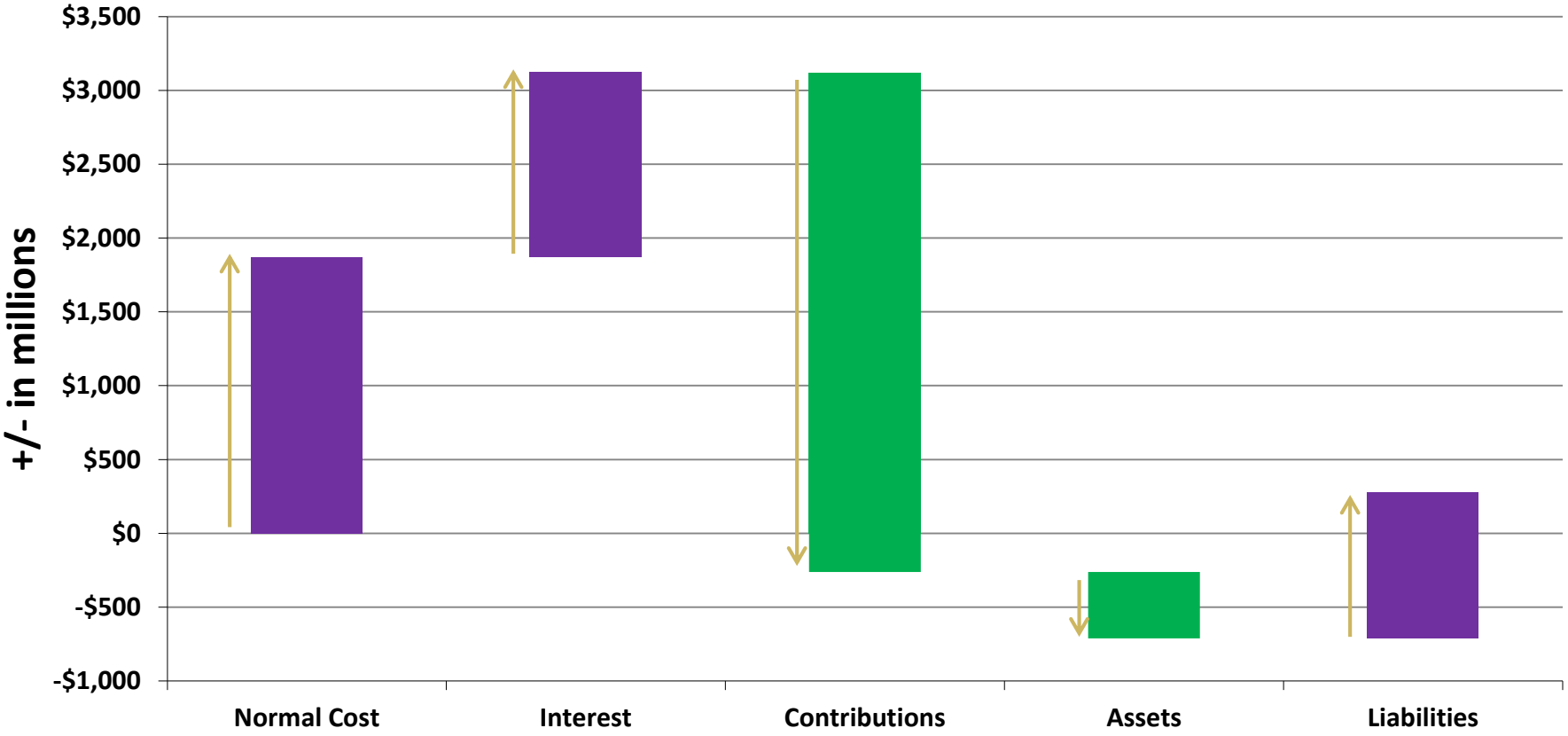
2024 Plan Actuarial Valuation Results

Funded Ratio and Contribution Calculations

	2023 Valuation	2024 Valuation
Based on Smoothed Asset Value		
UAAL ($ Billions)	$18.5	$18.7
Actuarial Funded Ratio	73.1%	74.0%
Normal Cost as a % of Payroll	14.46%	14.38%
Amortization of UAAL as % of Payroll	9.78%	9.34%
Total Rate as a % of Payroll	**24.24%**	**23.72%**
Contribution Rate: Employer	12.12%	11.86%
Contribution Rate: Employee	12.12%	11.86%
Contribution Rate: Total	**24.24%**	**23.72%**
Based on Market Value		
Actuarial Funded Ratio	75.6%	77.2%
Based on Market Value Including CPP Contributions		
Actuarial Funded Ratio	75.7%	77.3%

2024 Plan Actuarial Valuation Results

Change in UAAL Since Prior Valuation



Liability Change Detail:

Salary Increases: +$1.02 billion

Other: +$0.02 billion

2024 Plan Actuarial Valuation Results

Reconciliation of Change in Contribution Rate

401(a) and 401(h) Combined		
	EE+ER Contribution Rate	Change in Contribution Rate
Valuation as of June 30, 2023	24.24%	
Expected Experience*	24.16%	-0.08%
Asset Experience	23.90%	-0.26%
Pay Increase Experience	23.92%	0.02%
Contribution Experience	23.74%	-0.18%
Non-Retired Demographic (Gains)/Losses	23.76%	0.02%
Post-Retirement Mortality Experience	23.76%	0.00%
Other Experience	23.72%	-0.04%

**Expected amount includes decrease in normal cost due to hires in the newest benefit design*

Long Term Projections

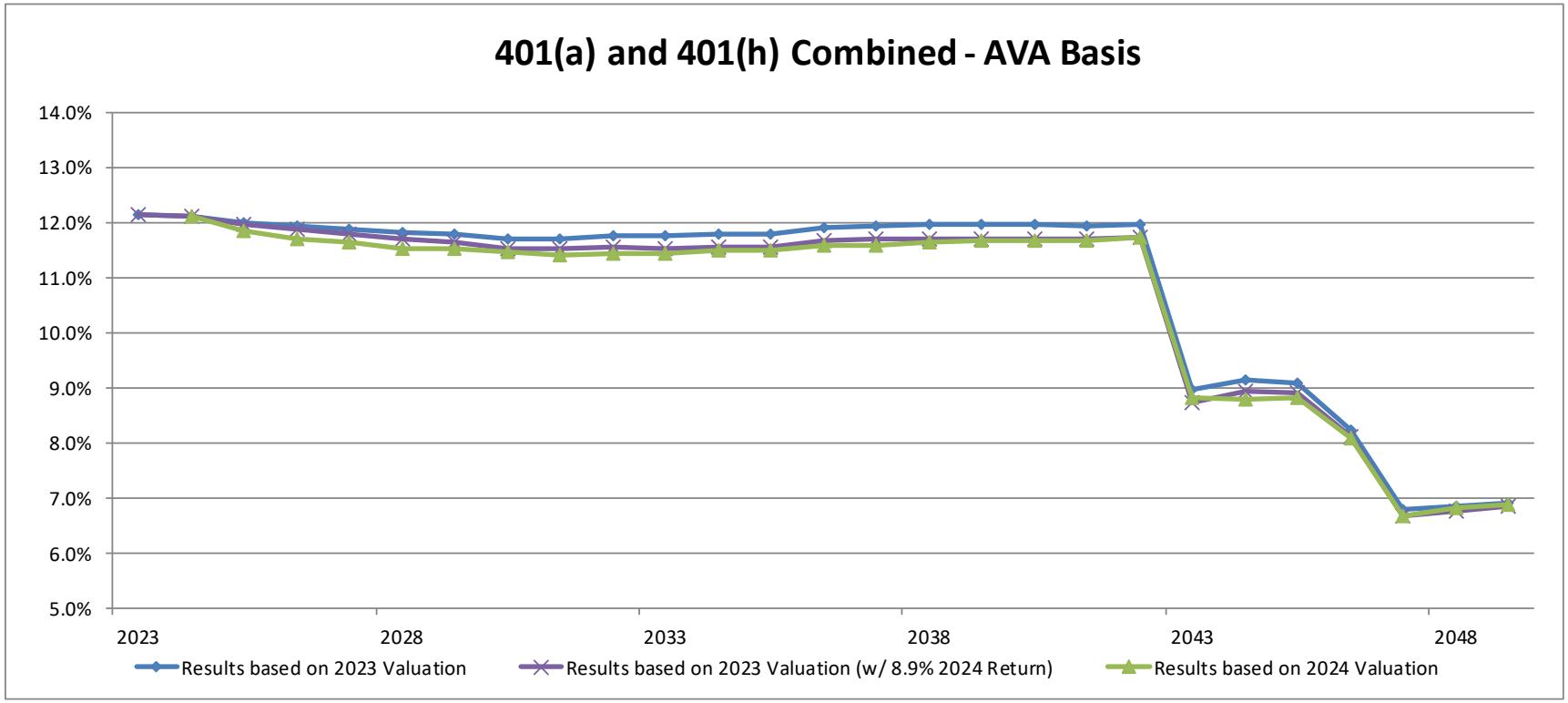
Contribution Rates, Funded Status, and UAAL

401(a) and 401(h) Combined				
Actuarial Valuation as of June 30,	Contribution Rate Effective as of July 1,	Member Contribution Rate	Funded Status (Smoothed Basis)	Unfunded Accrued Liability
2024	2025	11.86%	74.0%	$18,733
2025	2026	11.71%	75.8%	18,012
2026	2027	11.66%	77.2%	17,551
2027	2028	11.53%	78.6%	17,072
2028	2029	11.54%	79.9%	16,554
2029	2030	11.47%	81.1%	16,013
2034	2035	11.52%	86.3%	13,312
2039	2040	11.69%	92.0%	8,749
2044	2045	8.83%	98.4%	1,932
2049	2050	6.96%	100.0%	24
2054	2055	6.97%	100.0%	27
2057	2058	6.98%	100.0%	5

Projections assume all assumptions are exactly met

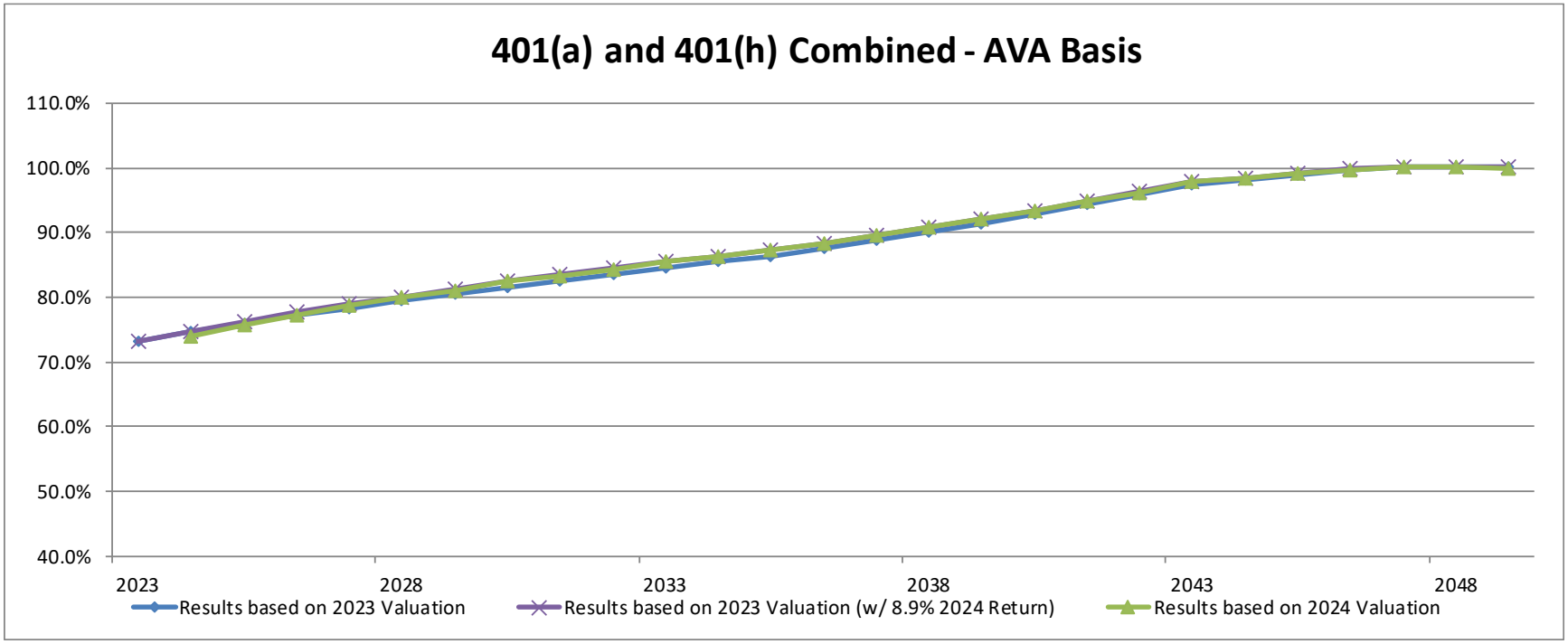
Long Term Projections

Projected Member Contribution Rate



Long Term Projections

Projected Funded Ratio



2024 LTD Valuation Results

	2022 Valuation	2023 Valuation	2024 Valuation
Actuarial Accrued Liability ($ Millions)	$210.2	$207.2	$209.0
Actuarial Value of Assets ($ Millions)	$192.4	$194.7	$205.8
UAAL ($ Millions)	$17.9	$12.4	$3.2
Actuarial Funded Ratio	91.5%	94.0%	98.5%
Normal Cost Rate	0.25%	0.25%	0.25%
Contribution Rate: Employer	0.15%	0.15%	0.14%
Contribution Rate: Employee	0.15%	0.15%	0.14%
Open Claims	2,617	2,377	2,217
Prior Year Claims Paid ($ Millions)	$44.5	$45.6	$41.7

2024 “Closed Prior System” Valuation Results

	2022 Valuation	2023 Valuation	2024 Valuation
Active Counts	0	0	0
In Payment Counts – Annuity	824	766	717
In Payment Counts – 13th Check	418	379	339
Actuarial Accrued Liability ($ Millions)	$248.1	$228.5	$206.1
Market Value of Assets ($ Millions)	$161.5	$139.3	$116.7
UAAL ($ Millions)	$86.6	$89.2	$89.4
Actuarial Funded Ratio	65.1%	61.0%	56.6%
Prior Year Disbursements ($ Millions)	$35.7	$34.0	$34.2
Estimated Exhaustion Date Assuming No Future Contributions	FY 2029	FY 2029	FY 2030

2024 Aggregate Results

	Plan 401(a)	Plan 401(h)	Plan Total	LTD	Plan and LTD Total
Contribution Rate: Employer	11.83%	0.03%	11.86%	0.14%	12.00%
Contribution Rate: Employee	11.86%	0.00%	11.86%	0.14%	12.00%
Contribution Rate: Total	**23.69%**	**0.03%**	**23.72%**	**0.28%**	**24.00%**
Alternate Contribution Rate	9.72%	0.00%	9.72%	0.03%	9.75%
Funded Ratio – AVA	72.6%	135.8%	74.0%	98.5%	
Funded Ratio – MVA	75.8%	141.9%	77.2%	99.9%	
Funded Ratio – MVA w/ CPP	75.9%	141.9%	77.3%	99.9%	

Contribution rates effective for the 2026 fiscal year

Summary of Valuation

- ASRS has a solid funding policy and is on a projected path to full funding with stable contribution rates
- Contribution rates are expected to remain relatively stable over time
- Currently over $2.3 billion of deferred asset gains
  - Will be incorporated into contribution rates over the next nine years and presents a bit of a tailwind on projected contribution rates
- CPP contributions increased the funded ratio by 0.1%
- Overall, outlook for plan health and plan funding continues to be stable