



Mendocino County Employees'
Retirement Association

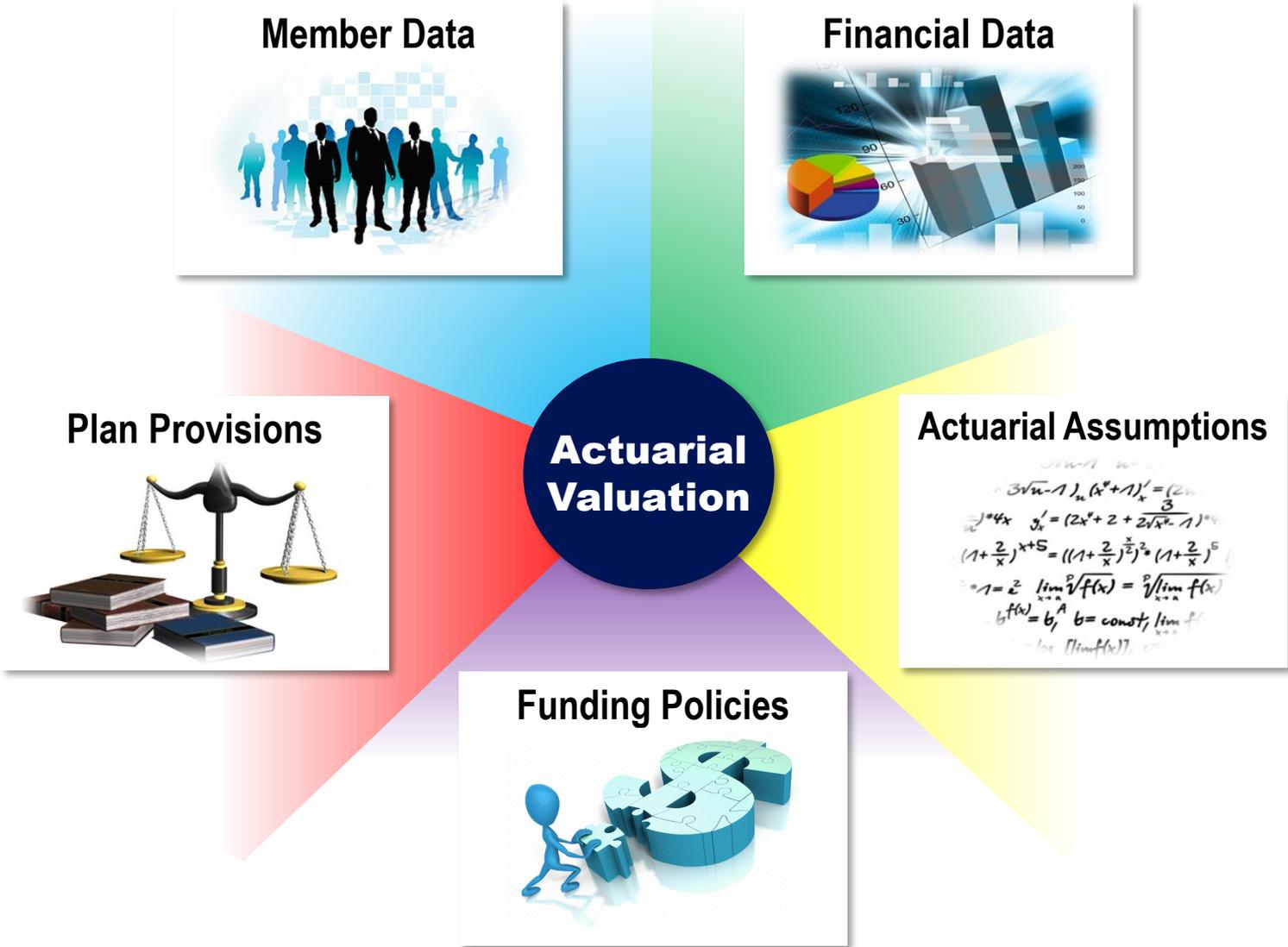
Results of the June 30, 2019 Actuarial Valuation Presentation to the Board of Supervisors

April 7, 2020 / Andy Yeung, ASA, MAAA, FCA, EA

Purpose of the Actuarial Valuation

- **Summarizes the actuarial data used in the valuation**
- **Analyzes the preceding year's experience**
- **Determines the funded status as of June 30, 2019**
- **Establishes funding requirements for fiscal 2020 – 2021**

What goes into an Actuarial Valuation?

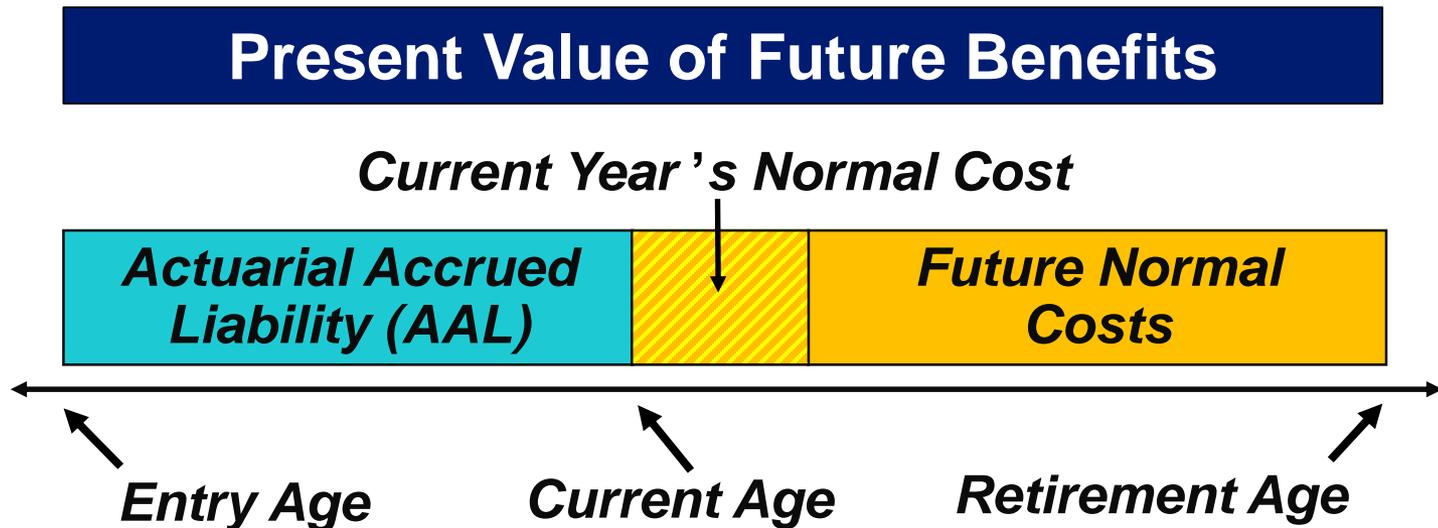


Actuarial Assumptions

$$\begin{aligned}
 &= 3\sqrt{x-1} \cdot (x^2+1)'_x = (2x) \cdot 3\sqrt{x-1} \\
 &= 6x\sqrt{x-1} \quad y'_x = (2x^2 + 2 + 2\sqrt{x^2-1})^{0.5} \\
 &(1 + \frac{2}{x})^{x+5} = ((1 + \frac{2}{x})^{\frac{x}{2}})^2 \cdot (1 + \frac{2}{x})^5 \\
 &= 1 = 2 \lim_{x \rightarrow a} \sqrt{f(x)} = \sqrt[2]{\lim_{x \rightarrow a} f(x)} \\
 &f^{(x)} = b^x, \quad b = \text{const}, \quad \lim_{x \rightarrow \infty} f(x) = \dots
 \end{aligned}$$

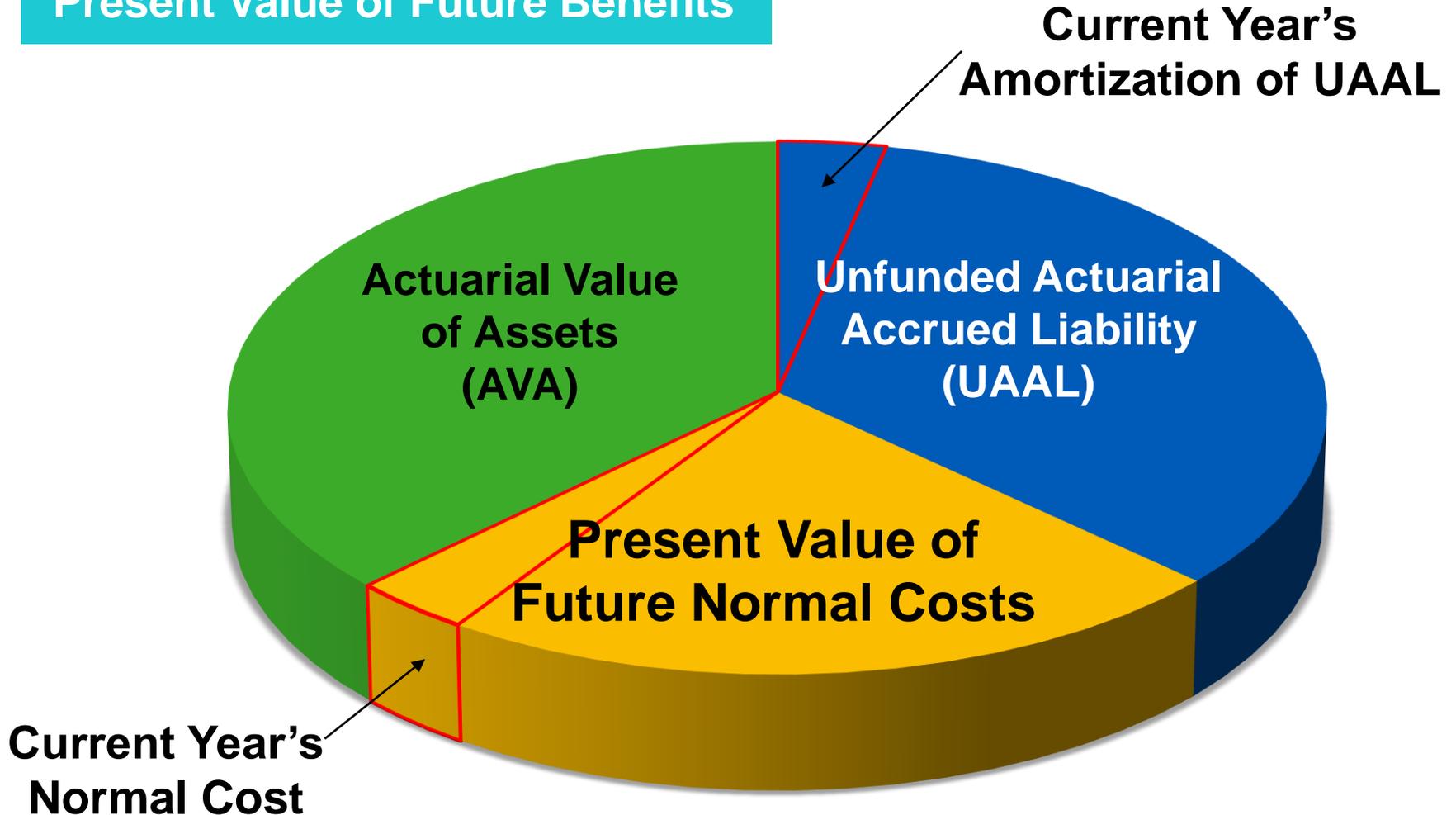
Funding Retirement Benefits – Cost Elements

- **The Normal Cost is the portion of the long term cost allocated to a year of service**—only active members have a current Normal Cost
- **The Actuarial Accrued Liability (AAL) measures the Normal Costs from past years**—for retired members, the AAL is the entire value of their benefit



Funding Retirement Benefits—Cost Elements

Present Value of Future Benefits



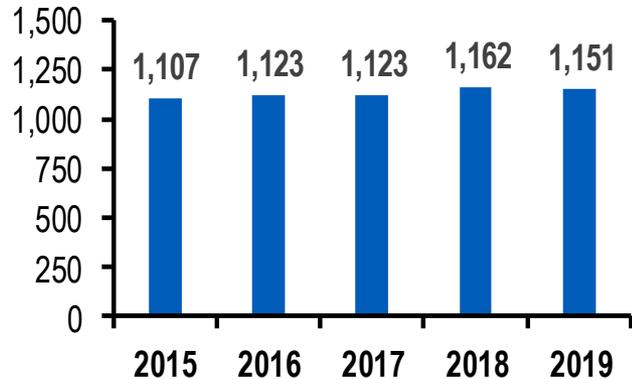
Current Funding Policy

- **Last substantive review by Segal in 2013. Last reviewed and amended by the Board of Retirement on February 21, 2018.**
- **Actuarial cost method:** Allocates costs to time periods, past vs. future
 - Entry Age method
 - Most stable contribution rate as a percent of payroll
- **Asset smoothing method:** Assigns a value to assets for determining contribution requirements
 - Market value gains and losses recognized over 5 years with a 25% “market value corridor”
 - Association is currently deferring a net gain of \$35K
 - Versus a \$10.4M gain last year
 - Will be recognized over next four years in the asset smoothing method

Current Funding Policy (continued)

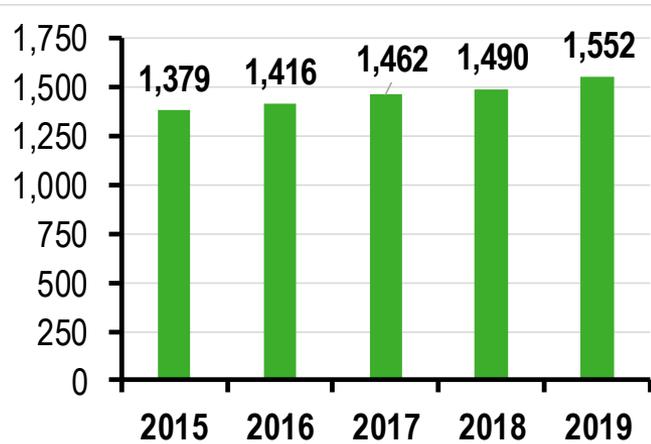
- **UAAL amortization policy:** How, and how long to fund difference between liabilities and assets
 - UAAL from June 30, 2012 valuation is being funded over a fixed, declining period
 - 20 years remaining as of June 30, 2019
 - Changes in UAAL after June 30, 2012 due to actuarial gains/losses or changes in assumptions/methods are amortized over separate, fixed 18-year periods
 - 18-year period was chosen by the Board in order to avoid “negative” amortization

Membership Demographics (as of June 30)



Active Members

	2019	2018
• Average Age	45.9	46.5
• Average Service	8.6	8.8
• Average Compensation	\$61,793	\$58,482



Retired Members and Beneficiaries

	2019	2018
• Average Age	69.5	69.3
• Average Annual Benefit	\$23,748	\$23,026

Terminated Vested Members

	2019	2018
	515	497

Valuation Results (\$ in thousands)

	06/30/2019	06/30/2018
Actuarial Accrued Liability (AAL) ⁽¹⁾	\$747,065	\$717,462
Valuation Value of Assets (VVA) ⁽²⁾	\$527,367	\$504,804
Market Value of Assets (MVA)	\$532,727	\$520,430
Funded Percentage on VVA Basis	70.6%	70.4%
Funded Percentage with Recognition of Deferred Gains (i.e., on MVA Basis)	71.3%	72.5%
Unfunded AAL on VVA Basis	\$219,698	\$212,658
Unfunded AAL on MVA Basis	\$214,338	\$197,032

⁽¹⁾ Excludes liabilities held for non-valuation reserves.

⁽²⁾ Excludes Contingency Reserve.

Note: Dollar amounts herein may not total exactly, due to rounding.

Valuation Results (\$ in thousands)

	6/30/2019	06/30/2018
Employer Contributions:		
Aggregate General Contribution Rate (% of payroll)	30.22%	29.36%
General Estimated Annual Contribution*	<u>\$17,366</u>	<u>\$16,869</u>
Aggregate Safety Contribution Rate (% of payroll)	56.73%	59.14%
Safety Estimated Annual Contribution*	<u>\$6,248</u>	<u>\$6,514</u>
Aggregate Probation Contribution Rate (% of payroll)	36.43%	33.71%
Probation Estimated Annual Contribution*	<u>\$965</u>	<u>\$893</u>
Aggregate Total Contribution Rate (% of payroll)	34.56%	34.13%
Total Estimated Annual Contribution*	<u>\$24,579</u>	<u>\$24,276</u>

* Based on June 30, 2019 projected annual compensation.

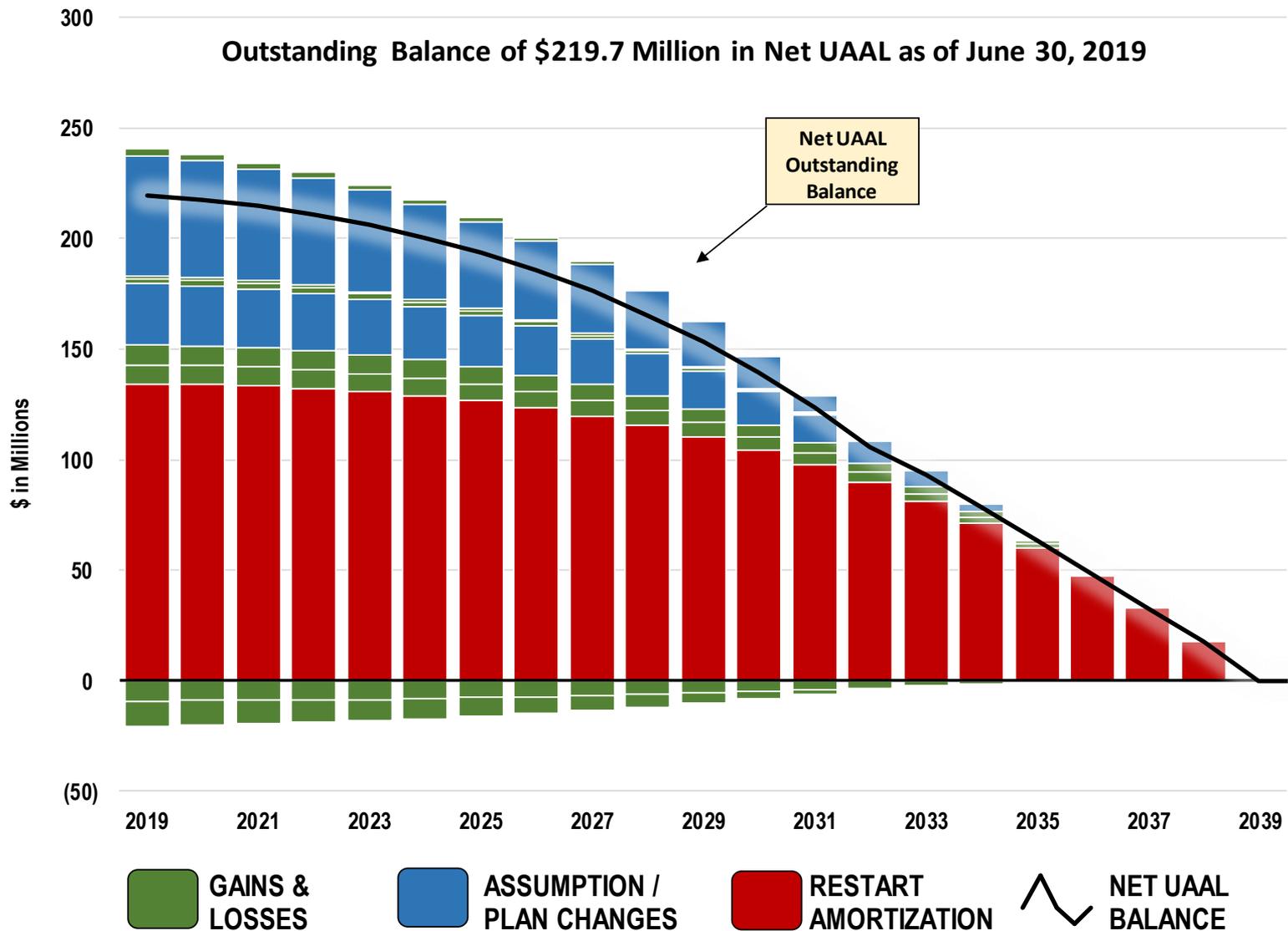
Experience During the Year

- Investment Experience for year ending June 30, 2019
 - Market Value of Assets earned 3.86%
 - Lower than the assumed rate of return of 7.00% for fiscal 2018 – 2019
 - Valuation (smoothed) Value of Assets earned 6.03%
 - Lower than 7.00%
 - Continued recognition of prior gains/losses
 - Association is currently deferring a net gain of \$35K
 - Versus a gain of \$10.4M last year
 - Will be recognized over next four years in the asset smoothing method
- Plan funded ratio on Valuation Value of Assets (VVA) basis increased from 70.4% to 70.6%
 - On a market value of assets basis, ratio decreased from 72.5% to 71.3 %
- Aggregate employer contribution rate increased from 34.13% to 34.56% of payroll

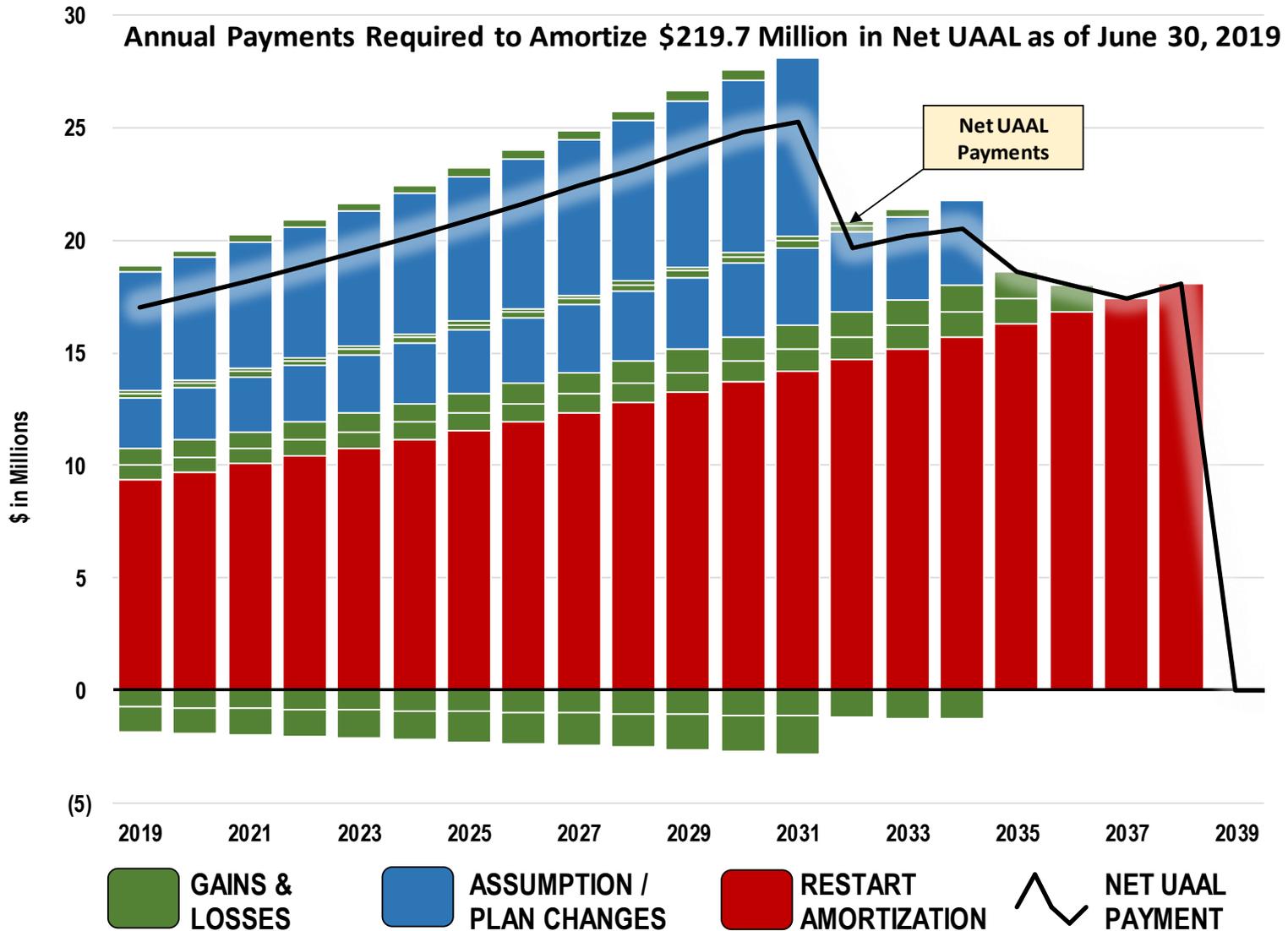
Development of Unfunded Actuarial Accrued Liability

	(Amounts in Thousands)
1. Unfunded actuarial accrued liability at beginning of year	\$212,658
2. Total normal cost at middle of year	14,055
3. Expected employer and member contributions	- 29,872
4. Interest	14,388
5. Expected unfunded actuarial accrued liability at end of year	<u>\$211,229</u>
6. Actuarial (gain)/loss due to all changes:	
a. Investment return less than expected	\$4,842
b. Higher than expected individual salary increases	5,295
c. Employer contribution delay	- 288
d. Other net experience gain	- 1,380
e. Total changes	<u>\$8,469</u>
7. Unfunded actuarial accrued liability at end of year	<u>\$219,698</u>

Projection of UAAL Balances and Payments



Projection of UAAL Balances and Payments (continued)



Change in Aggregate Employer Contribution Rates

	Contribution Rate (% of pay)	Estimated Annual Dollar Cost ⁽¹⁾ (\$000)
1. Aggregate Employer Contribution Rate as of June 30, 2018	34.13%	\$24,276
2. Effect of anticipated one-year delay in the future from implementing contribution rates in the June 30, 2019 valuation	0.03%	21
3. Effect of investment return less than expected	0.51%	363
4. Effect of higher than expected salary increases for actives	0.56%	398
5. Effect of amortizing prior year's UAAL over a larger than expected projected total payroll	- 0.26%	-185
6. Effect of other experience gains and changes in membership demographics	- 0.41%	-294
7. Total Change	0.43%	\$303
8. Aggregate Employer Contribution Rate as of June 30, 2019	34.56%	\$24,579

(1) Based on June 30, 2019 projected compensation.

Discussion

