

## Mendocino County Employees' Retirement Association

# Results of the June 30, 2016 Actuarial Valuation Presentation to the Board of Supervisors

**January 10, 2017** 

Andy Yeung, ASA, MAAA, FCA, EA Vice President & Actuary Segal Consulting

#### **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, 2016
- >Establishes funding requirements for fiscal 2017 2018

#### What goes into an Actuarial Valuation?





#### **Plan Provisions**



**Actuarial Valuation** 

#### **Funding Policies**



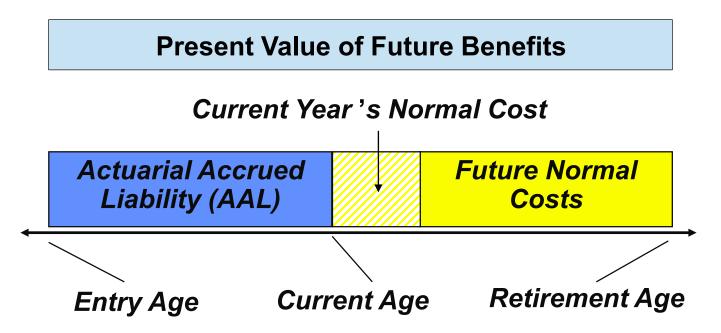
#### **Actuarial Assumptions**

 $3\sqrt{n}-1)_{n}(x^{4}+1)_{x}'=(2x^{4}+2+\frac{3}{2\sqrt{x^{4}}-1})^{4}$  $(1 + \frac{2}{x})^{x+5} = ((1 + \frac{2}{x})^{\frac{x}{2}})^{2} * (1 + \frac{2}{x})^{5}$  $b^{f(x)} = 2 \lim_{x \to \infty} \sqrt{f(x)} = \sqrt{\lim_{x \to \infty} f(x)}$   $b^{f(x)} = b^{A} b = const, \lim_{x \to \infty} f(x)$  \*

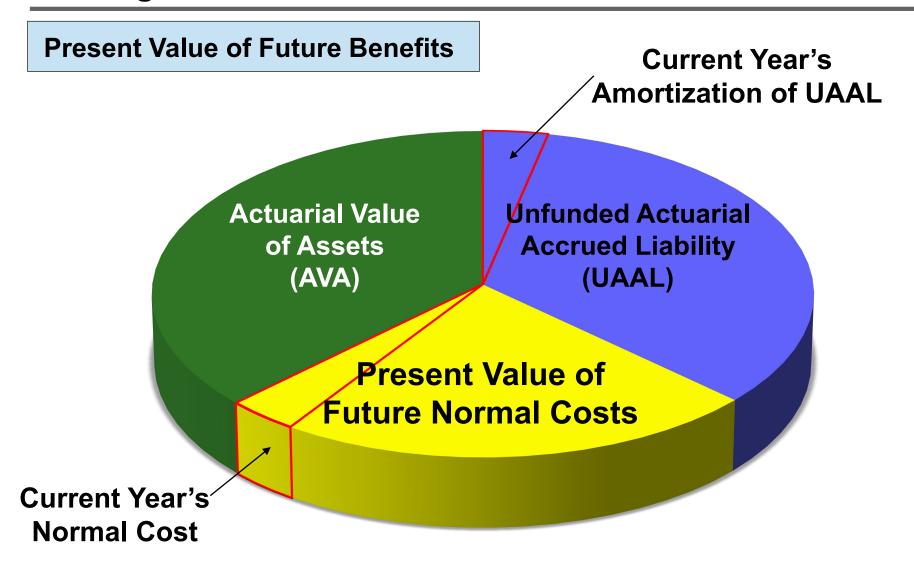
<sup>\*</sup> The last triennial experience study was as of June 30, 2014. The next triennial experience study is scheduled before the June 30, 2017 actuarial valuation.

#### 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



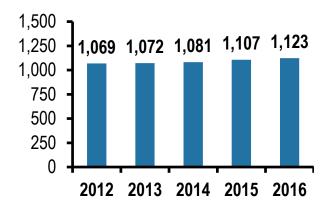
#### **Current Funding Policy**

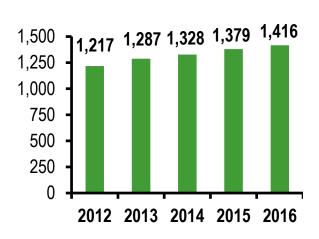
- Last review in 2013
- >Actuarial cost method: Allocates costs to time periods, past vs. future
  - Entry Age method
    - Most stable contribution rate as a percent of payroll
- >Asset smoothing method: Assigns a value to assets for determining contribution requirements
  - Market value gains and losses recognized over 5 years with a 25% market value corridor
  - Association is currently deferring a \$24.7M loss (versus a \$11.5M gain last year), and 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 was paid over a declining period with 23 years remaining as of June 30, 2016
  - Changes in UAAL after June 30, 2012 due to actuarial gains/losses or changes in assumptions/methods are amortized over separate decreasing 18-year periods
    - (18-year period was chosen by the Board in order to avoid "negative" amortization)

### **Membership Demographics** (as of June 30)





_	2016	2015
<b>Active Members</b>	1,123	1,107
<ul><li>Average Age</li></ul>	47.0	47.2
<ul><li>Average Service</li></ul>	9.1	9.4
<ul> <li>Average Compensation</li> </ul>	\$54,510	\$52,490
	2016	2015
Retired Members and Beneficiaries	1,416	1,379
<ul><li>Average Age</li></ul>	68.8	68.6
<ul> <li>Average Annual Benefit</li> </ul>	\$21,864	\$21,216
Terminated Vested Members	428	414

## Valuation Results (\$ in thousands)

	06/30/2016	06/30/2015
Actuarial Accrued Liability (AAL)(1)	\$632,058	\$610,382
Valuation Value of Assets (VVA)(2)	\$446,773	\$428,229
Market Value of Assets (MVA)	\$426,338	\$444,217
Funded Percentage on VVA Basis	70.7%	70.2%
Funded Percentage with Recognition of Deferred Gains (i.e., on MVA Basis)	67.5%	72.8%
Unfunded AAL on VVA Basis	\$185,284	\$182,153
Unfunded AAL on MVA Basis	\$205,720	\$166,164

<sup>(1)</sup> Excludes liabilities held for non-valuation reserves.

<sup>(2)</sup> Excludes Contingency Reserve.

## Valuation Results (\$ in thousands)

	06/30/2016	06/30/2015
Employer Contributions:		
Aggregate General Contribution Rate (% of payroll)	27.79%	27.97%
General Estimated Annual Contribution*	<u>\$13,695</u>	<u>\$13,782</u>
Aggregate Safety Contribution Rate (% of payroll)	55.12%	54.74%
Safety Estimated Annual Contribution*	<u>\$5,065</u>	<u>\$5,030</u>
Aggregate Probation Contribution Rate (% of payroll)	31.35%	31.35%
Probation Estimated Annual Contribution*	<u>\$861</u>	<u>\$861</u>
Aggregate Total Contribution Rate (% of payroll)	32.05%	32.14%
Total Estimated Annual Contribution*	<u>\$19,621</u>	<u>\$19,673</u>

<sup>\*</sup> Based on June 30, 2016 projected annual compensation.

#### **Experience During the Year**

- Investment Experience for year ending June 30, 2016
  - Market Value of Assets earned -2.35%, which is less than the assumed rate of return of 7.25%
  - Valuation (smoothed) Value of Assets earned 6.14% (less than 7.25%)
    - Continued recognition of prior gains/losses
  - Association is currently deferring a \$24.7M loss (versus a \$11.5M gain last year), and will be recognized over next four years in the asset smoothing method

#### **Experience During the Year (continued)**

- Plan funded ratio on Valuation Value of Assets (VVA) basis increased from 70.2% to 70.7%
  - On a market value of assets basis, funded ratio decreased from 72.8% to 67.5%
- Aggregate employer contribution rate decreased from 32.14% to 32.05% of payroll
- ➤If the \$24.7M in deferred losses were recognized immediately:
  - Funded ratio would decrease from 70.7% to 67.5%
  - Aggregate employer contribution rate would increase from 32.05% to about 34.8% of payroll
    - (about \$1.7M based on payroll of \$61.2M as of June 30, 2016)

#### **Development of Unfunded Actuarial Accrued Liability**

		(Amounts in Thousands)
1. Unfunded actuarial accrued liability at beginning of year		\$182,153
2. Total normal cost at middle of year		12,557
3. Expected employer and member contributions		-24,657
4. Interest		12,811
5. Expected unfunded actuarial accrued liability at end of year	_	\$182,864
6. Actuarial (gain)/loss due to all changes:		
a. Investment return less than expected	\$4,702	
b. Higher than expected individual salary increases	2,342	
c. Other experience	-4,624	
d. Total changes		\$2,420
7. Unfunded actuarial accrued liability at end of year	_	\$185,284

Note: There is an increase in the expected unfunded actuarial accrued liability in item 5 due to a net negative amortization. Such net negative amortization should be eliminated after the next valuation as of June 30, 2017.

#### **Change in Aggregate Employer Contribution Rates**

	Contribution Rate (% of pay)	Estimated Annual Dollar Cost <sup>(1)</sup> (\$000)
Aggregate Employer Contribution Rate as of June 30, 2015	32.14%	\$19,673
Effect of change in membership demographics Effect of anticipated one-year delay in the future from implementing contribution rates in the June 30, 2016	-0.13%	-81
valuation	0.00%	0
Effect of investment loss	0.58%	355
Effect of higher than expected salary increases for actives	0.29%	178
Effect of amortizing prior year's UAAL over a larger than expected projected total payroll	-0.31%	-190
Effect of other experience gain	<u>-0.52%</u>	<u>-314</u>
Total Change	-0.09%	-\$52
Aggregate Employer Contribution Rate as of June 30, 2016	32.05%	\$19,621

<sup>&</sup>lt;sup>(1)</sup> Based on June 30, 2016 projected compensation.

