

Marin County Employees' Retirement Association

Actuarial Review and Analysis as of June 30, 2016

Novato Fire Protection District

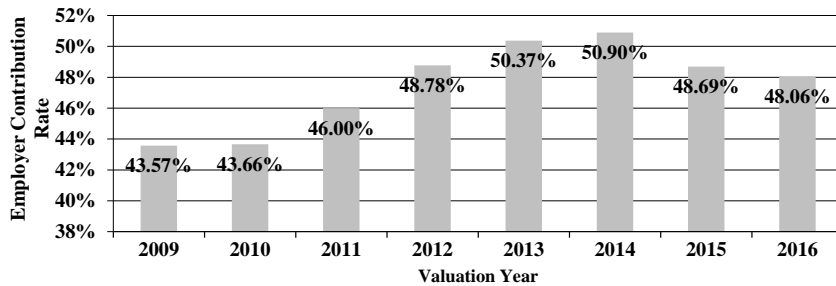
| Valuation Date | June 30, 2015 | | June 30, 2016 | |
|---|---------------|---------------------|---------------|---------------------|
| Actuarial Liability | \$165.8 M | <u>Funded Ratio</u> | \$172.3 M | <u>Funded Ratio</u> |
| Market Value of Valuation Assets | \$147.5 M | 88.9% | \$148.4 M | 86.1% |
| Unfunded Actuarial Liability | \$18.4 M | | \$23.9 M | |
| Inactive Actuarial Liability | \$111.8 M | | \$113.2 M | |
| Portion Covered by Market Value of Valuation Assets | 100.0% | | 100.0% | |
| Employer Normal Cost | 22.07% | | 22.30% | |
| Amortization of Unfunded Liability | 24.39% | | 23.57% | |
| Administrative Expense Rate | <u>2.23%</u> | | <u>2.19%</u> | |
| Total Employer Rate | 48.69% | | 48.06% | |
| Average Employee Rate | <u>14.16%</u> | | <u>13.85%</u> | |
| Final Total Rate | 62.85% | | 61.91% | |

Changes from Prior Year:

- Overall, the Plan cost decreased from 48.69% to 48.06% of active member payroll.
 - Asset experience produced an investment loss, which increased the contribution rate by 1.34% of pay.
 - Demographic experience of the Plan was close to the actuarial assumptions. However, due to an influx of new non-PEPRA members with higher entry ages (i.e., members with reciprocal service from another agency or employer) the contribution rate for Novato increased by 0.25%.
 - PEPRA new hires make up a growing proportion of the active population and generally contribute a larger share of their cost, decreased the contribution rate by 0.24%.
 - Liability-weighted salary increases were lower than expected, reducing the contribution rate by 0.05% of pay.
 - The higher than expected overall payroll growth, as a result of increases in the active population, meant that the UAL must be amortized over a larger than expected payroll base, which decreased the contribution rate by 0.22%.
 - There was an expected change in amortization due to the phase-in of prior UAL gains. This reduced the contribution rate by 1.70%.

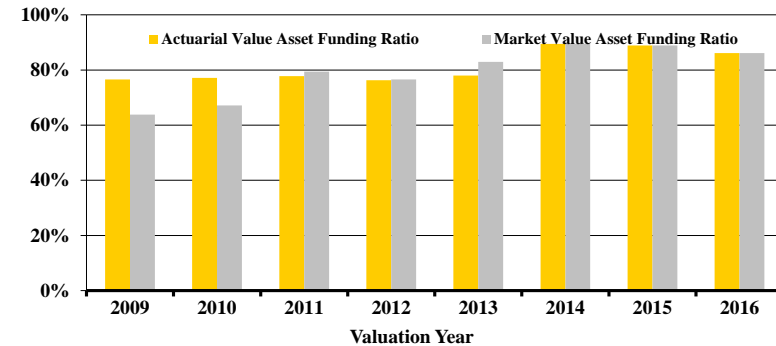
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Employer Contribution Rate as a Percentage of Member Payroll



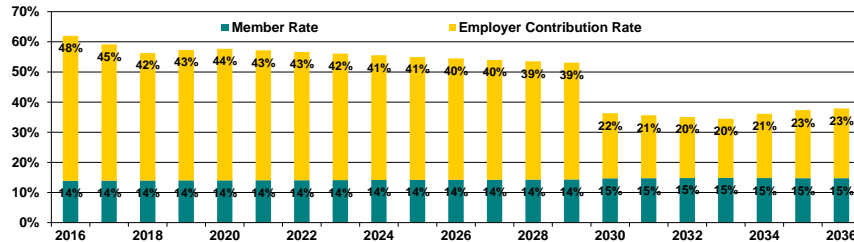
The employer contribution rate increased in fiscal year 2009 due principally to poor investment returns, and the deferred impact of these losses continued to be felt during the five year smoothing period. Changes in actuarial assumptions have also increased the employer rate.

Plan Funded Ratios



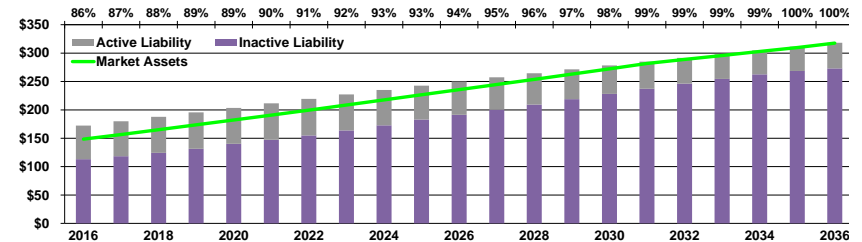
The above graph shows the funded ratio, both at Market and Actuarial Value of Assets. Beginning in 2014, the Actuarial Value of Assets is equal to the market value. Funded ratios have trended down since 2007, but have improved recently, due to investment performance.

Projection of Employer Cost as a Percentage of Member Payroll



Provided assumptions are met, contribution rates are expected to decline slowly over the next few years as the current deferred investment gains are recognized.

Projection of Funded Ratio Based on Actuarial Liability



Provided assumptions are met, the funded ratio (shown by the numbers along the top of the graph) will improve as the unfunded liability and extraordinary loss are paid off. This graph and the prior graph assume a 14-year amortization period for the bulk of the UAL.

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| | 2016 | | |
|-----------------------------------|-----------------|------------|------------|
| Sensitivity Analysis: | <u>Baseline</u> | <u>+1%</u> | <u>-1%</u> |
| Expected Long-Term Rate of Return | 7.25% | 8.25% | 6.25% |
| Employer Cost | 48.06% | 27.69% | 70.77% |
| Funding Ratio | 86.1% | 97.4% | 75.5% |

| Investment Earnings: | <u>FY 2015</u> | <u>FY 2016</u> |
|-----------------------------|----------------|----------------|
| Market Value | 5.0% | 2.1% |
| Expected | 7.25% | 7.25% |

| Projected Payroll: | <u>FY 2016</u> | <u>FY 2017</u> |
|---------------------------|----------------|----------------|
| Total | \$9.1 M | \$9.4 M |

| Projected Employer Contribution: | <u>FY 2017</u> | <u>FY 2018</u> |
|---|----------------|----------------|
| Total Employer Rate | 48.69% | 48.06% |
| Projected Covered Payroll | \$9.3 M | \$9.7M |
| Expected Employer Contribution | \$4.5 M | \$4.7 M |

Beginning in 2014, the Market and Actuarial Value of Assets are the same.

The employer costs in the sensitivity analysis are calculated assuming that the change in UAL due to the discount rate change is amortized over a 20-year period as a level percent of payroll with no phase-in/out.

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| | |
|---------------------------------|--|
| Actuarial Cost Method | Entry Age Normal to Final Decrement (GASB 67/68 compliant) |
| Amortization Method | Level % of pay; closed. |
| Remaining Amortization Period | 17 years, fixed (14 years remaining as of June 30, 2016). Half of the extraordinary asset loss from FY 2009 is being amortized as a level percentage of payroll over a closed 30-year period, with 22 years remaining as of June 30, 2016. Any subsequent unexpected change in the Unfunded Actuarial Liability after June 30, 2013 is amortized over 24 years (22 years for assumption changes) that includes a 5-year phase-in/out (3 years for assumption changes) of the payments/credits for each annual layer. |
| Asset Valuation Method | As of the June 30, 2014 valuation, assets are valued using the market value. The assets used to compute the UAL are the Market Value of Assets, minus the value of any non-valuation contingency reserves. |
| Actuarial Economic Assumptions: | |
| Long-Term Inflation Rate | 2.75% |
| Real Rate of Return | 4.50% |
| Nominal Rate of Return | 7.25% (net of investment, but not administrative, expenses) |
| Projected Salary Increases | 3.77% - 11.24% |
| Wage Inflation | 3.00% |

Disclaimers: This exhibit is intended to summarize the information presented in the June 30, 2016 Actuarial Valuation Report for MCERA. This exhibit is not intended to benefit any third party, and Cheiron assumes no duty or liability to any such party. We certify that the valuation was performed in accordance with generally accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein. This report does not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.