Marin County Employees' Retirement Association
Actuarial Review and Analysis as of June 30, 2016
City of San Rafael

Valuation Date	**June 30, 2015**		**June 30, 2016**	
Actuarial Liability	$511.6 M	Funded Ratio	$531.2 M	Funded Ratio
Market Value of Valuation Assets	$370.7 M	72.5%	$375.1 M	70.6%
Unfunded Actuarial Liability	$140.8 M		$156.1 M	
Inactive Actuarial Liability	$377.8 M		$395.7 M	
Portion Covered by Market Value of Valuation Assets	98.1%		94.8%	
Employer Normal Cost	16.88%		16.58%	
Amortization of Unfunded Liability	41.28%		41.68%	
Administrative Expense Rate	2.80%		2.78%	
Total Employer Rate	60.96%		61.04%	
Average Employee Rate	12.64%		12.41%	
Final Total Rate	73.60%		73.45%	

Changes from Prior Year:

- Overall, the Plan cost increased from 60.96% to 61.04% of active member payroll.
  - Asset experience produced an investment loss, which increased the contribution rate by 0.93% 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 San Rafael increased by 0.27%.
  - 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 0.57%.
  - Liability-weighted salary increases were lower than expected, reducing the contribution rate by 0.06% 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 0.62%.
  - There was an expected change in amortization due to the phase-in of prior UAL losses. This increased the contribution rate by 0.12%.

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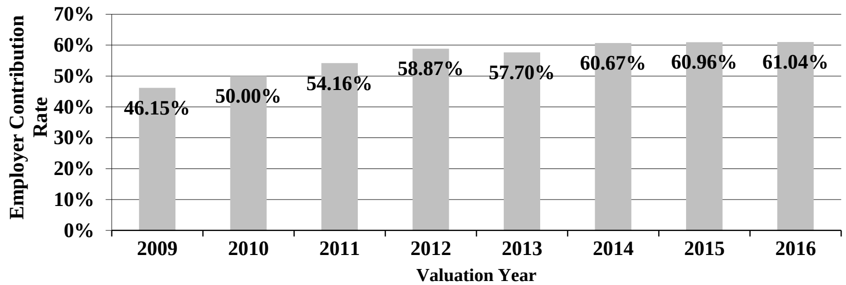
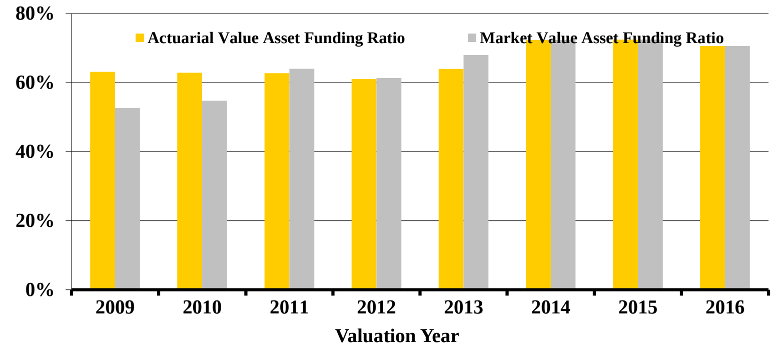
Employer Contribution Rate as a Percentage of Member Payroll



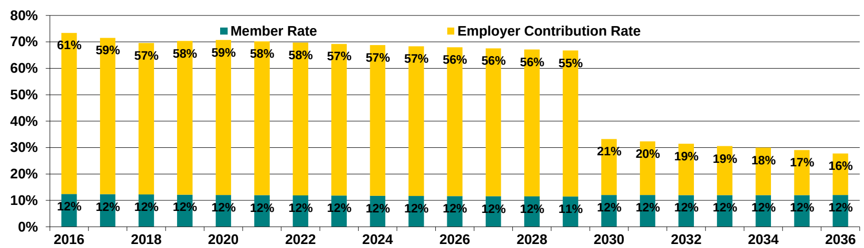
The employer contribution rate increased in fiscal year 2009 due principally to poor investment returns, and the deferred impact of these losses continued to be felt during the five year smoothing period. Changes in actuarial assumptions have also increased the employer rate.

Plan Funded Ratios



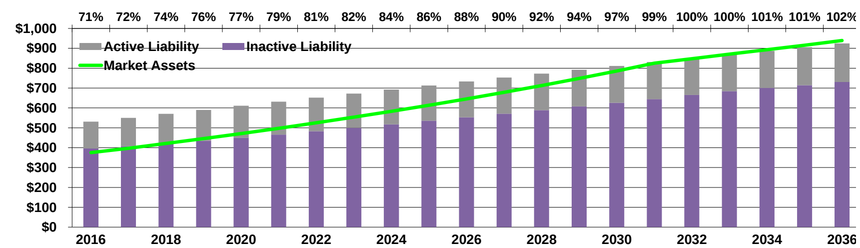
The above graph shows the funded ratio, both at Market and Actuarial Value of Assets. Beginning in 2014, the Actuarial Value of Assets is equal to the market value. Funded ratios have trended down since 2007, but have improved recently, due to investment performance and additional contributions.

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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Sensitivity Analysis:	2016 Baseline	+1%	-1%
Expected Long-Term Rate of Return	7.25%	8.25%	6.25%
Employer Cost	61.04%	46.47%	77.61%
Funding Ratio	70.6%	79.5%	62.1%

Investment Earnings:	FY 2015	FY 2016
Market Value	5.0%	2.1%
Expected	7.25%	7.25%

Projected Payroll:	FY 2016	FY 2017
Total	$32.5 M	$33.9 M

Projected Employer Contribution:	FY 2017	FY 2018
Total Employer Rate	60.96%	61.04%
Projected Covered Payroll	$33.4 M	$34.9 M
Expected Employer Contribution	$20.4 M	$21.3 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.

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.