

SCERA Actuarial Valuation 101

- Every year after the close of the plan year, which is December 31st, SCERA's Actuary, Segal Consulting, performs an actuarial valuation where they compare the Plan's experience for that year to the assumptions (salary growth, investment earnings, mortality, etc.)
- The valuation is usually received by SCERA in late April and brought to the Retirement Board in early May for discussion and approval.
- The purpose of the valuation is to calculate the liability of the plan as of the date of the valuation in order to set contribution rates to properly fund both the normal cost and the unfunded actuarial accrued liability (UAAL) cost.
- The normal cost is the cost of another year of service for each active member of the plan. The UAAL cost is the annual amortization payment on the unfunded liability for each layer of amortization.
- Every year, as part of the valuation, the actuary determines whether the plan's experience as compared to the assumptions resulted in a gain or loss. The gain or loss for that year is amortized over a closed 20 year period with a resulting annual amortization payment. The actuary adds up all the amortization layer annual payments to arrive at the UAAL cost for that year.
- The actuarial valuation sets contribution rates for the fiscal year that starts 18 months from the end of the plan year. For example, the 12-31-18 valuation sets contribution rates for FY 2020/21. SCERA does this so that the County, Court and Valley of the Moon have time to budget for upcoming contribution rate changes.
- When contribution rates rise, the 18 month delay will result in increased UAAL, and conversely when rates go down, the UAAL is decreased. It is typically a very small amount.

Specific points regarding the 12-31-18 actuarial valuation

- SCERA's valuation value funded ratio (which is the ratio of valuation value assets to liabilities) decreased from 87.7% to 86.8%. A valuation value of assets means that the actuary calculates the asset value using smoothed investment returns (market investment returns that are recognized over a five year period in 20% increments).
- SCERA's market value funded ratio decreased from 94.2% to 83.9%.
- The major causes of the decrease in funded ratio were investment losses and assumption change losses from SCERA's most recent experience study covering plan years 2015 through 2017.

**SONOMA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION (SCERA)
ACTUARIAL AND DEMOGRAPHIC INFORMATION**

- The UAAL increased from \$359.6 million to \$404.7 million.
- The impact on the average employer contribution rate was an increase from 18.77% to 20.58% of payroll.
- The impact on the average employee contribution rate was an increase from 11.57% to 12.01% of payroll.
- Each year the valuation contains a reconciliation starting with the prior year's UAAL and ending with the current year's UAAL. This year, it is found on page 27 and it shows that we received all of the normal cost contribution and UAAL cost contribution for the year, as well as an annual interest payment on the UAAL. It then shows the result of our experience as compared to our assumptions. It is an informative page.
- Over the past five years, the largest items increasing the UAAL have been the changes to actuarial assumptions and interest on the UAAL balance. Investments over this five year period resulted in a gain of \$77.2M. See the following slides from the summary report provided to the Board.
- The actuarial valuation can be found at <http://scetire.org/Financial/Actuarial-Reports/>.



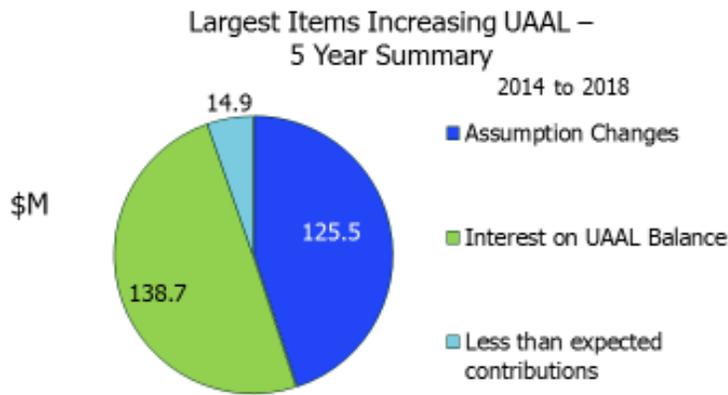
SCERA Actuarial Analysis of Plan Experience

SCERA Actuarial Analysis of Financial Experience						
(K\$)	2018	2017	2016	2015	2014	5 Year Total
Beginning of the Year UAAL Liability (Surplus)	359557	408227	408922	343043	449443	
Source of Actuarial (Gain) Loss:						
Compensation Increase Greater(Less) than Expected	11293	4586	5983	(12829)	(64347)	(55314)
Investment Experience recognized	13629	(44256)	891	(3307)	(44167)	(77210)
Other Experience	661	(3890)	(859)	(2546)	(5254)	(11888)
(Greater)/Less than Expected Contributions	(493)	4568	4094	(3519)	10343	14993
Composite (Gain) Loss for the Year - Total	25090	(38992)	10109	(22201)	(103425)	(129419)
Other Items Impacting UAAL:						
Assumption Change (Economic and Demographic)	31798			93686		125484
Interest Accrual on UAAL Balance	24876	28358	28249	24727	32514	138724
County's Additional UAAL Payment				(3661)		(3661)
Expected employer/member contributions less Normal Cost	(36589)	(38036)	(36053)	(29672)	(35489)	(175839)
Other Items Impacting UAAL - Total	20085	(9678)	(7804)	85080	(2975)	84708
End of the Year UAAL Liability (Surplus)	404732	359557	408227	405922	343043	





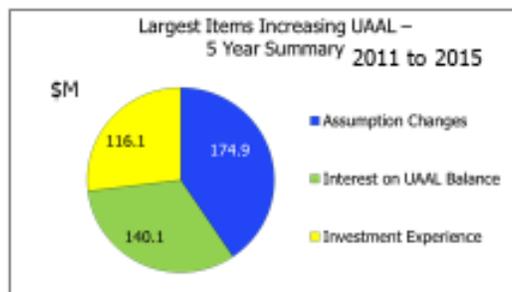
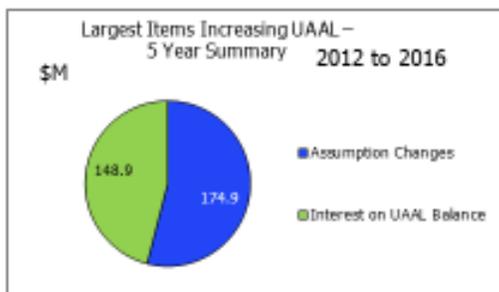
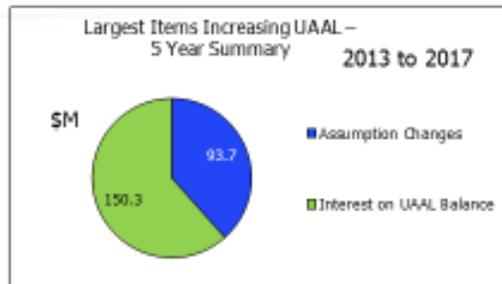
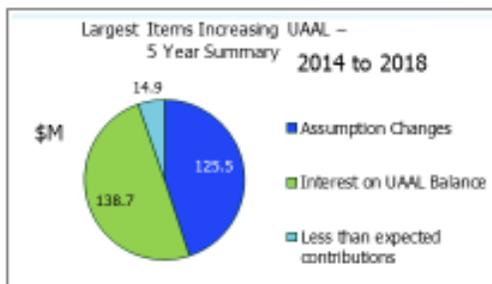
SCERA Actuarial Experience



The entire \$279.1M increase in the UAAL is offset by contributions and other favorable actuarial experience as the UAAL actually decreased by \$45M during this 5 year period from \$449.4M to 404.7M.



SCERA Actuarial Experience



Specific Points regarding the 2015 to 2017 Experience Study (Effective for the 12-31-18 plan year forward)

- SCERA is assuming investment earnings of 7.0% which includes a real return expectation of 5.28% minus administrative and investment expenses of .75% and a risk adjustment of .28% plus an inflation expectation of 2.75%.
- The real return expectation is what we expect to get from our target asset allocation (where we invest our money, like fixed income, equities, real estate, etc.) over and above inflation and deducting expenses and a risk adjustment. The risk adjustment is used to reflect the potential risk of shortfalls in achieving the return assumption.
- SCERA is assuming annual salary growth from inflationary increases plus across the board pay increases of 3.25%. SCERA also assumes that individual salaries will increase as employees advance in their career. These are called merit and promotion increases.
- SCERA moved from a static mortality table using the 2014 mortality improvement scale, to a generational mortality table using the 2017 mortality improvement scale. The generational approach provides projections for each cohort of retirees, as opposed to a single static table. As an example, the mortality projection of a member who is 65 years old this year, is different than the mortality projection of a member who is 65 years old next year.
- There are other assumption changes in this report, which can be accessed at <http://scretire.org/Financial/Actuarial-Reports/>.

General SCERA Information as of December 31, 2018

- Of the 3,309 active General members, 1,937 are in Plan A (Legacy) and 1,372 are in Plan B (PEPRA), which means that 41.5% of SCERA active General members are in the PEPRA Plan.
- Of the 712 Active Safety members, 500 are in Plan A (Legacy) and 212 are in Plan B (PEPRA), which means that 29.7% of the active Safety members are in the PEPRA Plan.
- The average annual retirement benefit for all retired members is \$36,648 with 17.03 years of service at retirement and the average age at retirement of 56.6 years old.
- The average annual retirement benefit for just those retirees who retired in 2018 is \$45,551 with 16.45 years of service at retirement with an average age at retirement of 58.7 years old.