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MEETING DATE
JUN 13 2012
AGENDA ITEM
#5

June 6, 2012

Ms. Marilyn Leedom
Chief Executive Officer
Contra Costa County Employees' Retirement Association
1355 Willow Way, Suite 221
Concord, CA 94520

Re: Contra Costa County Employees' Retirement Association
Cost-of-Living Adjustment Assumptions for Optional Forms of Payment

Dear Marilyn:

Pursuant to your request, we are providing information from an actuarial perspective concerning the inclusion of the Cost-of-Living Adjustment (COLA) assumption in calculating actuarially equivalent benefit amounts under optional forms of payment.

Background

The County Employees Retirement Law of 1937 (CERL) requires that optional forms of payment ("optional settlements") such as Optional Settlements 1 through 4 be determined on a basis that is actuarially equivalent.

§31760. Election of actuarial equivalent of retirement allowance
Until the first payment of any retirement allowance is made, a member or retired member, in lieu of the retirement allowance for his life alone, may elect to have the actuarial equivalent of his retirement allowance as of the date of retirement applied to a lesser retirement allowance payable throughout life in accordance with one of the optional settlements specified in this article.

Two streams of benefit payments are actuarially equivalent when they have the same present value based on a set of actuarial assumptions. The definition of actuarial equivalence from the CERL is as follows:

§31456. "Actuarial equivalent" defined
"Actuarial equivalent" means a benefit of equal value when computed upon the basis of the mortality tables adopted by the board of supervisors and regular interest thereon.

Current Policy

The following actuarial assumptions are currently used in the calculation of benefit amounts under optional forms of payment:

Interest Rate: 7.75%

Mortality Table: RP-2000 Combined Healthy Mortality Table set back 3 years for males and set back 2 years for females, weighted 30% male and 70% female for the member and weighted 70% male and 30% female for the beneficiaries.[1]

COLA: 0% (i.e., none)

These assumptions are based on the December 31, 2009 actuarial valuation and were implemented at the same time that contribution rates from that valuation were implemented (July 1, 2011). Note that the mortality tables from the valuation were blended into a single unisex table based on the weightings shown above. The Optional Settlements are determined to be actuarially equivalent to the Unmodified allowance that the member could have received at retirement, assuming that there is no survivor continuation under the Unmodified allowance.

As was noted by the Board of Retirement, there is no COLA assumed in the calculation of benefit amounts under optional forms of payment. This means that the Unmodified allowance and the Optional Settlement allowance are only actuarially equivalent assuming no COLAs are paid under either. As far as we know, this has always been the practice for CCCERA. We also understand that it is the current practice for all but two of the retirement systems covered under the CERL.

The origin of the current practice of not reflecting COLAs in these calculations is unknown; however, it could be due to the fact that there were no COLA provisions in the CERL until the mid-1960s, while the actuarial equivalent definition has remained unchanged since 1947.

The current practice could also be due to the fact that only regular interest and mortality tables are mentioned in the CERL definition of actuarial equivalent and Government Code Section 31760 applies that definition to the "retirement allowance as of the date of retirement." We understand that CCCERA's legal counsel is researching this issue to determine if it is even permissible to reflect the COLA assumption in this determination of actuarial equivalence. While we defer to counsel on this issue, for the purposes of the discussion that follows we have assumed that it would be allowable to reflect the COLA in the calculations of benefit amounts under optional forms of payment.

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[1] Note that the above mortality tables are used in determining life expectancies for members who retire from the General Tiers with a service retirement benefit and their beneficiaries. There are different tables used for Safety service retirements and their beneficiaries. The mortality tables used for disability retirements also differ.

Impact of COLA Assumption in Calculation of Benefit Amounts Under Optional Forms of Payment

It is our understanding that the great majority of members (roughly 90%) elect the Unmodified allowance at retirement so the impact of electing an Optional Settlement applies to a generally small portion of retiring members.

The current practice of excluding the COLA assumptions in the calculation of benefit amounts under optional forms of payment results in higher benefit amounts payable under Optional Settlements 2 through 4 as compared to the benefit amount that would result if the COLA assumption was included. This is because the value of the future COLAs expected to be paid over both the lives of the member and the beneficiary are proportionately greater than the value of the future COLAs expected to be paid over just the member's life. Since members (and their survivors) actually do receive COLAs, this policy results in a slight subsidy to members whenever they elect Optional Settlements 2 through 4.[2] This subsidy would be mitigated for members who forfeit the value of the automatic continuance benefit under the Unmodified allowance so that they can increase the continuance benefit to their eligible spouse or domestic partner to the 100% continuance payable under Optional Settlement 2. Ultimately, the cost impact of this subsidy is borne by the employer, as we discuss next.

The impact on the results of the annual actuarial valuation of not reflecting the COLAs in the calculation of these optional form of payment elections is as follows:

- Since assumed future COLAs <u>are</u> reflected in the annual actuarial valuation, there is an actuarial loss that is recognized in the first valuation after the electing member's date of retirement. These losses are combined with the other gains and losses that occur in each valuation (including other gains and losses that occur at retirement) and are amortized over 18 years under the Board's funding policy.

- More specifically, the amortization of the actuarial loss due to the optional form of payment election results in an increase in the employer contribution rate in the valuation that it is first recognized and would last 18 years.

- After the loss is reflected in the valuation and as long as future experience matches the assumptions used in the valuation, there would be no future actuarial gains or losses. In other words, the cost impact of any loss resulting from this election would be fully reflected in the first valuation after it occurs.

Note that reflecting the COLA assumption in the calculation of benefit amounts under optional forms of payment would eliminate the actuarial loss at retirement that is associated with this aspect of the optional form election.

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[2] This letter focuses on Optional Settlements 2 through 4. For the Social Security Modification under Gov. Code §31810 (which we understand is seldom elected by CCCERA members) the COLA assumption impacts this calculation in the opposite direction. For Optional Settlement 1 (cash refund annuity), it is possible that the COLA assumption may impact this calculation in an opposite direction as compared to Optional Settlements 2 through 4.

Conclusion

Absent any contrary guidance from legal counsel, we do not believe there is any absolute actuarial requirement to reflect the COLA assumption in the calculation of these optional benefit amounts. However, the Board should be aware that this practice does result in the small and unmeasured actuarial losses described above each time a retiring member elects Optional Settlements 2 through 4.

If the Board wants to eliminate these specific losses related to COLAs and optional forms of payment, then the most direct way would be to include a COLA assumption in the optional form calculations that matches the COLA assumption used in the actuarial valuation. This would be consistent from the following paragraph on page i of the actuarial valuation report:

"One of the general goals of an actuarial valuation is to establish contributions that fully fund the system's liabilities, and that, as a percentage of payroll, remain as level as possible for each generation of active members. Annual actuarial valuations measure the progress toward this goal, as well as test the adequacy of the contribution rates."

As in all matters pertaining to the interpretation and application of the law, Plan or individual Optional Settlement calculation provisions, you should be guided by the advice of the Plan's Legal Counsel.

Please let us know if you have any comments or questions.

Sincerely,

Paul Angelo

Paul Angelo, FSA, MAAA, FCA, EA
Senior Vice President and Actuary

John Monroe

John Monroe, ASA, MAAA, EA
Vice President and Associate Actuary

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Contra Costa County Employees' Retirement Association

COLA Assumption in Calculation of Optional Settlement Allowances

June 13, 2012

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CERL Optional Settlement Allowances

- CERL §31760 allows retiring members to exchange their lifetime allowance for an actuarially equivalent optional settlement
- CERL §31456 defines actuarially equivalent to mean a benefit of equal value considering mortality and regular interest
- Currently CCCERA does not take into account future cost-of-living adjustments when computing the actuarial equivalence

Actuarial Equivalence

- The present value of a member's lifetime allowance at retirement can be calculated if one knows the following
  - The probability each payment will be made (i.e. a mortality assumption)
  - An adjustment for the time value of money (i.e. an interest assumption)
  - The amount of each payment (i.e. a COLA assumption)

Actuarial Equivalence

- The amount of an Optional Settlement allowance must be lower than the retiree's lifetime allowance, since there is a chance some payments will be made after the retiree's death
- The amount of reduction (the "form conversion factor") is determined so that the present value of the reduced Optional Settlement allowance is the same as the present value of the unmodified lifetime allowance

COLA Assumption

- Using a COLA assumption greater than zero increases the present value of the retirement allowance (under either form of payment), since it increases the assumed payment amount
- The effect on the present value of Optional Settlements 2 through 4 is greater than the effect on the lifetime allowance, since the value of the future COLAs expected to be paid to the member and the beneficiaries is proportionally greater than the value of the future COLAs over just the member's life

Actuarial Equivalence Calculation

Based on the assumptions and the form of payment, an "annuity factor" is calculated. The ratio of annuity factors is the form conversion factor.

Membership type	General		
Member's age	57		
Beneficiary's age	57		
COLA assumption	0.00%	3.00%	Pct. Change
Unmodified allowance	11.207231	15.283542	36.4%
Option 2	12.115117	17.009337	40.4%
Form conversion factor	0.925062	0.898538	-2.9%

Actuarial Equivalence Examples

A typical member would receive a larger reduction when electing Optional Settlement 2 or 3 if the COLA were taken into account

Membership type	General		
Member's age	57		
Beneficiary's age	57		
COLA assumption	0.00%	3.00%	Pct. Change
Unmodified allowance	$1,000.00	$1,000.00	0.0%
Option 2	$925.06	$898.54	-2.9%
Option 3	$961.07	$946.56	-1.5%

Actuarial Equivalence Examples

This effect is greater the younger the beneficiary, since more COLAs will be assumed to be paid to the beneficiary

Membership type	General		
Member's age	57		
Beneficiary's age	27		
COLA assumption	0.00%	3.00%	Pct. Change
Unmodified allowance	$1,000.00	$1,000.00	0.0%
Option 2 (100%)	$854.24	$755.46	-11.6%
Option 3	$921.39	$860.70	-6.6%

Actuarial Equivalence Examples

The effect is similar with Optional Settlement 4 depending mainly on the ages of the beneficiaries

Membership type	General		
Member's age	57		
First beneficiary's age	27		
Second beneficiary's age	30		
COLA assumption	0.00%	3.00%	Pct. Change
Unmodified allowance	$1,000.00	$1,000.00	0.0%
Option 4 (79%)	$882.76	$800.40	-9.3%

Actuarial Equivalence Examples

The difference in the impact between Safety members and General members is due mainly to any difference in age of the beneficiary

Membership type	Safety		
Member's age	52		
Beneficiary's age	52		
COLA assumption	0.00%	3.00%	Pct. Change
Unmodified allowance	$1,000.00	$1,000.00	0.0%
Option 2	$935.35	$904.25	-3.3%
Option 3	$966.60	$949.72	-1.7%

Contra Costa County Employees' Retirement Association

COLA Assumption in Calculation of Optional Settlement Allowances

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