



**California Public Employees'
Retirement System
Legislators' Retirement System**

**Independent Review of the
Actuarial Valuation
as of June 30, 2013**

Produced by [Cheiron](#)

February 2015

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LETTER OF TRANSMITTAL

February 23, 2015

Ms. Young Hamilton, Acting Chief
California Public Employees' Retirement System
Office of Audit Services
P. O. Box 942701
Sacramento, CA 94229-2701

Dear Ms. Hamilton:

The purpose of this report is to provide an Independent Review of the Actuarial Valuation for the Legislators' Retirement Systems of June 30, 2013. This report was prepared exclusively for the California Public Employees' Retirement System (CalPERS) for the purpose described herein. This report is not intended to benefit any third party, and Cheiron assumes no duty or liability to any such party.

In preparing our report, we relied on information supplied by California Public Employees' Retirement System. This information includes, but is not limited to, the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

Future actuarial measurements may differ significantly from the current measurements due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; and changes in plan provisions or applicable law.

To the best of our knowledge, this report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices that are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. 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.

Sincerely,
Cheiron



Robert T. McCrory, FSA, FCA, EA, MAAA
Principal Consulting Actuary



Timothy S. Doyle, AAA, MAAA
Associate Actuary



**INDEPENDENT REVIEW OF THE ACTUARIAL VALUATION OF THE
LEGISLATORS' RETIREMENT SYSTEM AS OF JUNE 30, 2013**

Overview

Cheiron has conducted an independent review of the Actuarial Valuation of the Legislators' Retirement System (LRS, the System) as of June 30, 2013. We are able to certify that the liabilities and costs computed in this valuation are reasonable and were computed in accordance with generally accepted actuarial principles.

Based on the assumptions and methods employed in the valuation, the actuarial liabilities and costs independently computed by Cheiron closely matched those in the Valuation prepared by CalPERS.

The supporting calculations are presented in more detail below.

Background

The Legislators' Retirement System provides pensions and ancillary benefits to members of the Legislature elected before November 7, 1990, all Constitutional Officers upon electing to join the System, the Insurance Commissioner, and the Legislative Statutory Officers.

Members of the system who have reached age 60 and are credited with four or more years of service under the System, members who have completed 20 or more years of service under the System and Legislative Statutory Officers who have reached age 55 are eligible for an unreduced service retirement allowance. Members of the Legislature and Legislative Statutory Officers can receive up to two thirds of their highest compensation and Constitutional Officers can receive up to 60% of their highest compensation. Death, disability, and termination benefits are also paid from the System.

Methodology

Our review and certification involves three steps:

- **Review of Methods and Assumptions**
The actuarial assumptions and methods employed in the LRS Valuation were reviewed by Cheiron in order to establish whether they meet acceptable standards of actuarial practice.
- **Independent Valuation**
In order to verify the correctness of calculations in the LRS Valuation, Cheiron conducted an independent actuarial valuation using its own actuarial model. This independent valuation determines whether actuarial assumptions and methods are applied properly and yield the reported results.

In preparing our valuations, we relied on member and asset data supplied by CalPERS staff. As is usual in actuarial valuations, this data was neither audited nor independently verified.

**INDEPENDENT REVIEW OF THE ACTUARIAL VALUATION OF THE
LEGISLATORS' RETIREMENT SYSTEM AS OF JUNE 30, 2013**

- **Reconciliation of Results**

In the event that the figures computed by Cheiron fall outside of the established tolerances versus those computed by CalPERS' staff, reconciliation is required.

This reconciliation proceeds in four steps:

1. Establishing that the same member data has been used by Cheiron and by CalPERS staff.
2. Researching methodological differences between the Cheiron and staff approaches to computing liabilities and costs.
3. Comparing individual test life results to uncover subtle differences in approach that may result in material differences in liabilities and costs.
4. Discuss with CalPERS Staff the nature and magnitude of the discrepancy and come to agreement on the cause and remedy.

Review of Methods and Assumptions

The actuarial methods and assumptions used in the LRS Valuation are well within acceptable standards of actuarial practice.

Annual valuations of LRS are completed using the Entry Age Normal Funding Method. The valuation date is June 30, 2013. Contributions are determined for the July 1, 2014 through June 30, 2015 fiscal year.

Actuarial assumptions used to compute System liabilities and employer costs include:

- A 5.75% annual rate of investment return, net of all expenses;
- Annual salary increases of 3.00%;
- Annual inflation of 2.75%;
- Active and retired mortality rates developed based on actual CalPERS experience during the period from 1997 to 2011.

More detailed information concerning the valuation assumptions can be found in the 2013 CalPERS Experience Study Report. Cheiron also performed a review of this Experience Study, and evaluated demographic assumptions as part of that review.

Independent Valuation

The LRS Valuation was performed by CalPERS staff using the Actuarial Valuation System (AVS). Cheiron validated the calculations by creating an *independent* actuarial model to develop the valuation results. The only data common to the models was the participant data; the Cheiron model was developed separately, without reference to the one used by staff for the Valuation.

As established in our Proposal of Services, we expect the values of comparable items derived from the two models to differ by less than the percentages shown in the following table.

Table1: Independent Valuation Tolerances

Calculated Item	Acceptable Tolerance
Number of members - active, retired, inactive	0%
Annual payroll and member contributions	0%
Present value of pay; present value of member contributions	1%
Present value of benefit obligations	5%
Annual normal cost, employer contribution rates	5%

These tolerances are sufficiently stringent to detect material differences between the models. Differences outside of the Acceptable Tolerances listed above would not necessarily cause a failure to certify the valuation, but would result in additional scrutiny and reconciliation to determine the reasons.

Independent Actuarial Valuation Results

Tables 2 and 3 on the next page show the results of the calculations. We note the fully projected liabilities produced by CalPERS and by Cheiron are in close agreement in total.

As seen in Table 2, there is one area in which the valuation results were not within the acceptable tolerance levels: the Required Employer Contribution. CalPERS and Cheiron's calculations of the UAAL Amortization and Employer Normal Cost are in close agreement. However when added together to calculate the Required Employer Contribution, these results cause an apparently material difference, though the underlying calculations performed by Cheiron closely match those performed by CalPERS.

The LRS is well funded, with assets in excess of the Actuarial Liability. Because of this level of funding, the net employer contribution, after allowing for assets and employee contributions, is relatively small. Accordingly, small differences in the Actuarial Liability and in the Normal Cost are magnified into large relative changes in the net employer cost. It is because of this dynamic that we are able to say that the valuation results computed by Cheiron are within acceptable tolerances of those computed by CalPERS staff.

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Table 2: Independent Valuation Results

	CalPERS LRS Valuation	Cheiron Independent Valuation	Cheiron to PERS Difference	Within Tolerance
1. Present Value of Benefits for Active Members	\$ 8,355,520	\$ 8,116,130	-2.87%	Yes
2. Present Value of Benefits for Inactive Members				
Deferred Vested & DRO	11,289,580	10,836,926	-4.01%	Yes
Receiving Benefits	99,022,974	99,975,107	0.96%	Yes
Total	\$ 110,312,554	\$ 110,812,033	0.45%	Yes
3. Total Present Value of Benefits	\$ 118,668,074	\$ 118,928,163	0.22%	Yes
4. Actuarial Accrued Liability for Active Members	5,493,227	5,343,614	-2.72%	Yes
5. Total Actuarial Accrued Liability (4) + (2)	\$ 115,805,781	\$ 116,155,647	0.30%	Yes
6. Assets	123,201,262	123,201,262	0.00%	Yes
7. Unfunded Actuarial Accrued Liability (UAAL) [(5) – (6)]	\$ (7,395,481)	\$ (7,045,615)	-4.73%	N/A
8. Amortization of UAAL	\$ (379,917)	\$ (361,944)	-4.73%	Yes
9. Total Normal Cost	\$ 753,900	\$ 777,282	3.10%	Yes
10. Employee Contribution	\$ 114,062	\$ 114,119	0.05%	Yes
11. Employer Normal Cost	\$ 639,838	\$ 663,163	3.65%	Yes
10. Required Employer Contribution [(8) + (11)]	\$ 259,921	\$ 301,219	15.89%	No

Table 3: Demographic Comparison

Number of Members	CalPERS LRS Valuation	Cheiron Independent Valuation	Cheiron to PERS Difference	Within Tolerance
Active	11	11	0.00%	Yes
Retired	250	250	0.00%	Yes
Inactive	18	18	0.00%	Yes
Salaries and Contributions				
Total Payroll	\$ 1,427,241	\$ 1,427,241	0.00%	Yes
Present value of Payroll	\$ 5,604,077	\$ 5,611,446	0.13%	Yes