

To: A&F Committee

Date: December 27, 2012

From: Kathy Casenave 
Director of Finance

Reviewed By:

SUBJECT: PERS Actuarial Valuation for June 30, 2011; Rate for FY 2014

SUMMARY OF ISSUES:

The PERS Actuarial Valuation Report for the period ending June 30, 2011 was recently received. This valuation is used to set the rate for the next fiscal year. **The employer rate for FY 2013 will be 5.416%, up** slightly from the current year's rate of 5.219%, but less than the previous projection of 5.9%. This employer rate is low when compared to social security (6.2%) and the CCCTA rate before the dot com stock rally (7.289% in FY 1997). For six years (FY 1999-2004), the employer rate was zero.

CalPERS has estimated that our rate for FY 2015 will be 6.5% and FY 2016 6.9%.

Estimates of future employer rates depend upon a variety of factors:

- Future investment returns of 7.5% (this was lowered from 7.75%)
- Payroll growth of 3% (this was lowered from 3.25%)
- Demographic assumptions including the percentage of employees that will terminate, die, or retire in each future year.

Several pages of the actuarial report are attached.

Funded Status, Based on Market Value of Assets, Page 6

The funded status is 93.9% (the PERS long term goal is 100%), with unfunded liability totaling \$3.8 million. The prior year the funded status was 84%, with the unfunded liability at \$9.3 million.

Actuarial Value of Assets, Page 19

The *actuarial* value, not the *market* value, of assets, is used to determine the funded status of the retirement plan as part of the asset smoothing process. If the actuarial value is greater than the market value it means that past deferred losses have not been completely recognized. If the actuarial value is lower than market, not all gains have been recognized.

Page 19 of the report shows that the *actuarial* value of assets (\$66.5 million, line 19, 2nd section) is 112.6% of the market value of assets (\$59 million, line 13, 1st section). Not all losses have been recognized.

Benefits payments of \$1.486 million (Line 6, 1st section) are slightly less than the \$1.5 million in contributions (Lines 4 & 5, 1st section)

Other Information- Page 25

- There are 135 retirees receiving benefits
- The average annual benefit is \$11,483
- The average age of retirees is 68.69
- There are 248 active members

- The average annual payroll of the active members is \$51,252
- The covered annual payroll is \$12,710,400
- The average age for active members is 50.64

Investment rate of return

It is CalPERS' policy to use a constant investment return rate (7.5%) for the actuarial report rather than the actual rate of return. This is called *asset smoothing*- the delayed recognition of part of the investment gains or losses dampens the effect of short-term market value fluctuations in setting employers' rates. The delayed recognition is smoothed over a period of 15 years, based on an actuarial value that is not less than 80% or more than 120% of market value. Because of the significant loss in FY 2009, CalPERS increased the corridor limits to 60%-140% for the FY 2012 rate and 70%-130% for the FY 2013 rate. For FY 2014, the corridor limits will return to 80%-120%.

The CalPERS history of investment returns is shown on **Page 21** of the report.

Investment Return Sensitivity Analysis (Page D-2)

The FY 2012 investment return will be used for the FY 2015 employer rate. At the time of the preparation on the new actuarial report, it was estimated to be 0%, before administrative expenses. CalPERS estimates that the Authority's FY 2015 rate will be 6.5%, using this return.

The actuary also estimates the Authority's FYs 2016, 2017 & 2018 rates based on 5 different scenarios of investment returns for FY 2013, 2014, & 2015. If the 7.5% return is achieved in all three years the employer rates would be 5.8%, 6.1% & 6.4%.

The 7.5% for FY 2013 may be difficult to achieve due to fiscal cliff and worldwide economic conditions. A more conservative investment rate of 2.6% in all three years would result in estimated employer rates of 8%, 9.7% and 11.3% in FYs 2016, 2017, & 2018.

FINANCIAL IMPLICATIONS:

These rates will be used for the revised forecast.

ACTION REQUESTED: None; information only.

ATTACHMENTS:

Selected pages of the PERS valuation report

Funded Status

	June 30, 2010	June 30, 2011
1. Present Value of Projected Benefits	\$ 70,873,999	\$ 75,522,117
2. Entry Age Normal Accrued Liability	\$ 58,232,048	\$ 62,920,244
3. Actuarial Value of Assets (AVA)	62,352,007	66,543,536
4. Unfunded Liability (AVA Basis) [(2) – (3)]	\$ (4,119,959)	\$ (3,623,292)
5. Funded Ratio (AVA Basis) [(3) / (2)]	107.1%	105.8%
6. Market Value of Assets (MVA)	\$ 48,899,647	\$ 59,078,583
7. Unfunded Liability (MVA Basis) [(2) – (6)]	9,332,401	3,841,661
8. Funded Ratio (MVA Basis) [(6) / (2)]	84.0%	93.9%
Superfunded Status	No	No

Cost

Actuarial Cost Estimates in General

What will this pension plan cost? Unfortunately, there is no simple answer. There are two major reasons for the complexity of the answer. First, all actuarial calculations, including the ones in this report, are based on a number of assumptions about the future. These assumptions can be divided into two categories.

- Demographic assumptions include the percentage of employees that will terminate, die, become disabled, and retire in each future year.
- Economic assumptions include future salary increases for each active employee, and the assumption with the greatest impact, future asset returns at CalPERS for each year into the future until the last dollar is paid to current members of your plan.

While CalPERS has set these assumptions to reflect our best estimate of the real future of your plan, it must be understood that these assumptions are very long term predictors and will surely not be realized in any one year. For example, while the asset earnings at CalPERS have averaged more than the assumed return of 7.5% for the past twenty year period ending June 30, 2012, returns for each fiscal year ranged from -24% to +21.7%

Second, the very nature of actuarial funding produces the answer to the question of plan cost as the sum of two separate pieces.

- The Normal Cost (i.e., the future annual premiums in the absence of surplus or unfunded liability) expressed as a percentage of total active payroll.
- The Past Service Cost or Accrued Liability (i.e., the current value of the benefit for all credited past service of current members) which is expressed as a lump sum dollar amount.

The cost is the sum of a percent of future pay and a lump sum dollar amount (the sum of an apple and an orange if you will). To communicate the total cost, either the Normal Cost (i.e., future percent of payroll) must be converted to a lump sum dollar amount (in which case the total cost is the present value of benefits), or the Past Service Cost (i.e., the lump sum) must be converted to a percent of payroll (in which case the total cost is expressed as the employer's rate, part of which is permanent and part temporary). Converting the Past Service Cost lump sum to a percent of payroll requires a specific amortization period, and the employer rate will vary depending on the amortization period chosen.

Reconciliation of the Market Value of Assets

1. Market Value of Assets as of 6/30/10 Including Receivables	\$	48,899,647
2. Receivables for Service Buybacks as of 6/30/10		17,006
3. Market Value of Assets as of 6/30/10		48,882,641
4. Employer Contributions		610,368
5. Employee Contributions		894,263
6. Benefit Payments to Retirees and Beneficiaries		(1,485,801)
7. Refunds		(58,321)
8. Lump Sum Payments		(17,261)
9. Transfers and Miscellaneous Adjustments		(44,603)
10. Investment Return		10,281,304
11. Market Value of Assets as of 6/30/11	\$	59,062,590
12. Receivables for Service Buybacks as of 6/30/11		15,993
13. Market Value of Assets as of 6/30/11 Including Receivables	\$	59,078,583

Development of the Actuarial Value of Assets

1. Actuarial Value of Assets as of 6/30/10 Used For Rate Setting Purposes	\$	62,352,007
2. Receivables for Service Buybacks as of 6/30/10		17,006
3. Actuarial Value of Assets as of 6/30/10		62,335,001
4. Employer Contributions		610,368
5. Employee Contributions		894,263
6. Benefit Payments to Retirees and Beneficiaries		(1,485,801)
7. Refunds		(58,321)
8. Lump Sum Payments		(17,261)
9. Transfers and Miscellaneous Adjustments		(44,603)
10. Expected Investment Income at 7.75%		4,827,108
11. Expected Actuarial Value of Assets	\$	67,060,754
12. Market Value of Assets as of 6/30/11	\$	59,062,590
13. Preliminary Actuarial Value of Assets $[(11) + ((12) - (11)) / 15]$		66,527,543
14. Maximum Actuarial Value of Assets (120% of (12))		70,875,108
15. Minimum Actuarial Value of Assets (80% of (12))		47,250,072
16. Actuarial Value of Assets {Lesser of [(14), Greater of ((13), (15))]}		66,527,543
17. Actuarial Value to Market Value Ratio		112.6%
18. Receivables for Service Buybacks as of 6/30/11		15,993
19. Actuarial Value of Assets as of 6/30/11 Used for Rate Setting Purposes	\$	66,543,536

Summary of Valuation Data

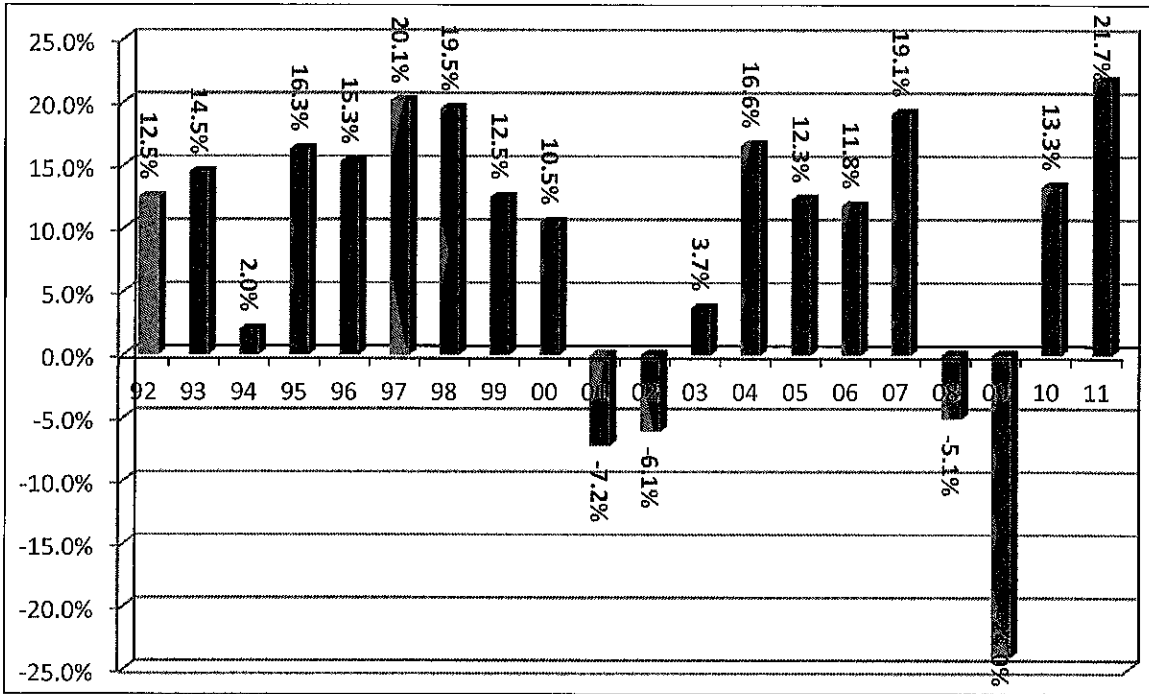
	June 30, 2010	June 30, 2011
1. Active Members		
a) Counts	250	248
b) Average Attained Age	51.11	51.42
c) Average Entry Age to Rate Plan	37.16	37.18
d) Average Years of Service	13.95	14.24
e) Average Annual Covered Pay	\$ 51,960	\$ 51,252
f) Annual Covered Payroll	12,990,109	12,710,400
g) Projected Annual Payroll for Contribution Year	14,298,253	13,888,997
h) Present Value of Future Payroll	96,181,527	93,144,832
2. Transferred Members		
a) Counts	32	33
b) Average Attained Age	51.00	50.64
c) Average Years of Service	2.82	2.99
d) Average Annual Covered Pay	\$ 67,319	\$ 65,496
3. Terminated Members		
a) Counts	107	101
b) Average Attained Age	48.63	50.02
c) Average Years of Service	3.11	3.28
d) Average Annual Covered Pay	\$ 37,564	\$ 38,103
4. Retired Members and Beneficiaries		
a) Counts	122	135
b) Average Attained Age	68.56	68.69
c) Average Annual Benefits	\$ 10,964	\$ 11,483
5. Active to Retired Ratio [(1a) / (4a)]	2.05	1.84

Counts of members included in the valuation are counts of the records processed by the valuation. Multiple records may exist for those who have service in more than one valuation group. This does not result in double counting of liabilities.

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CalPERS History of Investment Returns

The following is a chart with historical annual returns of the Public Employees Retirement Fund for each fiscal year ending on June 30. Beginning with June 30, 2002 the figures are reported as gross of fees.



Analysis of Future Investment Return Scenarios

The investment return for fiscal year 2011-2012 was estimated to be 0%. Note that this return is before administrative expenses and also does not reflect final investment return information for real estate and private equities. The final return information for these two asset classes is expected to be available later in October. For purposes of projecting future employer rates, we are assuming a 0% investment return for fiscal year 2011-2012.

The investment return realized during a fiscal year first affects the contribution rate for the fiscal year 2 years later. Specifically, the investment return for 2011-2012 will first be reflected in the June 30, 2012 actuarial valuation that will be used to set the 2014-2015 employer contribution rates, the 2012-2013 investment return will first be reflected in the June 30, 2013 actuarial valuation that will be used to set the 2015-2016 employer contribution rates and so forth.

Based on a 0% investment return for fiscal year 2011-2012 and assuming that all other actuarial assumptions will be realized and that no further changes to assumptions, contributions, benefits, or funding will occur between now and the beginning of the fiscal year 2014-2015, the effect on the 2014-2015 Employer Rate is as follows:

Estimated 2014-2015 Employer Rate	Estimated Increase in Employer Rate between 2013-2014 and 2014-2015
6.5%	1.1%

As part of this report, a sensitivity analysis was performed to determine the effects of various investment returns during fiscal years 2012-2013, 2013-2014 and 2014-2015 on the 2015-2016, 2016-2017 and 2017-2018 employer rates. Once again, the projected rate increases assume that all other actuarial assumptions will be realized and that no further changes to assumptions, contributions, benefits, or funding will occur.

Five different investment return scenarios were selected.

- The first scenario is what one would expect if the markets were to give us a 5th percentile return from July 1, 2012 through June 30, 2015. The 5th percentile return corresponds to a -4.1% return for each of the 2012-2013, 2013-2014 and 2014-2015 fiscal years.
- The second scenario is what one would expect if the markets were to give us a 25th percentile return from July 1, 2012 through June 30, 2015. The 25th percentile return corresponds to a 2.6% return for each of the 2012-2013, 2013-2014 and 2014-2015 fiscal years.
- The third scenario assumed the return for 2012-2013, 2013-2014, 2014-2015 would be our assumed 7.5% investment return which represents about a 49th percentile event.
- The fourth scenario is what one would expect if the markets were to give us a 75th percentile return from July 1, 2012 through June 30, 2015. The 75th percentile return corresponds to a 11.9% return for each of the 2012-2013, 2013-2014 and 2014-2015 fiscal years.
- Finally, the last scenario is what one would expect if the markets were to give us a 95th percentile return from July 1, 2012 through June 30, 2015. The 95th percentile return corresponds to a 18.5% return for each of the 2012-2013, 2013-2014 and 2014-2015 fiscal years.

The table below shows the estimated projected contribution rates and the estimated increases for your plan under the five different scenarios.

2012-2015 Investment Return Scenario	Estimated Employer Rate			Estimated Change in Employer Rate between 2014-2015 and 2017-2018
	2015-2016	2016-2017	2017-2018	
-4.1% (5th percentile)	10.3%	13.9%	17.1%	10.6%
2.6% (25th percentile)	8.0%	9.7%	11.3%	4.8%
7.5%	6.9%	7.3%	7.7%	1.2%
11.9%(75th percentile)	6.8%	7.1%	7.2%	0.7%
18.5%(95th percentile)	6.7%	6.7%	6.4%	-0.1%