Agenda Item 8a

April 14, 2014

ITEM NAME: State and Schools Actuarial Valuation and Employer and Employee Contribution Rates

PROGRAM: Actuarial Office

ITEM TYPE: Action

RECOMMENDATION
Adopt the employer and member contribution rates for the period July 1, 2014 to June 30, 2015 as set forth in the table on page 3 of this agenda item and in Attachment 6.

EXECUTIVE SUMMARY
The recommended employer contribution rates for the State plans are going to increase from the 2013-14 fiscal year to the 2014-15 fiscal year, mostly as a result of the new actuarial assumptions adopted by the Board in February of this year. Overall, the expected contribution amount for the State Plans is estimated to increase by approximately $459.1 million. Note that as per Government Code Section 20683.2, the State is expected to contribute above the contribution rates being recommended by staff to redirect savings that resulted from increases in member contribution rates.

The recommended employer contribution rate for Schools is increasing from the 2013-14 fiscal year to the 2014-15 fiscal year. The expected contribution amount for the Schools Pool is expected to increase by approximately $55.0 million. As per the Board decision in February of this year, the new actuarial assumptions will not be factored into the contributions of the Schools Pool until the 2016-17 fiscal year.

As a result of a provision in the Public Employees' Pension Reform Act of 2013 (PEPRA) and the new assumptions adopted by the Board in February, PEPRA members working for the Legislature or CSU in the Peace Officers and Firefighters plan 2.5% at 57 formula will have their contribution rates increased. The member contribution rate for these PEPRA members will be set to 11.0 percent effective July 1, 2014. This is 0.5 percent higher than the current 10.5 percent.

STRATEGIC PLAN
This action item is being presented as part of the regular and ongoing workload of the Actuarial Office and supports the Strategic Plan Goal A: Improve long-term pension and health benefit stability.

BACKGROUND

On January 1, 2013, the Public Employees' Pension Reform Act of 2013 (PEPRA) took effect. This is the first actuarial valuation for most of the plans that includes membership under the new benefit formulas. In addition to PEPRA, the pension reform bill (Assembly Bill 340) added Government Code Section 20683.2 which changed the contribution rates of many State members effective July 1, 2013 with additional increases for some members effective July 1, 2014. It also requires that the "savings realized by the state employer as a result of the employee contribution rate increases required by this section shall be allocated to any unfunded liability, subject to appropriation in the annual Budget Act." While the requirement to make additional contributions does not directly affect our recommended contribution rates, the State will need additional information to implement this requirement. The necessary information is included in a separate section later in this agenda item.

In the prior actuarial valuation, a number of data problems were identified. These problems were aggravated by the very short implementation timeframe for implementation of PEPRA which caused changes in the underlying data and which diverted staff resources from addressing the data issues. At the time that the prior valuation was prepared, staff believed that data issues could still be present in the data but that they would not have a material impact on the valuation results. This issue was also identified in the external review of that report. The data that was provided to perform the current valuation was significantly improved relative to the prior year.

In 2014, CalPERS completed a 2-year asset liability management study incorporating actuarial assumptions and strategic asset allocation. On February 19 the CalPERS Board of Administration adopted relatively modest changes to the current asset allocation that will reduce the expected volatility of returns. The adopted asset allocation is expected to have a long- term blended return that continues to support a discount rate assumption of 7.5 percent. The Board also approved several changes to the demographic assumptions that more closely align with actual experience. The most significant of these changes is the inclusion of mortality improvement to acknowledge the greater life expectancies we are seeing in our membership and expected continued improvements.

As per the Board's decision in February of this year, the new actuarial assumptions have been incorporated in this valuation for the State Plans and will be incorporated in the June 30, 2015 valuation for the Schools Pool. For the State Plans, the increase in liability due to new actuarial assumptions has been amortized over 20 years and phased in over 3 years, beginning with the contribution requirement for fiscal year 2014-15. The impact of the assumption change for each State plan can be found in Attachments 2a and 2b. For the Schools Pool, the increase in liability due to the new actuarial assumptions will be amortized over 20 years and phased in over 5 years, beginning with the contribution requirement for fiscal year 2016-17. The projected impact of the assumption change on the Schools Pool rate in year 1 is estimated to be 1.6 percent of payroll and in year 5 estimated to be 4.8 percent of payroll.

ANALYSIS

State and Schools Employer Contribution Rates for 2014-15
The Actuarial Office has completed the calculation of the employer contribution rates for the State and Schools for the fiscal year 2014-15. The full actuarial reports[1] are expected to be completed this summer and will be provided to the Board and posted online when complete.

The table below compares the fiscal year 2014-15 contribution rates and the dollar amounts these rates are anticipated to generate with the rates and contributions for the current fiscal year 2013-14.

	2013-14 Fiscal Year		2014-15 Fiscal Year	
	Expected Employer Contribution	Employer Contribution Rate	Expected Employer Contribution	Employer Contribution Rate
State Miscellaneous Tier 1	$2,093,047,896	21.121%	$2,350,570,687	24.198%
State Miscellaneous Tier 2	72,151,897	20.992%	70,586,143	23.510%
State Industrial	90,690,285	15.682%	92,024,304	17.286%
State Safety	326,678,917	17.205%	341,509,505	18.156%
State Peace Officers & Firefighters	954,994,296	30.495%	1,086,102,162	35.180%
California Highway Patrol	267,523,309	34.616%	323,393,110	42.175%
Subtotal State	**$3,805,086,600**		**$4,264,185,911**	
Schools	1,171,945,558	11.442%	1,226,981,694	11.771%

Please refer to Attachment 1 for the development of the employer rate for each plan.

At its April 17, 2013 meeting, the Board approved a change to the CalPERS amortization and smoothing policies. Beginning with the June 30, 2014 valuation, the newly adopted direct smoothing method will be used to set the 2015-16 rates for the State and Schools. Under this new direct rate smoothing method, all gains and losses will be paid over a fixed 30-year period with the increases or decreases in the rate phased-in over a 5-year period. The estimated impact of the first 5 years of the new methodology beginning with the projected 2015-16 rates will be shown in the valuation report that is expected to be released this summer.

[1] Due to the State plans having a different implementation date for the assumption changes than the Schools Pool, staff anticipates preparing one valuation report for the State plans and a separate valuation report for the Schools Pool instead of a single combined report.

Reasons for Changes in Employer Contributions for the State Plans

Overall, the required contributions for the State plans have increased by $459.1 million between fiscal year 2013-14 and fiscal year 2014-15. There are two main reasons for the increase in contributions: the change in demographic assumptions and the Plans' experience in fiscal year 2012-13, including the recognition of asset losses from prior years. Included in the category "Other Gains and Losses" in the table below are gains from salary increases lower than expected, gains from higher than expected contributions received in 2012-13, losses due to greater than expected retirements, an increase in contributions due to an improvement in the calculation methodology for termination benefits and gains or losses due to data corrections.

Reason for Change	Change in Required Contribution (millions)
Change due to normal progression of existing amortization bases	$56.7
Change due to reduction in overall payroll	(34.0)
Impact of change in assumptions	420.5
Impact of additional member contributions as per pension reform	(36.0)
Actuarial gains and losses:	
• Impact of recognizing lower than expected investment returns from prior years	74.8
• Other Gains and Losses	(22.8)
Total Change in Required Contributions	$459.1

In February 2014 the CalPERS Board adopted new demographic actuarial assumptions to be used in the June 30, 2013 actuarial valuation for the State plans. As shown above, the adoption of these new actuarial assumptions accounted for about $420.5 million of the total increase in contribution for the State Plans. The change in liability due to new actuarial assumptions has been amortized over 20 years and phased in over 3 years, beginning with the contribution requirement for fiscal year 2014-15. The increase of $420.5 million accounts for the increase in normal cost and year one of the three-year phase-in of the increase in unfunded liability.

The assumption causing the largest impact on employer rates for all plans is mortality improvement to acknowledge the greater life expectancies we are seeing in our membership and expected continued improvements. In addition, for the Peace Officers and Firefighters Plan and the California Highway Patrol Plan, changes to the assumption for service retirement have a large impact.

Reasons for Changes in Employer Contributions for the Schools Pool

Overall, the required contributions for the Schools Pool have increased between fiscal year 2013-14 and fiscal year 2014-15 by $55.0 million. These increases in required contributions are mainly due to plan experience in fiscal year 2012-13 and are shown in the table below. Note that, similar to the State plans, the "Other Gains and Losses" category accounts for gains due to individual salary increases lower than expected that are offset by higher liability and normal costs that resulted from the same change in the calculation of termination benefits for active employees described earlier.

Reason for Change	Change in Required Contribution (millions)
Change due to normal progression of existing amortization bases	$12.6
Change due to increase in overall payroll	13.3
Actuarial gains and losses:	
• Impact of recognizing lower than expected investment returns from the past	26.8
• Other Gains and Losses	2.3
Total Change in Required Contributions due to plan experience	$55.0

Additional Detailed Information

Please refer to Attachment 2 for a reconciliation of employer contribution rates and expected employer contributions.

Attachment 3 shows the development of the accrued and unfunded liabilities as well as the funded ratio for each plan based on the market value of assets.

Please refer to Attachment 4 for the development of the actuarial value of assets for each plan. Note that the actuarial value of assets is still included in this valuation since the method change that eliminates the use of an actuarial value of assets will be first reflected in the June 30, 2014 annual valuation.

Additional Contribution Pursuant to G.C. Section 20683.2

One of the provisions of AB 340 added Government Code Section 20683.2 which changed the contribution rates of many State members effective July 1, 2013 with additional increases for some members effective July 1, 2014. In addition it requires that the “savings realized by the state employer as a result of the employee contribution rate increases required by this section shall be allocated to any unfunded liability, subject to appropriation in the annual Budget Act.” Under the California Constitution, the Board has “plenary” authority over the actuarial function at CalPERS consistent with the fiduciary duties of a trustee. This includes authority to set employer contribution rates. By statute, the State may pay additional contributions in addition to the actuarially-required contribution rates set by the Board and, of course, CalPERS will generally accept these payments. AB 340 effectively augments the contributions of the State when increased employee contributions result in a savings to the employer.

The table below shows the:

- actuarially required contributions (these are the rates that staff is recommending that the Board set for the State plans),
- the additional contributions that the State is to make to offset the savings due to the increased member contributions, and
- the total contributions that the State is to make for each plan.

Plan	Actuarially Required Employer Contribution for 2014-15	Additional Statutory Contribution to Offset Increased Member Contributions	Total Contribution 2014-15
State Miscellaneous Tier 1	24.198%	0.082%	24.280%
State Miscellaneous Tier 2	23.510%	0.727%	24.237%
State Industrial	17.286%	0.848%	18.134%
State Safety	18.156%	1.182%	19.338%
State Peace Officers & Firefighters	35.180%	1.647%	36.827%
California Highway Patrol	42.175%	1.319%	43.494%

In all cases, the savings are less than the actual increase in member contributions. This is because the additional member contributions increase the value of the benefit in some circumstances. The obvious example is when the member terminates and takes a refund. A less obvious example is for Tier 2 members where the members are assume to elect to receive a Tier 1 benefit with an actuarial equivalent reduction to offset the missed Tier 1 contributions. Because the members will make additional contributions, a smaller reduction will apply in the future.

PEPRA Member Contribution Rates

With the enactment of the Public Employees’ Pension Reform Act of 2013 (PEPRA), new PEPRA members are required to contribute at least 50 percent of the total annual normal cost of their pension benefit as determined by the actuary. As per Government

Code Section 7522.30, State employees are excluded from this requirement except for employees of the Legislature, California State University (CSU), and the judicial branch. Last year, staff determined the required contribution rate for PEPRA members for these groups based on the actuarial assumptions in place at the time. PEPRA contains a provision that states when the total normal cost has changed by more than 1 percent of payroll the member contribution rate must be adjusted to ensure the member pays half the normal cost. The new assumptions have resulted in an increase of 1.24 percent to the total normal cost for PEPRA members working for the Legislature or CSU in the Peace Officers and Firefighters plan 2.5% at 57 formula. Consequently, the PEPRA member contribution will be set to 11.0 percent effective July 1, 2014. This is 0.5 percent higher than the current 10.5 percent.

Please refer to Attachment 5 for a summary of total normal cost by plan by benefit formula and Attachment 6 for details of the member contribution rates for certain PEPRA members.

BENEFITS/RISKS

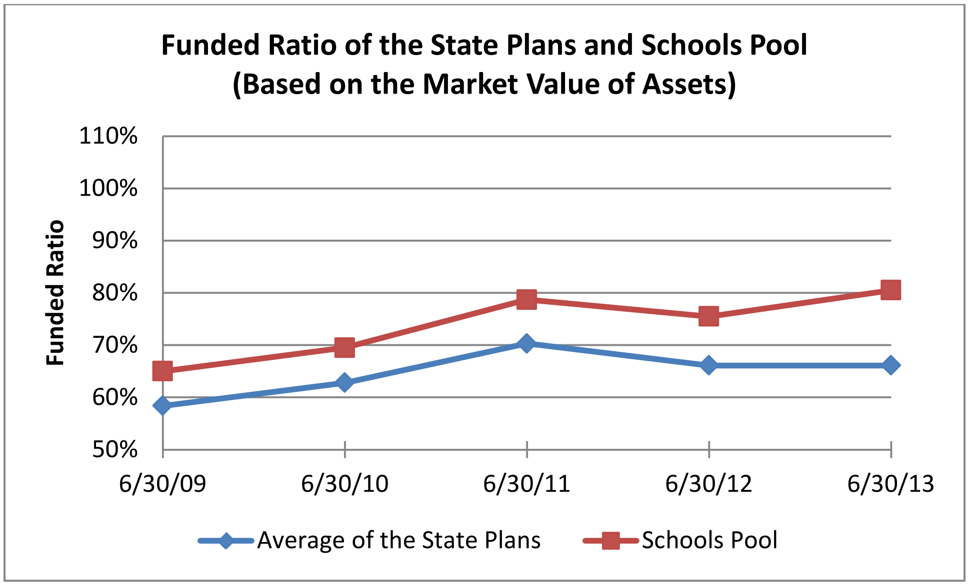
Volatility Ratios

The Actuarial Office presented the Annual Review of Funding Levels and Risks to the Board in March of 2013. One of the risk measures identified in that report was the Volatility Index (assets/payroll ratio). Employer contribution rate volatility is heavily influenced by the ratio of plan assets to active member payroll. The volatility index for the plans are displayed in the table below.

As of June 30, 2013	Market Value of Assets without Receivables	Annual Covered Payroll	Asset Volatility Ratio
	(1)	(2)	(1)/(2)
State Miscellaneous	59,688,192,070	9,439,181,366	6.3
State Industrial	2,404,402,962	501,794,264	4.8
State Safety	6,299,195,784	1,772,958,002	3.6
POFF	22,820,030,301	2,910,025,308	7.8
CHP	5,745,716,842	722,779,348	7.9
Schools	49,384,019,388	9,825,447,736	5.0

Funded Status

Another measure of risk is the funded status of a plan. The funded status of a pension plan is defined as the ratio of assets to a plan's accrued liabilities. Plans with a lower funded ratio are, all other things being equal, more at risk of not being able to meet their future benefit obligations. From June 30, 2012 to June 30, 2013 the funded status for the State plans, on average, remained the same. This was due to the investment return for 2012-13 being greater than expected, offset by the increase in liability due to the change in assumptions. For the Schools Pool, the funded status increased by 5.0 percent due to the favorable investment return. The change in assumptions will first impact the funded status for Schools Pool in the June 30, 2015 valuation. The graph below shows the average funded status for the past five years for the State plans and for the Schools Pool based on the market value of assets.



Attachment 7 shows the funded status of the plans using the market value of assets on June 30, 2013 and the funded status for each of the plans for the last five years.

ATTACHMENTS
Attachment 1 – Development of Employer Contribution Rates
Attachment 2a – Reconciliation of Employer Contribution Rates
Attachment 2b – Reconciliation of Employer Contributions
Attachment 3 – Development of Accrued and Unfunded Liabilities
Attachment 4 – Development of the Actuarial Value of Assets
Attachment 5 – Normal Cost Chart
Attachment 6 – Development of PEPRA Member Contribution Rates
Attachment 7 – Funded Status and History of Funded Status

KELLY STURM
Senior Pension Actuary

ALAN MILLIGAN
Chief Actuary
Actuarial Office