Finance and Administration Committee

Agenda Item 7a

April 17, 2018

Item Name: State Valuation and Employer/Employee Contribution Rates

Program: Actuarial Office

Item Type: Action

Recommendation
Adopt the employer and member contribution rates for the period July 1, 2018 to June 30, 2019 as set forth in the table on page 2 of this agenda item and in Attachment 7.

Executive Summary
The recommended employer contribution rates for the State plans are going to increase from fiscal year 2017-18 to fiscal year 2018-19 but for most plans they are lower than was estimated in the June 30, 2016 annual valuation report.

Comparison of Current and Prior Year Results (in millions)		
	June 30, 2016	June 30, 2017
Market Value of Assets	$ 111,121	$ 121,587
Accrued Liability	$ 170,657	$ 180,311
Unfunded Accrued Liability	$ 59,536	$ 58,724
Expected Employer Contributions based on Actuarially Determined Contribution Rates[1]	$ 5,875	$ 6,299
Expected Employer Contributions Including Additional Contributions Pursuant to G.C. Section 20683.2[1]	$ 5,986	$ 6,415

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
The five plans included in this valuation provide retirement benefits to members employed by the State of California. This includes employees of the California State University system but

[1] Expected employer contributions are calculated using the payroll as of the valuation date, incorporating two years of payroll growth at the assumption in effect on the valuation date (3 percent for June 30, 2016 valuation; 2.875 percent for June 30, 2017 valuation).

generally does not include employees of the University of California system. It also does not cover school employees or employees of local governments that have elected to contract with CalPERS.

This actuarial valuation sets forth the employer and employee contribution rates for the State plans for fiscal year July 1, 2018 through June 30, 2019.

Analysis

State Employer Contribution Rates for 2018-19
The Actuarial Office has completed the calculation of the employer contribution rates for the State plans for the fiscal year 2018-19. The full actuarial report is expected to be completed this summer and will be provided to the Board and posted online when complete. The additional information provided in the full actuarial report includes details on assumptions, methods, and participant data.

The table below compares the fiscal year 2018-19 actuarially required contribution rates and the dollar amounts these rates are anticipated to generate with the rates and contributions for the current fiscal year 2017-18.

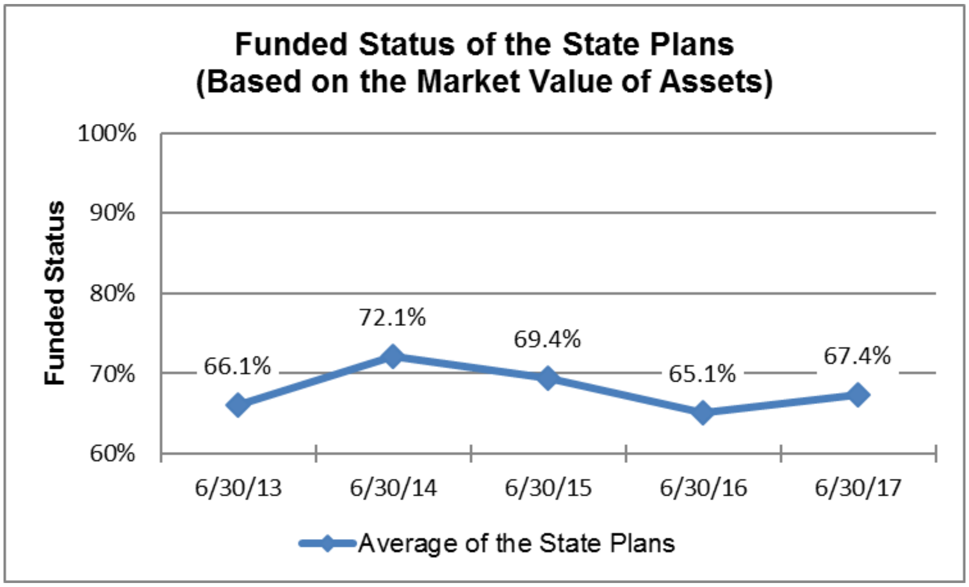
	Fiscal Year 2017-18		**Fiscal Year 2018-19**	
	Expected Employer Contribution (in millions)	**Employer Contribution Rate[2]**	**Expected Employer Contribution (in millions)**	**Employer Contribution Rate[2]**
State Miscellaneous	$ 3,398	28.325%	$ 3,632	29.298%
State Industrial	131	19.527%	135	19.550%
State Safety	436	19.402%	467	20.352%
State Peace Officers & Firefighters	1,463	42.598%	1,581	43.724%
California Highway Patrol	447	52.785%	484	53.805%
Total State	**$ 5,875**		**$ 6,299**	

Note that the payroll used to calculate the expected dollar contribution is the payroll used in the valuation incorporating two years of payroll growth using the annual payroll growth assumption on the valuation date (e.g. two years at 2.875 percent for fiscal year 2018-19 contributions). To the extent that payroll in the contribution year is different than projected payroll, the actual contribution amounts will be different than the expected contributions shown in the table above. Please refer to Attachment 1 for the development of the employer rate for each plan. State Miscellaneous includes both Tier 1 and Tier 2 benefit levels.

Funded Status
The funded status of a pension plan is defined as the ratio of assets to the 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, 2016 to June 30, 2017 the funded status of the State plans, on average, increased by 2.3 percent. This was mainly due to the investment return for 2016-17 being greater than expected, offset partially by an increase in

[2] Excludes additional contributions pursuant to Government Code Section 20683.2. See page 5 of the agenda item for more information about that requirement.

liability due to the change in discount rate assumption from 7.375 percent to 7.25 percent. The graph below shows the average funded status for the past five years for the State plans.



Attachment 2 shows the funded status of the plans using the market value of assets on June 30, 2017 and the funded status for each of the plans for the last five years.

Reasons for Changes in Employer Contributions for the State Plans

Overall, the required contributions for the State plans have increased $424 million between fiscal year 2017-18 and fiscal year 2018-19. This change is mainly driven by the factors listed below.

Reason for Change	Change in Required Contributions (in millions)
Change due to normal progression of existing amortization bases	$458.1
Change in assumptions (reduction in discount rate to 7.25% and update to inflation and various demographic assumptions)	154.3
Change due to increase in overall payroll	82.5
Decrease in normal cost due to new hires in lower benefit level	(36.3)
Decrease due to SB 84 additional contributions	(177.3)
First installment of the 5-year phased-in 30-year amortization of the following gains and losses:	
• Impact of investment experience	(59.5)
• Impact of greater than expected contributions received due to higher than expected payroll	(4.0)
• Demographic gains and losses	6.2
Total Change in Required Contributions	$424.0

CalPERS currently employs an amortization and smoothing policy that spreads rate increases or decreases over a 5-year period and amortizes all experience gains and losses over a fixed 30-year period. This means that only one-fifth of the total anticipated rate change caused by each gain or loss is realized in the first year, culminating in the full increase in the fifth year. As a result, the progression of these gain or loss amortization bases will affect contribution levels in increasing measure throughout the ramp period. A complete description of the actuarial methods used in the June 30, 2017 valuation will be shown in the valuation report that is expected to be released this summer.

On February 14, 2018, the Board adopted a new amortization policy effective with the June 30, 2019 actuarial valuation, first affecting State plan employer contributions for fiscal year 2020-21. The new policy will generally accelerate the recognition of new sources of Unfunded Accrued Liability. Since this change is not effective until a future valuation and will not affect any amortization bases already in existence upon implementation, it has no effect on the June 30, 2017 valuation results or fiscal year 2018-19 required contributions.

Various assumption changes were recognized in this valuation. On December 21, 2016, the Board lowered the discount rate from 7.50 percent to 7.00 percent using a three-year phase-in beginning with the June 30, 2016 actuarial valuations. The employer contributions for fiscal year 2018-19 were calculated using a discount rate of 7.25 percent, down from 7.375 percent the prior year. In addition, on December 20, 2017, the Board adopted new actuarial assumptions based on an experience study of CalPERS membership performed every four years. As a result of the study, updates were made to various assumptions including mortality, retirement rates and inflation. The reduction of the inflation assumption will be implemented in two steps in conjunction with the decreases in the discount rate. For the June 30, 2017 valuation, an inflation rate of 2.625 percent will be used and a rate of 2.50 percent will be used for the following valuation. The impact on required contributions of these assumption changes is approximately $154.3 million, which accounts for the increase in normal cost and year one of the five-year phase-in of the increase in unfunded liability, to be paid over twenty years.

Overall, payroll across the State plans increased by 3.7 percent, as compared to the payroll growth assumption of 3 percent. This led to a contribution increase of $82.5 million. The payroll growth for the year ranges from a 2.1 percent increase for Safety to a 6.1 percent increase for California Highway Patrol.

The Public Employees’ Pension Reform Act of 2013 (PEPRA) requires lower benefits for new members as defined by PEPRA who are hired after January 1, 2013. The normal cost for all of the plans, net of the change due to the discount rate change, is lower due to the enrollment of new hires into the lower benefit level. The number of PEPRA members ranges from a high of 32 percent of active members for State Safety to a low of 13 percent of active members for California Highway Patrol.

Senate Bill 84 (SB 84), approved by the Governor on July 10, 2017, directed the State to contribute an additional $6 billion to the State plans during fiscal year 2017-18 to pay down the Unfunded Accrued Liability. Payments are being made in three equal installments on or around October 31, 2017, January 16, 2018 and April 17, 2018 (planned). These payments are in addition to the actuarially required contributions for fiscal year 2017-18. SB 84 specified the following allocation among plans:

Plan	Additional Contributions Made/Planned During Fiscal 2017-18 Pursuant to SB 84 (in millions)
State Miscellaneous	$3,600
State Industrial	100
State Safety	300
State Peace Officers & Firefighters	1,500
California Highway Patrol	500
Total	**$6,000**

The additional payments served to reduce the required contribution for fiscal year 2018-19 by approximately $177.3 million. If the third installment is not made on or around the scheduled date of April 17, 2018, prospective contribution requirements will differ from what is shown herein. Note that while the additional payment is included in the calculation of the required contribution for 2018-19, it will not be recognized in the market value of assets or the funded status until the June 30, 2018 valuation.

The net return on plan assets for the year ending June 30, 2017 was approximately 11.2 percent, which is greater than the assumed return of 7.375 percent. This led to an experience gain that will be amortized over the next 30 years. This was partially offset by a small net demographic loss.

Additional Detailed Information

Please refer to Attachment 3 for a reconciliation of employer contribution rates and expected employer contributions.

Attachment 4 shows the development of the accrued and unfunded liabilities as well as the funded ratio.

Additional Contribution Pursuant to G.C. Section 20683.2

One of the provisions of pension reform added Government Code Section 20683.2 which changed the contribution rates of many State members that were effective July 1, 2013, July 1, 2014, and July 1, 2015. Government Code Section 20683.2 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." 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 CalPERS will generally accept these payments.

The table below shows the:

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

Plan	Actuarially Required Employer Contribution for 2018-19	Additional Statutory Contribution to Offset Increased Member Contributions	Total Contribution 2018-19
State Miscellaneous	29.298%	0.098%	29.396%
State Industrial	19.550%	0.881%	20.431%
State Safety	20.352%	1.182%	21.534%
State Peace Officers & Firefighters	43.724%	1.647%	45.371%
California Highway Patrol	53.805%	1.319%	55.124%

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 assumed 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.

Please refer to Attachment 5 for the expected dollar contributions the additional statutory contribution rates are expected to generate.

Member Contribution Rates

With the enactment of 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. PEPRA contains a provision that states when the total normal cost changes by more than 1 percent of payroll the member contribution rate must be adjusted to ensure the member pays half the normal cost. For fiscal year 2018-19, the total normal cost for State Miscellaneous PEPRA members has changed by more than 1 percent of payroll from the base total normal cost. As a result, the member contribution rate for these PEPRA members will be set to 7.25 percent effective July 1, 2018. This is 0.75 percent higher than the current 6.50 percent.

Please refer to Attachment 6 for a summary of total normal cost by plan by benefit formula and Attachment 7 for details of the member contribution rates for certain PEPRA members.

Effective July 1, 2017, pursuant to Government Code Sections 20683.4 and 20683.5, the member contribution rates for State Miscellaneous, State Industrial, and State Safety members represented by State Bargaining Unit 16 shall be adjusted when the total normal cost in effect for fiscal year 2016-17 has increased by at least 1 percent. For Fiscal Year 2018-19, the total normal cost for those plans has not increased by 1 percent, so the member contribution rates for those members will remain the same. Please refer to Attachment 8 for analysis on the member contribution rates for State Bargaining Unit 16.

Expected Future Changes

The amortization and smoothing policy in effect for this valuation, approved by the Board on April 17, 2013, spreads rate increases or decreases over a 5-year period and amortizes all experience gains and losses over a fixed 30-year period. This inherently builds in future rate changes due to the progression of the amortization schedule.

In addition, on December 21, 2016, the CalPERS Board of Administration lowered the discount rate from 7.50 percent to 7.00 percent using a three-year phase-in beginning with the June 30, 2016 actuarial valuation. The employer contribution rates for fiscal year 2018-19 determined in this valuation were calculated using a discount rate of 7.25 percent. The discount rate will be lowered to 7 percent for the 2019-20 contribution rates and beyond. At its December 20, 2017 meeting, the CalPERS Board adopted new actuarial assumptions that included a decrease in the inflation assumption in two steps in conjunction with the decrease in the discount rate.

Lowering the discount rate means both the normal cost and the accrued liabilities will increase in the future. These increases will result in higher required employer contributions. Consistent with the Board amortization and smoothing policy in effect for this valuation, the impact of each change in discount rate will not be fully realized until fiscal year 2023-24. Note that the new amortization policy mentioned above will not take effect until after the discount rate has reached 7 percent. Further, the new policy will not affect any amortization bases in existence on the date of implementation. Hence, the new amortization policy will not accelerate or otherwise alter the impact of the discount rate reduction.

The table below shows a projection of employer contribution rates including the 5-year phase-in of gains and losses as per the amortization policy in effect for this valuation as well as the estimated impact of the change in discount rate and inflation that will impact the June 30, 2018 valuation. The projected rates assume that all actuarial assumptions will be realized and no other changes will occur during the projection period. The rates below include the anticipated decrease in normal cost due to new hires entering lower benefit formulas under PEPRA but do not include the additional contribution pursuant to Government Code Section 20683.2. The additional contribution amount is shown on page 6 of this agenda item.

	New Rate	**Projected Future Employer Contribution Rates**					
Plan	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**2024-25**
State Miscellaneous	29.298%	31.3%	32.2%	32.6%	32.7%	33.0%	32.1%
State Industrial	19.550%	21.1%	21.8%	22.1%	22.0%	22.1%	20.3%
State Safety	20.352%	21.6%	21.9%	22.0%	21.8%	21.1%	20.8%
State Peace Officers and Firefighters	43.724%	46.7%	48.1%	49.0%	49.1%	49.6%	48.0%
California Highway Patrol	53.805%	57.1%	58.8%	59.6%	59.9%	60.6%	59.5%

A more comprehensive projection will be included in the report that will include the expected impacts of the investment return for 2017-18.

Budget and Fiscal Impacts

Not applicable.

Benefits and Risks
Information about the risks associated with the funding of these plans will be included in the valuation report that is expected to be released this summer. This information includes investment return scenarios, discount rate sensitivity, and volatility ratios.

Attachments
Attachment 1 – Development of Employer Contribution Rates
Attachment 2 – Funded Status and History of Funded Status
Attachment 3 – Reconciliation of Employer Contribution Rates and Reconciliation of Employer Contributions
Attachment 4 – Development of Accrued and Unfunded Liabilities
Attachment 5 – Additional Contribution Pursuant to G.C. Section 20683.2
Attachment 6 – Normal Cost Chart
Attachment 7 – Development of PEPRA Member Contribution Rates
Attachment 8 – Development of State Bargaining Unit 16 Member Contribution Rates
Attachment 9 – PowerPoint Presentation

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