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Actuarial  
Circular Letter

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**To: All Public Agency Employers**

**Subject: Discount Rate Change**

The purpose of this Circular Letter is to inform you of recent changes to the CalPERS discount rate assumption and the impact these changes are expected to have on required employer and PEPRAs member contributions. This Circular Letter will assist you in calculating projected pension cost increases in future years. The June 30, 2016, annual valuations will provide updated projections of expected future year pension contributions. These reports will be available this summer.

At the December 21, 2016, meeting, the CalPERS Board of Administration approved lowering the CalPERS discount rate assumption, the long-term rate of return, from 7.50 percent to 7.00 percent over the next three years. This will increase public agency employer contribution costs beginning in Fiscal Year 2018-19.

The phase-in of the discount rate change approved by the Board for the next three Fiscal Years is as follows:

Valuation Date	Fiscal Year for Required Contribution	Discount Rate
June 30, 2016	2018-19	7.375%
June 30, 2017	2019-20	7.25%
June 30, 2018	2020-21	7.00%

Lowering the discount rate means plans will see increases in both the normal costs (the cost of pension benefits accruing in one year for active members) and the accrued liabilities. These increases will result in higher required employer contributions.

In addition, active members hired after January 1, 2013, under the Public Employees' Pension Reform Act (PEPRA) may also see their contribution rates rise.

The benefits of reducing the discount rate include:

- Strengthening long-term sustainability of the fund
- Reducing negative cash flows; additional contributions will help to offset the cost to pay pensions
- Reducing the long-term probability of funded ratios falling below undesirable levels
- Improving the likelihood of CalPERS investments earning our assumed rate of return
- Reducing the risk of contribution increases in the future from volatile investment markets

### **Results**

Employer contribution increases as a result of the discount rate changes are estimated below by Normal Cost and required Unfunded Accrued Liability (UAL) payment. The Total Employer Contribution is the sum of the Normal Cost Rate applied to reported payroll plus the Unfunded Accrued Liability payment. The Normal Cost portion of the Employer Contribution is expected to increase by the listed percentages of payroll. Increases to the UAL payments are provided as relative increases to be applied to the projected UAL payments in the June 30, 2015, valuation report.

Valuation Date	Fiscal Year Impact	Normal Cost		UAL Payments	
		Misc. Plans	Safety Plans	Misc. Plans	Safety Plans
6/30/2016	2018-19	0.25% - 0.75%	0.5% - 1.25%	2% - 3%	2% - 3%
6/30/2017	2019-20	0.5% - 1.5%	1.0% - 2.5%	4% - 6%	4% - 6%
6/30/2018	2020-21	1.0% - 3.0%	2.0% - 5.0%	10% - 15%	10% - 15%
6/30/2019	2021-22	1.0% - 3.0%	2.0% - 5.0%	15% - 20%	15% - 20%
6/30/2020	2022-23	1.0% - 3.0%	2.0% - 5.0%	20% - 25%	20% - 25%
6/30/2021	2023-24	1.0% - 3.0%	2.0% - 5.0%	25% - 30%	25% - 30%
6/30/2022	2024-25	1.0% - 3.0%	2.0% - 5.0%	30% - 40%	30% - 40%

The changes to the Unfunded Accrued Liability (UAL) due to changes of actuarial assumptions are amortized over a fixed 20-year period with a 5-year ramp up at the beginning and a 5-year ramp down at the end of the amortization period. The 5-year ramp up means that the payments in the first four years of the amortization schedule are 20 percent, 40 percent, 60 percent and 80 percent of the ultimate payment, which begins in year five. The 5-year ramp down means that the reverse is true and the payments in the final four years are ramped down by the above percentages. A new ramp is established with each change to the discount rate. There will be three ramps established in the first three years. As a result of the 5-year ramp up and effective date of the increase, it will be seven years until the full impact of the discount rate change is completely phased in. The shaded rows above are the expected increases beyond the five year projection quoted in your June 30, 2015, valuation report.

To illustrate how this table can be used as a guide to include the change in the discount rate in the calculation of pension contributions, a Miscellaneous plan with a current normal cost of 15 percent of payroll can expect an increase to 15.25 percent to 15.75 percent of payroll in the first year (Fiscal Year 2018-19), and 16 percent to 18 percent in the fifth year (Fiscal Year 2022-23). For the UAL payment, a plan with a projected payment of \$500,000 in Fiscal Year 2018-19 and \$600,000 in Fiscal Year 2022-23 can expect the revised payment to be \$510,000 - \$515,000 ( $\$500,000 \times 2.00\% / \$500,000 \times 3.00\%$ ) for Fiscal Year 2018-19, and \$720,000 - \$750,000 ( $\$600,000 \times 20\% / \$600,000 \times 25\%$ ) for Fiscal Year 2022-23. These estimated increases incorporate both the impact of the discount rate change and the ramp up.

Please keep in mind the above table is a tool for you to calculate broad estimates and should only be used as a general guide. The annual valuation report that will be released this summer will provide updated projections for your specific plan.

If you have any questions about the information provided or how to apply it to your current valuations, please call our CalPERS Customer Contact Center at **888 CalPERS** (or **888-225-7377**) and ask to have your plan actuary contact you.

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