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October 28, 2016

VIA E-MAIL

Steve Rodeman
Executive Director
Oregon PERS

Re: Request Number: 2016-008
Analysis of Potential 2017 Legislation: 5-year Final Average Salary

Dear Steve:

Per the request noted above, we estimated the system-wide average effects of changing the calculation of Final Average Salary from a 3-year average to 5-year average. This change would apply prospectively, and would affect both Tier 1/Tier 2 members and OPSRP pension members.

Our analysis is based upon our understanding of the proposed change as informed by discussions with PERS staff.

Currently, Final Average Salary is defined as the greater of:

- The average salary earned during the three calendar years in which a member was paid the highest salary (for OPSRP members, the three calendar years must be consecutive);
- One-third of the total salary earned over the last 36 months of employment

For simplicity in this letter, we will refer to the current calculation method as a 3-year Final Average Salary and the proposed new method as a 5-year Final Average Salary.

We understand the proposed change in the Final Average Salary would apply as follows:

- The change would apply to the calculation of all OPSRP pension benefits and also apply to Tier 1/Tier 2 benefits determined under the Full Formula or Formula Plus Annuity calculation methods. Tier 1/Tier 2 benefits determined under the Money Match calculation would not be affected.
- The change from a 3-year Final Average Salary to a 5-year Final Average Salary would apply prospectively beginning January 1, 2018 for members with service after that date. The 3-year Final Average Salary calculated as of January 1, 2018 would be preserved as a minimum Final Average Salary for all members.
    - For example, for a member retiring as of January 1, 2020, the 5-year Final Average Salary at that date (reflecting all salary history) would be compared to the 3-year Final Average Salary as of January 1, 2018 (reflecting salary history

through the end of 2017). The larger amount would be the Final Average Salary used in the pension benefit calculation.

- The Final Average Salary determined as described above would apply to all of a member's service in a benefit calculation. In other words, Final Average Salary will not be bifurcated and applied differently to service earned before January 1, 2018 than to service earned after that date.

Other than as described herein, our analysis used the same assumptions as used in the December 31, 2015 Actuarial Valuation. The analysis estimates the impact of the changes and assumed implementation dates described above on the Actuarial Accrued Liability and system-wide average uncollared base pension contribution rates calculated in the December 31, 2015 Actuarial Valuation.

The uncollared base pension contribution rate, which this concept lowers, is the theoretical rate which would need to be contributed starting at the valuation date to amortize the unfunded liability over the specified amortization period if future experience follows assumptions. Employers actually contribute the collared base pension contribution rate reflecting the effect of the rate collar, which spreads large needed rate increases over several biennia. The system-average uncollared base pension contribution rate in the December 31, 2015 actuarial valuation is more than 8% of payroll greater than the collared base pension contribution rate for the 2017-2019 biennium[1].

The consultants who worked on this assignment are pension actuaries. We have not explored any legal issues with respect to these change concepts. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

SUMMARY OF LIABILITY RESULTS

The table below summarizes key December 31, 2015 valuation results for pension benefits prior to reflecting any legislative concept, along with the change in Final Average Salary calculation described above.

"Accrued Liability" refers to the net present value of projected future benefits allocated to service already completed as of the valuation date in accordance with the current actuarial cost allocation method, while "Total Liability" also includes the value allocated to projected future service for current active members. The contribution rate shown is a blended rate reflecting the weighted averages of Tier 1, Tier 2 & OPSRP payroll as of the valuation date. The base contribution rate is shown on an uncollared basis. Contribution rates shown in the table are rounded to the nearest 0.05% of payroll.

[1] Slide 23, July 2016 PERS Board Presentation

The change in system-wide December 31, 2015 valuation results is shown below.

	12/31/2015 Total Liability ($B)	12/31/2015 Accrued Liability ($B)	2017-2019 Uncollared Base Pension Employer Contribution Rates (% of Payroll)		
			Normal Cost	UAL	Total
12/31/2015 Pension Valuation Results	$83.8	$76.2	11.79%	17.29%	29.08%
5-year Final Average Salary Effective 1/1/2018	($0.7)	($0.5)	(0.25%)	(0.40%)	(0.65%)

Data, Methods, Assumptions and Provisions

Other than the exceptions and additions discussed in this letter, the data, methods, assumptions, and plan provisions used to calculate employer contribution rates are the same as those used in the December 31, 2015 System-wide Actuarial Valuation Report, published on September 27, 2016. That information, including a discussion of the inherent limitations of use of actuarial valuation results, is herein incorporated to this letter by reference.

Our valuation assumptions portion of the analysis does not include any assumed change in participant behavior such as retirement patterns due to the proposed changes in policy, or to bargaining agreements or employer pay practices as a result of any legislative changes. Such potential impacts merit possible consideration but are beyond the scope of this assignment. Actual experience will vary from assumption, and sometimes the variance from assumption will be significant. The variance will affect the long-term financial impact of any proposed legislation.

In calculating the illustrative changes in uncollared employer base employer contribution rates shown above, we assumed all changes in Actuarial Accrued Liability were amortized over a closed 20-year period as a level percent of projected payroll using current valuation assumptions. This is the method currently used in the valuation when establishing new Tier 1/Tier 2 UAL amortization bases. If a different amortization method were used, the overall impact on employer rates could be significantly different than shown in this letter.

Actuarial Basis and Qualifications

In preparing this letter and the valuation report on which it is based, we relied, without audit, on information (some oral and some in writing) supplied by Oregon PERS. This information includes, but is not limited to, statutory provisions, employee data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. These estimates depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the System.

Future actuarial measurements may differ significantly from the current measurements presented in this estimate 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; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, additional cost or contribution requirements based on the plan's funded status, or a change in the cost allocation method); and changes in plan provisions or applicable law. Due to the limited scope of this estimate, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the valuation assumptions and adopted the assumptions used in the December 31, 2015 valuation in September 2015.

Actuarial computations presented in this estimate are for purposes of providing a high-level analysis of the requested change concepts to the System. As such, they cannot be relied upon for financial reporting or other purposes, and calculations for purposes other than this use may be significantly different from the estimates contained in this letter. Accordingly, additional determinations may be needed for other purposes.

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The signing actuaries are independent of the System. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

If you have any questions about our response or need any additional information, please let us know.

Sincerely,

Matt Larrabee, FSA, EA, MAAA
Principal and Consulting Actuary

Scott D. Preppernau, FSA, EA, MAAA
Principal and Consulting Actuary

MRL:sdp

cc: Debra Hembree, Marjorie Taylor

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