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October 28, 2016

**VIA E-MAIL**

Mr. Steve Rodeman
Executive Director
Oregon PERS

**Re: Overview of October 2016 Legislative Concepts Analyses**

Dear Steve:

This letter provides a summary of the actuarial legislative concepts analyses performed this month. In addition to a results summary, this letter also discusses the extent of interaction between the concepts, with an emphasis on assessing how enacting more than one concept could possibly affect the financial impact of each individual concept. Detailed analysis of each individual concept is provided in separate letters. Those letters should be referenced for additional detail and are incorporated into this letter by reference.

### Concepts Analyzed

- **$100,000 limit on Final Average Salary** would apply prospectively beginning January 1, 2018 for members with service after that date and would apply to the calculation of all OPSRP pension benefits and for 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 limit would not be indexed in future years. For members with a Final Average Salary of over $100,000 as of January 1, 2018, the $100,000 limit on Final Average Salary would apply to service after that date. The member's Final Average Salary calculated as of January 1, 2018 would apply to service earned prior to that date.

- **5-year Final Average Salary** 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.

- **1.00%/1.20% Multiplier** would change the pension multiplier to 1.00% of Final Average Salary per year of service for general service members and 1.20% of Final Average Salary for police & fire members for service after January 1, 2018. Service earned prior to January 1, 2018 would continue to receive the current pension multiplier in benefit calculations.

- **0.25%/0.30% Multiplier** would change the pension multiplier to 0.25% of Final Average Salary per year of service for general service members and 0.30% of Final Average Salary for police & fire members for service after January 1, 2018. Service earned prior to January 1, 2018 would continue to receive the current pension multiplier in benefit calculations.

- **Change in Money Match Interest Rate** used to convert account balances to monthly lifetime annuities from the current PERS Board's long-term investment return assumption of 7.50% to an illustrative interest rate of 3.5%, first effective for 2018 retirements. The rate would be made independent of the PERS Board's long-term investment return assumption.

- **Reducing Sick Leave and Vacation Payments** that are included in a Tier 1/Tier 2 member's FAS calculation, beginning with 2018 retirements. We understand various concepts have been discussed that could limit the amount of unused sick leave or vacation time payments that are included in a Tier 1/Tier 2 member's Final Average Salary calculation. We have not analyzed a specific proposal, but instead estimated the financial impact of:

    - **Halving Sick Leave and Vacation Payments** that are included in a Tier 1/Tier 2 member's FAS calculation, beginning with 2018 retirements.

    - **Eliminating Sick Leave and Vacation Payments** that are included in a Tier 1/Tier 2 member's FAS calculation, beginning with 2018 retirements.

- **Redirecting member contributions** from the defined contribution Individual Account Plan (IAP) to fund Tier 1/Tier 2 and OPSRP benefits beginning in January 2018. Redirected contributions would <u>not</u> add to the Money Match-eligible account balance for Tier 1/Tier 2 members.

**Summary and Interaction of the Financial Impact of the Individual Concepts**

Each of the above concepts if enacted would lower the 2017-2019 Uncollared Base Pension Employer Contribution Rate, and all concepts except for the redirection of member contributions would lower the Total Liability and Accrued Liability.

The decrease in both Total Liability and Accrued Liability associated with each benefit modification concept is shown separately below. **Please note that if multiple concepts are implemented together, the resulting effect <u>would not</u> be the cumulative amount of the separate concepts illustrated below. Instead, the interactions between the various benefit modifications would produce a reduction in liability and uncollared contribution rate of smaller magnitude than the sum of the reductions shown below. If more than one concept will be incorporated into a legislative proposal, an additional analysis should be conducted to study the combined effects.**

A table summarized the estimated effect of each individual concept analyzed is shown below. For more information on each concept, the detailed analysis for the concept should be referenced.

| | 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% |
| $100,000 Limit on Final Average Salary | ($3.3) | ($2.0) | (1.30%) | (1.55%) | (2.85%) |
| 5-year Final Average Salary | ($0.7) | ($0.5) | (0.25%) | (0.40%) | (0.65%) |
| 1.00%/1.20% Multipliers | ($2.8) | ($1.8) | (1.20%) | (1.35%) | (2.55%) |
| 0.25%/0.30% Multipliers | ($6.5) | ($4.0) | (2.85%) | (3.00%) | (5.85%) |
| Change in Money Match Interest Rate | ($0.9) | ($0.8) | (0.20%) | (0.60%) | (0.80%) |
| Halving Sick Leave & Vacation Payments | ($0.35) | ($0.3) | (0.08%) | (0.22%) | (0.30%) |
| Eliminating Sick Leave & Vacation Payments | ($0.7) | ($0.6) | (0.15%) | (0.45%) | (0.60%) |
| Redirecting Member Contributions | ($0.0) | ($0.0) | (6.00%) | (0.00%) | (6.00%) |

**Data, Assumptions, Methods and Provisions Used in Analysis**

Other than the exceptions and additions discussed in the relevant analysis letters of the individual concepts, which are incorporated herein by reference, 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. The information in that report, including a discussion of the inherent limitations of use of actuarial valuation results, is also incorporated into 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 consideration. For example, an announced change in the annuitization interest rate to take effect at a future date could lead some affected members who otherwise would have retired after the effective date to accelerate retirement. This would limit the liability reduction associated with a change. 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 our analysis, it was assumed that a standalone annuitization interest rate change would not affect future interest crediting on Tier 1 member accounts over time.

In calculating the illustrative changes in uncollared employer base contribution rates shown above, we assumed all changes in Accrued Liability were amortized over a 20-year period as a level percent of payroll using current valuation assumptions. This is the method currently used in the valuation when establishing new Tier 1/Tier 2 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. The updated 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.

Milliman’s work is prepared solely for the use of Oregon PERS. Milliman does not intend to benefit or create a legal duty to any third party recipient of its work product. No third party recipient of Milliman's work product should rely upon Milliman's work product. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

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

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 & Consulting Actuary

Scott Preppernau, FSA, EA, MAAA
Principal & Consulting Actuary

cc: Marjorie Taylor, Debra Hembree

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