C.4. Attachment 1

ACTUARIAL ANALYSIS OF *MORO* DECISION

OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

May 29, 2015

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Milliman

Legislative Reforms and *Moro* Decision

- 2013 legislative changes were reflected in employer contribution rates that the PERS Board adopted for the 2015-2017 biennium
  - Based on December 31, 2013 actuarial valuation
- The Oregon Supreme Court's *Moro* decision overturned the most financially significant portions of the 2013 legislative changes
- Higher System benefits and costs will be reflected in:
  - December 31, 2014 *advisory* valuation, to be published later this year
  - December 31, 2015 *rate-setting* valuation, which determines 2017-2019 employer contribution rates
- June 30, 2015 employer financial reporting under GASB 68 will use pre-*Moro* results as of June 30, 2014 due to GASB's timing rules
  - Supplementary notes will estimate *Moro*'s effect on future GASB results

Mapping of Valuations to Contribution Rates

- Actuarial valuations are conducted annually
  - Alternate between “rate-setting” and “advisory” valuations
  - The 12/31/2014 valuation will be advisory
  - The 12/31/2015 valuation will be rate-setting
- The Board adopts employer contribution rates developed in rate setting valuations, and those rates go into effect 18 months after the valuation date

Valuation Date	Employer Contribution Rates
12/31/2013 →	July 2015 – June 2017
12/31/2015 →	July 2017 – June 2019

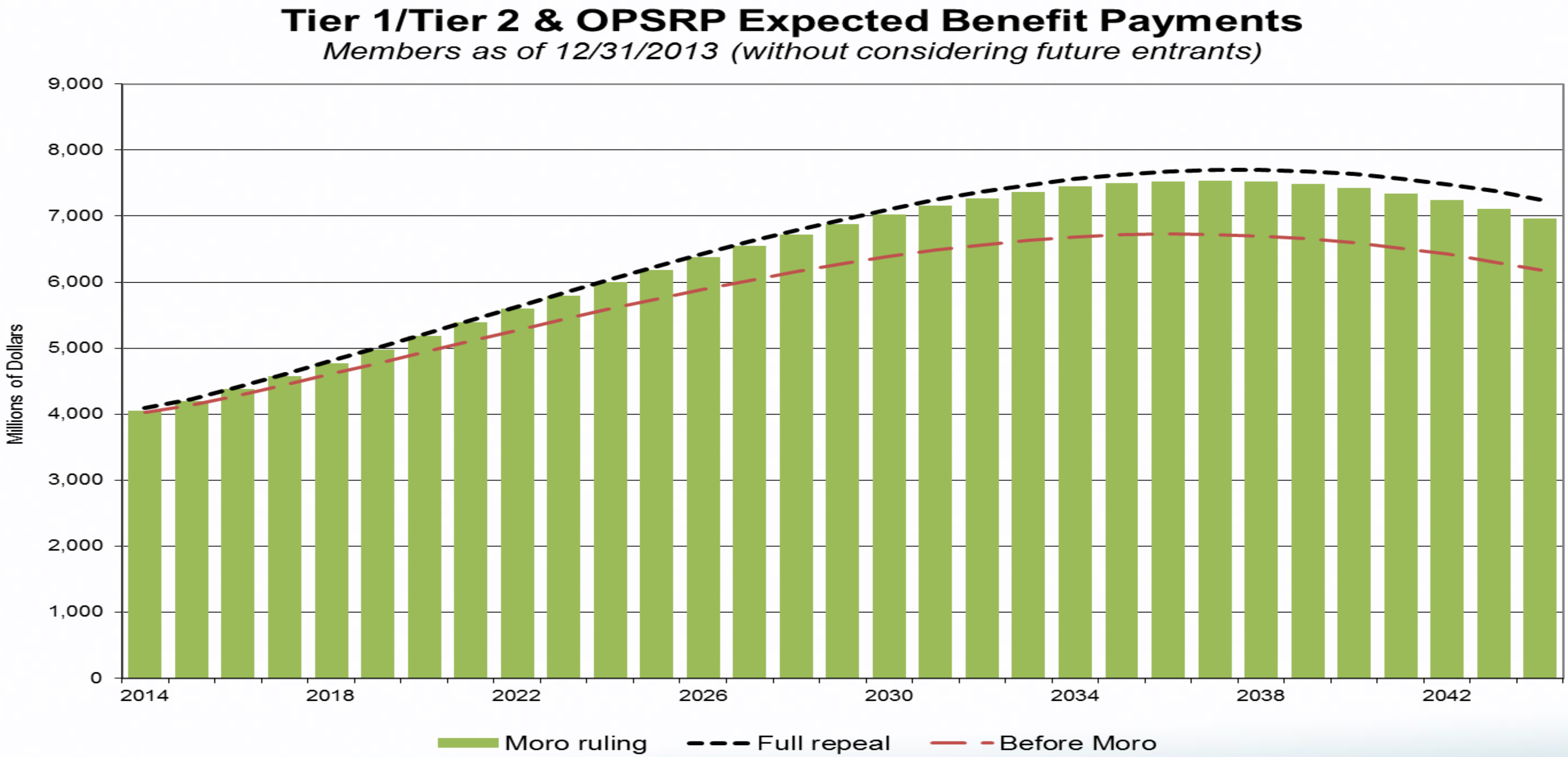
Effect of *Moro* Decision

Executive Summary

- For this presentation, we analyzed *Moro*’s effects based on the most recently completed actuarial valuation as of December 31, 2013
- Estimated contribution rate increases needed to fund *Moro*’s benefits are expected to be limited by the “rate collar” in the 2017-19 biennium
  - Additional estimated increases are deferred to subsequent period(s)
- Estimates shown today may change based on actual investment and demographic experience, along with any changes in assumptions
  - Estimates reflecting those updates could significantly affect <u>uncollared</u> employer contribution rates while having far less effect on the <u>collared</u> employer contribution rates for the 2017-19 biennium

Year-by-year Effect of Reforms and *Moro*

Liabilities are calculated from projected benefit payments



Based on an interpretation of the calculation of COLAs as detailed in the Appendix

Financial Magnitude of Reforms and *Moro*

- The financial magnitude of the year-by-year changes can be summarized as a single present value
- Present values are sensitive to the “as of” date of the calculation, to the assumptions, methods, and census data used plus the benefit provisions reflected

“As of” present value date

Assumptions & census from ___ actuarial valuation

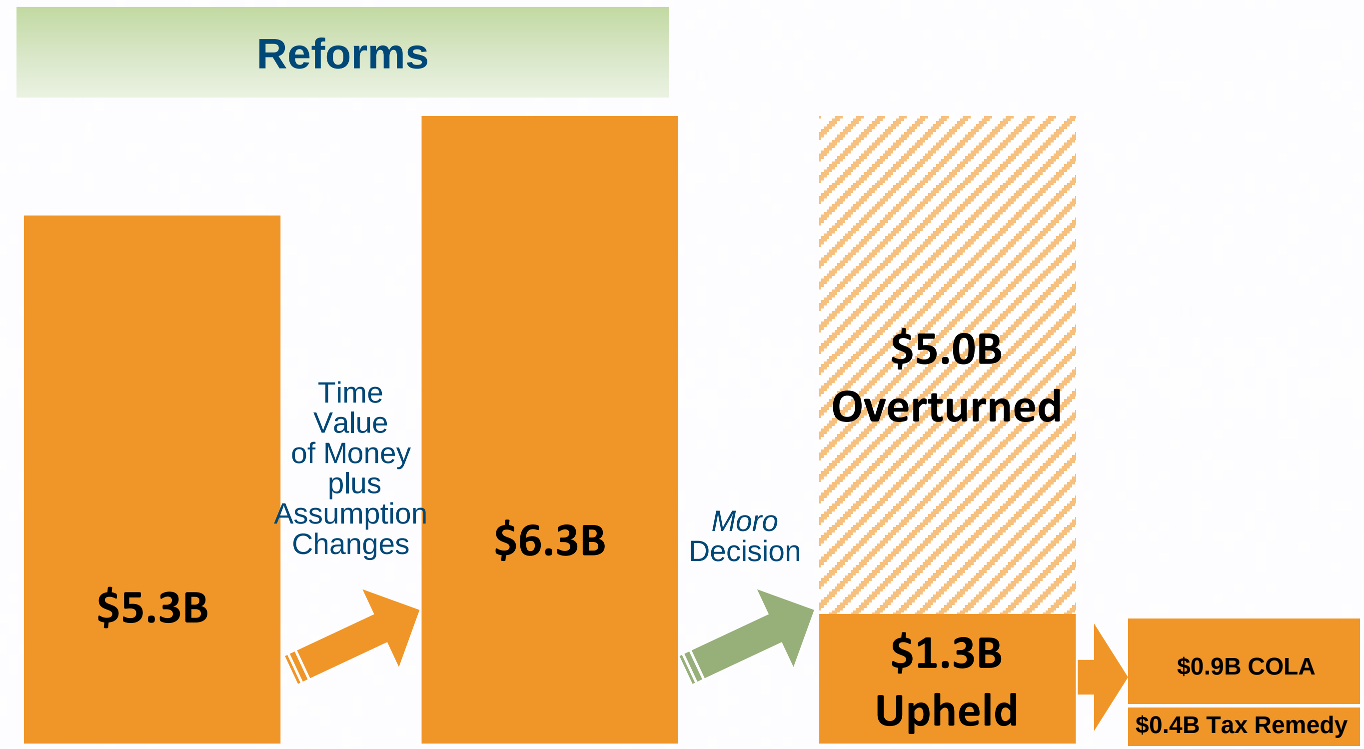
Discount rate / investment return assumption

Reflects *Moro* decision?

Financial Magnitude of Reforms and *Moro*

Effect on Present Value of Future Benefits (PVFB) Basis

Prior to any 12/31/14 updates due to assumptions, census or methods



Present Value as of:	12/31/11	12/31/13	12/31/13
Assumptions/census as of:	12/31/11	12/31/13	12/31/13
Inv. Return Assumption:	8.00%	7.75%	7.75%
Reflects *Moro*?	No	No	Yes

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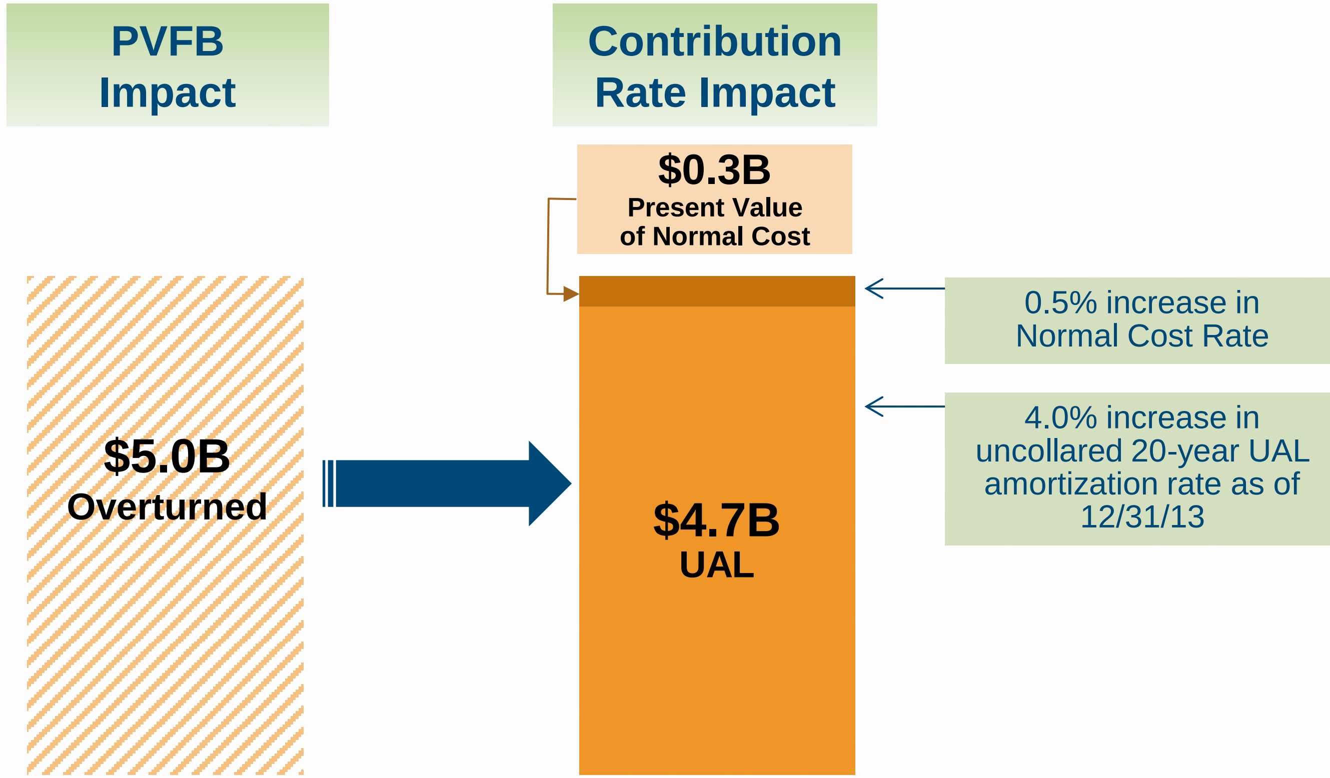
System-average Uncollared Base Contribution Rate Impact of *Moro* Decision

Prior to any 12/31/14 updates due to assumptions, census or methods



Present Value as of:	12/31/13	12/31/13
Assumptions/census as of:	12/31/13	12/31/13
Inv. Return Assumption:	7.75%	7.75%
Reflects *Moro*?	Yes	Yes

System-average Uncollared Base Contribution Rate Impact of *Moro* Decision

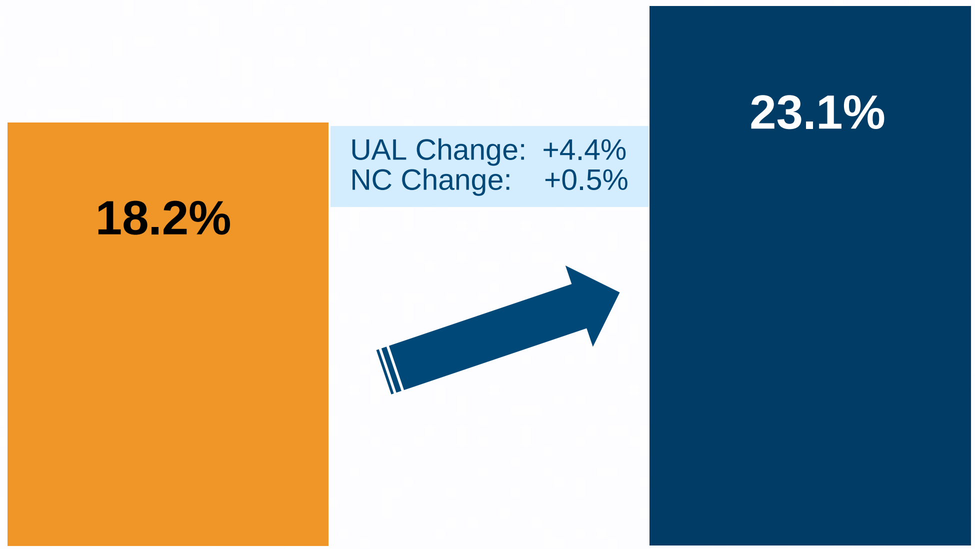
- The estimated system-wide UAL rate increase due to *Moro* is:
  - 4.0% of payroll => measured at December 31, 2013
  - 4.4% of payroll => estimated measurement at December 31, 2015 prior to reflecting any changes in assumptions and/or methods that are adopted at the July 2015 PERS Board meeting
    - Final rate calculations as of December 31, 2015 for the 2017-19 biennium will also reflect updated census demographics and actual investment results as of the valuation date
- The UAL rate grows for the passage of time due to:
  - Growth in present value of *Moro* impact measured at a later date
  - Time lag in contribution rates adjusting for the increased present value

Uncollared Contribution Rate Impact of *Moro*

Reflecting *Moro* – Uncollared System-average Base Contribution Rates

Based on an interpretation of the calculation of COLAs as detailed in the Appendix

Prior to any 12/31/14 updates due to assumptions, census or methods



Present Value as of:	12/31/13	12/31/15
Assumptions/census as of:	12/31/13	12/31/13
Inv. Return Assumption:	7.75%	7.75%
Reflects *Moro*?	No	Yes

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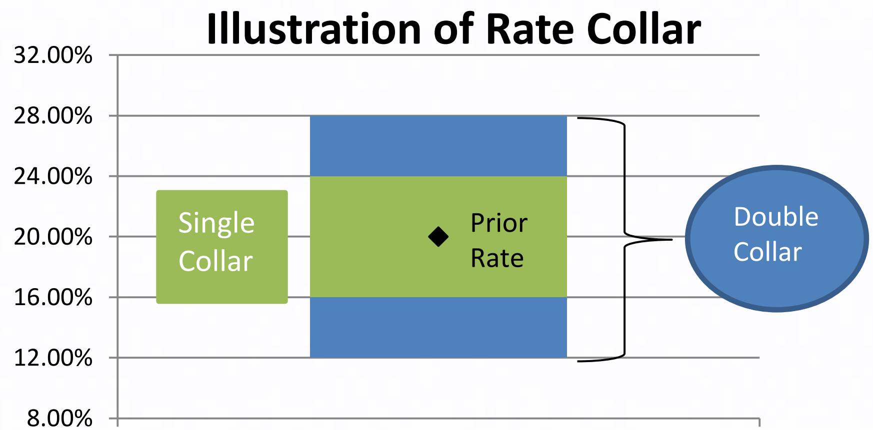
The Rate Collar

- In 2005, the Board adopted an employer contribution rate smoothing method called the “rate collar”
- After a major change in unfunded actuarial liability (UAL), the difference between the current contribution rate and the updated actuarially calculated rate can be large
  – The rate collar is a formulaic approach that spreads large employer contribution rate changes systematically across several biennia
- It allows employers to see both:
  – An advanced estimate of the maximum base rate change per biennium
  – The currently estimated long-term (20-year) contribution rate on a current market value of assets basis

The Rate Collar's Current Design

- The maximum change typically permitted by the collar is:
  - 20% of the rate currently in effect (3% of payroll minimum collar width)
- If funded status is 60% or lower, the width of the collar doubles
  - 40% of rate currently in effect (6% of payroll minimum collar width)
- If the funded status is between 60% and 70%, the collar size is pro-rated between the initial collar and double collar level



- Rate collars are calculated at a rate pool level and limit the biennium to biennium increase in the UAL rate for a given rate pool

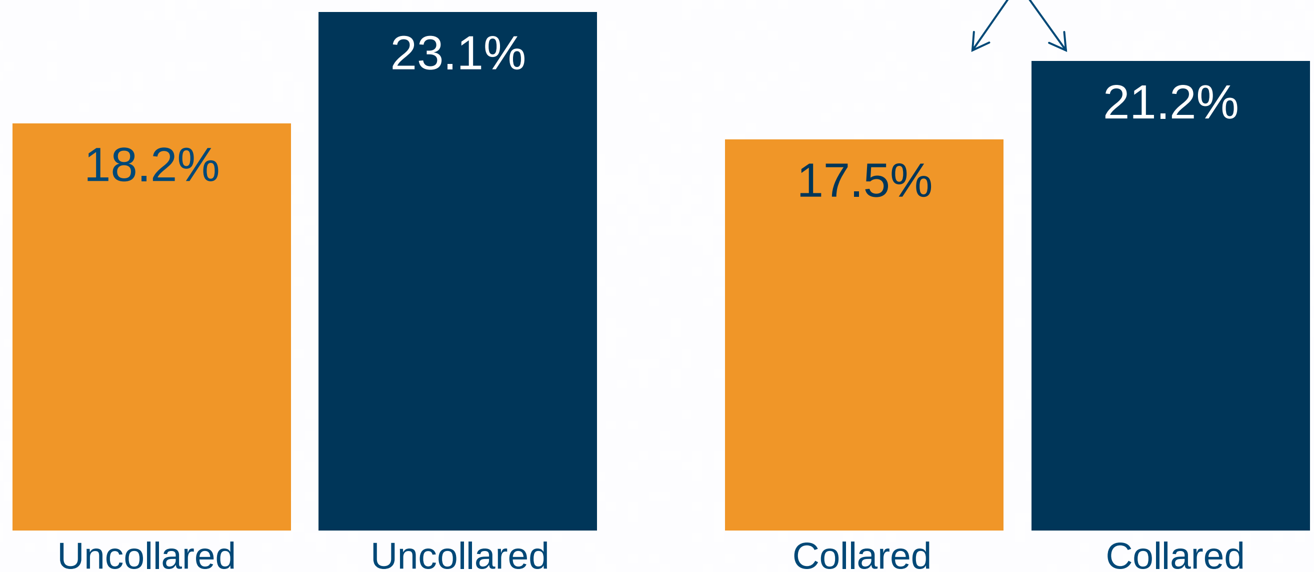
System-average Base Rates – *Moro* Impact

Reflecting *Moro*

Based on an interpretation of the calculation of COLAs as detailed in the Appendix

Prior to any 12/31/14 updates due to assumptions, census or methods

3.7% of payroll increase
=
Approx. $690 million in 2017-19 contributions



Present Value as of:	12/31/13	12/31/15	12/31/13	12/31/15
Assumptions/census as of:	12/31/13	12/31/13	12/31/13	12/31/13
Inv. Return Assumption:	7.75%	7.75%	7.75%	7.75%
Reflects *Moro*?	No	Yes	No	Yes

System-Average Rates – *Moro* Impact

Summary

- We currently anticipate "top of collar" employer contribution rate increases for the 2017-19 biennium to reflect *Moro*'s effects
- Estimates shown are prior to reflecting post-2013 investment returns and census updates or any changes in assumptions and methods adopted at the July 2015 PERS Board meeting
  - The above factors could significantly affect the <u>uncollared</u> system average contribution rate while having far less effect on the <u>collared</u> system average rate for the next biennium
- Advisory December 31, 2014 valuation results published later this year will provide updated employer-specific 2017-19 rate estimates
  - Actual 2017-19 employer rates for PERS Board approval will be published in September 2016, based on the December 31, 2015 valuation

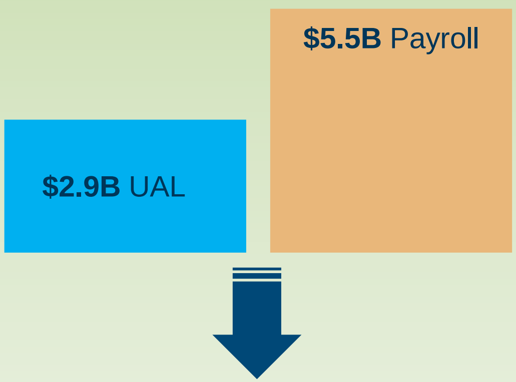
Pool-Specific Effects

Estimated Changes in 12/31/15 Uncollared UAL Rate due to *Moro*

Based on an interpretation of the calculation of COLAs as detailed in the Appendix

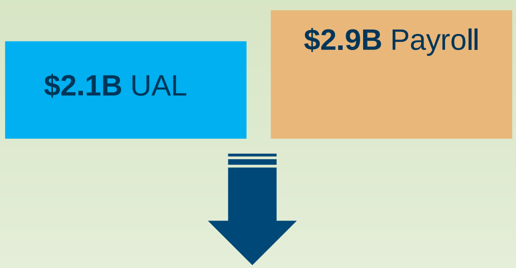
Prior to any 12/31/14 updates due to assumptions, census or methods

T1/T2 SLGRP



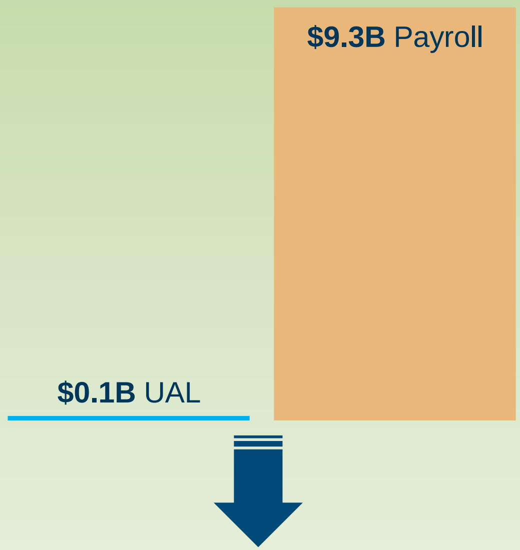
3.8% of SLGRP Pay

T1/T2 School Districts



5.3% of School District Pay

OPSRP



0.1% of System Pay

UAL Rates for a given tier/pool are charged on <u>all</u> of an employer’s payroll

The Fundamental Cost Equation

- Decisions made by the PERS Board, with one exception, do not affect the ultimate cost of system benefits
  – Exception is that investment return assumption affects Tier 1/Tier 2 benefits calculated under Money Match

BENEFITS =

EARNINGS +

CONTRIBUTIONS

Wrap Up / Next Steps

- Adopt assumptions and methods for December 31, 2014 advisory valuation and December 31, 2015 rate-setting valuation at July 2015 PERS Board meeting
  - The December 31, 2014 advisory valuation will provide an updated measurement of the present value, plus collared and uncollared rate estimates reflecting the *Moro* decision, updated census data, and the adopted assumptions and methods
- Present system-wide December 31, 2014 actuarial valuation results at the September 2015 PERS Board meeting
  - Advisory employer-specific 2017-19 employer contribution rates will be included in November 2015 Board meeting materials

Certification

This presentation summarizes results and projections based on an actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2013, for the Plan Year ending December 31, 2013. The results are for discussion purposes only and may not be relied upon to, for example, prepare the System's Consolidated Annual Financial Report (CAFR) or financial reporting for any System employer. The results are based upon the same assumptions, methods, and plan provisions as described in the December 31, 2013 System-Wide Actuarial Valuation Report, except where noted otherwise.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. 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 valuation results 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 our best estimate of anticipated experience affecting the System.

Future actuarial measurements may differ significantly from the current measurements presented in this report 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 or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements. The PERS Board has the final decision regarding the appropriateness of the assumptions.

Actuarial computations presented in this report are for purposes of determining the recommended funding amounts for the System. Actuarial computations presented in this report under GASB Statements No. 25 and 27, 43 and 45 are for purposes of fulfilling financial accounting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's

Certification

funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the plan provisions described in the appendix of this report, and of GASB Statements No. 25 and 27, 43 and 45. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

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The consultants who worked on this assignment are pension actuaries. Milliman’s advice is not intended to be a substitute for qualified legal or accounting counsel. The signing actuaries are independent of the plan sponsors. 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.

Appendix

Actuarial Basis

Data

We have based our calculation of the liabilities on the data supplied by the Oregon Public Employees Retirement System and summarized in the data exhibits on the preceding slides.

Assets as of December 31, 2013, were based on values provided by Oregon PERS reflecting the Board's earnings crediting decisions for 2013.

Methods / Policies

Actuarial Cost Method: Entry Age Normal, adopted effective December 31, 2012.

UAL Amortization: The UAL for OPSRP and Retiree Health Care as of December 31, 2007 are amortized as a level percentage of combined valuation payroll over a closed 16 year period for OPSRP and a closed 10 year period for Retiree Health Care. For the Tier 1/Tier 2 UAL, the amortization period is reset at 20 years as of December 31, 2013. Gains and losses between subsequent odd-year valuations are amortized as a level percentage of combined valuation payroll over the amortization period (20 years for Tier/Tier 1, 16 years for OPSRP, 10 years for Retiree Health Care) from the odd-year valuation in which they are first recognized.

Contribution rate stabilization method: Contribution rates for a rate pool (e.g. Tier 1/Tier 2 SLGRP, Tier 1/Tier 2 School Districts, OPSRP) are confined to a collar based on the prior contribution rate (prior to application of side accounts, pre-SLGRP liabilities, and 6 percent Independent Employer minimum). The new contribution rate will generally not increase or decrease from the prior contribution rate by more than the greater of 3 percentage points or 20 percent of the prior contribution rate. If the funded percentage excluding side accounts drops below 60% or increases above 140%, the size of the collar doubles. If the funded percentage excluding side accounts is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale.

Appendix

Actuarial Basis

Methods / Policies (cont'd)

Expenses: OPSRP administration expenses are assumed to be equal to $5.5M and are added to the OPSRP normal cost.

Actuarial Value of Assets: Equal to Market Value of Assets excluding Contingency and Tier 1 Rate Guarantee Reserves. The Tier 1 Rate Guarantee Reserve is not excluded from assets if it is negative (i.e. in deficit status).

Assumptions

Assumptions for valuation calculations are as described in the 2012 Experience Study for Oregon PERS and were presented to the PERS Board in July 2013.

Provisions

Provisions valued are as detailed in the 2013 Valuation Report, except as modified by *Moro*.

Appendix

Blended COLA

Moro Decision

The Oregon Supreme Court decision in *Moro v. State of Oregon* stated that the reduced COLA amounts provided by Senate Bills 822 and 861 (both passed in 2013) only apply to benefits earned after the effective date of the legislation. According to the Court, PERS members who earned benefits before and after the effective date "will be entitled to receive during retirement a blended COLA rate that reflects the different COLA provisions applicable to benefits earned at different times."

The Supreme Court did not articulate a specific a methodology for determining a member's blended COLA. For purposes of the estimates in this presentation, the blending was based on the creditable service earned before and after the effective date.

The example below illustrates this blended COLA approach for a member with 30 years of service at retirement, 20 of which were earned prior to the effective date of the SB 861 COLA.

Annual Benefit COLA Applies to:	COLA prior to SB 822 & 861	SB 861 COLA	Blended COLA
<$60,000	2.00%	1.25%	(20/30) x 2.00% +(10/30) x 1.25% = 1.75%
>$60,000	2.00%	0.15%	(20/30) x 2.00% +(10/30) x 0.15% = 1.38%