# OREGON PUBLIC EMPLOYEES RETIREMENT SYSTEM

## TIER 1/TIER 2 AND OPSRP PENSION BENEFITS
## RHIA/RHIPA RETIREE MEDICAL BENEFITS

### December 31, 2012 Actuarial Valuation

**Prepared by:**

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December 13, 2013

Retirement Board
Oregon Public Employees Retirement System

Dear Members of the Board,

As part of our engagement with the Board, we performed an actuarial valuation of the Oregon Public Employees Retirement System ("PERS" or "the System") as of December 31, 2012. Our findings are set forth in this actuarial valuation report. This report reflects the benefit provisions in effect as of December 31, 2012, as further adjusted by the legislative changes made in 2013 discussed within the report.

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, System benefit provisions as defined by statute, member census 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 a reasonable estimate of anticipated experience affecting the System.

This valuation report is only an estimate of the System's financial condition as of a single date. It can neither predict the System's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of System benefits, only the timing of System contributions. While the valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: System 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 System's funded status); and changes in System benefit provisions or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. The Board has the final decision regarding the appropriateness of the assumptions and adopted them as indicated herein in September 2013.

Some of the actuarial computations presented in this report are for purposes of determining the advisory July 2015 to June 2017 contribution rates for System employers. Other actuarial computations presented in this report under GASB Statements No. 25 and 27, 43 and 45 are for purposes of assisting the System and participating employers in fulfilling their financial reporting 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 funding requirements and goals. The calculations in this report have been made on a basis consistent with our understanding of the System benefit provisions as summarized in 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.

Milliman's work is prepared solely for the use and benefit of the Oregon Public Employees Retirement System.

Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. No third party recipient of Milliman's work product should rely upon this report. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

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.

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.

Sincerely,

| | |
|---|---|
| Matthew R. Larrabee, FSA, EA, MAAA | Scott D. Preppernau, FSA, EA, MAAA |
| Principal and Consulting Actuary | Consulting Actuary |

**The information contained in this document (including any attachments) is not intended by Milliman to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer.**

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# Executive Summary

## Executive Summary

Milliman has prepared this report for the Oregon Public Employees Retirement System to:

- Present Milliman's actuarial estimates of the system-wide liabilities and expenses of the Oregon Public Employees Retirement System (PERS), including pension benefits provided through Tier 1/Tier 2 and the Oregon Public Service Retirement Plan (OPSRP), and retiree medical benefits provided through the Retiree Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA), as of December 31, 2012, for PERS to incorporate, as PERS deems appropriate, in its financial statements; and
- Provide information on advisory system-wide average employer contribution rates and employer contribution rates for the School District rate pool and the State and Local Government Rate Pool (SLGRP) calculated as of December 31, 2012.

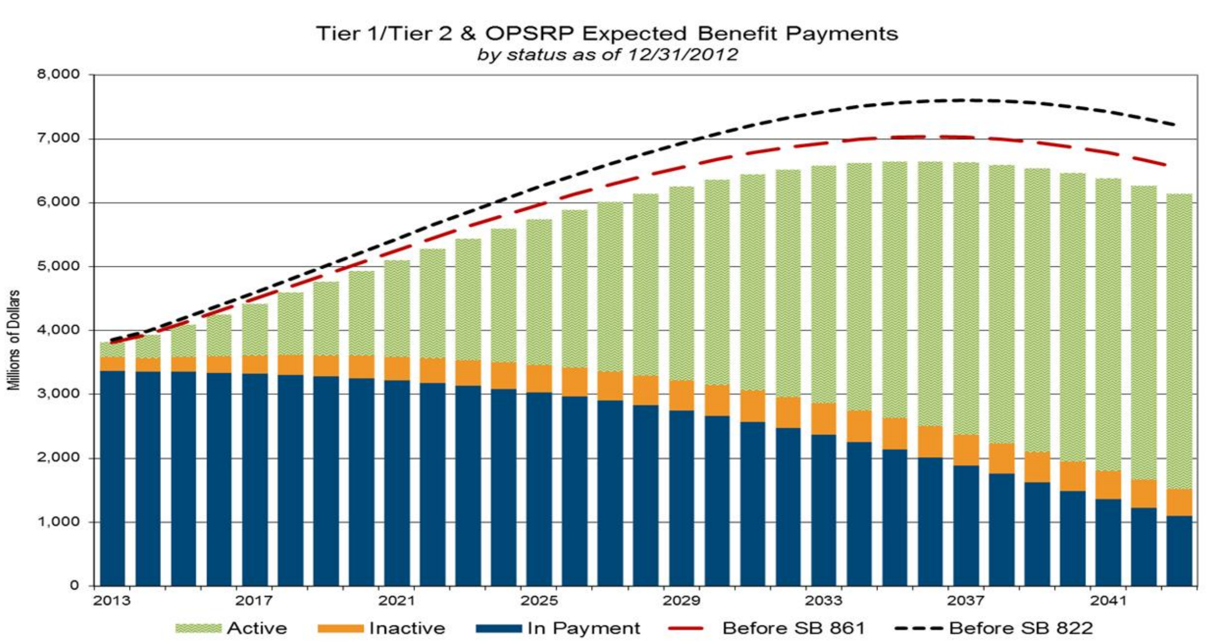
This valuation does not cover the Individual Account Program (IAP). Except where otherwise explicitly noted, contribution rates in this valuation do not include contributions to the IAP. In addition, the valuation does not include an allowance for employer debt service payments on pension obligation bonds.

### Legislative and Actuarial Changes

The results shown in this valuation reflect significant changes in both plan provisions and actuarial assumptions and methods since the December 31, 2011 valuation.

The 2013 Oregon Legislature made a series of changes to PERS that lowered projected future benefit payments from the System. These changes, described in detail later in the report, included reductions to future Cost of Living Adjustments (COLA) made through Senate Bills 822 and 861. Senate Bill 822 also required the contribution rates scheduled to be in effect from July 2013 to June 2015, which were originally calculated in the December 31, 2011 valuation, to be reduced.

The graph below illustrates the impact of the 2013 legislation on projected benefit payments from the System.



In addition, in 2013 Milliman worked with the PERS Board to complete a thorough review of actuarial methods and assumptions to be used for the December 31, 2012, and December 31, 2013, valuations. After completion of this review, the PERS Board made several changes, most notably lowering the investment return assumption to 7.75% and changing the actuarial cost method used to allocate benefit costs over a member's working lifetime.

Due to these changes in both plan provisions and actuarial methods, comparisons shown in this report between current and prior valuation results often show significant differences.

### Employer Contribution Rates

*Pension Contribution Rates*

This report presents system average employer contribution rates calculated as of December 31, 2012. These rates are advisory only. The December 31, 2013 valuation will determine employer contribution rates that will be effective on July 1, 2015. The December 31, 2011 valuation presented the employer contribution rates that are in effect from July 1, 2013 through June 30, 2015, as further modified by Senate Bill 822 passed by the Oregon Legislature in May 2013.

Employer pension contribution rates consist of a normal cost rate and an amortization of the Unfunded Accrued Liability (UAL). Normal cost rates are calculated and charged separately to the Tier 1/Tier 2, OPSRP general service and OPSRP police and fire payrolls. UAL rates are calculated separately for Tier 1/Tier 2 and OPSRP, but each UAL rate is charged across all payrolls. Rates for individual employers are adjusted if the employer maintains a side account or has a pre-SLGRP liability or surplus. The table below compares the average employer contribution rates for each type of payroll calculated for this valuation compared to the rates in effect from July 1, 2013 through June 30, 2015. The estimated system average effect of the Senate Bill 822 reduction in rates for the 2013 – 2015 biennium is also shown in the table.

**Pension Contribution Rates (Excludes IAP)**

| | Advisory July 1, 2015 | | | Effective July 1, 2013 | | |
|---|---|---|---|---|---|---|
| Payroll | Tier 1/Tier 2 | OPSRP General Service | OPSRP Police & Fire | Tier 1/Tier 2 | OPSRP General Service | OPSRP Police & Fire |
| Normal Cost Rate | 13.45% | 7.36% | 11.46% | 9.00% | 6.27% | 9.00% |
| Tier 1/Tier 2 UAL Rate[1] | 6.73% | 6.73% | 6.73% | 12.47% | 12.47% | 12.47% |
| OPSRP UAL Rate | 0.60% | 0.60% | 0.60% | 0.15% | 0.15% | 0.15% |
| **Total Pension Rate** | **20.78%** | **14.69%** | **18.79%** | **21.62%** | **18.89%** | **21.62%** |
| Senate Bill 822 Adjustment | N/A | N/A | N/A | (4.28%) | (4.28%) | (4.28%) |
| **Total Pension Rate (Post-SB 822)** | **N/A** | **N/A** | **N/A** | **17.34%** | **14.61%** | **17.34%** |
| Average Adjustment[2] | (6.15%) | (6.15%) | (6.15%) | (5.70%) | (5.70%) | (5.70%) |
| **Net Pension Rate (Post-SB 822)** | **14.63%** | **8.54%** | **12.64%** | **11.64%** | **8.91%** | **11.64%** |

*1. Includes Multnomah Fire District #10*

*2. Adjustments shown are for side accounts and pre-SLGRP liabilities and are shown on system-wide average basis. For this purpose, adjustments are not assumed to be limited when an individual employer reaches a 0% contribution rate.*

Normal cost rates calculated in this valuation increased compared to the contribution rates calculated in the December 31, 2011 valuation, which produced rates effective July 1, 2013. This is primarily due to a change in actuarial cost method and a resulting difference in the allocation of Money Match benefits between past and future service.

Tier 1/Tier 2 UAL rates decreased in this valuation compared to the prior one due to legislative changes to future COLA amounts and investment returns above assumption during 2012. OPSRP UAL rates increased because the change in actuarial cost method worked to increase the actuarial liability assigned to OPSRP.

Pension contribution rates differ for each Tier 1/Tier 2 rate pool. This report calculates the specific rates for each rate pool. Tier 1/Tier 2 rates for independent employers (employers that do not participate in a Tier 1/Tier 2 rate pool) are calculated in separate reports for each employer. Changes in pension contribution rates for each rate pool (or independent employer) are confined to a rate collar depending on funded status. The table below shows the employer pension contribution rates for each Tier 1/Tier 2 rate pool calculated in this valuation compared to the rates in effect as of July 1, 2013 and the average adjustment to that rate for side accounts rate offsets and pre-SLGRP and transition liability charges and credits.

**Tier 1/Tier 2 Pension Contribution Rates (Excludes IAP)**

| | Advisory July 1, 2015 | | Effective July 1, 2013 | |
|---|---|---|---|---|
| | SLGRP | School Districts | SLGRP | School Districts |
| Normal Cost Rate | 13.93% | 12.28% | 9.15% | 8.17% |
| Tier 1/Tier 2 UAL Rate[1] | 4.30% | 12.26% | 10.42% | 17.78% |
| **Total Pension Rate** | **18.23%** | **24.54%** | **19.57%** | **25.95%** |
| Senate Bill 822 Adjustment | N/A | N/A | **(4.38%)** | **(4.40%)** |
| **Total Pension Rate (Post-SB 822)** | **N/A** | **N/A** | **15.19%** | **21.55%** |
| Average Adjustment[2] | (5.29%) | (9.33%) | (5.02%) | (8.35%) |
| **Net Pension Rate (Post-SB 822)** | **12.94%** | **15.21%** | **10.17%** | **13.20%** |

*1. Includes Multnomah Fire District #10*

*2. Adjustments shown are for side accounts and pre-SLGRP liabilities and are shown on system-wide average basis. For this purpose, adjustments are not assumed to be limited when an individual employer reaches a 0% contribution rate.*

The Tier 1/Tier 2 contribution rates shown here are after reflecting the effects of the rate collar. Due to the significant investment losses first recognized in contribution rates in the December 31, 2009 actuarial valuation, the rate collar has deferred a significant portion of the rate increase calculated in the most recent two rate-setting valuations. In the December 31, 2012 valuation, the SLGRP has a calculated contribution rate, prior to application of the rate collar, which still exceeds the maximum rate allowed by the collar. By contrast, the contribution rate calculated for the School District pool is no longer limited by the collar. The impact of the adjustment for each group is shown below. The contribution rate increase deferred for the SLGRP will be reflected in future rate-setting periods. In other words, if all assumptions are met, in addition to the increases effective for the July 1, 2015 to June 30, 2017 biennium illustrated in this report on an advisory basis, we would expect additional increases for the SLGRP in the July 1, 2017 to June 30, 2019 biennium.

| Collar Impact on Tier 1/Tier 2 Pension Contribution Rates<br>Advisory July 1, 2015 | | |
|---|---|---|
| | SLGRP | School Districts |
| **Total Pension Rate Before Collar** | 21.53% | 24.54% |
| Collar Adjustment | (3.30%) | 0.00% |
| **Total Pension Rate After Collar** | **18.23%** | **24.54%** |
| Average Adjustment | (5.29%) | (9.33%) |
| **Net Pension Rate** | **12.94%** | **15.21%** |

*Retiree Healthcare Contribution Rates*

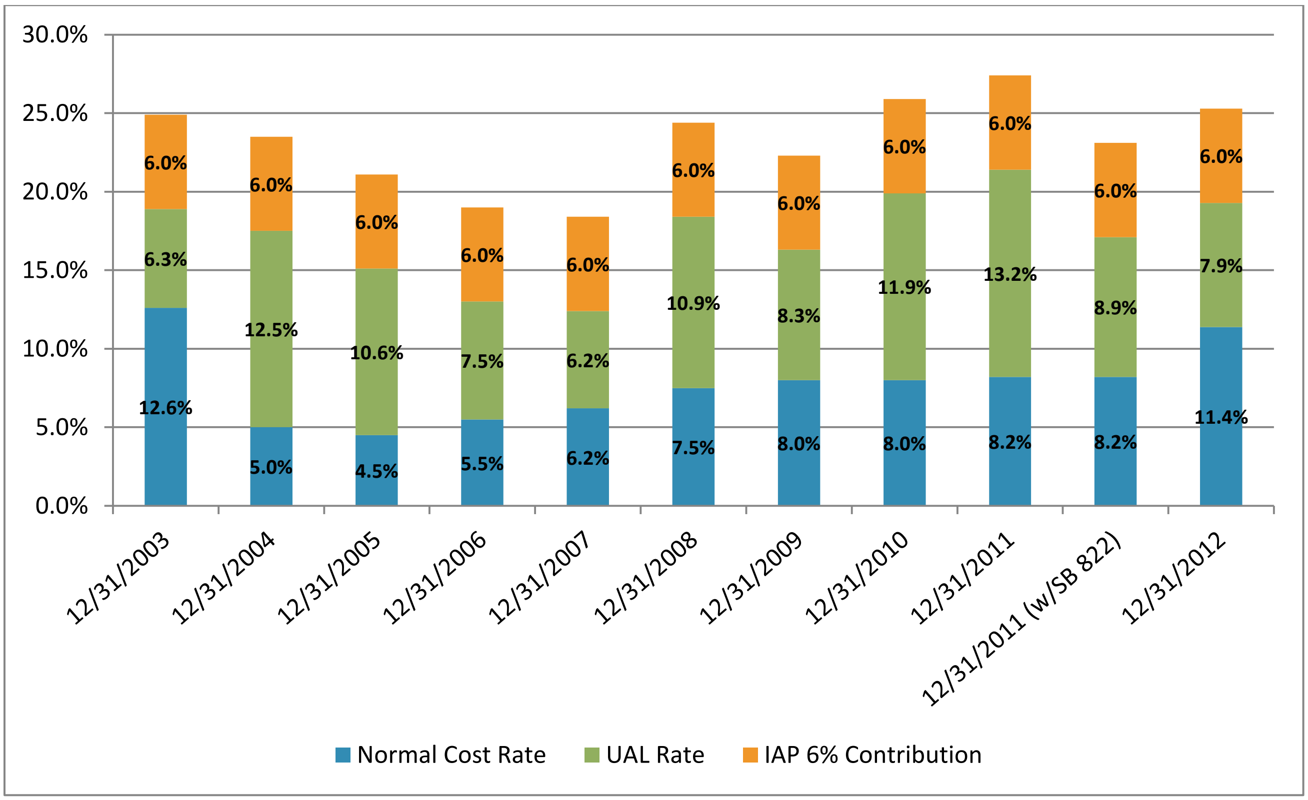
In addition to the pension contribution rates, all employers also contribute to the Retirement Health Insurance Account (RHIA). Further, State Agencies and State Judiciary contribute to the Retiree Health Insurance Premium Account (RHIPA). Only Tier 1 and Tier 2 members are eligible for these benefits, so the normal cost rates are only charged to Tier 1/Tier 2 payroll, but the UAL rates are charged to all payrolls. For each type of payroll used in this valuation the table below compares the advisory employer contribution rates calculated in this valuation to the rates in effect from July 1, 2013 through June 30, 2015.

| Retiree Healthcare Contribution Rates | | | | | | |
|---|---|---|---|---|---|---|
| | Advisory July 1, 2015 | | | Effective July 1, 2013 | | |
| Payroll | Tier 1/Tier 2 | OPSRP General Service | OPSRP Police & Fire | Tier 1/Tier 2 | OPSRP General Service | OPSRP Police & Fire |
| RHIA Normal Cost Rate | 0.08% | 0.00% | 0.00% | 0.10% | 0.00% | 0.00% |
| RHIA UAL Rate | 0.48% | 0.48% | 0.48% | 0.49% | 0.49% | 0.49% |
| **Total RHIA rate** | **0.56%** | **0.48%** | **0.48%** | **0.59%** | **0.49%** | **0.49%** |
| RHIPA Normal Cost Rate | 0.09% | 0.00% | 0.00% | 0.07% | 0.00% | 0.00% |
| RHIPA UAL Rate | 0.34% | 0.34% | 0.34% | 0.20% | 0.20% | 0.20% |
| **Total RHIPA rate** | **0.43%** | **0.34%** | **0.34%** | **0.27%** | **0.20%** | **0.20%** |

*Combined Pension and Retiree Healthcare Contribution Rates*

The system-wide average combined pension and retiree healthcare contribution rates are shown below for each valuation since December 31, 2003. As shown below, the average normal cost rate declined dramatically after the 2003 valuation, primarily due to the change in the actuarial cost method from EAN to PUC made in the December 31, 2004 valuation. The PUC method allocates benefits projected to be paid under the Money Match formula to past service with a 0% normal cost allocation to current year service. As additional long-service Tier 1 members retired under the Money Match formula, the normal cost rate increased over the subsequent valuations. The change back to the EAN method in this valuation accelerated the increase in the normal cost rate to a full career level, and now is expected drift down gradually in the future toward the OPSRP normal cost rate (currently 7.81%) as new OPSRP members replace retiring Tier 1/Tier 2 members. The UAL rate has decreased since the prior rate-setting valuation at December 31, 2011, as modified by Senate Bill 822, due to further legislative changes to future COLA amounts and investment returns above assumption during 2012. This decrease was partially offset by increases calculated in the prior rate-setting valuation which were deferred by the rate collar contribution stabilization method.

**System-Wide Average Contribution Rates – Combined Pension and Retiree Healthcare**




For an individual employer, base pension rates are adjusted for side accounts rate offsets to develop net pension rates paid by the employer. Side accounts are the result of employer supplemental deposits, typically financed through a pension obligation bond. When a supplemental deposit is made, a side account is established (after any transition liabilities for joining the SLGRP have been paid) and used to offset the otherwise required contribution. As of December 31, 2012, the system has approximately $5.5 billion in side accounts, an increase of about $0.3 billion in the last year. Side accounts now reduce the average advisory employer contribution rate by 5.70% of payroll, but there is wide variation between employers.

For individual employers in the SLGRP, the rates shown above are also adjusted for amortization payments on pre-SLGRP liabilities. The average adjustment to individual employer rates due to side accounts and pre-SLGRP liabilities is shown on a combined basis in the table on page 2.

*Limits on Future Pension Contribution Rates*

The minimum and maximum rates that can be effective July 1, 2015 for each rate pool (prior to adjustments) are shown in the table below. The limits are calculated and applied on an individual employer basis for independent employers. The contribution rates for individual employers are adjusted from the rates of the pool to reflect side account rate offsets, charges or credits for pre-SLGRP liabilities, and adjustments to the normal cost rates of SLGRP employers to reflect the employer's ratio of general service to fire and police payroll. These adjustments are not limited by the rate collar.

The size of the rate collar depends on the funded status of a rate pool or employer. When funded status is less than 60 percent or above 140 percent, the size of the rate collar is twice the size of the "single collar" that applies when funded status is between 70 percent and 130 percent. The rate collar provides a graded schedule between the single and double rate collars if the funded status, excluding side accounts, is between 60% and 70% or 130% and 140%.

| Limits on Future Pension Contribution Rates | | |
|---|---|---|
| | Effective July 1, 2015 | |
| | Tier 1/Tier 2 | |
| | SLGRP | School Districts |
| **Between 70% and 130% Funded** | | |
| Minimum Rate | 12.15% | 17.24% |
| Maximum Rate | 18.23% | 25.86% |
| **Less than 60% or Greater than 140% Funded** | | |
| Minimum Rate | 9.11% | 12.93% |
| Maximum Rate | 21.27% | 30.17% |

*For Rate Pools funded between 60% and 70% or between 130% and 140% the limits vary linearly between the rates shown above.*

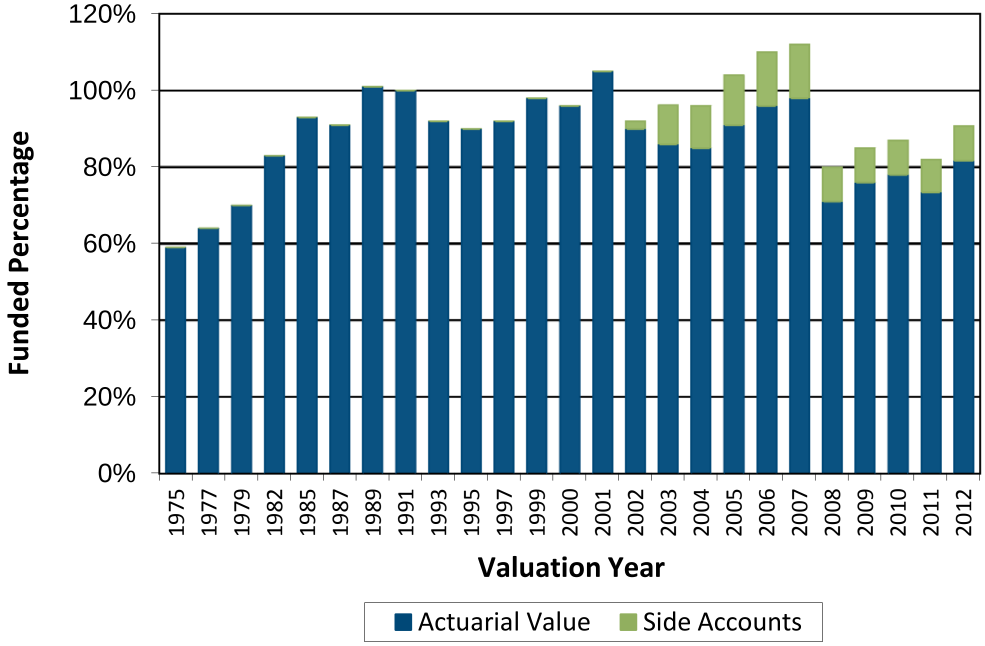
## Funded Status

The table below shows the funded status of the various pension rate pools both on the basis used to calculate the contribution rate for each rate pool and after adjustment for side accounts (assuming side accounts offset Tier 1/Tier 2 liabilities). For this exhibit, all independent employers, including State Judiciary, have been grouped together. Note that the decline in the OPSRP funded status comes from the Entry Age cost method assigning a significantly larger share of benefits to past service for a relatively new plan such as OPSRP, which increases the actuarial accrued liability.

| | SLGRP | School Districts | Independent Employers | OPSRP | Pension System Totals[1] |
|---|---|---|---|---|---|
| ***December 31, 2012*** | | | | | |
| Actuarial accrued liability | $ 30,601.9 | $ 22,908.0 | $ 5,043.4 | $ 1,795.6 | $ 60,405.2 |
| Actuarial value of assets | $ 25,464.1 | $ 18,329.6 | $ 4,392.0 | $ 1,190.0 | $ 49,265.9 |
| **Funded percentage** | **83.2%** | **80.0%** | **87.1%** | **66.3%** | **81.6%** |
| Side accounts | $ 2,558.3 | $ 2,872.5 | $ 87.4 | $ - | $ 5,518.2 |
| **Funded percentage reflecting side accounts** | **91.6%** | **92.6%** | **88.8%** | **66.3%** | **90.7%** |
| ***December 31, 2011*** | | | | | |
| Actuarial accrued liability | $ 31,109.1 | $ 23,973.7 | $ 5,069.8 | $ 986.4 | $ 61,198.4 |
| Actuarial value of assets | $ 23,240.9 | $ 16,964.3 | $ 4,000.4 | $ 840.5 | $ 44,943.1 |
| **Funded percentage** | **74.7%** | **70.8%** | **78.9%** | **85.2%** | **73.4%** |
| Side accounts | $ 2,438.3 | $ 2,704.0 | $ 82.8 | $ - | $ 5,225.1 |
| **Funded percentage reflecting side accounts** | **82.5%** | **82.0%** | **80.5%** | **85.2%** | **82.0%** |
| *Amounts in millions* | | | | | |

[1] *Includes Multnomah Fire District #10*

As shown in the graph below, the funded status of the system generally improved until the market decline of 2000-2002. The restatement of the December 31, 2001 actuarial valuation to reflect the impact of the 2003 reforms mitigates the impact on the reported funded status of the market downturn. Funded status was generally improving for several years due to better than expected investment returns until 2008, when it decreased significantly due to investment losses. The funded status improved in the current valuation due to legislative changes in plan provisions and investment gains during 2012.




The retiree medical benefits are funded using a 401(h) account within the pension trust. The table below shows the funded status of the retiree medical programs. The funded status of the RHIA program improved since the prior valuation due to the increase in RHIA contribution rates effective July 1, 2011. The funded status of the RHIPA program declined since the prior valuation due to both actual participation experience and an updated actuarial assumption about the percentage of Tier 1/Tier 2 retired members that will elect to participate in the RHIPA program when eligible.

| | December 31, 2012 | | | December 31, 2011 | | |
|---|---|---|---|---|---|---|
| | RHIA | RHIPA | Total | RHIA | RHIPA | Total |
| Actuarial accrued liability | $471.8 | $60.3 | $532.2 | $461.1 | $34.4 | $495.5 |
| Actuarial value of assets | $291.6 | $4.4 | $296.0 | $239.6 | $4.5 | $244.1 |
| **Funded Percentage** | **61.8%** | **7.4%** | **55.6%** | **52.0%** | **13.2%** | **49.3%** |
| *Amounts in millions* | | | | | | |

**Asset Changes**

Since December 31, 2011, contributions (including supplemental deposits but excluding side account rate offset transfers) for pension benefits have increased assets by 1.8% while benefit payments decreased assets by about 6.6%. On the whole, assets increased by 9% due to investment returns of approximately 14.7%.

| All Reserves | Amount | Percentage of 12/31/2011 Market Value |
|---|---|---|
| ***Market value, December 31, 2011*** | **$ 51,388.8** | |
| Contributions | 928.7 | 1.8% |
| Investment Income | 7,203.9 | 14.0% |
| Benefit Payments | (3,403.7) | (6.6%) |
| ***Market value, December 31, 2012*** | **$ 56,117.6** | **109.2%** |
| *Amounts in millions* | | |

The Tier 1 Rate Guarantee Reserve that is used to pay for the interest crediting rate guarantee on active Tier 1 member accounts when actual investment earnings are below the assumed rate has improved from a deficit of $0.3 billion as of December 31, 2011 to a deficit of $300,000 as of December 31, 2012 due to investment performance above assumption in 2012. Tier 1 member accounts that are linked to the Rate Guarantee Reserve decreased from $6.5 billion on December 31, 2011 to $6.3 billion on December 31, 2012.

Market values are reported to Milliman by PERS. It is our understanding that select real estate and private equity investments are reported on a three-month lag basis. This valuation report does not attempt to quantify any such effects.

**Liability Changes**

Since December 31, 2011, the system-wide actuarial accrued liability has decreased due to the legislative changes discussed above, though this was offset somewhat by changes to actuarial methods and assumptions. The normal cost, or the value of benefits assigned to that year of service, was about one-fifth of the value of benefits paid out during the year. The remaining 0.3% decrease in the actuarial accrued liability was attributable to demographic experience.

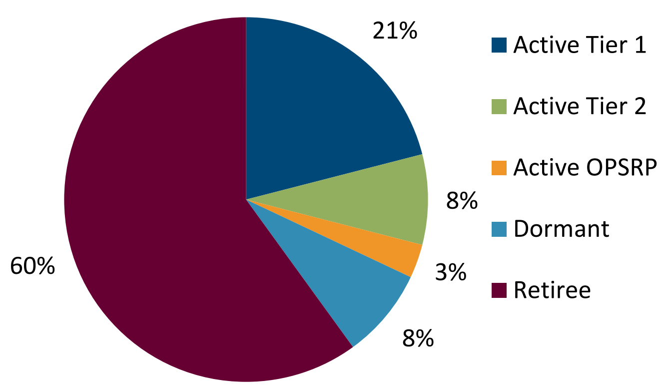
| | Amount | Percentage of 12/31/2011 AAL |
|---|---|---|
| ***Actuarial Accrued Liability, December 31, 2011*** | **$ 61,694.0** | |
| Normal Cost | 704.8 | 1.1% |
| Benefit Payments | (3,403.7) | (5.5%) |
| Interest | 4,855.8 | 7.9% |
| Assumption & Method Changes | 2,496.6 | 4.0% |
| Plan Changes | (5,243.5) | (8.5%) |
| Other | (166.5) | (0.3%) |
| ***Actuarial Accrued Liability, December 31, 2012*** | **$ 60,937.3** | **98.8%** |
| *Amounts in millions* | | |

The Oregon Public Employees Retirement System is a very mature system. There are currently 1.37 active members in the system for every annuitant (including retired members and beneficiaries). By comparison, the average ratio in NASRA's 2012 Public Fund Survey is 1.65. Since contributions to the system are based on active payroll, a lower ratio means there are fewer actives to support any gains or losses, such as investment experience varying from assumption, in comparison to other systems. The ratio of active members to annuitants may decline further as a significant portion of the active members are currently eligible to retire.

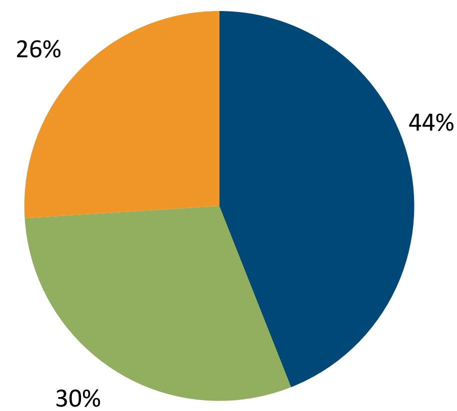
The left-hand chart below illustrates the distribution of the system's accrued liability by member pension tier and status. While the majority of active liability is attributable to Tier 1 members, 68% of the system's total accrued liability is due to members who are no longer actively working in covered employment. Only 11% of the liability is attributable to active Tier 2 and OPSRP members. Of the accrued liability that is attributable to actives, a large portion is located at or near prime retirement ages.

The right-hand chart below illustrates the distribution of the system's normal cost. Tier 2 members account for nearly a third of the system's normal cost compared to about 8% of the system's accrued liability. OPSRP members account for 26% of the normal cost compared to just 3% of the accrued liability.

**Actuarial Accrued Liability by Member Category**




**Normal Cost by Member Category**



### Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or plan provisions between the two valuations are described after the summary. Combined valuation payroll includes Tier 1/Tier 2 payroll and OPSRP payroll.

| | Actuarial Valuation as of | | |
|---|---|---|---|
| | December 31, 2012 | December 31, 2011 | Percent Change |
| **Tier 1/Tier 2 Pension** | | | |
| Actuarial accrued liability | $ 58,609.6 | $ 60,212.0 | (3%) |
| Actuarial value of assets | $ 48,075.9 | $ 44,102.6 | 9% |
| Unfunded actuarial accrued liability | $ 10,533.7 | $ 16,109.4 | (35%) |
| Funded status | 82% | 73% | |
| UAL as a percentage of payroll | 123% | 188% | |
| | | | |
| Normal cost | $ 718.6 | $ 505.0 | 42% |
| Tier 1/Tier 2 valuation payroll | $ 5,341.7 | $ 5,607.9 | (5%) |
| Normal cost rate | 13.45% | 9.00% | |
| | | | |
| **OPSRP Pension** | | | |
| Actuarial accrued liability | $ 1,795.6 | $ 986.4 | 82% |
| Actuarial value of assets | $ 1,190.0 | $ 840.5 | 42% |
| Unfunded actuarial accrued liability | $ 605.5 | $ 145.9 | 315% |
| Funded status | 66% | 85% | |
| UAL as a percentage of payroll | 7% | 2% | |
| | | | |
| Normal cost | $ 253.6 | $ 193.0 | 31% |
| OPSRP valuation payroll | $ 3,249.2 | $ 2,942.6 | 10% |
| Normal cost rate | 7.81% | 6.56% | |
| | | | |
| **Combined Pension** | | | |
| Actuarial accrued liability | $ 60,405.2 | $ 61,198.4 | (1%) |
| Actuarial value of assets | $ 49,265.9 | $ 44,943.1 | 10% |
| Unfunded actuarial accrued liability | $ 11,139.3 | $ 16,255.3 | (31%) |
| Funded status | 82% | 73% | |
| Combined valuation payroll | $ 8,590.9 | $ 8,550.5 | 0% |
| UAL as a percentage of payroll | 130% | 190% | |
| | | | |
| Normal cost | $ 972.2 | $ 698.0 | 39% |
| Combined valuation payroll | $ 8,590.9 | $ 8,550.5 | 0% |
| Normal cost rate | 11.32% | 8.16% | |
| *Amounts in millions* | | | |

| | Actuarial Valuation as of December 31, 2012 | December 31, 2011 | Percent Change |
|---|---|---|---|
| **RHIA** | | | |
| Actuarial accrued liability | $ 471.8 | $ 461.1 | 2% |
| Actuarial asset value | $ 291.6 | $ 239.6 | 22% |
| Unfunded actuarial accrued liability | $ 180.2 | $ 221.5 | (19%) |
| Funded status | 62% | 52% | |
| Combined valuation payroll | $ 8,590.9 | $ 8,550.5 | 0% |
| UAL as a percentage of payroll | 2% | 3% | |
| | | | |
| Normal cost | $ 4.4 | $ 5.8 | (24%) |
| Tier 1/Tier 2 valuation payroll | $ 5,341.7 | $ 5,607.9 | (5%) |
| Normal cost rate | 0.08% | 0.10% | |
| | | | |
| **RHIPA** | | | |
| Actuarial accrued liability | $ 60.3 | $ 34.4 | 75% |
| Actuarial asset value | $ 4.4 | $ 4.5 | (2%) |
| Unfunded actuarial accrued liability | $ 55.9 | $ 29.9 | 87% |
| Funded status | 7% | 13% | |
| Combined valuation payroll | $ 2,432.4 | $ 2,376.9 | 2% |
| UAL as a percentage of payroll | 2% | 1% | |
| | | | |
| Normal cost | $ 1.4 | $ 1.1 | 23% |
| Tier 1/Tier 2 valuation payroll | $ 1,478.4 | $ 1,539.5 | (4%) |
| Normal cost rate | 0.09% | 0.07% | |
| *Amounts in millions* | | | |

### Data Summary

A brief summary of the data underlying the current and prior valuation follows. Additional detail can be found in the data section of this report. State Judiciary is included in the Tier 1 counts.

| | December 31 | | | | |
|---|---|---|---|---|---|
| | 2012 | | | | 2011 |
| | Tier 1 | Tier 2 | OPSRP | Total | Total |
| **Active Members** | | | | | |
| Count | 42,776 | 46,661 | 77,666 | 167,103 | 170,972 |
| Average age | 54.4 | 48.4 | 41.8 | 46.9 | 46.6 |
| Average total service | 22.2 | 12.2 | 4.9 | 11.4 | 11.0 |
| Average prior year covered salary | $ 65,737 | $ 56,008 | $ 39,375 | $ 50,768 | $ 49,388 |
| **Dormant Members**[1] | | | | | |
| Count | 19,668 | 16,397 | 5,806 | 41,871 | 40,507 |
| Average age | 57.3 | 50.6 | 44.9 | 53.0 | 52.9 |
| Average monthly deferred benefit | $ 2,116 | $ 641 | $ 283 | $ 1,284 | $ 1,235 |
| **Retired Members and Beneficiaries**[1] | | | | | |
| Count | 114,045 | 7,410 | 582 | 122,037 | 118,408 |
| Average age | 71.2 | 65.6 | 64.9 | 70.8 | 70.6 |
| Average monthly benefit | $ 2,422 | $ 879 | $ 351 | $ 2,318 | $ 2,265 |
| **Total members** | **176,489** | **70,468** | **84,054** | **331,011** | **329,887** |

*1. Dormant and Retiree counts are shown by lives within the system. In other words, a member is counted once for purposes of this exhibit, regardless of their service history for different rate pools. This contrasts with the method used to count inactive participants in some of the later exhibits of this report.*

### Effects of Changes

Effective with the December 31, 2012 actuarial valuation the following changes were made. Please refer to the 2012 Experience Study for more detail on assumption and method changes.

*Cost Method*

The Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method.

*Assumption Changes*

The following assumption changes were made the prior valuation:

- Assumed investment returns were lowered to 7.75% from the previously assumed 8.00%.
- Interest crediting on regular and variable member accounts was also lowered to 7.75%.
- Mortality, disability and retirement rates were updated for some groups to more closely match observed experience.
- Termination assumptions were changed to be based on duration of service.

- Assumptions for merit increases, unused sick leave, and vacation pay were updated.
- The assumed healthcare cost trend rates for the RHIPA program as well as the participation assumptions for both RHIA and RHIPA were updated.

*Method Changes*

The Tier 1/Tier 2 UAL will be re-amortized over a closed 20-year period as of December 31, 2013 (the next rate-setting valuation).

In addition, the “grade-in range” over which the rate collar doubles was modified.

*Plan Changes*

Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.

Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.

Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation.

# System-Wide Assets

## System-Wide Assets

The table below reconciles the market value of assets, as provided by PERS, to the asset values used in this valuation.

| | Tier 1/Tier 2 | OPSRP | Side Accounts | Contingency and Capital Preservation Reserve | Rate Guarantee Reserve | RHIA and RHIPA | System Totals |
|---|---|---|---|---|---|---|---|
| **Amount reported by PERS December 31, 2012** | $ 48,513.5 | $ 1,190.0 | $ 5,518.2 | $ 600.2 | $ (0.3) | $ 296.0 | $ 56,117.6 |
| Adjustment for Negative Rate Guarantee Reserve | $ (0.3) | - | $ - | $ - | $ 0.3 | $ - | $ - |
| Net Pre-SLGRP Liabilities | $ (437.3) | $ - | $ - | $ - | $ - | $ - | $ (437.3) |
| **December 31, 2012 Actuarial Value of Assets** | $ 48,075.9 | $ 1,190.0 | $ 5,518.2 | $ 600.2 | $ - | $ 296.0 | $ 55,680.3 |
| *Amounts in millions* | | | | | | | |

PERS calculates the amount that should be transferred from side accounts to employer reserves in Tier 1/ Tier 2 and OPSRP for rate relief on a monthly basis. PERS does not track net Pre-SLGRP liabilities.

Employer supplemental deposits establish individual side accounts within the pension trust. The side accounts are treated as prepaid contributions. Employer contribution rates are first determined excluding side accounts. Then, an amortized portion of the side account is used to offset the contribution otherwise required for the individual employers that have side accounts. While side accounts are excluded from valuation assets in determining contribution rates for each of the rate pools, side accounts are included in valuation assets for financial reporting purposes such as the reporting of funded status.

In addition, pension assets are held in the Contingency Reserve, the Capital Preservation Reserve, and the Tier 1 Rate Guarantee Reserve. As shown below, at December 31, 2011 the Tier 1 Rate Guarantee Reserve (RGR) was in deficit status of $345.3 million. Crediting towards the RGR deficit during 2012, because the earnings on Tier 1 member reserves was greater than the assumed rate with which they are credited, brought the overall balance near to zero. The adjustment to Tier 1/Tier 2 valuation assets to account for the deficit status of the Tier 1 Rate Guarantee Reserve is shown in the table above. It is our understanding that if a deficit persists for five years, employers may be required to restore the Tier 1 Rate Guarantee Reserve.

Tier 1/Tier 2 assets are adjusted by the net outstanding balance of pre-SLGRP liabilities to arrive at the actuarial value of assets. These notional employer-specific balances, created at the formation of the SLGRP and at later dates when additional employers join the pool, are treated akin to receivables to the SLGRP from individual employers (for pre-SLGRP liabilities) or payables – in the form of future rate offsets – from the SLGRP assets to individual employers (for pre-SLGRP surpluses).

Finally, assets are held in separate accounts established under Internal Revenue Code Section 401(h) (the Retirement Health Insurance Account (RHIA) and the Retiree Health Insurance Premium Account (RHIPA)) to provide retiree medical benefits.

The following table reconciles the changes in the system-wide assets from December 31, 2011 to December 31, 2012. The reconciliation of assets is provided by PERS.

| Reconciliation of Pension and Retiree Healthcare Assets | Tier 1/Tier 2 | OPSRP | Side Accounts | Contingency Reserve | Capital Preservation Reserve | Rate Guarantee Reserve | RHIA and RHIPA | System Totals |
|---|---|---|---|---|---|---|---|---|
| ***Additions*** | | | | | | | | |
| 1. Contributions | | | | | | | | |
| a. Employer | $ 653.0 | $ 209.9 | $ - | $ - | $ - | $ - | $ 51.6 | $ 914.5 |
| b. Transfer from side accounts[1] | $ 442.8 | $ - | $ (442.8) | $ - | $ - | $ - | $ - | $ - |
| c. Judge member contributions | $ 1.5 | $ - | $ - | $ - | $ - | $ - | $ - | $ 1.5 |
| d. Member service purchases | $ 12.6 | $ - | $ - | $ - | $ - | $ - | $ - | $ 12.6 |
| e. Total | $ 1,109.9 | $ 209.9 | $ (442.8) | $ - | $ - | $ - | $ 51.6 | $ 928.7 |
| 2. Net investment income | | | | | | | | |
| a. Transfers | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| b. From investments | $ 5,903.8 | $ 150.4 | $ 736.0 | $ 64.9 | $ - | $ 344.9 | $ 35.6 | $ 7,235.7 |
| c. Total | $ 5,903.8 | $ 150.4 | $ 736.0 | $ 64.9 | $ - | $ 344.9 | $ 35.6 | $ 7,235.7 |
| 3. Other[2] | $ 1.0 | $ - | $ - | $ - | $ - | $ - | $ - | $ 1.0 |
| **4. Total additions** | **$ 7,014.7** | **$ 360.3** | **$ 293.2** | **$ 64.9** | **$ -** | **$ 344.9** | **$ 87.2** | **$ 8,165.3** |
| ***Deductions*** | | | | | | | | |
| 5. Retirement and survivor benefits | $ (3,340.8) | $ (5.5) | $ - | $ - | $ - | $ - | $ (34.3) | $ (3,380.7) |
| 6. Death Benefits | $ (5.1) | $ - | $ - | $ - | $ - | $ - | $ - | $ (5.1) |
| 7. Refund of contributions | $ (18.0) | $ - | $ - | $ - | $ - | $ - | $ - | $ (18.0) |
| 9. Administrative expenses | $ (26.4) | $ (5.3) | $ (0.2) | $ - | $ - | $ - | $ (1.0) | $ (32.8) |
| **10. Total deductions** | **$ (3,390.2)** | **$ (10.8)** | **$ (0.2)** | **$ -** | **$ -** | **$ -** | **$ (35.3)** | **$ (3,436.5)** |
| **11. Net change** | **$ 3,624.5** | **$ 349.5** | **$ 293.0** | **$ 64.9** | **$ -** | **$ 344.9** | **$ 51.9** | **$ 4,728.8** |
| 12. Net assets held in trust for pension benefits | | | | | | | | |
| a. Beginning of year | $ 44,889.0 | $ 840.5 | $ 5,225.1 | $ 535.3 | $ - | $ (345.3) | $ 244.1 | $ 51,388.8 |
| **b. End of year** | **$ 48,513.5** | **$ 1,190.0** | **$ 5,518.2** | **$ 600.2** | **$ -** | **$ (0.3)** | **$ 296.0** | **$ 56,117.6** |
| *Amounts in millions* | | | | | | | | |

*[1] Side account transfers shown in this exhibit are all credited to Tier 1/Tier 2 assets. We understand the portion to be credited to OPSRP is credited through the employer contribution line of the exhibit.*

*[2] Includes TRFA transfer from Metlife and adjustments by PERS.*

## Reconciliation of Side Accounts

Side accounts are established for employers who make supplemental payments (a lump sum payment in excess of the required employer contribution). For SLGRP employers, this supplemental payment is first applied toward the employer's Transition Liability, and any excess is established in a Side Account. A reconciliation of the side accounts from December 31, 2011, to December 31, 2012, is shown below on a rate pool basis. For this exhibit, all independent employers are grouped together.

| | SLGRP | School Districts | Independent Employers | System Totals |
|---|---|---|---|---|
| **Side Accounts, December 31, 2011** | **2,438.3** | **2,704.0** | **82.8** | **5,225.1** |
| Deposits during 2012 | - | - | - | - |
| Interest | 342.3 | 382.0 | 11.7 | 736.0 |
| Administrative expenses | (0.0) | (0.1) | (0.0) | (0.2) |
| Transfers to employer reserves | (222.4) | (213.3) | (7.1) | (442.8) |
| **Side Accounts, December 31, 2012** | **2,558.3** | **2,872.5** | **87.4** | **5,518.2** |
| *Amounts in millions* | | | | |

## Development of Side Account Rate Relief

The rate relief attributable to an employer's side account is determined by amortizing the side account balance on the valuation date over a fixed period and expressing the result as a percentage of combined valuation payroll. For side accounts established on or before December 31, 2009, the fixed period ends December 31, 2027. For side accounts established later, the fixed period ends 18 years after the first rate-setting valuation following its creation. The table below shows the average rate relief attributable to side accounts for each rate pool.

| | December 31, 2012 | | | |
|---|---|---|---|---|
| | SLGRP | School Districts | Independent Employers | System Totals |
| 1. Side Account | $ 2,558.3 | $ 2,872.5 | $ 87.4 | $ 5,518.2 |
| 2. Combined valuation payroll | $ 5,018.0 | $ 2,731.5 | $ 841.3 | $ 8,590.9 |
| 3. Average Amortization Factor[1] | 11.272 | 11.272 | 11.272 | 11.272 |
| 4. Average Side Account Rate Relief (1. ÷ 2. ÷ 3.) | 4.52% | 9.33% | 0.92% | 5.70% |
| *Amounts in millions* | | | | |

[1] *Weighted average*

# Pension Plan Valuation

## Tier 1/Tier 2 Pension Assets

**Summary of Actuarial Value of Assets**

This section summarizes the current Tier 1/Tier 2 pension valuation assets as of the current and prior actuarial valuation. For valuation purposes, pension assets are divided among the State & Local Government Rate Pool (SLGRP), the School District Pool, and various independent employers to determine employer contribution rates. For this system-wide report, all independent employers, including State Judiciary, have been grouped together as if they were a rate pool.

| | SLGRP | School Districts | Independent Employers | Tier 1/Tier 2 Totals[1] |
|---|---|---|---|---|
| **December 31, 2012** | | | | |
| Member reserves[2] | $ 4,460.3 | $ 2,575.3 | $ 668.6 | $ 7,704.5 |
| Employer reserves | 10,941.5 | 6,457.5 | 1,965.7 | 19,221.5 |
| Benefit in force reserves | 10,499.6 | 9,296.9 | 1,757.8 | 21,587.2 |
| Net outstanding pre-SLGRP liabilities | (437.3) | | | (437.3) |
| **Total actuarial value of assets** | **$ 25,464.1** | **$ 18,329.6** | **$ 4,392.0** | **$ 48,075.9** |
| **December 31, 2011** | | | | |
| Member reserves | $ 4,288.0 | $ 2,498.5 | $ 647.5 | $ 7,434.4 |
| Employer reserves | 9,627.1 | 5,547.2 | 1,726.1 | 16,764.9 |
| Benefit in force reserves | 9,767.0 | 8,918.5 | 1,626.7 | 20,344.4 |
| Net outstanding pre-SLGRP liabilities | (441.2) | | | (441.2) |
| **Total actuarial value of assets** | **$ 23,240.9** | **$ 16,964.3** | **$ 4,000.4** | **$ 44,102.6** |
| *Amounts in millions* | | | | |

[1] *Includes Multnomah Fire District #10.*

[2] *For the valuation, reported member reserves were reduced by $0.3 million to reflect the deficit status of the Tier 1 Rate Guarantee Reserve.*

Please note that pre-SLGRP liabilities and surpluses are notional balances specific to specific employers or groups of employers. For contribution rate calculations, pre-SLGRP liabilities are treated akin to receivables to the SLGRP from the individual employers and pre-SLGRP surpluses are treated akin to payables (in the form of future rate offsets) from the SLGRP assets to individual employers. The assets of the SLGRP used to calculate the pooled contribution rate reflect the net outstanding balance of these items.

Side accounts are treated as pre-paid contributions. Consequently, they are not reflected in the actuarial value of assets shown above. The actuarial value of assets for each rate pool is used to develop the contribution rate for that pool. Side accounts are used by employers to pay a portion of the base contribution rate via a side account rate offset and deduction mechanism. The net impact of side accounts is shown in a separate section of this report.

### Reconciliation of Actuarial Value of Assets

The table below shows a reconciliation of the actuarial value of assets from the prior valuation to the current valuation for each of the rate pools. Again, independent employers, including State Judiciary, are treated as if they were a single rate pool for purposes of the system-wide report.

| | SLGRP | School Districts | Independent Employers | Tier 1/Tier 2 Totals[1] |
|---|---|---|---|---|
| **Actuarial value of assets, December 31, 2011** | **$ 23,240.9** | **$ 16,964.3** | **$ 4,000.4** | **$ 44,102.6** |
| **Contributions** | | | | |
| Employer | $ 372.7 | $ 233.8 | $ 83.0 | $ 689.5 |
| Side account transfers | 222.4 | 213.3 | 7.1 | 442.8 |
| Member | 0.0 | 0.0 | 1.5 | 1.5 |
| Total contributions | 595.0 | 447.1 | 91.6 | 1,133.7 |
| Investment income | 3,084.5 | 2,220.2 | 532.7 | 5,820.3 |
| Benefit payments and expenses | (1,649.0) | (1,460.1) | (276.1) | (3,390.4) |
| Adjustments[2] | 192.7 | 158.3 | 43.3 | 409.6 |
| **Actuarial value of assets, December 31, 2012** | **$ 25,464.1** | **$ 18,329.6** | **$ 4,392.0** | **$ 48,075.9** |
| *Amounts in millions* | | | | |

*[1] Includes Multnomah Fire District #10.*

*[2] Adjustments include a reallocation of the benefits in force reserve, exclusion of the negative Tier 1 Rate Guarantee Reserve from the member reserve, transfers to Multnomah Fire District #10, member service purchases and other adjustments made by PERS.*

## Outstanding Balance of Pre-SLGRP Liabilities

In the valuation, pre-SLGRP liabilities are treated as assets of the SLGRP. That is, a pre-SLGRP liability is essentially a receivable owed to the SLGRP by the employer. Pre-SLGRP surpluses are essentially payables from the SLGRP to employers.

Prior to the formation of the SLGRP, the State and Community Colleges were pooled together and some employers participated in the Local Government Rate Pool (LGRP). The UAL attributable to the State and Community Colleges or the LGRP at the time the SLGRP was formed is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate.

Similarly, when an independent employer joins the SLGRP, a transition liability or surplus is calculated to ensure that each employer enters the pool on a comparable basis. The transition liability is maintained separately from the SLGRP, and is reduced by contributions and increased for interest charges at the assumed interest rate. The table below shows the reconciliation of the pre-SLGRP pooled liability attributable to the State and Community Colleges and the LGRP from the last valuation to the current valuation. It also shows the reconciliation of the total transition liability or surplus from the last valuation to the current valuation.

| | State and Community Colleges | Local Government Rate Pool | Transition | Total |
|---|---|---|---|---|
| **1. Pre-SLGRP liability/(surplus), January 1, 2012** | **$ 598.8** | **$ (250.1)** | **$ (790.0)** | **$ (441.4)** |
| 2. Employer contributions | (53.5) | 21.6 | 68.3 | 36.5 |
| 3. Supplemental payments | 0.0 | 0.0 | 0.0 | 0.0 |
| 4. Interest | 43.6 | (18.3) | (57.7) | (32.4) |
| **5. Pre-SLGRP liability/(surplus), December 31, 2012 (1. + 2. + 3. + 4.)** | **$ 588.9** | **$ (246.7)** | **$ (779.5)** | **$ (437.3)** |
| *Amounts in millions* | | | | |

## Tier 1/Tier 2 Pension Liabilities

### Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the percent of payroll that would need to be contributed each year to fund plan benefits.

A summary of the normal cost by decrement is shown below on a system-wide basis for the Tier 1/Tier 2 pension benefits.

| | December 31, 2012 | December 31, 2011 | Percent Change |
|---|---|---|---|
| Normal Cost | | | |
| Service Retirement | 469.0 | 468.4 | |
| Withdrawal | 222.8 | 27.8 | |
| Duty Disability | 3.3 | 1.2 | |
| Nonduty Disability | 16.1 | 7.6 | |
| Death | 7.3 | 0.0 | |
| **Total Normal Cost** | **718.6** | **505.0** | **42.3%** |
| *Amounts in millions* | | | |

The significant increase in normal cost since the prior valuation is primarily due to the change in actuarial cost method. The cost method used in the prior valuation allocated benefits under the Money Match formula entirely to prior years of service because no additional member contributions are permitted. Consequently, members who are expected to retire under the Money Match formula had no normal cost. In contrast, the cost method adopted for the current valuation allocates the cost of benefits across the full working career, regardless of the manner in which they actually accrue. Because of this members expected to retire under Money Match have a non-zero normal cost in the December 31, 2012 valuation.

The table below reconciles the normal cost from the prior valuation to the current valuation.

### Reconciliation of Change in Normal Cost

| | Tier 1/Tier 2 Pension |
|---|---|
| **Normal Cost, December 31, 2011** | **$ 505.0** |
| Expected increase | 20.8 |
| Assumption and method changes | 270.2 |
| Plan changes | (57.1) |
| **Deviations from expected experience** | |
| Pay increases | (17.0) |
| Interest crediting experience | (0.9) |
| All other sources | (2.3) |
| **Total demographic (gains) and losses** | **(20.3)** |
| **Normal Cost, December 31, 2012** | **$ 718.6** |
| *Amounts in millions* | |

A summary of the normal cost by tier and employment category for each rate pool is shown below. Again, independent employers, including State Judiciary, are treated as if they were a single rate pool for purposes of the system-wide report.

| Summary of Pension Normal Cost by Group and Tier | | | | | | |
|---|---|---|---|---|---|---|
| | December 31, 2012 | | | | December 31, 2011 | Percent Change |
| | SLGRP | School Districts | Independent Employers | Tier 1/ Tier 2 Totals | Tier 1/ Tier 2 Totals | |
| **Normal Cost** | | | | | | |
| Tier 1 General Service | 209.1 | 131.5 | 29.3 | 369.8 | 156.6 | 136.1% |
| Tier 2 General Service | 125.2 | 85.2 | 18.6 | 229.0 | 239.0 | (4.2%) |
| Tier 1 Police & Fire | 44.7 | 0.3 | 16.0 | 60.9 | 54.0 | 12.8% |
| Tier 2 Police & Fire | 45.2 | 0.2 | 13.4 | 58.8 | 55.4 | 6.2% |
| **Total Normal Cost** | **424.1** | **217.2** | **77.3** | **718.6** | **505.0** | **42.3%** |
| *Amounts in millions* | | | | | | |

### Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. A summary of the actuarial accrued liability is shown below on a system-wide basis for the Tier 1/Tier 2 pension benefits.

| | December 31, 2012 | December 31, 2011 | Percent Change |
|---|---|---|---|
| **Active Members** | **17,554.9** | **18,473.0** | **(5.0%)** |
| **Dormant Members** | **4,677.4** | **4,737.9** | **(1.3%)** |
| **Retired Members and Beneficiaries** | **36,377.3** | **37,001.1** | **(1.7%)** |
| **Total Actuarial Accrued Liability** | **58,609.6** | **60,212.0** | **(2.7%)** |
| *Amounts in millions* | | | |

### Actuarial Accrued Liability

A summary of actuarial accrued liabilities based on member status, tier and employment category is shown in the table below. For this exhibit, all independent employers, including State Judiciary, have been grouped together.

| | December 31, 2012 | | | | December 31, 2011 | Percent Change |
|---|---|---|---|---|---|---|
| | SLGRP | School Districts | Independent Employers | Tier 1 / Tier 2 Totals[1] | Tier 1 / Tier 2 Totals[1] | |
| **Active Members** | | | | | | |
| Tier 1 General Service | 5,991.8 | 4,313.6 | 768.7 | 11,074.1 | 12,990.0 | (14.7%) |
| Tier 1 Police & Fire | 1,202.2 | 4.7 | 456.4 | 1,663.4 | 1,697.0 | (2.0%) |
| **Tier 1 Total** | **7,194.1** | **4,318.3** | **1,225.1** | **12,737.6** | **14,686.9** | **(13.3%)** |
| Tier 2 General Service | 2,128.7 | 1,466.4 | 323.0 | 3,918.1 | 3,095.6 | 26.6% |
| Tier 2 Police & Fire | 695.1 | 3.4 | 200.7 | 899.2 | 690.5 | 30.2% |
| **Tier 2 Total** | **2,823.8** | **1,469.8** | **523.8** | **4,817.3** | **3,786.1** | **27.2%** |
| **Total Active Members** | **10,017.8** | **5,788.1** | **1,748.9** | **17,554.9** | **18,473.0** | **(5.0%)** |
| **Dormant Members** | **2,890.8** | **1,453.3** | **332.5** | **4,677.4** | **4,737.9** | **(1.3%)** |
| **Retired Members and Beneficiaries** | **17,693.3** | **15,666.6** | **2,962.1** | **36,377.3** | **37,001.1** | **(1.7%)** |
| **Total Tier 1/ Tier 2 Pension Liability, December 31,** | **30,601.9** | **22,908.0** | **5,043.4** | **58,609.6** | **60,212.0** | **(2.7%)** |
| *Amounts in millions* | | | | | | |

[1] *Includes Multnomah Fire District #10.*

## Actuarial Accrued Liability

The change in actuarial accrued liability since the last valuation reflects the experience of the system. The table below reconciles the actuarial accrued liability from the last valuation to this valuation. The actuarial accrued liability is expected to increase due to benefits earned during the year and interest, and to decrease due to benefits paid during the year.

The changes to actuarial assumptions and methods made with the current valuation, including lowering the assumed investment return assumption to 7.75%, increased accrued liability by approximately $1.8 billion. Legislative changes made to the system lowered the accrued liability by over $5 billion.

| | Tier 1/Tier 2 Pension |
|---|---|
| **Actuarial Accrued Liability December 31, 2011** | **60,212.0** |
| Expected change | 1,864.0 |
| Assumption and method changes | 1,785.6 |
| Plan changes | (5,100.3) |
| **Deviations from expected experience** | |
| Retirements from active status | (45.4) |
| Disability retirements | (1.2) |
| Active mortality and withdrawal | 32.4 |
| Pay increases | (140.8) |
| Interest Crediting Experience | 81.3 |
| Inactive mortality | (129.5) |
| COLA Experience | - |
| Data Corrections | 53.4 |
| Other | (1.8) |
| **Total demographic (gains) and losses** | (151.7) |
| **Actuarial Accrued Liability December 31, 2012** | **58,609.6** |
| *Amounts in millions* | |

## Tier 1/Tier 2 Pension Unfunded Accrued Liability (UAL)

### Calculation of UAL

The Unfunded Accrued Liability (UAL) represents the difference between the actuarial accrued liability and the valuation assets. To determine employer contribution rates, the UAL is calculated excluding side accounts. The calculated contribution rate is later offset by an amortized portion of the side accounts for individual employers with such accounts. A summary of the UAL by rate pool is shown on the following table. All independent employers, including State Judiciary, have been grouped together.

| | SLGRP | School Districts | Independent Employers | Tier 1 / Tier 2 Totals[1] |
|---|---|---|---|---|
| **December 31, 2012** | | | | |
| 1. Actuarial accrued liability | 30,601.9 | 22,908.0 | 5,043.4 | 58,609.6 |
| 2. Actuarial value of assets | 25,464.1 | 18,329.6 | 4,392.0 | 48,075.9 |
| 3. Unfunded accrued liability | 5,137.8 | 4,578.3 | 651.4 | 10,533.7 |
| 4. Funded percentage (2. ÷ 1.) | 83.2% | 80.0% | 87.1% | 82.0% |
| 5. Combined Valuation Payroll | 5,018.0 | 2,731.5 | 841.3 | 8,590.9 |
| 6. Unfunded accrued liability as % of combined valuation payroll (3. ÷ 5.) | 102.4% | 167.6% | 77.4% | 122.6% |
| **December 31, 2011** | | | | |
| 1. Actuarial accrued liability | 31,109.1 | 23,973.7 | 5,069.8 | 60,212.0 |
| 2. Actuarial value of assets | 23,240.9 | 16,964.3 | 4,000.4 | 44,102.6 |
| 3. Unfunded accrued liability | 7,868.2 | 7,009.5 | 1,069.4 | 16,109.4 |
| 4. Funded percentage (2. ÷ 1.) | 74.7% | 70.8% | 78.9% | 73.2% |
| 5. Combined Valuation Payroll | 4,935.7 | 2,786.0 | 828.9 | 8,550.5 |
| 6. Unfunded accrued liability as % of combined valuation payroll (3. ÷ 5.) | 159.4% | 251.6% | 129.0% | 188.4% |
| *Amounts in millions* | | | | |

[1] *Includes Multnomah Fire District #10.*

### Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each odd-year valuation has established a 20-year closed-period amortization schedule for outstanding regular Tier 1/Tier 2 UAL amounts. As part of the 2012 review of actuarial methods and assumption, the PERS Board decided to reset the Tier 1/Tier 2 amortization period to 20 years effective with the December 31, 2013 valuation. This means the entire unamortized Tier 1/Tier 2 UAL for each rate pool and independent employer will be re-amortized over a 20 year period in that valuation. For subsequent odd-year valuations, amortization schedules will be calculated based on the total Tier 1/Tier 2 UAL as of that valuation date less the remaining unamortized balance of previously established Tier 1/Tier 2 UAL bases. This even-year advisory valuation shows an estimate of the amortization schedules to be established on December 31, 2013, with the estimate based on experience through the end of 2012. The payment schedules for the unamortized UAL balances as of December 31, 2012, have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

The UAL amortization schedules are shown for the SLGRP and School District rate pools below. UAL bases for independent employers are developed individually for each employer, and are shown in the employer's individual valuation report.

| SLGRP | | | | | |
|---|---|---|---|---|---|
| **Amortization Base** | **UAL December 31, 2011** | **Payment** | **Interest** | **UAL December 31, 2012** | **Next Year's Payment** |
| December 31, 2012 | N/A | N/A | N/A | 5,137.8 | 371.9 |
| **Total** | **$ -** | **$ -** | **$ -** | **$ 5,137.8** | **$ 371.9** |

| School Districts | | | | | |
|---|---|---|---|---|---|
| **Amortization Base** | **UAL December 31, 2011** | **Payment** | **Interest** | **UAL December 31, 2012** | **Next Year's Payment** |
| December 31, 2012 | N/A | N/A | N/A | 4,578.3 | 331.4 |
| **Total** | **$ -** | **$ -** | **$ -** | **$ 4,578.3** | **$ 331.4** |
| *Amounts in millions* | | | | | |

### Actuarial Gain or Loss since Prior Valuation

In every actuarial valuation, assumptions are made as to the future experience of the plan and covered group of participants. Whenever there is a difference between the actual experience and that anticipated by the actuarial assumptions, there is a gain or loss to the plan. Gains are the result of experience that is more favorable than anticipated (i.e., serves to reduce the unfunded accrued liability or increase the surplus), while losses are the result of unfavorable experience.

The table below shows the development of the actuarial gain (or loss) for the Tier 1/Tier 2 pension benefits for the year ending December 31, 2012. For this exhibit, all independent employers, including State Judiciary, have been grouped together.

| | December 31, 2012 | | | |
|---|---|---|---|---|
| | SLGRP | School District | Independent Employers | Tier 1/Tier 2 Totals[1] |
| 1. Expected actuarial accrued liability | | | | |
| a. Actuarial accrued liability at January 1, 2012 | $ 31,109.1 | $ 23,973.7 | $ 5,069.8 | $ 60,212.0 |
| b. Normal cost at January 1, 2012 | 290.9 | 153.7 | 60.5 | 505.0 |
| c. Benefit payments for fiscal year ending December 31, 2012 | (1,636.1) | (1,448.7) | (273.9) | (3,363.8) |
| d. Interest | 2,446.6 | 1,872.2 | 399.5 | 4,722.8 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | $ 32,210.4 | $ 24,550.9 | $ 5,255.8 | $ 62,076.0 |
| f. Change in actuarial accrued liability at December 31, 2012, due to assumption, method, and plan changes | (1,644.7) | (1,427.1) | (240.8) | (3,314.7) |
| g. Expected actuarial accrued liability at December 31, 2012 *(e. + f.)* | $ 30,565.7 | $ 23,123.8 | $ 5,015.1 | $ 58,761.3 |
| 2. Actuarial accrued liability at December 31, 2012 | $ 30,601.9 | $ 22,908.0 | $ 5,043.4 | $ 58,609.6 |
| **3. Liability gain/(loss) (1.g. - 2)** | **$ (36.1)** | **$ 215.9** | **$ (28.3)** | **$ 151.7** |
| 4. Expected actuarial value of assets | | | | |
| a. Actuarial value of assets at January 1, 2012 | $ 23,240.9 | $ 16,964.3 | $ 4,000.4 | $ 44,102.6 |
| b. Actual contributions for 2012 | 595.0 | 447.1 | 91.6 | 1,133.7 |
| c. Benefit payments and expenses for fiscal year ending December 31, 2012 | (1,649.0) | (1,460.1) | (276.1) | (3,390.4) |
| d. Assumed investment return | 1,817.1 | 1,316.6 | 312.7 | 3,437.9 |
| e. Expected actuarial value of assets before changes *(a. + b. + c. + d.)* | $ 24,004.0 | $ 17,267.8 | $ 4,128.6 | $ 45,283.9 |
| f. Change in actuarial value of assets at December 31, 2012, due to assumption changes | 0.0 | 0.0 | 0.0 | 0.0 |
| g. Expected actuarial value of assets at December 31, 2012 *(e. + f.)* | $ 24,004.0 | $ 17,267.8 | $ 4,128.6 | $ 45,283.9 |
| 5. Actuarial value of assets as of December 31, 2012 | $ 25,464.1 | $ 18,329.6 | $ 4,392.0 | $ 48,075.9 |
| **6. Asset gain/(loss) (5. - 4.g.)** | **$ 1,460.1** | **$ 1,061.8** | **$ 263.4** | **$ 2,792.0** |
| **7. Net actuarial gain/(loss) (3. + 6.)** | **$ 1,423.9** | **$ 1,277.7** | **$ 235.1** | **$ 2,943.7** |
| *Amounts in millions* | | | | |

[1] *Includes Multnomah Fire District #10.*

**Reconciliation of the UAL**

The table below develops the UAL. For this exhibit, all independent employers, including State Judiciary, have been grouped together.

| | SLGRP | School Districts | Independent Employers | Tier 1 / Tier 2 Totals[1] |
|---|---|---|---|---|
| **UAL, December 31, 2011** | 7,868.2 | 7,009.5 | 1,069.4 | 16,109.4 |
| Expected change | 933.2 | 720.7 | 149.5 | 1,816.4 |
| Contributions | (595.0) | (447.1) | (91.6) | (1,133.7) |
| Liability (gain) or loss | 36.1 | (215.9) | 28.3 | (151.7) |
| Asset (gain) or loss | (1,460.1) | (1,061.8) | (263.4) | (2,792.0) |
| Assumption, method, and plan changes | (1,644.7) | (1,427.1) | (240.8) | (3,314.7) |
| **UAL, December 31, 2012** | **5,137.8** | **4,578.3** | **651.4** | **10,533.7** |
| *Amounts in millions* | | | | |

[1] *Includes Multnomah Fire District #10.*

## Tier 1/Tier 2 Pension Contribution Rate Development

### Normal Cost Rates

The table below shows the development of the system-wide weighted average normal cost rate.

| | December 31, 2012 | December 31, 2011 | Percent Change |
|---|---|---|---|
| **Normal Cost** | | | |
| a. Service Retirement | 469.0 | 468.4 | |
| b. Withdrawal | 222.8 | 27.8 | |
| c. Duty Disability | 3.3 | 1.2 | |
| d. Nonduty Disability | 16.1 | 7.6 | |
| e. Death | 7.3 | 0.0 | |
| **f. Total Normal Cost** | **718.6** | **505.0** | **42.3%** |
| **Tier 1/ Tier 2 Valuation Payroll** | **5,341.7** | **5,607.9** | **(4.7%)** |
| Average Normal Cost Rate | | | |
| a. Service Retirement | 8.78% | 8.35% | |
| b. Withdrawal | 4.17% | 0.50% | |
| c. Duty Disability | 0.06% | 0.02% | |
| d. Nonduty Disability | 0.30% | 0.13% | |
| e. Death | 0.14% | 0.00% | |
| **f. Average Normal Cost Rate** | **13.45%** | **9.00%** | |
| *Amounts in millions* | | | |

The table below shows the development of the normal cost rate for the various rate pools. For this exhibit, all independent employers, including State Judiciary, have been grouped together.

| | SLGRP | School Districts | Independent Employers | Tier 1 / Tier 2 Totals |
|---|---|---|---|---|
| **Normal Cost** | | | | |
| Tier 1 General Service | 209.1 | 131.5 | 29.3 | 369.8 |
| Tier 2 General Service | 125.2 | 85.2 | 18.6 | 229.0 |
| Tier 1 Police & Fire | 44.7 | 0.3 | 16.0 | 60.9 |
| Tier 2 Police & Fire | 45.2 | 0.2 | 13.4 | 58.8 |
| **Total Normal Cost** | **424.1** | **217.2** | **77.3** | **718.6** |
| **Tier 1/ Tier 2 Valuation Payroll** | | | | |
| Tier 1 General Service | 1,323.7 | 915.1 | 178.6 | 2,417.4 |
| Tier 2 General Service | 1,182.6 | 851.1 | 173.7 | 2,207.4 |
| Tier 1 Police & Fire | 249.8 | 1.4 | 88.7 | 340.0 |
| Tier 2 Police & Fire | 287.6 | 1.3 | 87.9 | 376.8 |
| **Total Valuation Payroll** | **3,043.7** | **1,769.0** | **529.0** | **5,341.7** |
| **Average Normal Cost Rates** | | | | |
| Tier 1 General Service | 15.80% | 14.37% | 16.40% | 15.30% |
| Tier 2 General Service | 10.58% | 10.02% | 10.72% | 10.38% |
| Tier 1 Police & Fire | 17.89% | 18.17% | 17.98% | 17.92% |
| Tier 2 Police & Fire | 15.70% | 17.76% | 15.27% | 15.61% |
| **Average Rates** | | | | |
| Tier 1 Average | 16.13% | 14.37% | 16.93% | 15.62% |
| Tier 2 Average | 11.59% | 10.03% | 12.25% | 11.14% |
| General Service Average | 13.34% | 12.27% | 13.60% | 12.95% |
| Police & Fire Average | 16.72% | 17.98% | 16.63% | 16.70% |
| **System Average** | **13.93%** | **12.28%** | **14.61%** | **13.45%** |
| Member Contributions | | | 0.28% | 0.03% |
| **Employer System Average** | **13.93%** | **12.28%** | **14.33%** | **13.42%** |
| *Amounts in millions* | | | | |

## UAL Rates

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll.

The following table develops the UAL rate separately for each of the rate pools. For this exhibit, all independent employers, including State Judiciary, have been grouped together.

| | SLGRP | School Districts | Independent Employers | Tier 1 / Tier 2 Totals[1] |
|---|---|---|---|---|
| **December 31, 2012** | | | | |
| 1. Total UAL | $ 5,137.8 | $ 4,578.3 | $ 651.4 | $ 10,533.7 |
| 2. Next year's UAL payment | $ 371.9 | $ 331.4 | $ 47.2 | $ 750.4 |
| 3. Combined valuation payroll | $ 5,018.0 | $ 2,731.5 | $ 841.3 | $ 8,590.9 |
| **4. UAL rate (2 ÷ 3)** | **7.41%** | **12.13%** | **5.60%** | **8.73%** |
| **December 31, 2011** | | | | |
| 1. Total UAL | $ 7,868.2 | $ 7,009.5 | $ 1,069.4 | $ 16,109.4 |
| 2. Next year's UAL payment | $ 613.4 | $ 553.7 | $ 81.3 | $ 1,248.4 |
| 3. Combined valuation payroll | $ 4,935.7 | $ 2,786.0 | $ 828.9 | $ 8,550.5 |
| **4. UAL rate (2 ÷ 3)** | **12.43%** | **19.88%** | **9.81%** | **14.60%** |
| *Amounts in millions* | | | | |

[1] *While the Tier 1/Tier 2 Total UAL amount includes the UAL for Multnomah Fire District #10 (MFD), the UAL rate for MFD is developed separately in this report and is added to the rates shown in this table.*

**Pre-SLGRP Pooled Rate**

Prior to the formation of the SLGRP, the State and Community Colleges were pooled together and some employers participated in the Local Government Rate Pool (LGRP). The UAL attributable to the State and Community Colleges and the LGRP at the time the SLGRP was formed is maintained separately from the UAL for the SLGRP. The balance of the pre-SLGRP pooled liability attributable to the State and Community Colleges or the LGRP on the valuation date is amortized over the period ending December 31, 2027, and expressed as a percentage of combined valuation payroll.

| | December 31, 2012 | December 31, 2011 |
|---|---|---|
| **State and Community College Pool** | | |
| 1. Total pre-SLGRP pooled liability | $ 588.9 | $ 598.8 |
| 2. Combined valuation payroll | $ 2,824.7 | $ 2,763.7 |
| 3. Amortization Factor | 11.272 | 11.626 |
| 4. Pre-SLGRP pooled rate (1. ÷ 2. ÷ 3.) | 1.85% | 1.86% |
| **Local Government Rate Pool** | | |
| 1. Total pre-SLGRP pooled liability | $ (246.7) | $ (250.1) |
| 2. Combined valuation payroll | $ 1,245.2 | $ 1,225.6 |
| 3. Amortization Factor | 11.272 | 11.626 |
| 4. Pre-SLGRP pooled rate (1. ÷ 2. ÷3.) | (1.76%) | (1.76%) |
| *Amounts in millions* | | |

### Transition Liability or Surplus Rate

When an employer joins the SLGRP, a transition liability or surplus is calculated to ensure that each employer enters the pool on a comparable basis. The transition liability is maintained separately from the UAL for the SLGRP. The transition liability is amortized over a fixed period, and is expressed as a percentage of combined valuation payroll. For employers joining the SLGRP prior to December 31, 2009, the fixed period ends December 31, 2027. For all others, the fixed period ends 18 years after the date the employer joined the pool. The amortization factor below reflects the weighted average of the amortization periods for all employers.

| | December 31, 2012 | December 31, 2011 |
|---|---|---|
| 1. Total transition liability / (surplus) | $ (779.5) | $ (789.9) |
| 2. Combined valuation payroll | $ 2,027.8 | $ 2,009.9 |
| 3. Average Amortization Factor[1] | 11.272 | 11.626 |
| 4. **Average transition liability/(surplus) rate (1. ÷ 2. ÷ 3.)** | **(3.41%)** | **(3.38%)** |
| *Amounts in millions* | | |

[1] *Weighted average*

**Multnomah Fire District #10 UAL Rate**

The Multnomah Fire District #10 UAL rate is determined by amortizing Multnomah Fire District #10's unfunded accrued liability over the period ending December 31, 2027, and expressing the result as a percentage of combined valuation payroll.

As part of the 2003 Legislation, the Multnomah Fire District #10 UAL was allocated to Tier 1/Tier 2 employers. Multnomah Fire District #10 was allocated $50,000 of the outstanding UAL, which was fully paid in November, 2003. Of the remaining UAL, City of Portland is allocated 21.8743%, while all Tier 1/Tier 2 employers, including City of Portland, share in the remaining 78.1257%. In addition, four other employers (City of Gresham, City of Fairview, City of Wood Village, and City of Troutdale) are required to pay twice the rate that is determined under item 6.b. below. Thus, the combined valuation payroll for all Tier 1/Tier 2 employers, shown below in item 4.b., includes twice the valuation payroll for those four employers.

| | December 31, 2012 | December 31, 2011 |
|---|---|---|
| 1. Actuarial accrued liability | | |
| a. Active members | $ 0.1 | $ 0.5 |
| b. Dormant members | 0.8 | 0.4 |
| c. Retired members and beneficiaries | 55.4 | 58.4 |
| d. Total actuarial accrued liability | $ 56.4 | $ 59.4 |
| 2. Actuarial value of assets | | |
| a. Employer reserve | $ (143.2) | $ (135.5) |
| b. Members reserve | 0.4 | 0.4 |
| c. Benefits in force reserve | 32.9 | 32.1 |
| d. Total actuarial value of aseets | $ (109.8) | $ (102.9) |
| 3. Multnomah FD #10 UAL | $ 166.2 | $ 162.3 |
| a. Portion allocated to City of Portland (21.8743% x 3.) | $ 36.4 | $ 35.5 |
| b. Portion allocated to all T1/T2 employers (78.1257% x 3.) | $ 129.8 | $ 126.8 |
| 4. Combined valuation payroll | | |
| a. City of Portland | $ 311.7 | $ 303.5 |
| b. All employers | $ 8,638.0 | $ 8,596.9 |
| 5. Amortization factor | 11.272 | 11.626 |
| 6. Multnomah FD #10 UAL Rate | | |
| a. City of Portland (3.a. ÷ 4.a. ÷ 5.) | 1.03% | 1.00% |
| b. All Tier 1 / Tier 2 employers (3.b. ÷ 4.b. ÷ 5.) | 0.13% | 0.13% |
| 7. Total Multnomah FD #10 UAL Rate | | |
| a. City of Portland (6.a. + 6.b.) | 1.16% | 1.13% |
| b. City of Gresham, City of Fairview, City of Wood Village, City of Troutdale (2 x 6.b.) | 0.26% | 0.26% |
| c. All other Tier 1 / Tier 2 employers (6.b.) | 0.13% | 0.13% |
| *Amounts in millions* | | |

**Calculated Employer Contribution Rate Summary (Pre-Rate Collar)**

The following table summarizes the development of the total Tier 1/Tier 2 contribution rate for each rate pool as of the valuation date. The normal cost rates apply to Tier 1/Tier 2 payroll only, but all other rates are applied to combined valuation payroll. These rates are adjusted on an individual employer basis for side accounts and pre-SLGRP liabilities, if applicable. Weighted average adjustments for side accounts and pre-SLGRP liabilities are shown in the table. For individual employers, these adjustments cannot reduce the pension contribution rate below 0.0%. Note that independent employers, other than the State Judiciary, are subject to a minimum employer contribution rate of 6.0% that is not taken into account in the average rates below.

| | SLGRP | School Districts | Independent Employers | Tier 1 / Tier 2 Totals |
|---|---|---|---|---|
| **Tier 1/Tier 2 pension contribution rates** | | | | |
| Employer normal cost rate | 13.93% | 12.28% | 14.33% | 13.42% |
| Member normal cost rate | | | 0.28% | 0.03% |
| UAL rate | 7.41% | 12.13% | 5.60% | 8.73% |
| Multnomah FD #10 rate | 0.19% | 0.13% | 0.14% | 0.17% |
| **Total Tier 1/Tier 2 pension rate** | **21.53%** | **24.54%** | **20.35%** | **22.35%** |
| **Average adjustments** | | | | |
| Pre-SLGRP liability/(surplus) rate | (0.77%) | N/A | N/A | (0.45%) |
| Side account rate | (4.52%) | (9.33%) | (0.92%) | (5.70%) |
| **Total average adjustment** | **(5.29%)** | **(9.33%)** | **(0.92%)** | **(6.15%)** |
| **Net pension contribution rate** | **16.24%** | **15.21%** | **19.43%** | **16.20%** |

## Calculation of Rate Collar

Employer contribution rates cannot change by more than the greater of 3 percentage points or 20% of the current contribution rate. However, if the funded percentage is below 60% or above 140%, the size of the collar is doubled. If the funded percentage is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale. All collar calculations are performed excluding amounts and contribution rates attributable to pre-SLGRP liabilities, side accounts and member contributions. Retiree medical rates are also excluded from the rate collar calculation.

The table below develops the impact of the collar for each of the Tier 1/Tier 2 rate pools. Although the calculation is performed individually for independent employers, the table shows the calculation as if independent employers were a pool. Note that independent employers, other than the State Judiciary, are subject to a minimum employer contribution rate of 6.0% that is not taken into account in the calculation below.

**Advisory July 1, 2015 Rates Calculated as of December 31, 2012**

| Calculation of Collar Adjustments | SLGRP | School Districts | Independent Employers | Tier 1 / Tier 2 Totals[1] |
|---|---|---|---|---|
| 1. Current employer contribution rate[2] | 15.19% | 21.55% | 14.56% | 17.15% |
| 2. Size of rate collar | | | | |
| a. Preliminary size of rate collar (*maximum of 3% or 20% x 1.)* | 3.04% | 4.31% | 3.00% | 3.43% |
| b. Funded percentage | 83% | 80% | 87% | 82% |
| **c. Size of rate collar *(If b. < 60% or b. > 140%, 2 x a. If b. is 70%-130%, a. Otherwise, a graded rate between a. and 2 x a.)*** | **3.04%** | **4.31%** | **3.00%** | |
| 3. July 1, 2015 Minimum employer contribution rate *(1. - 2.c.)* | 12.15% | 17.24% | 11.56% | |
| 4. July 1, 2015 Maximum employer contribution rate *(1. + 2.c.)* | 18.23% | 25.86% | 17.56% | |
| 5. Advisory July 1, 2015 employer contribution rate before collar | 21.53% | 24.54% | 20.07% | |
| 6. Advisory July 1, 2015 employer contribution rate after collar *(5., but not less than 3. or more than 4.)* | 18.23% | 24.54% | 17.56% | |
| **7. Impact of collar *(6. - 5.)*[3]** | **(3.30%)** | **0.00%** | **(2.51%)** | **(2.17%)** |

[1] *The average Tier 1/Tier 2 rate has been recalculated based on current valuation payroll.*

[2] *Current employer contribution rates reflect changes to actual 2013-2015 contributions made by Senate Bill 822.*

[3] *The impact of collar shown for the system-wide column is the weighted average of the impact shown for each rate pool.*

**Calculated Employer Contribution Rate Summary (Post Rate Collar)**

Any adjustment for the collar is made to the UAL rate. The table below summarizes the average rates that would be effective July 1, 2015, by pool and component, if the December 31, 2012 actuarial valuation determined those rates. Although the rate collar is applied individually for independent employers, the table shows the average rates as if independent employers were a pool. Note that independent employers, other than the State Judiciary, are subject to a minimum employer contribution rate of 6.0% that is not taken into account in the average rates below.

| | Advisory July 1, 2015 Rates Calculated as of December 31, 2012 | | | |
|---|---|---|---|---|
| | SLGRP | School Districts | Independent Employers | Tier 1 / Tier 2 Totals |
| **Tier 1/Tier 2 pension contribution rates** | | | | |
| Employer normal cost rate | 13.93% | 12.28% | 14.33% | 13.42% |
| Member normal cost rate | | | 0.28% | 0.03% |
| UAL rate | 4.11% | 12.13% | 3.09% | 6.56% |
| Multnomah FD #10 rate | 0.19% | 0.13% | 0.14% | 0.17% |
| **Total Tier 1/Tier 2 pension rate** | **18.23%** | **24.54%** | **17.84%** | **20.18%** |
| **Average adjustments** | | | | |
| Pre-SLGRP liability/(surplus) rate | (0.77%) | N/A | N/A | (0.45%) |
| Side account rate | (4.52%) | (9.33%) | (0.92%) | (5.70%) |
| **Total average adjustment** | **(5.29%)** | **(9.33%)** | **(0.92%)** | **(6.15%)** |
| **Net pension contribution rate** | **12.94%** | **15.21%** | **16.92%** | **14.03%** |

## OPSRP Assets

Information on OPSRP assets is shown in the section of this report covering the system-wide assets. As of December 31, 2012, the actuarial value of assets for OPSRP is $1,190.0 million.

## OPSRP Liabilities

### Normal Cost

The normal cost represents the value of benefits assigned to the next year of service by the actuarial cost method. If all actuarial assumptions are met, the normal cost represents the percent of payroll that would need to be contributed each year to fully fund each member's plan benefits during his or her working career.

A summary of the normal cost by decrement is shown below for the current and prior year.

| | December 31, 2012 | | | December 31, 2011 | | |
|---|---|---|---|---|---|---|
| | General Service | Police & Fire | Total | General Service | Police & Fire | Total |
| **Pre-Retirement Disability** | | | | | | |
| Duty | $ 0.5 | $ 0.5 | $ 1.0 | $ 0.5 | $ 0.4 | $ 0.8 |
| Non-Duty | 4.6 | 0.6 | 5.2 | 4.9 | 0.6 | 5.5 |
| **Total Pre-Retirement Disability** | **$ 5.0** | **$ 1.1** | **$ 6.1** | **$ 5.4** | **$ 1.0** | **$ 6.3** |
| **Other Benefits** | | | | | | |
| Service Retirement | $ 180.6 | $ 35.6 | $ 216.2 | $ 130.4 | $ 22.9 | $ 153.4 |
| Withdrawal | 18.2 | 1.9 | 20.1 | 19.2 | 2.3 | 21.6 |
| Death | 2.2 | 0.3 | 2.5 | 1.9 | 0.2 | 2.1 |
| Duty Disability Retirement | 0.2 | 0.3 | 0.4 | 0.2 | 0.2 | 0.4 |
| Non-Duty Disability Retirement | 2.4 | 0.4 | 2.7 | 2.3 | 0.4 | 2.6 |
| **Total Other Benefits** | **$ 203.6** | **$ 38.4** | **$ 242.0** | **$ 154.0** | **$ 26.1** | **$ 180.1** |
| Assumed Administrative Expenses | $ 4.9 | $ 0.6 | $ 5.5 | $ 5.9 | $ 0.7 | $ 6.6 |
| **Total Normal Cost** | **$ 213.5** | **$ 40.1** | **$ 253.6** | **$ 165.3** | **$ 27.7** | **$ 193.0** |
| *Amounts in millions* | | | | | | |

The increase in the normal cost since the prior valuation is primarily attributable to the changes in actuarial cost method and investment return assumption, plus the effect of new entrants to the OPSRP program. The table below reconciles the normal cost from the prior valuation to the current valuation.

| | OPSRP |
|---|---|
| **Normal Cost, December 31, 2011** | **$ 193.0** |
| Expected increase | 10.2 |
| Assumption and method changes | 57.0 |
| Plan changes | (20.1) |
| New entrants | 20.6 |
| Deviations from expected experience | (7.0) |
| **Normal Cost, December 31, 2012** | **$ 253.6** |
| *Amounts in millions* | |

### Actuarial Accrued Liability

The actuarial accrued liability represents the value of benefits attributed to prior years of service by the actuarial cost method. A summary of the actuarial accrued liability by decrement is shown below for the current and prior year.

| | December 31, 2012 | | | December 31, 2011 | | |
|---|---|---|---|---|---|---|
| | General Service | Police & Fire | Total | General Service | Police & Fire | Total |
| Active Members | | | | | | |
| Pre-retirement Duty Disability | $ 0.5 | $ 0.8 | $ 1.4 | $ 2.4 | $ 1.8 | $ 4.1 |
| Pre-retirement Non-Duty Disability | 34.4 | 3.5 | 38.0 | 24.6 | 2.9 | 27.5 |
| Service Retirement | 1,304.8 | 220.2 | 1,524.9 | 652.8 | 112.0 | 764.8 |
| Withdrawal | 91.5 | 8.4 | 99.9 | 98.1 | 11.6 | 109.7 |
| Death | 15.4 | 1.9 | 17.2 | 9.3 | 1.0 | 10.4 |
| Duty Disability Retirement | 1.2 | 1.5 | 2.7 | 1.1 | 1.0 | 2.1 |
| Non-Duty Disability Retirement | 17.8 | 2.3 | 20.1 | 11.4 | 1.7 | 13.1 |
| **Total Active Members** | **$ 1,465.6** | **$ 238.6** | **$ 1,704.2** | **$ 799.7** | **$ 132.0** | **$ 931.7** |
| Dormant Members | | | $ 62.7 | | | $ 39.5 |
| Retired Members and Beneficiaries | | | $ 28.6 | | | $ 15.2 |
| **Total Actuarial Accrued Liability** | | | **$ 1,795.6** | | | **$ 986.4** |
| *Amounts in millions* | | | | | | |

The change in actuarial accrued liability since the last valuation reflects the experience of the system. The table below reconciles the actuarial accrued liability from the last valuation to this valuation. The actuarial accrued liability is expected to increase due to benefits earned during the year and interest, and to decrease due to benefits paid during the year.

| | OPSRP |
|---|---|
| **Actuarial Accrued Liability December 31, 2011** | **$ 986.4** |
| Expected change | 274.5 |
| Assumption and method changes | 678.0 |
| Plan changes | (143.2) |
| **Deviations from expected experience** | |
| Retirements from active status | (0.8) |
| Active mortality and withdrawal | (18.3) |
| Pay increases | (16.3) |
| Other | 3.8 |
| **Total demographic (gains) and losses** | (31.6) |
| New entrants | 31.5 |
| **Actuarial Accrued Liability December 31, 2012** | **$ 1,795.6** |
| *Amounts in millions* | |

## OPSRP Unfunded Accrued Liability (UAL)

### Calculation of UAL

The Unfunded Accrued Liability (UAL) represents the difference between the actuarial accrued liability and the valuation assets. The UAL is amortized over combined valuation payroll. The table below shows the OPSRP UAL, funded status, and UAL as a percentage of combined valuation payroll.

| | December 31, 2012 | December 31, 2011 |
|---|---|---|
| 1. Actuarial accrued liability | $ 1,795.6 | $ 986.4 |
| 2. Actuarial value of assets | $ 1,190.0 | $ 840.5 |
| 3. Unfunded accrued liability | $ 605.5 | $ 145.9 |
| 4. Funded percentage *(2. ÷ 1.)* | 66% | 85% |
| 5. Combined valuation payroll | $ 8,590.9 | $ 8,550.5 |
| 6. Unfunded accrued liability as % of combined valuation payroll | 7% | 2% |
| *Amounts in millions* | | |

### Reconciliation of UAL Bases

Beginning with the December 31, 2007, actuarial valuation, each odd-year valuation establishes a 16-year closed-period amortization base for outstanding OPSRP UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base will be calculated based on the total OPSRP UAL as of that valuation date less the remaining unamortized balance of any OPSRP UAL bases established at previous odd-year valuation dates. In other words, OPSRP experience from December 31, 2011, to December 31, 2013, will be amortized based on a 16-year amortization schedule established in the December 31, 2013 valuation. This even-year advisory valuation shows both the progress of the amortization bases established in prior valuations and an estimate of the base to be established on December 31, 2013, with the estimate based on experience during 2012. The payment schedules for the unamortized UAL balances as of December 31, 2012, have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

| Reconciliation of UAL Bases | | | | | |
|---|---|---|---|---|---|
| Amortization Base | UAL, December 31, 2011 | Payment | Interest | UAL, December 31, 2012 | Next Year's Payment |
| December 31, 2007 | $ (67.3) | $ (7.2) | $ (5.1) | $ (65.2) | $ (7.4) |
| December 31, 2009 | 156.7 | 14.9 | 11.9 | 153.7 | 15.2 |
| December 31, 2011 | 56.5 | 4.9 | 4.3 | 56.0 | 5.0 |
| December 31, 2012 | N/A | N/A | N/A | 461.0 | 39.0 |
| **Total** | **$ 145.9** | **$ 12.5** | **$ 11.1** | **$ 605.5** | **$ 51.8** |
| *Amounts in millions* | | | | | |

### Actuarial Gain or Loss since Prior Valuation

In every actuarial valuation, assumptions are made as to the future experience of the plan and covered group of participants. Whenever there is a difference between the actual experience and that anticipated by the actuarial assumptions, there is a gain or loss to the plan. Gains are the result of experience that is more favorable than anticipated (i.e., serves to reduce the unfunded accrued liability or increase the surplus), while losses are the result of unfavorable experience. The 2012 liability gain is primarily due to favorable demographic experience, offset by new entrants to the OPSRP program.

The table below develops the actuarial gain or loss for OPSRP for the year ending December 31, 2012.

| | | | OPSRP |
|---|---|---|---|
| 1. | Expected actuarial accrued liability | | |
| | a. Actuarial accrued liability at December 31, 2011 | $ | 986.4 |
| | b. Normal cost at December 31, 2011 (excluding administrative expenses) | $ | 186.4 |
| | c. Benefit payments (excluding administrative expenses) for year ending December 31, 2012 | $ | (5.5) |
| | d. Interest | $ | 93.6 |
| | e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | $ | 1,260.9 |
| | f. Change in actuarial accrued liability at December 31, 2012, due to assumption and method changes | $ | 678.0 |
| | g. Change in actuarial accrued liability at December 31, 2012, due to plan changes | $ | (143.2) |
| | h. Expected actuarial accrued liability at December 31, 2012 *(e. + f. + g.)* | $ | 1,795.6 |
| 2. | Actuarial accrued liability at December 31, 2012 | $ | 1,795.6 |
| **3.** | **Liability gain/(loss) (1.h. - 2)** | **$** | **0.1** |
| 4. | Expected actuarial value of assets | | |
| | a. Actuarial value of assets at December 31, 2011 | $ | 840.5 |
| | b. Actual contributions for 2012 | $ | 209.9 |
| | c. Benefit payments and administrative expenses for fiscal year ending December 31, 2012 | $ | (10.8) |
| | d. Assumed investment return | $ | 75.2 |
| | e. Expected actuarial value of assets at December 31, 2012 *(a. + b. + c. + d.)* | $ | 1,114.8 |
| 5. | Actuarial value of assets as of December 31, 2012 | $ | 1,190.0 |
| **6.** | **Asset gain/(loss) (5. - 4.e.)** | **$** | **75.2** |
| **7.** | **Net actuarial gain/(loss) (3. + 6.)** | **$** | **75.3** |

*Amounts in millions*

## Reconciliation of the UAL

The table below summarizes the changes in UAL since the prior valuation.

| | OPSRP |
|---|---|
| **UAL, December 31, 2011** | **$ 145.9** |
| Normal Cost (including actual administrative expenses) | 191.7 |
| Contributions | (209.9) |
| Liability (gain) or loss | (0.1) |
| Asset (gain) or loss | (75.2) |
| Assumption and method changes | 678.0 |
| Plan changes | (143.2) |
| Interest at 8.0% | 18.4 |
| **UAL, December 31, 2012** | **$ 605.5** |
| *Amounts in millions* | |

## OPSRP Contribution Rate Development

### Normal Cost Rates

The table below shows the development of the OPSRP normal cost rates.

| | December 31, 2012 | | | December 31, 2011 | | |
|---|---|---|---|---|---|---|
| **Development of Normal Cost Rate** | **General Service** | **Police & Fire** | **Total** | **General Service** | **Police & Fire** | **Total** |
| **Normal Cost** | | | | | | |
| Pre-retirement Disability Benefits | $ 5.0 | $ 1.1 | $ 6.1 | $ 5.4 | $ 1.0 | $ 6.3 |
| All Other Benefits | 203.6 | 38.4 | 242.0 | 154.0 | 26.1 | 180.1 |
| Assumed Administrative Expenses | 4.9 | 0.6 | 5.5 | 5.9 | 0.7 | 6.6 |
| **Total Normal Cost** | **$ 213.5** | **$ 40.1** | **$ 253.6** | **$ 165.3** | **$ 27.7** | **$ 193.0** |
| OPSRP Valuation Payroll | $ 2,899.3 | $ 349.9 | $ 3,249.2 | $ 2,634.7 | $ 307.9 | $ 2,942.6 |
| **Normal Cost Rate** | | | | | | |
| Pre-retirement Disability Benefits | 0.17% | 0.31% | 0.19% | 0.20% | 0.31% | 0.21% |
| All Other Benefits | 7.02% | 10.99% | 7.45% | 5.84% | 8.47% | 6.12% |
| Assumed Administrative Expenses | 0.17% | 0.17% | 0.17% | 0.22% | 0.22% | 0.22% |
| **Total Normal Cost** | **7.36%** | **11.46%** | **7.81%** | **6.27%** | **9.00%** | **6.56%** |
| *Amounts in millions* | | | | | | |

### UAL Rates

The UAL rate is determined by calculating the next year’s scheduled payment to the UAL as a percentage of combined valuation payroll.

| | December 31, 2012 | December 31, 2011 |
|---|---|---|
| 1. Total UAL | $ 605.5 | $ 145.9 |
| 2. Next year's UAL payment | $ 51.8 | $ 12.5 |
| 3. Combined valuation payroll | $ 8,590.9 | $ 8,550.5 |
| 4. UAL rate (2 ÷ 3) | 0.60% | 0.15% |
| *Amounts in millions* | | |

### Calculated Employer Contribution Rates (Pre-Rate Collar)

The following table summarizes the OPSRP contribution rate for general service and police & fire members as of the valuation date prior to application of the collar.

The normal cost rates apply to OPSRP payroll only, but the UAL rate is applied to combined valuation payroll. These rates, after the application of the collar, are combined with each employer's Tier 1/Tier 2 rates (other than Tier 1/Tier 2 normal cost rate) to determine each employer's contribution rate on OPSRP payroll.

| | Advisory July 1, 2015 Rates Calculated as of December 31, 2012 | | |
|---|---|---|---|
| | **General Service** | **Police & Fire** | **Average Rate** |
| **OPSRP pension contribution rates** | | | |
| Employer normal cost rate | 7.36% | 11.46% | 7.81% |
| Employer UAL rate | 0.60% | 0.60% | 0.60% |
| **Total OPSRP pension rate** | **7.96%** | **12.06%** | **8.41%** |

### Calculation of Rate Collar

The rate collar restricts the average OPSRP contribution rate so it generally cannot change by more than the greater of 3 percentage points or 20% of the current average OPSRP contribution rate. However, if the funded percentage is below 60% or above 140%, the size of the collar is doubled. If the funded percentage is between 60% and 70% or between 130% and 140%, the size of the rate collar is increased on a graded scale. All collar calculations are performed based on the weighted average OPSRP contribution rate, and any adjustment due to the collar is applied to the OPSRP UAL rate.

The table below shows the calculation of and any adjustment for the rate collar.

| | Advisory July 1, 2015 Rates Calculated as of December 31, 2012 | | |
|---|---|---|---|
| | General Service | Police & Fire | Average Rate |
| 1. Current employer contribution rate | 6.42% | 9.15% | 6.71% |
| 2. Size of rate collar | | | |
| a. Preliminary size of rate collar (Maximum of 3% or 20% of 1.) | | | 3.00% |
| b. Funded percentage | | | 66% |
| **c. Size of rate collar (If b. < 60% or b. > 140%, 2 x a.. If b. is 70% - 130%, a., otherwise a graded rate between a. and b.)** | | | **4.20%** |
| 3. July 1, 2015 Minimum contribution rate (1. - 2.c.) | | | 2.51% |
| 4. July 1, 2015 Maximum contribution rate (1. + 2.c.) | | | 10.91% |
| 5. Advisory July 1, 2015 employer contribution rate before collar | 7.96% | 12.06% | 8.41% |
| 6. Advisory July 1, 2015 employer contribution rate after collar | 7.96% | 12.06% | 8.41% |
| **7. Impact of collar (6. - 5.)** | **0.00%** | **0.00%** | **0.00%** |

### Calculated Employer Contribution Rates (Post-Rate Collar)

The table below summarizes the employer's pension contribution rate for OPSRP after adjustments for the rate collar.

| | Advisory July 1, 2015 Rates Calculated as of December 31, 2012 | | |
|---|---|---|---|
| | General Service | Police & Fire | Average Rate |
| **OPSRP pension contribution rates** | | | |
| Employer normal cost rate | 7.36% | 11.46% | 7.81% |
| Employer UAL rate | 0.60% | 0.60% | 0.60% |
| **Total OPSRP pension rate** | **7.96%** | **12.06%** | **8.41%** |

# Retiree Healthcare Valuation

## Retiree Healthcare Assets

### Assets

A reconciliation of retiree healthcare assets is shown below. The reconciliation of assets is provided by PERS.

| | | RHIA | RHIPA | Retiree Healthcare Totals |
|---|---|---|---|---|
| **Additions** | | | | |
| 1. | Employer contributions | $ 48.1 | $ 3.5 | $ 51.6 |
| 2. | Net investment income | $ 35.1 | $ 0.6 | $ 35.6 |
| 3. | Other | $ - | $ - | $ - |
| **4.** | **Total additions** | **$ 83.2** | **$ 4.0** | **$ 87.2** |
| **Deductions** | | | | |
| 4. | Healthcare Premium Subsidies | $ (30.4) | $ (4.0) | (34.3) |
| 5. | Administrative expenses | $ (0.8) | $ (0.1) | (1.0) |
| **6.** | **Total deductions** | **$ (31.2)** | **$ (4.1)** | **(35.3)** |
| **7.** | **Net change** | **$ 52.0** | **$ (0.1)** | **51.9** |
| 8. | Net assets held in trust for benefits | | | |
| | a. Beginning of year | $ 239.6 | $ 4.5 | 244.1 |
| | **b. End of year** | **$ 291.6** | **$ 4.4** | **296.0** |

*Amounts in millions.*

## Retiree Healthcare Liabilities

### Normal Cost

A summary of the normal cost by decrement is shown below for the retiree healthcare benefits.

| | RHIA | | | RHIPA | | |
|---|---|---|---|---|---|---|
| | 12/31/2012 | 12/31/2011 | Percent Change | 12/31/2012 | 12/31/2011 | Percent Change |
| **Normal Cost** | | | | | | |
| Service Retirement | $ 3.3 | $ 5.2 | | $ 1.3 | $ 1.0 | |
| Withdrawal | 0.9 | 0.4 | | 0.0 | 0.0 | |
| Duty Disability | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Nonduty Disability | 0.0 | 0.0 | | 0.0 | 0.1 | |
| Death | 0.1 | 0.1 | | 0.0 | 0.0 | |
| **Total Normal Cost** | **$ 4.4** | **$ 5.8** | **(24.1%)** | **$ 1.4** | **$ 1.1** | **23.2%** |
| *Amounts in millions* | | | | | | |

The table below reconciles the normal cost from the prior valuation to the current valuation.

| | RHIA | RHIPA |
|---|---|---|
| **Normal Cost December 31, 2011** | **$5.8** | **$1.1** |
| Expected increase | - | - |
| Assumption and method changes | (1.0) | 0.3 |
| Plan changes | - | - |
| **Deviations from expected experience** | | |
| Demographic (gains) or losses | (0.4) | (0.0) |
| **Normal Cost December 31, 2012** | **$4.4** | **$1.4** |
| *Amounts in millions* | | |

### Actuarial Accrued Liability

A summary of the actuarial accrued liability by status is shown below for the retiree healthcare benefits.

| | RHIA | | | RHIPA | | |
|---|---|---|---|---|---|---|
| | 12/31/2012 | 12/31/2011 | Percent Change | 12/31/2012 | 12/31/2011 | Percent Change |
| **Actives** | **$ 105.3** | **$ 101.1** | **4.2%** | **$ 45.3** | **$ 20.8** | **117.4%** |
| **Dormant Members** | **28.2** | **27.5** | **2.4%** | **0.0** | **0.0** | **0.0%** |
| **Retired Members and Beneficiaries** | **338.3** | **332.5** | **1.7%** | **15.1** | **13.6** | **10.7%** |
| **Total Actuarial Accrued Liability** | **$ 471.8** | **$ 461.1** | **2.3%** | **$ 60.3** | **$ 34.4** | **75.2%** |
| *Amounts in millions* | | | | | | |

The change in actuarial accrued liability since the last valuation reflects the experience of the system. The table below reconciles the actuarial accrued liability from the last valuation to this valuation. The actuarial accrued liability is expected to increase due to benefits earned during the year and interest, and to decrease due to benefits paid during the year. The significant increase in RHIPA actuarial accrued liability between the December 31, 2011 valuation and the December 31, 2012 valuation is due to an increase and restructuring of the participation assumption for future RHIPA-eligible retirees.

| | RHIA | RHIPA | Total |
|---|---|---|---|
| **Actuarial Accrued Liability December 31, 2011** | **$ 461.1** | **$ 34.4** | **$ 495.5** |
| Expected change | 11.5 | (0.2) | 11.4 |
| Assumption and method changes | 8.2 | 24.8 | 32.9 |
| Plan changes | - | - | - |
| **Deviations from expected experience** | | | |
| Demographic (gains) or losses | (9.0) | 1.3 | (7.7) |
| **Actuarial Accrued Liability December 31, 2012** | **$ 471.8** | **$ 60.3** | **$ 532.2** |
| *Amounts in millions* | | | |

## Retiree Healthcare Unfunded Accrued Liability (UAL)

### Calculation of UAL

The Unfunded Accrued Liability (UAL) represents the difference between the actuarial accrued liability and the valuation assets. A summary of the UAL by program is shown on the following table.

| | RHIA | | | RHIPA | | |
|---|---|---|---|---|---|---|
| | 12/31/2012 | 12/31/2011 | Percent Change | 12/31/2012 | 12/31/2011 | Percent Change |
| 1. Actuarial accrued liability | $ 471.8 | $ 461.1 | 2.3% | $ 60.3 | $ 34.4 | 75.2% |
| 2. Actuarial value of assets | $ 291.6 | $ 239.6 | 21.7% | $ 4.4 | $ 4.5 | (2.1%) |
| 3. Unfunded accrued liability | $ 180.2 | $ 221.5 | (18.6%) | $ 55.9 | $ 29.9 | 87.0% |
| 4. Funded percentage (2. ÷ 1.) | 61.8% | 52.0% | 18.9% | 7.4% | 13.2% | (44.1%) |
| 5. Combined valuation payroll | $ 8,590.9 | $ 8,550.5 | 0.5% | $ 2,432.4 | $ 2,376.9 | 2.3% |
| 6. Unfunded accrued liability as % of combined valuation payroll (3. ÷ 5.) | 2.1% | 2.6% | (19.0%) | 2.3% | 1.3% | 82.7% |
| *Amounts in millions* | | | | | | |

### Reconciliation of UAL Bases

Beginning with the December 31, 2007 actuarial valuation, each rate-setting valuation establishes a 10-year amortization base for outstanding RHIA and RHIPA UAL amounts. For odd-year valuations subsequent to December 31, 2007, this amortization base will be calculated based on the total UAL as of that valuation date less the remaining unamortized balance of any UAL bases established at previous odd-year valuation dates. In other words, RHIA and RHIPA experience from December 31, 2011, to December 31, 2013, will be amortized based on a 10-year amortization schedule established in the December 31, 2013, valuation. The payment schedules for the unamortized UAL balances as of December 31, 2012, have been modified to reflect the lowering of the investment return assumption first effective with that valuation.

| *RHIA* Amortization Base | UAL, December 31, 2011 | Payment | Interest | UAL, December 31, 2012 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | $ 196.7 | $ 37.5 | $ 14.1 | $ 173.4 | $ 38.7 |
| December 31, 2009 | 55.9 | 8.3 | 4.1 | 51.8 | 8.5 |
| December 31, 2011 | (31.1) | (3.8) | (2.3) | (29.6) | (3.9) |
| December 31, 2012 | N/A | N/A | N/A | (15.3) | (1.9) |
| **Total** | **$ 221.5** | **$ 41.9** | **$ 15.9** | **$ 180.2** | **$ 41.4** |

| *RHIPA* Amortization Base | UAL, December 31, 2011 | Payment | Interest | UAL, December 31, 2012 | Next Year's Payment |
|---|---|---|---|---|---|
| December 31, 2007 | $ 13.5 | $ 2.6 | $ 1.0 | $ 11.9 | $ 2.6 |
| December 31, 2009 | 1.9 | 0.3 | 0.1 | 1.8 | 0.3 |
| December 31, 2011 | 14.5 | 1.8 | 1.1 | 13.8 | 1.8 |
| December 31, 2012 | N/A | N/A | N/A | 28.4 | 3.5 |
| **Total** | **$ 29.9** | **$ 4.6** | **$ 2.2** | **$ 55.9** | **$ 8.2** |
| *Amounts in millions* | | | | | |

### Actuarial Gain or Loss since Prior Valuation

In every actuarial valuation, assumptions are made as to the future experience of the plan and covered group of participants. Whenever there is a difference between the actual experience and that anticipated by the actuarial assumptions, there is a gain or loss to the plan. Gains are the result of experience that is more favorable than anticipated (i.e., serves to reduce the unfunded accrued liability or increase the surplus), while losses are the result of unfavorable experience.

The table below shows the development of the actuarial gain (or loss) for RHIA and RHIPA for the plan year ending December 31, 2012.

| | RHIA | RHIPA | Retiree Healthcare Totals |
|---|---|---|---|
| **Retiree Healthcare** | | | |
| 1. Expected actuarial accrued liability | | | |
| a. Actuarial accrued liability at December 31, 2011 | $ 461.1 | $ 34.4 | $ 495.5 |
| b. Normal cost at December 31, 2011 | $ 5.8 | $ 1.1 | $ 6.9 |
| c. Benefit payments for fiscal year ending December 31, 2012 | $ (30.4) | $ (4.0) | $ (34.3) |
| d. Interest | $ 36.1 | $ 2.7 | $ 38.8 |
| e. Expected actuarial accrued liability before changes *(a. + b. + c. + d.)* | $ 472.7 | $ 34.2 | $ 506.9 |
| f. Change in actuarial accrued liability at December 31, 2012, due to assumption and method changes | $ 8.2 | $ 24.8 | $ 32.9 |
| g. Change in actuarial accrued liability at December 31, 2012, due to plan changes | $ - | $ - | $ - |
| h. Expected actuarial accrued liability at December 31, 2012 *(e. + f. + g.)* | $ 480.8 | $ 59.0 | $ 539.8 |
| 2. Actuarial accrued liability at December 31, 2012 | $ 471.8 | $ 60.3 | $ 532.2 |
| **3. Liability gain/(loss) (1.h. - 2)** | **$ 9.0** | **$ (1.3)** | **$ 7.7** |
| 4. Expected actuarial value of assets | | | |
| a. Actuarial value of assets at December 31, 2011 | $ 239.6 | $ 4.5 | $ 244.1 |
| b. Actual contributions for 2012 | $ 48.1 | $ 3.5 | $ 51.6 |
| c. Benefit payments and expenses for fiscal year ending December 31, 2012 | $ (31.2) | $ (4.1) | $ (35.3) |
| d. Assumed investment return | $ 19.8 | $ 0.3 | $ 20.2 |
| e. Expected actuarial value of assets before changes *(a. + b. + c. + d.)* | $ 276.4 | $ 4.2 | $ 280.6 |
| f. Change in actuarial value of assets at December 31, 2012, due to assumption changes | $ - | $ - | $ - |
| g. Change in actuarial value of assets at December 31, 2012, due to plan changes | $ - | $ - | $ - |
| h. Expected actuarial value of assets at December 31, 2012 *(e. + f. + g.)* | $ 276.4 | $ 4.2 | $ 280.6 |
| 5. Actuarial value of assets at December 31, 2012 | $ 291.6 | $ 4.4 | $ 296.0 |
| **6. Actuarial asset gain/(loss) (5. - 4.h.)** | **$ 15.2** | **$ 0.2** | **$ 15.5** |
| **7. Net actuarial gain/(loss) (3. + 6.)** | **$ 24.2** | **$ (1.1)** | **$ 23.1** |
| *Amounts in millions* | | | |

### Reconciliation of UAL

The table below summarizes the changes in UAL since the prior valuation.

The significant decrease in the RHIA UAL is due to the increase in RHIA contribution rates effective July 1, 2011 combined with better than assumed investment and liability experience during the year. The significant increase in the RHIPA UAL is primarily due to an updated actuarial assumption about the percentage of Tier 1/Tier 2 retired members that will elect to participate in the RHIPA program when eligible at their future retirement dates.

| | RHIA | RHIPA |
|---|---|---|
| **UAL, December 31, 2011** | $ 221.5 | $ 29.9 |
| Normal Cost (including actual administrative expenses) | 6.6 | 1.2 |
| Contributions | (48.1) | (3.5) |
| Liability (gain) or loss | (9.0) | 1.3 |
| Asset (gain) or loss | (15.2) | (0.2) |
| Assumption and method changes | 8.2 | 24.8 |
| Interest @ 8.0% | 16.3 | 2.3 |
| **UAL, December 31, 2012** | **$ 180.2** | **$ 55.9** |
| *Amounts in millions* | | |

## Retiree Healthcare Contribution Rate Development

### Normal Cost Rate

The table below shows the development of the retiree healthcare normal cost rates. For RHIA, valuation payroll is shown on a system-wide basis. For RHIPA, valuation payroll is for the State of Oregon and the State Judiciary only.

| | RHIA | | RHIPA | |
|---|---|---|---|---|
| | December 31, 2012 | December 31, 2011 | December 31, 2012 | December 31, 2011 |
| Normal Cost | $ 4.4 | $ 5.8 | $ 1.4 | $ 1.1 |
| Tier 1/Tier 2 Valuation Payroll | $ 5,341.7 | $ 5,607.9 | $ 1,478.4 | $ 1,539.5 |
| **Normal Cost Rate** | **0.08%** | **0.10%** | **0.09%** | **0.07%** |
| *Amounts in millions* | | | | |

The table below shows the development of the retiree healthcare normal cost rates for the various rate pools. For RHIA, valuation payroll is shown on a system-wide basis. For RHIPA, valuation payroll is for the State of Oregon and the State Judiciary only. For this exhibit, all independent employers, including State Judiciary, have been grouped together.

| | December 31, 2012 | | | |
|---|---|---|---|---|
| | SLGRP | School Districts | Independent Employers | Retiree Healthcare Total |
| 1. Tier 1/ Tier 2 Valuation Payroll | | | | |
| a. Total Tier 1/Tier 2 Payroll | $ 3,043.7 | $ 1,769.0 | $ 529.0 | $ 5,341.7 |
| b. RHIPA Employers' Payroll | $ 1,457.6 | $ 0.0 | $ 20.9 | $ 1,478.4 |
| 2. Normal Cost Rate | | | | |
| a. RHIA | 0.08% | 0.08% | 0.08% | 0.08% |
| b. RHIPA | 0.09% | 0.00% | 0.09% | 0.09% |
| **3. Weighted Average Normal Cost Rate [( 1.a. x 2.a + 1.b. x 2.b. ) / 1.a]** | **0.12%** | **0.08%** | **0.08%** | **0.10%** |
| *Amounts in millions* | | | | |

## UAL Rate

The UAL rate is determined by calculating the next year's scheduled payment to the UAL as a percentage of combined valuation payroll. For RHIPA, valuation payroll is for the State of Oregon and the State Judiciary only.

| | RHIA | | RHIPA | |
|---|---|---|---|---|
| | December 31, 2012 | December 31, 2011 | December 31, 2012 | December 31, 2011 |
| 1. Total UAL, December 31, 2012 | 180.2 | 221.5 | 55.9 | 29.9 |
| 2. Next year's UAL payment | 41.4 | 41.9 | 8.2 | 4.6 |
| 3. Combined valuation payroll | $ 8,590.9 | $ 8,550.5 | $ 2,432.4 | $ 2,376.9 |
| 4. **UAL rate (2 ÷ 3)** | **0.48%** | **0.49%** | **0.34%** | **0.20%** |
| *Amounts in millions* | | | | |

The table below shows the development of the retiree healthcare UAL rates for the various rate pools. For RHIA, combined valuation payroll is shown on a system-wide basis. For RHIPA, valuation payroll is for the State of Oregon and the State Judiciary only. For this exhibit, all independent employers, including State Judiciary, have been grouped together.

| | December 31, 2012 | | | |
|---|---|---|---|---|
| | SLGRP | School Districts | Independent Employers | Retiree Healthcare Total |
| 1. Combined Valuation Payroll | | | | |
| a. Tier 1/Tier 2 | $ 5,018.0 | $ 2,731.5 | $ 841.3 | $ 8,590.9 |
| b. RHIPA Employers' Payroll | $ 2,411.6 | $ 0 | $ 20.9 | $ 2,432.4 |
| 2. UAL Rate | | | | |
| a. RHIA - Reg | 0.48% | 0.48% | 0.48% | 0.48% |
| b. RHIPA - Reg | 0.34% | 0.00% | 0.34% | 0.34% |
| **3. Weighted Average UAL Rate [( 1.a. x 2.a + 1.b. x 2.b. ) / 1.a]** | **0.64%** | **0.48%** | **0.49%** | **0.58%** |
| *Amounts in millions* | | | | |

### Calculated Employer Contribution Rate Summary

The following table summarizes the calculated employer contribution rates for the retiree healthcare programs. The normal cost rates are applied against Tier 1/Tier 2 payroll, but the UAL rates are applied against all payroll. For RHIPA, valuation payroll is for the State of Oregon and the State Judiciary only.

| | Advisory July 1, 2015 Rates Calculated as of December 31, 2012 | | |
|---|---|---|---|
| | **State Agencies and Judiciary** | **All Other Employers** | **Retiree Healthcare Total** |
| **Normal Cost Rates** | | | |
| RHIA | 0.08% | 0.08% | 0.08% |
| RHIPA | 0.09% | 0.00% | 0.02% |
| **Total normal cost rate** | **0.17%** | **0.08%** | **0.10%** |
| **UAL Rates** | | | |
| RHIA | 0.48% | 0.48% | 0.48% |
| RHIPA | 0.34% | 0.00% | 0.10% |
| **Total UAL rate** | **0.82%** | **0.48%** | **0.58%** |
| **Total retiree healthcare rate** | **0.99%** | **0.56%** | **0.68%** |

# Accounting / CAFR Exhibits

## Accounting/CAFR Exhibits

The following information as of December 31, 2012, has been prepared and provided to Oregon PERS for inclusion in the Actuarial Section of the 2013 Comprehensive Annual Financial Report (CAFR):

- Schedule of Active Member Valuation Data
- Schedule of Retirees and Beneficiaries Added to and Removed from Rolls
- Schedules of Funding Progress by Rate Pool
- Solvency Test
- Analysis of Financial Experience

In addition, the Schedules of Funding Progress, the Schedules of Employer Contributions and the Notes to Required Supplementary Schedules are provided for the Financial Section of the CAFR. All data and amounts shown for the December 31, 2005 and later actuarial valuations include both Tier 1/Tier 2 and OPSRP member and employer counts, assets, and liabilities.

This information has been prepared under GASB Statements No. 25, 27, 43, and 45 for purposes of assisting the System and participating employers in fulfilling their financial reporting requirements. **These exhibits do not reflect GASB Statements No. 67 and 68, issued by GASB in June 2012 to replace Statements No. 25 and 27.** GASB 67 governs plan financial reporting effective for fiscal years beginning after June 15, 2013, while GASB 68 governs employer financial reporting for fiscal years beginning after June 15, 2014.

Some employers have made supplemental deposits in addition to their regularly scheduled contributions. These deposits are placed in a side account within the pension trust and used to offset future contribution requirements of that employer. For financial reporting purposes, supplemental deposits are not considered as contributions toward meeting the Annual Required Contribution (ARC) or the contractually required contribution (CRC) for employers in a cost-sharing pool. The Schedule of Funding Progress and Solvency Test also include side accounts as part of the Plan's assets since those amounts are in a restricted trust available exclusively for the benefit of plan members.

Our understanding is the Schedule of Employer Contributions exhibit for 2005 and prior years were prepared by Oregon PERS. Due to the phase-in of the significant contribution rate increases calculated in the December 31, 2003 valuation, the schedule indicates that only a portion of the pension annual required contribution (ARC) was contributed in 2006 and 2007. Effective July 1, 2007, contribution rates were implemented to return pension contributions for the system to the full ARC. During the July 2011 to June 2013 biennium, the percentage of the ARC contribution was less than 100 percent due to the application of the contribution rate stabilization method (rate collar).

Milliman is not an accounting or audit firm and cannot provide accounting advice. Milliman is not responsible for the interpretation of, or compliance with, accounting standards; citations to, and descriptions of accounting standards provided in this report are for reference purposes only. The information provided in this section is intended to assist Oregon PERS in completing its financial statements, but any accounting determination should be reviewed by your auditor.

The exhibits are provided on the following pages.

## Actuarial Schedules

### Schedule of Active Member Valuation Data

| Valuation Date | Count | Annual Payroll (in Thousands) | Average Annual Pay | %Increase in Average Pay | Number of Participating Employers[1] | |
|---|---|---|---|---|---|---|
| 12/31/1993 | 137,513 | $ 4,466,797 | $ 32,483 | 4.9% | N/A | |
| 12/31/1995 | 141,471 | $ 4,848,058 | $ 34,269 | 2.7% | N/A | |
| 12/31/1997 | 143,194 | $ 5,161,562 | $ 36,045 | 2.6% | N/A | |
| 12/31/1999 | 151,262 | $ 5,676,606 | $ 37,528 | 2.0% | N/A | |
| 12/31/2000 | 156,869 | $ 6,195,862 | $ 39,497 | 5.2% | N/A | |
| 12/31/2001 | 160,477 | $ 6,520,225 | $ 40,630 | 2.9% | N/A | Old Basis |
| 12/31/2001 | 160,477 | $ 6,253,965 | $ 38,971 | — | N/A | New Basis[2] |
| 12/31/2002 | 159,287 | $ 6,383,475 | $ 40,075 | 2.8% | N/A | |
| 12/31/2003 | 153,723 | $ 6,248,550 | $ 40,648 | 1.4% | N/A | |
| 12/31/2004 | 142,635 | $ 6,306,447 | $ 44,214 | 8.8% | 806 | |
| 12/31/2005 [3] | 156,501 | $ 6,791,891 | $ 43,398 | -1.8% | 810 | |
| 12/31/2006 | 163,261 | $ 7,326,798 | $ 44,878 | 3.4% | 758 | |
| 12/31/2007 | 167,023 | $ 7,721,819 | $ 46,232 | 3.0% | 760 | |
| 12/31/2008 | 170,569 | $ 8,130,136 | $ 47,665 | 3.1% | 766 | |
| 12/31/2009 | 178,606 | $ 8,512,192 | $ 47,659 | 0.0% | 776 | |
| 12/31/2010 | 193,569 | $ 8,750,064 | $ 45,204 | -5.2% | 787 | |
| 12/31/2011 | 170,972 | $ 8,550,511 | $ 50,011 | 10.6% | 791 | |
| 12/31/2012 | 167,103 | $ 8,590,879 | $ 51,411 | 2.8% | 798 | |

[1] *Effective in 2006, participating employers are defined for this purpose as any employer with covered payroll during the prior year. In prior years, employers with liabilities but without covered payroll were included as well.*

[2] *Effective in 2001, the Annual Payroll excludes the member pick-up, if any.*

[3] *Effective with the 12/31/2005 valuation, OPSRP members and payroll are included.*

## Actuarial Schedules

### Schedule of Retirees and Beneficiaries Added to and Removed from Rolls

Annual Allowances are shown in thousands.

| Valuation Date | Added to Rolls Count | Added to Rolls Annual Allowances | Removed from Rolls Count | Removed from Rolls Annual Allowances | Rolls - End of Year Count | Rolls - End of Year Annual Allowances | %Increase in Annual Allowances[1] | Average Annual Allowances |
|---|---|---|---|---|---|---|---|---|
| 12/31/1993 | | | | | 60,841 | $ 564,341 | 27.6% | $ 9,276 |
| 12/31/1995 | | | | | 64,796 | $ 700,171 | 24.1% | $ 10,806 |
| 12/31/1997 | | | | | 69,624 | $ 919,038 | 31.3% | $ 13,200 |
| 12/31/1999 | | | | | 82,819 | $ 1,299,380 | 41.4% | $ 15,689 |
| 12/31/2000 | | | | | 82,458 | $ 1,385,556 | 6.6% | $ 16,803 |
| 12/31/2001 | | | | | 85,216 | $ 1,514,491 | 9.3% | $ 17,772 |
| 12/31/2002 | | | | | 89,482 | $ 1,722,865 | 13.8% | $ 19,254 |
| 12/31/2003 | | | | | 97,777 | $ 2,040,533 | 8.4% | $ 20,869 |
| 12/31/2004 [2] | 6,754 | $ 149,474 | 2,863 | $ 35,151 | 101,668 | $ 2,154,856 | 5.6% | $ 21,195 |
| 12/31/2005 [2] | 4,472 | $ 149,127 | 3,217 | $ 36,784 | 102,923 | $ 2,267,198 | 5.2% | $ 22,028 |
| 12/31/2006 [2] | 5,060 | $ 151,240 | 3,263 | $ 39,735 | 104,720 | $ 2,378,704 | 4.9% | $ 22,715 |
| 12/31/2007 [2] | 5,385 | $ 183,232 | 3,304 | $ 40,590 | 106,801 | $ 2,521,345 | 6.0% | $ 23,608 |
| 12/31/2008 [2] | 5,963 | $ 171,484 | 3,626 | $ 47,062 | 109,138 | $ 2,645,767 | 4.9% | $ 24,242 |
| 12/31/2009 [2] | 6,377 | $ 226,713 | 3,374 | $ 46,228 | 112,141 | $ 2,826,252 | 6.8% | $ 25,203 |
| 12/31/2010 [2] | 6,359 | $ 217,424 | 3,512 | $ 51,627 | 114,988 | $ 2,992,048 | 5.9% | $ 26,021 |
| 12/31/2011 [2] | 8,715 | $ 282,098 | 3,679 | $ 55,633 | 120,024 | $ 3,218,514 | 7.6% | $ 26,816 |
| 12/31/2012 [2] | 7,023 | $ 235,917 | 4,875 | $ 59,353 | 122,172 | $ 3,395,079 | 5.5% | $ 27,789 |

[1] *Since last valuation date.*

[2] *Annual allowances reflect estimated adjustments to retiree benefits due to the implementation of the Strunk v. PERB, et al. and City of Eugene v. State of Oregon, PERB, et al. decisions.*

## Actuarial Schedules

### Schedule of Funding Progress by Rate Pool

The GASB Statement Nos. 25 and 43 liabilities and assets resulting from the last six actuarial valuations are as follows **(dollar amounts in millions)**:

| Actuarial Valuation Date | Actuarial Value of Assets[1,2] (a) | Actuarial Accrued Liability (AAL)[2] (b) | Unfunded AAL (UAAL) (b-a) | Funded Ratio (a/b) | Covered Payroll[3] (c) | UAAL as a % of Covered Payroll ((b-a)/c) |
|---|---|---|---|---|---|---|
| **Tier 1/Tier 2 State & Local Government Rate Pool** | | | | | | |
| 12/31/2007 [4] | $ 30,314.8 | $ 26,883.1 | $ (3,431.7) | 112.8% | $ 3,448.1 | (99.5%) |
| 12/31/2008 | $ 22,301.2 | $ 27,551.8 | $ 5,250.6 | 80.9% | $ 3,452.7 | 152.1% |
| 12/31/2009 [5] | $ 25,068.8 | $ 29,029.1 | $ 3,960.3 | 86.4% | $ 3,465.1 | 114.3% |
| 12/31/2010 | $ 26,499.5 | $ 30,285.0 | $ 3,785.4 | 87.5% | $ 3,333.1 | 113.6% |
| 12/31/2011 [6] | $ 25,679.2 | $ 31,109.1 | $ 5,429.9 | 82.5% | $ 3,179.3 | 170.8% |
| 12/31/2012 [7] | $ 28,022.3 | $ 30,601.9 | $ 2,579.5 | 91.6% | $ 3,043.7 | 84.7% |
| **Tier 1/Tier 2 School District Rate Pool** | | | | | | |
| 12/31/2007 | $ 24,053.6 | $ 21,299.3 | $ (2,754.3) | 112.9% | $ 2,185.0 | (126.1%) |
| 12/31/2008 | $ 17,458.5 | $ 21,742.7 | $ 4,284.2 | 80.3% | $ 2,153.7 | 198.9% |
| 12/31/2009 | $ 19,388.0 | $ 22,517.6 | $ 3,129.6 | 86.1% | $ 2,079.2 | 150.5% |
| 12/31/2009 | $ 20,343.5 | $ 23,303.3 | $ 2,959.8 | 87.3% | $ 2,027.5 | 146.0% |
| 12/31/2011 | $ 19,668.2 | $ 23,973.7 | $ 4,305.5 | 82.0% | $ 1,880.7 | 228.9% |
| 12/31/2012 [7] | $ 21,202.1 | $ 22,908.0 | $ 1,705.8 | 92.6% | $ 1,769.0 | 96.4% |
| **Tier 1/Tier 2 Independent Employers and Judiciary** | | | | | | |
| 12/31/2007 [4] | $ 4,765.5 | $ 4,423.2 | $ (342.3) | 107.7% | $ 628.8 | (54.4%) |
| 12/31/2008 | $ 3,576.7 | $ 4,566.0 | $ 989.3 | 78.3% | $ 619.4 | 159.7% |
| 12/31/2009 [5] | $ 3,926.7 | $ 4,665.9 | $ 739.3 | 84.2% | $ 579.1 | 127.7% |
| 12/31/2010 | $ 4,189.4 | $ 4,913.1 | $ 723.7 | 85.3% | $ 569.7 | 127.0% |
| 12/31/2011 [6] | $ 4,083.2 | $ 5,069.8 | $ 986.6 | 80.5% | $ 547.9 | 180.1% |
| 12/31/2012 [7] | $ 4,479.4 | $ 5,043.4 | $ 564.0 | 88.8% | $ 529.0 | 106.6% |
| **OPSRP Rate Pool** | | | | | | |
| 12/31/2007 | $ 275.1 | $ 203.0 | $ (72.1) | 135.5% | $ 1,459.9 | (4.9%) |
| 12/31/2008 | $ 270.5 | $ 336.8 | $ 66.3 | 80.3% | $ 1,904.3 | 3.5% |
| 12/31/2009 | $ 445.4 | $ 535.5 | $ 90.1 | 83.2% | $ 2,388.8 | 3.8% |
| 12/31/2010 | $ 659.0 | $ 767.6 | $ 108.6 | 85.8% | $ 2,819.8 | 3.9% |
| 12/31/2011 | $ 840.5 | $ 986.4 | $ 145.9 | 85.2% | $ 2,942.6 | 5.0% |
| 12/31/2012 [7] | $ 1,190.0 | $ 1,795.6 | $ 605.5 | 66.3% | $ 3,249.2 | 18.6% |
| **Postemployment Healthcare Benefits - Retirement Health Insurance Account** | | | | | | |
| 12/31/2007 | $ 250.8 | $ 499.6 | $ 248.8 | 50.2% | $ 6,261.9 | 4.0% |
| 12/31/2008 | $ 183.8 | $ 494.0 | $ 310.2 | 37.2% | $ 6,225.8 | 5.0% |
| 12/31/2009 | $ 214.1 | $ 511.2 | $ 297.1 | 41.9% | $ 6,123.4 | 4.9% |
| 12/31/2010 | $ 232.3 | $ 547.1 | $ 314.8 | 42.5% | $ 5,930.3 | 5.3% |
| 12/31/2011 | $ 239.6 | $ 461.1 | $ 221.5 | 52.0% | $ 5,607.9 | 3.9% |
| 12/31/2012 | $ 291.6 | $ 471.8 | $ 180.2 | 61.8% | $ 5,341.7 | 3.4% |
| **Postemployment Healthcare Benefits - Retiree Health Insurance Premium Account** | | | | | | |
| 12/31/2007 | $ 7.8 | $ 23.3 | $ 15.5 | 33.6% | $ 1,692.1 | 0.9% |
| 12/31/2008 | $ 5.7 | $ 21.3 | $ 15.6 | 26.7% | $ 1,708.5 | 0.9% |
| 12/31/2009 | $ 6.4 | $ 24.5 | $ 18.2 | 25.9% | $ 1,705.1 | 1.1% |
| 12/31/2010 | $ 5.7 | $ 33.9 | $ 28.2 | 16.8% | $ 1,603.3 | 1.8% |
| 12/31/2011 | $ 4.5 | $ 34.4 | $ 29.9 | 13.2% | $ 1,539.5 | 1.9% |
| 12/31/2012 | $ 4.4 | $ 60.3 | $ 55.9 | 7.4% | $ 1,478.4 | 3.8% |

Notes:

[1] *Side account assets are included with Tier 1/Tier 2 assets.*

[2] *Excludes effect of Multnomah Fire District (net UAAL of $166 million as of 12/31/2012).*

[3] *Covered payroll shown is payroll for members of the rate pool benefiting from the specified program. For example, Tier 1/Tier 2 School District payroll is only payroll for Tier 1/Tier 2 members and excludes OPSRP. However, UAL is amortized using combined Tier 1/Tier 2 and OPSRP*

[4] *Reflects the transfer in assets and liabilities for new employers that joined the SLGRP effective 1/1/2008.*

[5] *Reflects the transfer in assets and liabilities for new employers that joined the SLGRP effective 1/1/2010.*

[6] *Reflects the transfer in assets and liabilities for new employers that joined the SLGRP effective 1/1/2012.*

[7] *The 12/31/2012 valuation reflects the benefit changes enacted by the 2013 Oregon Legislature in Senate Bills 822 and 861, as well as a change in cost method to Entry Age Normal.*

## Actuarial Schedules

### Solvency Test

### Pension and Retiree Healthcare Plans

*(dollar amounts in millions)*

The schedule below shows results from the defined benefit pension plans and retiree healthcare plans on a consolidated basis, though GASB 43 does not require solvency tests for retiree healthcare plans. Note that the defined benefit pension plan constitutes over 99% of the consolidated assets and liabilities.

| Valuation Date[2] | Actuarial Accrued Liability[1]: Active Member Contributions (1) | Actuarial Accrued Liability[1]: Retired Members and Beneficiaries (2) | Actuarial Accrued Liability[1]: Other Members (3) | Valuation Assets[1,3] | Portion of Actuarial Accrued Liabilities Covered by Assets (1) | Portion of Actuarial Accrued Liabilities Covered by Assets (2) | Portion of Actuarial Accrued Liabilities Covered by Assets (3) |
|---|---|---|---|---|---|---|---|
| 12/31/1995 | $ 5,753.0 | $ 7,492.8 | $ 10,002.8 | $ 20,957.6 | 100% | 100% | 77% |
| 12/31/1997 | $ 8,135.4 | $ 9,994.9 | $ 13,534.6 | $ 29,108.2 | 100% | 100% | 81% |
| 12/31/1999 | $ 8,238.1 | $ 14,333.7 | $ 18,336.1 | $ 39,964.8 | 100% | 100% | 95% |
| 12/31/2000 | $ 10,142.5 | $ 15,664.1 | $ 17,543.9 | $ 41,804.6 | 100% | 100% | 91% |
| 12/31/2001 | $ 10,252.8 | $ 17,465.9 | $ 18,229.0 | $ 39,852.2 | 100% | 100% | 67% |
| 12/31/2001 [4] | $ 10,252.8 | $ 17,340.0 | $ 10,228.8 | $ 39,852.2 | 100% | 100% | 120% |
| 12/31/2002 [4] | $ 9,940.7 | $ 19,339.0 | $ 10,240.8 | $ 36,316.8 | 100% | 100% | 69% |
| 12/31/2003 [4] | $ 9,005.8 | $ 23,625.9 | $ 11,993.9 | $ 42,874.4 | 100% | 100% | 85% |
| 12/31/2004 [5,6] | $ 9,073.0 | $ 25,363.0 | $ 13,547.6 | $ 45,735.3 | 100% | 100% | 83% |
| 12/31/2005 [7,8] | $ 9,169.7 | $ 26,602.4 | $ 14,044.7 | $ 51,569.6 | 100% | 100% | 112% |
| 12/31/2006 | $ 9,410.8 | $ 27,711.3 | $ 14,666.2 | $ 56,844.8 | 100% | 100% | 134% |
| 12/31/2007 [9] | $ 9,225.0 | $ 29,157.3 | $ 15,011.8 | $ 59,586.4 | 100% | 100% | 141% |
| 12/31/2008 | $ 8,341.5 | $ 30,537.7 | $ 15,895.7 | $ 43,710.2 | 100% | 100% | 30% |
| 12/31/2009 [10] | $ 8,392.0 | $ 32,484.2 | $ 16,470.1 | $ 48,949.7 | 100% | 100% | 49% |
| 12/31/2010 | $ 8,407.9 | $ 34,432.5 | $ 17,070.2 | $ 51,821.6 | 100% | 100% | 53% |
| 12/31/2011 [11] | $ 7,779.7 | $ 37,362.4 | $ 16,551.8 | $ 50,412.4 | 100% | 100% | 32% |
| 12/31/2012 [12] | $ 7,704.9 | $ 36,759.3 | $ 16,473.1 | $ 55,080.1 | 100% | 100% | 64% |

[1] *Includes effect of Multnomah Fire District (net UAAL of $166 million as of 12/31/2012).*

[2] *An extensive revision of the actuarial assumptions occurs prior to each odd-year valuation; therefore, the figures are not directly comparable. Effective with the 12/31/2006 valuation, revisions to actuarial assumptions occur prior to each even-year valuation.*

[3] *Effective with the 12/31/2002 valuation, includes the value of UAL Lump Sum Side Accounts.*

[4] *The 2001 valuation was revised to include the impact of PERS Reform Legislation enacted in 2003. Figures through 12/31/2003 do no reflect the judicial review or subsequent Board action.*

[5] *Effective with the 12/31/2004 valuation, the Oregon Supreme Court rulings in Strunk v. PERB, et al. (Issued March 8, 2005) and City of Eugene v. State of Oregon, PERB, et al. (Issued August 11, 2005) are reflected.*

[6] *Effective with the 12/31/2004 valuation, the cost method was changed from Entry Age Normal to Projected Unit Credit, and the actuarial value of assets was changed from a 4-year smoothed value to market value.*

[7] *Assets and liabilities for OPSRP are first valued in the 2005 valuation.*

[8] *Reflects the transfer in assets and liabilities for new employers that joined the SLGRP effective 1/1/2006.*

[9] *Reflects the transfer in assets and liabilities for new employers that joined the SLGRP effective 1/1/2008.*

[10] *Reflects the transfer in assets and liabilities for new employers that joined the SLGRP effective 1/1/2010.*

[11] *Reflects the transfer in assets and liabilities for new employers that joined the SLGRP effective 1/1/2012.*

[12] *The 12/31/2012 valuation reflects the benefit changes enacted by the 2013 Oregon Legislature in Senate Bills 822 and 861.*

## Actuarial Schedules

### Analysis of Financial Experience

The schedule below shows results from the defined benefit pension plans and retiree healthcare plans on a consolidated basis, though GASB 43 does not require an analysis of financial experience for retiree healthcare plans. Note that the defined benefit pension plan constitutes over 99% of the consolidated assets and liabilities.

**Gains and Losses in Unfunded Accrued Liability Resulting from Differences Between Assumed Experience and Actual Experience and Assumption Changes**

*(dollar amounts in millions)*

| | $ Gain (or Loss) for Year | |
|---|---|---|
| **Pension and Retiree Healthcare Plans** | **2012** | **2011** |
| ***Type of Activity*** | | |
| Retirements from Active Status | $ 48.2 | $ (68.2) |
| Active Mortality and Withdrawal | (14.1) | 19.1 |
| Pay Increases | 157.1 | 130.7 |
| Contributions | 47.0 | (37.9) |
| Interest Crediting Experience | (81.3) | 171.9 |
| Investment Income | 2,882.7 | (2,372.9) |
| Retirement, Mortality and Lump Sums from Dormant Status | 29.2 | 38.3 |
| Retiree and Beneficiary Mortality | 101.5 | (110.0) |
| Data Corrections | - | 27.7 |
| COLA Experience | - | 54.0 |
| New Entrants | (31.5) | (21.8) |
| Other | (96.2) | (0.5) |
| **Gain (or Loss) During Year From Financial Experience** | **$ 3,042.5** | **$ (2,169.6)** |
| ***Non-Recurring Items*** | | |
| Assumption Changes | (2,496.6) | - |
| Plan Changes | 5,243.5 | - |
| **Composite Gain (or Loss) During Year** | **$ 5,789.4** | **$ (2,169.6)** |

## GASB Nos. 25 and 43 Required Supplementary Information

### Schedules of Funding Progress

*(dollar amounts in millions)*

| Actuarial Valuation Date | Actuarial Value of Assets (a) | Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (UAAL) (b-a) | Funded Ratio (a/b) | Covered Payroll (c) | UAAL as a % of Covered Payroll ((b-a)/c) |
|---|---|---|---|---|---|---|
| **Pension Benefits - Tier 1/Tier 2 and OPSRP[1]** | | | | | | |
| 12/31/2003 [2] | 42,753.3 | 44,078.1 | 1,324.8 | 97.0% | 6,248.5 | 21.2% |
| 12/31/2004 [3,4] | 45,581.1 | 47,398.6 | 1,817.5 | 96.2% | 6,772.4 [5] | 26.8% |
| 12/31/2005 [5, 6] | 51,382.6 | 49,294.0 | (2,088.6) | 104.2% | 6,791.9 | (30.8%) |
| 12/31/2006 | 56,616.5 | 51,252.9 | (5,363.5) | 110.5% | 7,326.8 | (73.2%) |
| 12/31/2007 [7] | 59,327.8 | 52,871.2 | (6,456.7) | 112.2% | 7,721.8 | (83.6%) |
| 12/31/2008 | 43,520.6 | 54,259.5 | 10,738.9 | 80.2% | 8,130.1 | 132.1% |
| 12/31/2009 [8] | 48,729.2 | 56,810.6 | 8,081.4 | 85.8% | 8,512.2 | 94.9% |
| 12/31/2010 | 51,583.6 | 59,329.5 | 7,746.0 | 86.9% | 8,750.1 | 88.5% |
| 12/31/2011 [9] | 50,168.2 | 61,198.4 | 11,030.2 | 82.0% | 8,550.5 | 129.0% |
| 12/31/2012 [10] | 54,784.1 | 60,405.2 | 5,621.1 | 90.7% | 8,590.9 | 65.4% |
| **Postemployment Healthcare Benefits - Retirement Health Insurance Account** | | | | | | |
| 12/31/2003 [2] | 117.1 | 522.5 | 405.4 | 22.4% | 6,248.5 | 6.5% |
| 12/31/2004 [4] | 148.0 | 556.9 | 408.9 | 26.6% | 6,772.4 [5] | 6.0% |
| 12/31/2005 | 181.0 | 495.9 | 314.9 | 36.5% | 6,791.9 | 4.6% |
| 12/31/2006 | 221.3 | 511.8 | 290.5 | 43.2% | 7,326.8 | 4.0% |
| 12/31/2007 | 250.8 | 499.6 | 248.8 | 50.2% | 7,721.8 | 3.2% |
| 12/31/2008 | 183.8 | 494.0 | 310.2 | 37.2% | 8,130.1 | 3.8% |
| 12/31/2009 | 214.1 | 511.2 | 297.1 | 41.9% | 8,512.2 | 3.5% |
| 12/31/2010 | 232.3 | 547.1 | 314.8 | 42.5% | 8,750.1 | 3.6% |
| 12/31/2011 | 239.6 | 461.1 | 221.5 | 52.0% | 8,550.5 | 2.6% |
| 12/31/2012 | 291.6 | 471.8 | 180.2 | 61.8% | 8,590.9 | 2.1% |
| **Postemployment Healthcare Benefits - Retiree Health Insurance Premium Account** | | | | | | |
| 12/31/2003 [2] | 4.0 | 25.0 | 21.0 | 16.0% | 1,711.9 | 1.2% |
| 12/31/2004 [4] | 5.2 | 28.2 | 23.0 | 18.4% | 1,851.4 [5] | 1.2% |
| 12/31/2005 | 6.1 | 27.0 | 20.9 | 22.7% | 1,827.0 | 1.1% |
| 12/31/2006 | 7.0 | 23.4 | 16.4 | 30.0% | 1,946.8 | 0.8% |
| 12/31/2007 | 7.8 | 23.3 | 15.5 | 33.6% | 2,080.2 | 0.7% |
| 12/31/2008 | 5.7 | 21.3 | 15.6 | 26.7% | 2,217.9 | 0.7% |
| 12/31/2009 | 6.4 | 24.5 | 18.2 | 25.9% | 2,371.8 | 0.8% |
| 12/31/2010 | 5.7 | 33.9 | 28.2 | 16.8% | 2,379.7 | 1.2% |
| 12/31/2011 | 4.5 | 34.4 | 29.9 | 13.2% | 2,376.9 | 1.3% |
| 12/31/2012 | 4.4 | 60.3 | 55.9 | 7.4% | 2,432.4 | 2.3% |

*Notes:*

1 *Includes UAAL for Multnomah Fire District ($166 million as of 12/31/2012)*

2 *The 2001 valuation was revised to include the impact of PERS Reform Legislation enacted in 2003. Figures through 12/31/2003 do not reflect the judicial review or subsequent Board action.*

3 *Effective with the 2004 valuation, the Oregon Supreme Court rulings in Strunk v. PERB, et al. (Issued March 8, 2005) and City of Eugene v. State of Oregon, PERB, et al. (Issued August 11, 2005) are reflected.*

4 *Effective with the 2004 valuation, the cost method was changed from Entry Age Normal to Projected Unit Credit, and the actuarial value of assets was changed from a 4-year smoothed value to market value.*

5 *Assets and liabilities for OPSRP are first valued in the 2005 valuation. OPSRP payroll, however, was included in the amortization of the UAAL beginning with the 2004 valuation.*

6 *Reflects the transfer in assets and liabilities for new employers that joined the SLGRP effective 1/1/2006.*

7 *Reflects the transfer in assets and liabilities for new employers that joined the SLGRP effective 1/1/2008.*

8 *Reflects the transfer in assets and liabilities for new employers that joined the SLGRP effective 1/1/2010.*

9 *Reflects the transfer in assets and liabilities for new employers that joined the SLGRP effective 1/1/2012.*

10 *The 12/31/2012 valuation reflects the benefit changes enacted by the 2013 Oregon Legislature in Senate Bills 822 and 861, as well as a change in cost method to Entry Age Normal.*

## GASB Nos. 25 and 43 Required Supplementary Information

### Schedules of Employer Contributions

*(dollar amounts in millions)*

| Actuarial Valuation Date | Annual Required Contribution[1,2,3] | Percentage Contributed |
|---|---|---|
| **Pension Benefits - Tier 1/Tier 2 and OPSRP** | | |
| 12/31/2006 | $938.6 | 63% |
| 12/31/2007 | $805.7 | 74% |
| 12/31/2008 | $707.4 | 100%[4] |
| 12/31/2009 | $630.8 | 100%[4] |
| 12/31/2010 | $472.4 | 100%[4] |
| 12/31/2011 | $779.1 | 83%[4] |
| 12/31/2012 | $1,239.4 | 72%[4] |
| **Postemployment Healthcare Benefits - Retirement Health Insurance Account** | | |
| 12/31/2006 | $44.3 | 89% |
| 12/31/2007 | $38.8 | 91% |
| 12/31/2008 | $33.0 | 85% |
| 12/31/2009 | $29.8 | 87% |
| 12/31/2010 | $26.5 | 83% |
| 12/31/2011 | $37.0 | 88% |
| 12/31/2012 | $47.5 | 101% |
| **Postemployment Healthcare Benefits - Retiree Health Insurance Premium Account** | | |
| 12/31/2006 | $2.5 | 90% |
| 12/31/2007 | $2.7 | 79% |
| 12/31/2008 | $2.9 | 63% |
| 12/31/2009 | $2.6 | 68% |
| 12/31/2010 | $2.3 | 64% |
| 12/31/2011 | $2.8 | 83% |
| 12/31/2012 | $3.4 | 101% |

[1] *The Annual Required Contribution prior to 7/1/2007 is based on the 7/1/2005 rates developed in the 12/31/2003 Milliman valuation prior to the adjustment to phase-in the rate increase and adjusted for supplemental payments since 12/31/2003. For most employers, the actual pension amount contributed from 7/1/2005 to 6/30/2007 was based on the phased-in rates.*

[2] *The Annual Required Contribution shown for 12/31/2010 and prior is an estimated amount based on system-wide contribution rates in effect for the year in question and system payroll as reported by PERS. For example, the 2010 pension benefits ARC is based on rates developed in the 12/31/2007 actuarial valuation and 2010 payroll as reported by PERS.*

[3] *The Annual Required Contribution shown beginning in 12/31/2011 is based on contribution rates in effect for individual employers for the year in question, system payroll as reported by PERS, and contributions rates for individual employers that would have been effective in the absence of the contribution rate stabilization method (rate collar).*

[4] *For both the July 2007-June 2009 and July 2009-June 2011 biennia, system employers are generally required to contribute 100% of the Annual Required Contribution for Tier 1/Tier 2 and OPSRP, as a percent of pay. The actual dollar amount contributed in a given calendar year can vary from the estimated Annual Required Contribution based on factors such as month-to-month variations in payroll and timing of contributions. During the July 2011-June 2013 biennium, the percentage of ARC contributed is less than 100% due to the application of the contribution rate stabilization method (rate collar).*

## GASB Nos. 25 and 43 Required Supplementary Information

**Notes to Required Supplementary Schedules**

| | |
|---|---|
| Valuation Date: | December 31, 2012 |
| Actuarial Cost Method: | Entry Age Normal (GASB 67/68 compliant application) |
| Amortization Method | The UAL is amortized as a level percentage of combined payroll.<br>The OPSRP UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 16 year period.<br>The Retiree Healthcare UAL as of December 31, 2007 and experience in each subsequent biennium is amortized over a closed 10 year period.<br>All existing Tier 1/Tier 2 UAL will be re-amortized over 20 years as of the December 31, 2013 rate-setting valuations. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll over a closed 20 year amortization period. |
| Equivalent Single Amortization Period: | |
| Pension | 24 years |
| RHIA | 7 years |
| RHIPA | 9 years |

The Equivalent Single Amortization Period (ESAP) calculation is performed biennially with each rate-setting actuarial valuation. This was calculated most recently in the December 31, 2011 actuarial valuation and the ESAPs for that valuation are shown above. The ARCs for the July 2009-June 2011 and July 2011-June 2013 biennia were based on the December 31, 2007 and December 31, 2009 valuations, respectively.

| | |
|---|---|
| Actuarial Assumptions: | |
| Investment Rate of Return: | 7.75 percent |
| Payroll Growth: | 3.75 percent |
| Consumer Price Inflation: | 2.75 percent |
| Health Cost Inflation: | Graded from 8.0 percent in 2013 to 4.7 percent in 2083. |
| Cost-of-Living Adjustments: | 1.50% for 2013. In later years, 1.25% on first $60,000 of annual benefit and 0.15% on benefits over $60,000. |
| Method used to Value Assets: | The actuarial value of assets equals the fair market value of assets, excluding the Contingency, Capital Preservation and Rate Guarantee Reserves. The Rate Guarantee Reserve is only excluded from assets when it has a balance greater than zero. |

# Data Exhibits

**This valuation is based upon the membership of the System as of December 31, 2012.**

## System Wide Data Exhibits

### Valuation Pay and Census Exhibit

The following tables illustrate the breakdown of member counts and valuation payroll for the SLGRP, School District Pool, and independent employers.

### SLGRP

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $ 1,323.7 | $ 249.8 | $ 1,573.5 |
| Tier 2 | 1,182.6 | 287.6 | 1,470.2 |
| Tier 1/Tier 2 Valuation Payroll | 2,506.2 | 537.5 | 3,043.7 |
| OPSRP Valuation Payroll | 1,700.3 | 274.0 | 1,974.3 |
| **Combined Valuation Payroll** | **$ 4,206.5** | **$ 811.5** | **$ 5,018.0** |
| *Amounts in millions* | | | | |

| | December 31 | | | | |
|---|---|---|---|---|---|
| | 2012 | | | | 2011 |
| | Tier 1 | Tier 2 | OPSRP | Total | |
| **Active Members in the Pool** | | | | | |
| General Service | 19,354 | 20,045 | 37,170 | 76,569 | 77,580 |
| Police & Fire | 3,051 | 3,987 | 4,413 | 11,451 | 11,383 |
| Total | 22,405 | 24,032 | 41,583 | 88,020 | 88,963 |
| Average Age | 54.7 | 48.8 | 41.6 | 46.9 | 46.7 |
| Average Service | 22.5 | 12.3 | 4.6 | 11.3 | 11.0 |
| Average prior year Covered Salary | $ 71,928 | $ 62,213 | $ 44,542 | $ 56,338 | $ 54,907 |
| **Active Members outside the Pool with previous Segments in the Pool** | | | | | |
| General Service | 4,223 | 2,596 | | 6,819 | 7,493 |
| Police & Fire | 373 | 343 | | 716 | 760 |
| Total | 4,596 | 2,939 | | 7,535 | 8,253 |
| Average Age | 53.4 | 45.6 | | 50.3 | 49.8 |
| Average Service in the Pool | 2.7 | 2.2 | | 2.5 | 2.4 |
| **Dormant Members**[1] | | | | | |
| General Service | 12,430 | 8,996 | 2,856 | 24,282 | 23,659 |
| Police & Fire | 761 | 704 | 200 | 1,665 | 1,697 |
| Total | 13,191 | 9,700 | 3,056 | 25,947 | 25,356 |
| Average Age | 56.8 | 50.8 | 44.5 | 53.1 | 52.9 |
| Average Monthly Benefit | $ 1,978 | $ 628 | $ 309 | $ 1,277 | $ 1,222 |
| **Retired Members and Beneficiaries**[1] | | | | | |
| General Service | 58,148 | 4,078 | 341 | 62,567 | 60,334 |
| Police & Fire | 7,941 | 725 | 44 | 8,710 | 8,373 |
| Total | 66,089 | 4,803 | 385 | 71,277 | 68,707 |
| Average Age | 70.4 | 65.3 | 65.0 | 70.1 | 69.8 |
| Average Monthly Benefit | $ 2,027 | $ 807 | $ 358 | $ 1,935 | $ 1,889 |
| **Grand Total Number of Members** | **106,281** | **41,474** | **45,024** | **192,779** | **191,279** |

*[1] In these exhibits, Dormants and Retirees are counted by members with service in each rate pool. As a result, individual inactive member with service segments in more than one rate pool will be included in more than one exhibit.*

## School District Pool

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $ 915.1 | $ 1.4 | $ 916.6 |
| Tier 2 | 851.1 | 1.3 | 852.4 |
| Tier 1/Tier 2 Valuation Payroll | 1,766.2 | 2.7 | 1,769.0 |
| OPSRP Valuation Payroll | 961.4 | 1.1 | 962.5 |
| **Combined Valuation Payroll** | **$ 2,727.6** | **$ 3.9** | **$ 2,731.5** |
| *Amounts in millions* | | | |

| | December 31 | | | | |
|---|---|---|---|---|---|
| | 2012 | | | | 2011 |
| | Tier 1 | Tier 2 | OPSRP | Total | |
| **Active Members** | | | | | |
| General Service | 16,860 | 18,694 | 30,124 | 65,678 | 68,398 |
| Police & Fire | 23 | 25 | 25 | 73 | 70 |
| Total | 16,883 | 18,719 | 30,149 | 65,751 | 68,468 |
| Average Age | 54.4 | 48.2 | 42.2 | 47.0 | 46.7 |
| Average Service | 21.9 | 12.0 | 5.3 | 11.5 | 11.0 |
| Average prior year Covered Salary | $ 54,909 | $ 45,561 | $ 30,329 | $ 40,977 | $ 39,967 |
| **Active Members outside the Pool with previous Segments in the Pool** | | | | | |
| General Service | 1,860 | 1,258 | | 3,118 | 3,352 |
| Police & Fire | 9 | 6 | | 15 | 16 |
| Total | 1,869 | 1,264 | | 3,133 | 3,368 |
| Average Age | 54.9 | 46.8 | | 51.6 | 51.0 |
| Average Service | 5.0 | 3.1 | | 4.2 | 4.1 |
| **Dormant Members**[1] | | | | | |
| General Service | 7,977 | 7,136 | 2,309 | 17,422 | 16,625 |
| Police & Fire | 19 | 18 | 1 | 38 | 43 |
| Total | 7,996 | 7,154 | 2,310 | 17,460 | 16,668 |
| Average Age | 57.6 | 49.8 | 45.3 | 52.8 | 52.7 |
| Average Monthly Benefit | $ 1,565 | $ 500 | $ 240 | $ 953 | $ 926 |
| **Retired Members and Beneficiaries**[1] | | | | | |
| General Service | 57,347 | 2,426 | 135 | 59,908 | 58,541 |
| Police & Fire | 169 | 26 | 1 | 196 | 174 |
| Total | 57,516 | 2,452 | 136 | 60,104 | 58,715 |
| Average Age | 71.5 | 66.0 | 65.1 | 71.2 | 71.0 |
| Average Monthly Benefit | $ 2,095 | $ 761 | $ 332 | $ 2,036 | $ 1,997 |
| **Grand Total Number of Members** | **84,264** | **29,589** | **32,595** | **146,448** | **147,219** |

*[1] In these exhibits, Dormants and Retirees are counted by members with service in each rate pool. As a result, individual inactive member with service segments in more than one rate pool will be included in more than one exhibit.*

## Independents

| | General Service | | Police & Fire | | Total | |
|---|---|---|---|---|---|---|
| Tier 1 | $ | 178.6 | $ | 88.7 | $ | 267.4 |
| Tier 2 | | 173.7 | | 87.9 | | 261.6 |
| Tier 1/Tier 2 Valuation Payroll | | 352.4 | | 176.6 | | 529.0 |
| OPSRP Valuation Payroll | | 237.6 | | 74.7 | | 312.4 |
| **Combined Valuation Payroll** | **$** | **590.0** | **$** | **251.4** | **$** | **841.3** |
| *Amounts in millions* | | | | | | |

| | December 31 | | | | |
|---|---|---|---|---|---|
| | 2012 | | | | 2011 |
| | Tier 1 | Tier 2 | OPSRP | Total | |
| **Active Members** | | | | | |
| General Service | 2,542 | 2,882 | 4,913 | 10,337 | 10,558 |
| Police & Fire | 946 | 1,028 | 1,021 | 2,995 | 2,983 |
| Total | 3,488 | 3,910 | 5,934 | 13,332 | 13,541 |
| Average Age | 53.5 | 47.4 | 41.1 | 46.2 | 46.0 |
| Average Service | 21.6 | 12.3 | 4.7 | 11.3 | 11.1 |
| Average prior year Covered Salary | $ 78,378 | $ 67,886 | $ 49,129 | $ 62,282 | $ 60,760 |
| **Active Members outside the Pool with previous Segments in the Pool** | | | | | |
| General Service | 1,359 | 1,140 | | 2,499 | 2,613 |
| Police & Fire | 319 | 303 | | 622 | 641 |
| Total | 1,678 | 1,443 | | 3,121 | 3,254 |
| Average Age | 52.9 | 45.5 | | 49.5 | 49.0 |
| Average Service | 4.4 | 2.9 | | 3.7 | 3.7 |
| **Dormant Members**[1] | | | | | |
| General Service | 1,675 | 1,403 | 385 | 3,463 | 3,334 |
| Police & Fire | 243 | 169 | 55 | 467 | 438 |
| Total | 1,918 | 1,572 | 440 | 3,930 | 3,772 |
| Average Age | 55.6 | 50.3 | 45.6 | 52.3 | 52.1 |
| Average Monthly Benefit | $ 1,568 | $ 541 | $ 331 | $ 1,019 | $ 957 |
| **Retired Members and Beneficiaries**[1] | | | | | |
| General Service | 8,143 | 769 | 55 | 8,967 | 8,481 |
| Police & Fire | 2,609 | 167 | 6 | 2,782 | 2,676 |
| Total | 10,752 | 936 | 61 | 11,749 | 11,157 |
| Average Age | 69.2 | 64.9 | 64.3 | 68.8 | 68.6 |
| Average Monthly Benefit | $ 2,026 | $ 820 | $ 347 | $ 1,921 | $ 1,891 |
| **Grand Total Number of Members** | **17,836** | **7,861** | **6,435** | **32,132** | **31,724** |

*[1] In these exhibits, Dormants and Retirees are counted by members with service in each rate pool. As a result, individual inactive member with service segments in more than one rate pool will be included in more than one exhibit.*

## Total

| | General Service | Police & Fire | Total |
|---|---|---|---|
| Tier 1 | $ 2,417.4 | $ 340.0 | $ 2,757.4 |
| Tier 2 | 2,207.4 | 376.8 | 2,584.3 |
| Tier 1/Tier 2 Valuation Payroll | 4,624.8 | 716.9 | 5,341.7 |
| OPSRP Valuation Payroll | 2,899.3 | 349.9 | 3,249.2 |
| **Combined Valuation Payroll** | **$ 7,524.1** | **$ 1,066.8** | **$ 8,590.9** |
| *Amounts in millions* | | | |

| | December 31 | | | | |
|---|---|---|---|---|---|
| | 2012 | | | | 2011 |
| | Tier 1 | Tier 2 | OPSRP | Total | |
| **Active Members** | | | | | |
| General Service | 38,756 | 41,621 | 72,207 | 152,584 | 156,536 |
| Police & Fire | 4,020 | 5,040 | 5,459 | 14,519 | 14,436 |
| Total | 42,776 | 46,661 | 77,666 | 167,103 | 170,972 |
| Average Age | 54.4 | 48.4 | 41.8 | 46.9 | 46.6 |
| Average Service | 22.2 | 12.2 | 4.9 | 11.4 | 11.0 |
| Average prior year Covered Salary | $ 65,737 | $ 56,008 | $ 39,375 | $ 50,768 | $ 49,388 |
| **Dormant Members**[1] | | | | | |
| General Service | 22,082 | 17,535 | 5,550 | 45,167 | 43,618 |
| Police & Fire | 1,023 | 891 | 256 | 2,170 | 2,178 |
| Total | 23,105 | 18,426 | 5,806 | 47,337 | 45,796 |
| Average Age | 57.0 | 50.3 | 44.9 | 52.9 | 52.8 |
| Average Monthly Benefit | $ 1,801 | $ 571 | $ 283 | $ 1,136 | $ 1,092 |
| **Retired Members and Beneficiaries**[1] | | | | | |
| General Service | 123,638 | 7,273 | 531 | 131,442 | 127,356 |
| Police & Fire | 10,719 | 918 | 51 | 11,688 | 11,223 |
| Total | 134,357 | 8,191 | 582 | 143,130 | 138,579 |
| Average Age | 70.8 | 65.5 | 64.9 | 70.4 | 70.2 |
| Average Monthly Benefit | $ 2,056 | $ 795 | $ 351 | $ 1,977 | $ 1,935 |
| **Grand Total Number of Members** | **200,238** | **73,278** | **84,054** | **357,570** | **355,347** |

[1] *In these exhibits, Dormants and Retirees are counted by members with service in each rate pool. As a result, individual inactive member with service segments in more than one rate pool are counted more than once in this exhibit.*

## Age/Service and Prior Year Covered Payroll by Tier and Job Class

### Tier 1 General Service Active Members

| | | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| <20 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| | $ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| 20-24 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| | $ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| 25-29 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| | $ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| 30-34 | | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | **3** |
| | $ | 0 | 0 | 0 | 57,105 | 0 | 0 | 0 | 0 | 0 | **57,105** |
| 35-39 | | 1 | 3 | 36 | 210 | 8 | 0 | 0 | 0 | 0 | **258** |
| | $ | 81,740 | 35,258 | 51,494 | 56,944 | 71,413 | 0 | 0 | 0 | 0 | **56,477** |
| 40-44 | | 9 | 44 | 217 | 1,889 | 440 | 10 | 0 | 0 | 0 | **2,609** |
| | $ | 100,065 | 36,126 | 51,401 | 64,833 | 63,482 | 58,598 | 0 | 0 | 0 | **63,102** |
| 45-49 | | 16 | 53 | 238 | 2,358 | 2,151 | 493 | 11 | 0 | 0 | **5,320** |
| | $ | 88,536 | 43,319 | 50,718 | 65,180 | 68,901 | 63,712 | 70,645 | 0 | 0 | **65,765** |
| 50-54 | | 10 | 59 | 294 | 2,738 | 3,203 | 2,284 | 449 | 11 | 0 | **9,048** |
| | $ | 88,786 | 54,290 | 51,813 | 59,676 | 64,996 | 69,974 | 65,614 | 58,886 | 0 | **64,194** |
| 55-59 | | 6 | 64 | 247 | 3,306 | 4,033 | 2,472 | 1,328 | 173 | 5 | **11,634** |
| | $ | 86,989 | 46,815 | 49,563 | 55,864 | 63,652 | 68,638 | 71,549 | 66,730 | 42,951 | **63,057** |
| 60-64 | | 3 | 40 | 166 | 2,203 | 2,763 | 1,583 | 770 | 245 | 23 | **7,796** |
| | $ | 48,050 | 57,736 | 47,208 | 56,454 | 60,765 | 68,355 | 74,642 | 72,126 | 66,925 | **62,525** |
| 65-69 | | 0 | 13 | 37 | 505 | 654 | 352 | 154 | 69 | 17 | **1,801** |
| | $ | 0 | 46,089 | 57,787 | 56,721 | 63,710 | 65,870 | 76,041 | 79,963 | 82,239 | **63,775** |
| 70-74 | | 1 | 1 | 11 | 70 | 69 | 30 | 22 | 13 | 12 | **229** |
| | $ | 4,914 | 6,169 | 50,859 | 46,071 | 59,862 | 53,148 | 75,092 | 104,206 | 84,737 | **59,144** |
| 75+ | | 0 | 1 | 4 | 18 | 15 | 9 | 5 | 0 | 6 | **58** |
| | $ | 0 | 65,212 | 36,723 | 37,477 | 52,481 | 83,759 | 64,246 | 0 | 71,141 | **54,755** |
| **Total** | | **46** | **278** | **1,250** | **13,300** | **13,336** | **7,233** | **2,739** | **511** | **63** | **38,756** |
| | **$** | **86,038** | **47,376** | **50,588** | **59,645** | **64,193** | **68,468** | **71,709** | **71,888** | **72,949** | **63,544** |

### Tier 2 General Service Active Members

| | | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| <20 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| | $ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| 20-24 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| | $ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| 25-29 | | 4 | 64 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | **94** |
| | $ | 42,862 | 34,970 | 40,422 | 0 | 0 | 0 | 0 | 0 | 0 | **36,814** |
| 30-34 | | 16 | 1,013 | 763 | 10 | 0 | 0 | 0 | 0 | 0 | **1,802** |
| | $ | 30,520 | 48,489 | 49,583 | 54,136 | 0 | 0 | 0 | 0 | 0 | **48,824** |
| 35-39 | | 30 | 1,570 | 4,243 | 274 | 0 | 0 | 0 | 0 | 0 | **6,117** |
| | $ | 31,138 | 51,643 | 57,174 | 60,026 | 0 | 0 | 0 | 0 | 0 | **55,755** |
| 40-44 | | 19 | 1,306 | 4,890 | 877 | 0 | 0 | 0 | 0 | 0 | **7,092** |
| | $ | 22,039 | 52,574 | 59,420 | 63,701 | 0 | 0 | 0 | 0 | 0 | **58,588** |
| 45-49 | | 14 | 1,107 | 4,570 | 757 | 0 | 0 | 0 | 0 | 0 | **6,448** |
| | $ | 15,824 | 50,549 | 56,357 | 60,434 | 0 | 0 | 0 | 0 | 0 | **55,750** |
| 50-54 | | 11 | 1,112 | 5,000 | 941 | 0 | 0 | 0 | 0 | 0 | **7,064** |
| | $ | 28,781 | 46,695 | 51,190 | 55,367 | 0 | 0 | 0 | 0 | 0 | **51,004** |
| 55-59 | | 9 | 932 | 4,902 | 1,077 | 0 | 0 | 0 | 0 | 0 | **6,920** |
| | $ | 17,359 | 47,684 | 50,828 | 53,910 | 0 | 0 | 0 | 0 | 0 | **50,841** |
| 60-64 | | 23 | 622 | 3,056 | 686 | 0 | 0 | 0 | 0 | 0 | **4,387** |
| | $ | 35,993 | 46,406 | 52,276 | 52,644 | 0 | 0 | 0 | 0 | 0 | **51,416** |
| 65-69 | | 13 | 218 | 932 | 202 | 0 | 0 | 0 | 0 | 0 | **1,365** |
| | $ | 37,028 | 52,322 | 50,807 | 54,956 | 0 | 0 | 0 | 0 | 0 | **51,532** |
| 70-74 | | 2 | 47 | 167 | 36 | 0 | 0 | 0 | 0 | 0 | **252** |
| | $ | 38,651 | 31,432 | 47,276 | 55,856 | 0 | 0 | 0 | 0 | 0 | **45,478** |
| 75+ | | 0 | 14 | 58 | 8 | 0 | 0 | 0 | 0 | 0 | **80** |
| | $ | 0 | 21,395 | 32,594 | 30,123 | 0 | 0 | 0 | 0 | 0 | **30,387** |
| **Total** | | **141** | **8,005** | **28,607** | **4,868** | **0** | **0** | **0** | **0** | **0** | **41,621** |
| | **$** | **29,032** | **49,403** | **54,238** | **57,155** | **0** | **0** | **0** | **0** | **0** | **53,564** |

## Tier 1 Police and Fire Active Members

| | | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| <20 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| | $ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| 20-24 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| | $ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| 25-29 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| | $ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| 30-34 | | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | **1** |
| | $ | 0 | 0 | 0 | 95,603 | 0 | 0 | 0 | 0 | 0 | **95,603** |
| 35-39 | | 0 | 1 | 6 | 63 | 1 | 0 | 0 | 0 | 0 | **71** |
| | $ | 0 | 38,642 | 86,208 | 90,795 | 150,337 | 0 | 0 | 0 | 0 | **90,511** |
| 40-44 | | 0 | 0 | 19 | 596 | 143 | 1 | 0 | 0 | 0 | **759** |
| | $ | 0 | 0 | 65,134 | 88,381 | 93,565 | 66,382 | 0 | 0 | 0 | **88,747** |
| 45-49 | | 0 | 1 | 11 | 422 | 665 | 96 | 0 | 0 | 0 | **1,195** |
| | $ | 0 | 77,267 | 89,146 | 88,245 | 90,335 | 94,202 | 0 | 0 | 0 | **89,886** |
| 50-54 | | 0 | 2 | 5 | 218 | 464 | 268 | 53 | 0 | 0 | **1,010** |
| | $ | 0 | 37,562 | 58,448 | 82,706 | 86,220 | 95,912 | 94,342 | 0 | 0 | **88,226** |
| 55-59 | | 0 | 1 | 4 | 124 | 227 | 177 | 87 | 9 | 0 | **629** |
| | $ | 0 | 102,814 | 64,694 | 76,192 | 80,238 | 87,941 | 88,995 | 78,352 | 0 | **82,729** |
| 60-64 | | 0 | 0 | 2 | 62 | 119 | 61 | 33 | 9 | 0 | **286** |
| | $ | 0 | 0 | 56,698 | 65,125 | 74,494 | 80,898 | 85,431 | 81,826 | 0 | **75,197** |
| 65-69 | | 1 | 0 | 1 | 16 | 27 | 7 | 5 | 1 | 5 | **63** |
| | $ | 4,518 | 0 | 45,861 | 72,468 | 75,609 | 69,597 | 86,970 | 119,520 | 107,092 | **76,640** |
| 70-74 | | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | **4** |
| | $ | 0 | 0 | 0 | 0 | 82,462 | 0 | 64,755 | 0 | 0 | **78,035** |
| 75+ | | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | **2** |
| | $ | 0 | 0 | 0 | 76,923 | 0 | 0 | 0 | 100,921 | 0 | **88,922** |
| **Total** | | **1** | **5** | **48** | **1,503** | **1,649** | **610** | **179** | **20** | **5** | **4,020** |
| | **$** | **4,518** | **58,769** | **71,785** | **85,484** | **86,705** | **91,478** | **89,729** | **83,103** | **107,092** | **86,881** |

## Tier 2 Police and Fire Active Members

| | | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| <20 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| | $ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| 20-24 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| | $ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| 25-29 | | 1 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **10** |
| | $ | 42,065 | 63,963 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **61,773** |
| 30-34 | | 2 | 135 | 163 | 1 | 0 | 0 | 0 | 0 | 0 | **301** |
| | $ | 62,503 | 73,772 | 79,268 | 104,304 | 0 | 0 | 0 | 0 | 0 | **76,775** |
| 35-39 | | 2 | 199 | 1,023 | 99 | 0 | 0 | 0 | 0 | 0 | **1,323** |
| | $ | 58,363 | 77,685 | 80,406 | 80,599 | 0 | 0 | 0 | 0 | 0 | **79,978** |
| 40-44 | | 0 | 126 | 1,007 | 285 | 0 | 0 | 0 | 0 | 0 | **1,418** |
| | $ | 0 | 72,648 | 80,311 | 82,980 | 0 | 0 | 0 | 0 | 0 | **80,166** |
| 45-49 | | 0 | 73 | 576 | 180 | 0 | 0 | 0 | 0 | 0 | **829** |
| | $ | 0 | 72,409 | 75,696 | 81,540 | 0 | 0 | 0 | 0 | 0 | **76,675** |
| 50-54 | | 0 | 55 | 369 | 104 | 0 | 0 | 0 | 0 | 0 | **528** |
| | $ | 0 | 63,024 | 68,786 | 69,757 | 0 | 0 | 0 | 0 | 0 | **68,377** |
| 55-59 | | 0 | 32 | 251 | 71 | 0 | 0 | 0 | 0 | 0 | **354** |
| | $ | 0 | 61,501 | 65,753 | 67,673 | 0 | 0 | 0 | 0 | 0 | **65,754** |
| 60-64 | | 0 | 30 | 151 | 34 | 0 | 0 | 0 | 0 | 0 | **215** |
| | $ | 0 | 53,104 | 64,795 | 68,218 | 0 | 0 | 0 | 0 | 0 | **63,705** |
| 65-69 | | 1 | 8 | 42 | 7 | 0 | 0 | 0 | 0 | 0 | **58** |
| | $ | 86,396 | 81,678 | 68,424 | 61,479 | 0 | 0 | 0 | 0 | 0 | **69,724** |
| 70-74 | | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | **2** |
| | $ | 0 | 17,539 | 0 | 69,444 | 0 | 0 | 0 | 0 | 0 | **43,491** |
| 75+ | | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | **2** |
| | $ | 0 | 0 | 11,316 | 0 | 0 | 0 | 0 | 0 | 0 | **11,316** |
| **Total** | | **6** | **668** | **3,584** | **782** | **0** | **0** | **0** | **0** | **0** | **5,040** |
| | **$** | **61,699** | **72,054** | **76,511** | **78,374** | **0** | **0** | **0** | **0** | **0** | **76,192** |

### All Tier 1/Tier 2 Active Members

| | | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| <20 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| | $ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| 20-24 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| | $ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| 25-29 | | 5 | 73 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | **104** |
| | $ | 42,702 | 38,544 | 40,422 | 0 | 0 | 0 | 0 | 0 | 0 | **39,214** |
| 30-34 | | 18 | 1,148 | 926 | 15 | 0 | 0 | 0 | 0 | 0 | **2,107** |
| | $ | 34,074 | 51,462 | 54,808 | 60,839 | 0 | 0 | 0 | 0 | 0 | **52,851** |
| 35-39 | | 33 | 1,773 | 5,308 | 646 | 9 | 0 | 0 | 0 | 0 | **7,769** |
| | $ | 34,321 | 54,531 | 61,646 | 65,178 | 80,183 | 0 | 0 | 0 | 0 | **60,221** |
| 40-44 | | 28 | 1,476 | 6,133 | 3,647 | 583 | 11 | 0 | 0 | 0 | **11,878** |
| | $ | 47,119 | 53,797 | 62,584 | 69,827 | 70,861 | 59,306 | 0 | 0 | 0 | **64,083** |
| 45-49 | | 30 | 1,234 | 5,395 | 3,717 | 2,816 | 589 | 11 | 0 | 0 | **13,792** |
| | $ | 54,604 | 51,554 | 58,240 | 67,624 | 73,963 | 68,682 | 70,645 | 0 | 0 | **63,829** |
| 50-54 | | 21 | 1,228 | 5,668 | 4,001 | 3,667 | 2,552 | 502 | 11 | 0 | **17,650** |
| | $ | 57,355 | 47,776 | 52,374 | 60,179 | 67,682 | 72,698 | 68,647 | 58,886 | 0 | **60,415** |
| 55-59 | | 15 | 1,029 | 5,404 | 4,578 | 4,260 | 2,649 | 1,415 | 182 | 5 | **19,537** |
| | $ | 45,211 | 48,114 | 51,474 | 56,138 | 64,536 | 69,928 | 72,621 | 67,305 | 42,951 | **59,412** |
| 60-64 | | 26 | 692 | 3,375 | 2,985 | 2,882 | 1,644 | 803 | 254 | 23 | **12,684** |
| | $ | 37,384 | 47,351 | 52,590 | 55,892 | 61,332 | 68,820 | 75,086 | 72,470 | 66,925 | **58,988** |
| 65-69 | | 15 | 239 | 1,012 | 730 | 681 | 359 | 159 | 70 | 22 | **3,287** |
| | $ | 38,151 | 52,966 | 51,789 | 56,623 | 64,181 | 65,942 | 76,385 | 80,528 | 87,888 | **59,042** |
| 70-74 | | 3 | 49 | 178 | 107 | 72 | 30 | 23 | 13 | 12 | **487** |
| | $ | 27,406 | 30,633 | 47,497 | 49,581 | 60,803 | 53,148 | 74,643 | 104,206 | 84,737 | **52,163** |
| 75+ | | 0 | 15 | 64 | 27 | 15 | 9 | 5 | 1 | 6 | **142** |
| | $ | 0 | 24,317 | 32,187 | 36,759 | 52,481 | 83,759 | 64,246 | 100,921 | 71,141 | **40,896** |
| **Total** | | **194** | **8,956** | **33,489** | **20,453** | **14,985** | **7,843** | **2,918** | **531** | **68** | **89,437** |
| | **$** | **43,433** | **51,035** | **56,511** | **61,667** | **66,670** | **70,258** | **72,815** | **72,311** | **75,459** | **60,661** |

## Age/Service and Prior Year Covered Payroll by Rate Pool

### Tier 1/Tier 2 SLGRP Active Members

| | | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| <20 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| | $ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| 20-24 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| | $ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| 25-29 | | 3 | 44 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | **65** |
| | $ | 45,908 | 43,800 | 47,581 | 0 | 0 | 0 | 0 | 0 | 0 | **44,944** |
| 30-34 | | 8 | 472 | 563 | 12 | 0 | 0 | 0 | 0 | 0 | **1,055** |
| | $ | 38,242 | 52,872 | 56,239 | 59,502 | 0 | 0 | 0 | 0 | 0 | **54,633** |
| 35-39 | | 18 | 749 | 2,493 | 429 | 5 | 0 | 0 | 0 | 0 | **3,694** |
| | $ | 36,924 | 57,180 | 63,957 | 67,214 | 80,818 | 0 | 0 | 0 | 0 | **62,852** |
| 40-44 | | 9 | 680 | 3,193 | 1,880 | 398 | 7 | 0 | 0 | 0 | **6,167** |
| | $ | 15,161 | 61,382 | 65,636 | 72,433 | 71,956 | 56,222 | 0 | 0 | 0 | **67,562** |
| 45-49 | | 6 | 592 | 2,801 | 2,014 | 1,512 | 372 | 10 | 0 | 0 | **7,307** |
| | $ | 10,010 | 58,932 | 65,079 | 70,816 | 76,268 | 69,497 | 73,543 | 0 | 0 | **68,669** |
| 50-54 | | 6 | 555 | 2,775 | 2,019 | 1,942 | 1,181 | 313 | 9 | 0 | **8,800** |
| | $ | 35,564 | 56,085 | 61,726 | 69,355 | 72,377 | 75,143 | 70,402 | 59,711 | 0 | **67,560** |
| 55-59 | | 7 | 526 | 2,725 | 2,138 | 2,218 | 1,474 | 668 | 131 | 1 | **9,888** |
| | $ | 20,105 | 55,785 | 61,249 | 66,699 | 73,142 | 74,534 | 74,754 | 68,545 | 53,502 | **67,764** |
| 60-64 | | 18 | 390 | 1,843 | 1,536 | 1,557 | 1,012 | 481 | 152 | 13 | **7,002** |
| | $ | 39,964 | 52,006 | 60,609 | 64,878 | 70,071 | 76,172 | 82,092 | 74,460 | 62,553 | **67,147** |
| 65-69 | | 11 | 151 | 620 | 438 | 433 | 230 | 108 | 48 | 14 | **2,053** |
| | $ | 47,773 | 60,342 | 58,458 | 63,994 | 72,091 | 75,240 | 87,935 | 82,936 | 89,423 | **66,810** |
| 70-74 | | 1 | 29 | 103 | 65 | 52 | 22 | 16 | 10 | 11 | **309** |
| | $ | 7,679 | 34,961 | 56,314 | 60,248 | 67,873 | 58,894 | 86,720 | 118,373 | 80,667 | **61,559** |
| 75+ | | 0 | 9 | 47 | 15 | 9 | 6 | 4 | 1 | 6 | **97** |
| | $ | 0 | 28,119 | 35,061 | 43,434 | 68,179 | 98,485 | 70,555 | 100,921 | 71,141 | **47,082** |
| **Total** | | **87** | **4,197** | **17,181** | **10,546** | **8,126** | **4,304** | **1,600** | **351** | **45** | **46,437** |
| | **$** | **33,465** | **56,581** | **62,710** | **68,578** | **72,804** | **74,612** | **77,100** | **74,359** | **76,284** | **66,900** |

## Tier 1/Tier 2 School District Active Members

| | | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| <20 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| | $ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| 20-24 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| | $ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| 25-29 | | 0 | 21 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | **28** |
| | $ | 0 | 23,950 | 22,295 | 0 | 0 | 0 | 0 | 0 | 0 | **23,537** |
| 30-34 | | 8 | 583 | 244 | 1 | 0 | 0 | 0 | 0 | 0 | **836** |
| | $ | 20,689 | 47,416 | 44,437 | 43,343 | 0 | 0 | 0 | 0 | 0 | **46,286** |
| 35-39 | | 12 | 880 | 2,300 | 133 | 1 | 0 | 0 | 0 | 0 | **3,326** |
| | $ | 21,618 | 49,655 | 55,931 | 51,217 | 55,504 | 0 | 0 | 0 | 0 | **53,958** |
| 40-44 | | 10 | 674 | 2,353 | 1,394 | 109 | 1 | 0 | 0 | 0 | **4,541** |
| | $ | 24,567 | 44,083 | 55,578 | 62,744 | 59,118 | 44,060 | 0 | 0 | 0 | **56,086** |
| 45-49 | | 9 | 554 | 2,111 | 1,357 | 1,025 | 144 | 1 | 0 | 0 | **5,201** |
| | $ | 18,137 | 41,630 | 46,310 | 59,289 | 67,212 | 59,403 | 41,669 | 0 | 0 | **53,630** |
| 50-54 | | 6 | 579 | 2,491 | 1,714 | 1,417 | 1,187 | 150 | 1 | 0 | **7,545** |
| | $ | 9,420 | 36,711 | 40,116 | 47,476 | 58,277 | 67,906 | 61,936 | 68,587 | 0 | **49,723** |
| 55-59 | | 3 | 423 | 2,296 | 2,108 | 1,732 | 968 | 647 | 39 | 3 | **8,219** |
| | $ | 12,697 | 35,956 | 38,151 | 43,531 | 51,923 | 61,322 | 68,510 | 65,020 | 29,860 | **47,554** |
| 60-64 | | 3 | 252 | 1,269 | 1,215 | 1,106 | 529 | 275 | 87 | 7 | **4,743** |
| | $ | 10,575 | 36,465 | 39,445 | 42,460 | 47,942 | 53,375 | 61,613 | 67,012 | 67,461 | **45,408** |
| 65-69 | | 3 | 66 | 310 | 234 | 206 | 106 | 41 | 17 | 5 | **988** |
| | $ | 14,083 | 31,250 | 36,694 | 40,442 | 46,579 | 45,519 | 46,829 | 67,631 | 81,242 | **41,336** |
| 70-74 | | 1 | 15 | 57 | 36 | 14 | 8 | 5 | 2 | 1 | **139** |
| | $ | 69,623 | 20,659 | 29,706 | 30,087 | 30,818 | 37,346 | 40,018 | 24,232 | 129,505 | **30,678** |
| 75+ | | 0 | 6 | 10 | 12 | 5 | 2 | 1 | 0 | 0 | **36** |
| | $ | 0 | 18,613 | 23,669 | 28,415 | 24,379 | 66,350 | 39,012 | 0 | 0 | **27,305** |
| **Total** | | **55** | **4,053** | **13,448** | **8,204** | **5,615** | **2,945** | **1,120** | **146** | **16** | **35,602** |
| | **$** | **19,492** | **42,624** | **46,034** | **50,023** | **55,400** | **61,818** | **64,965** | **65,976** | **68,595** | **49,994** |

## Tier 1/Tier 2 Independent Employers Active Members

| | | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| <20 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| | $ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| 20-24 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| | $ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| 25-29 | | 2 | 8 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | **11** |
| | $ | 37,894 | 47,945 | 38,447 | 0 | 0 | 0 | 0 | 0 | 0 | **45,254** |
| 30-34 | | 2 | 93 | 119 | 2 | 0 | 0 | 0 | 0 | 0 | **216** |
| | $ | 70,941 | 69,670 | 69,305 | 77,609 | 0 | 0 | 0 | 0 | 0 | **69,554** |
| 35-39 | | 3 | 144 | 515 | 84 | 3 | 0 | 0 | 0 | 0 | **749** |
| | $ | 69,516 | 70,554 | 75,984 | 76,882 | 87,351 | 0 | 0 | 0 | 0 | **75,060** |
| 40-44 | | 9 | 122 | 587 | 373 | 76 | 3 | 0 | 0 | 0 | **1,170** |
| | $ | 104,133 | 65,187 | 74,066 | 83,163 | 81,969 | 71,582 | 0 | 0 | 0 | **76,779** |
| 45-49 | | 15 | 88 | 483 | 346 | 279 | 73 | 0 | 0 | 0 | **1,284** |
| | $ | 94,321 | 64,393 | 70,713 | 81,734 | 86,272 | 82,830 | 0 | 0 | 0 | **77,595** |
| 50-54 | | 9 | 94 | 402 | 268 | 308 | 184 | 39 | 1 | 0 | **1,305** |
| | $ | 103,839 | 66,877 | 63,777 | 72,301 | 81,343 | 87,920 | 80,371 | 41,757 | 0 | **74,056** |
| 55-59 | | 5 | 80 | 383 | 332 | 310 | 207 | 100 | 12 | 1 | **1,430** |
| | $ | 99,866 | 61,958 | 61,796 | 68,182 | 73,432 | 77,374 | 84,978 | 61,193 | 71,673 | **69,821** |
| 60-64 | | 5 | 50 | 263 | 234 | 219 | 103 | 47 | 15 | 3 | **939** |
| | $ | 44,183 | 65,903 | 59,818 | 66,652 | 66,819 | 75,914 | 82,217 | 83,965 | 84,621 | **66,746** |
| 65-69 | | 1 | 22 | 82 | 58 | 42 | 23 | 10 | 5 | 3 | **246** |
| | $ | 4,518 | 67,483 | 58,432 | 66,243 | 68,975 | 67,090 | 72,824 | 101,256 | 91,801 | **65,336** |
| 70-74 | | 1 | 5 | 18 | 6 | 6 | 0 | 2 | 1 | 0 | **39** |
| | $ | 4,914 | 35,448 | 53,384 | 50,995 | 69,498 | 0 | 64,594 | 122,481 | 0 | **54,300** |
| 75+ | | 0 | 0 | 7 | 0 | 1 | 1 | 0 | 0 | 0 | **9** |
| | $ | 0 | 0 | 25,061 | 0 | 51,708 | 30,218 | 0 | 0 | 0 | **28,595** |
| **Total** | | **52** | **706** | **2,860** | **1,703** | **1,244** | **594** | **198** | **34** | **7** | **7,398** |
| | **$** | **85,432** | **66,349** | **68,537** | **74,968** | **77,474** | **80,551** | **82,595** | **78,362** | **85,848** | **72,833** |

## OPSRP Active General Service Members

| | | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| <20 | | 90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **90** |
| | $ | 7,705 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **7,705** |
| 20-24 | | 1,595 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1,683** |
| | $ | 19,399 | 21,836 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **19,526** |
| 25-29 | | 6,220 | 1,926 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **8,146** |
| | $ | 30,952 | 35,742 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **32,085** |
| 30-34 | | 6,418 | 6,449 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **12,867** |
| | $ | 36,455 | 42,606 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **39,538** |
| 35-39 | | 5,283 | 5,422 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **10,705** |
| | $ | 38,328 | 45,308 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **41,863** |
| 40-44 | | 4,723 | 5,166 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **9,889** |
| | $ | 36,947 | 44,318 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **40,797** |
| 45-49 | | 3,777 | 4,743 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **8,520** |
| | $ | 35,185 | 40,507 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **38,148** |
| 50-54 | | 3,304 | 4,477 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **7,781** |
| | $ | 36,066 | 39,125 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **37,826** |
| 55-59 | | 2,732 | 3,710 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **6,442** |
| | $ | 36,341 | 39,258 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **38,021** |
| 60-64 | | 1,740 | 2,410 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **4,150** |
| | $ | 34,797 | 40,313 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **38,000** |
| 65-69 | | 572 | 925 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1,497** |
| | $ | 31,656 | 34,558 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **33,449** |
| 70-74 | | 123 | 202 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **325** |
| | $ | 22,327 | 23,593 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **23,114** |
| 75+ | | 29 | 83 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **112** |
| | $ | 17,670 | 17,265 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **17,370** |
| **Total** | | **36,606** | **35,601** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **72,207** |
| | **$** | **34,649** | **41,246** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **37,901** |

## OPSRP Active Police and Fire Members

| | | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| <20 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| | $ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **0** |
| 20-24 | | 97 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **102** |
| | $ | 47,230 | 45,195 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **47,130** |
| 25-29 | | 713 | 299 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1,012** |
| | $ | 53,941 | 62,165 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **56,371** |
| 30-34 | | 650 | 883 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1,533** |
| | $ | 57,335 | 65,943 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **62,293** |
| 35-39 | | 406 | 632 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1,038** |
| | $ | 55,564 | 64,894 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **61,244** |
| 40-44 | | 308 | 395 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **703** |
| | $ | 52,933 | 63,531 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **58,888** |
| 45-49 | | 169 | 227 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **396** |
| | $ | 52,699 | 58,852 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **56,226** |
| 50-54 | | 92 | 179 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **271** |
| | $ | 58,616 | 52,048 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **54,278** |
| 55-59 | | 99 | 124 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **223** |
| | $ | 56,809 | 55,842 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **56,271** |
| 60-64 | | 43 | 90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **133** |
| | $ | 57,440 | 50,007 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **52,410** |
| 65-69 | | 12 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **37** |
| | $ | 61,509 | 49,189 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **53,185** |
| 70-74 | | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **7** |
| | $ | 0 | 36,559 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **36,559** |
| 75+ | | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **4** |
| | $ | 89,764 | 78,162 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **81,063** |
| **Total** | | **2,590** | **2,869** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **5,459** |
| | **$** | **54,978** | **62,380** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **58,868** |

## All OPSRP Active Members

| | | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | 30-34 | 35-39 | 40+ | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| <20 | | 90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **90** |
| | $ | 7,705 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **7,705** |
| 20-24 | | 1,692 | 93 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1,785** |
| | $ | 20,994 | 23,092 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **21,104** |
| 25-29 | | 6,933 | 2,225 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **9,158** |
| | $ | 33,316 | 39,293 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **34,768** |
| 30-34 | | 7,068 | 7,332 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **14,400** |
| | $ | 38,376 | 45,417 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **41,961** |
| 35-39 | | 5,689 | 6,054 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **11,743** |
| | $ | 39,558 | 47,353 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **43,577** |
| 40-44 | | 5,031 | 5,561 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **10,592** |
| | $ | 37,925 | 45,682 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **41,998** |
| 45-49 | | 3,946 | 4,970 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **8,916** |
| | $ | 35,935 | 41,345 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **38,951** |
| 50-54 | | 3,396 | 4,656 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **8,052** |
| | $ | 36,677 | 39,622 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **38,380** |
| 55-59 | | 2,831 | 3,834 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **6,665** |
| | $ | 37,057 | 39,794 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **38,631** |
| 60-64 | | 1,783 | 2,500 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **4,283** |
| | $ | 35,343 | 40,662 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **38,448** |
| 65-69 | | 584 | 950 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **1,534** |
| | $ | 32,270 | 34,943 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **33,925** |
| 70-74 | | 123 | 209 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **332** |
| | $ | 22,327 | 24,027 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **23,398** |
| 75+ | | 30 | 86 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **116** |
| | $ | 20,073 | 19,389 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **19,566** |
| **Total** | | **39,196** | **38,470** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **77,666** |
| | **$** | **35,992** | **42,822** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **39,375** |

## Inactive Member Data Exhibits

For the following exhibits, inactive members are counted by lives, not by segments.

**Total Tier 1/Tier 2**

| Dormant Members | Count | Average Deferred Monthly Benefit |
|---|---|---|
| <20 | 0 | $ 0 |
| 20-24 | 0 | 0 |
| 25-29 | 88 | 232 |
| 30-34 | 776 | 577 |
| 35-39 | 2,539 | 1,015 |
| 40-44 | 3,779 | 1,336 |
| 45-49 | 4,244 | 1,554 |
| 50-54 | 6,073 | 1,665 |
| 55-59 | 7,811 | 1,608 |
| 60-64 | 6,117 | 1,493 |
| 65-69 | 2,648 | 1,340 |
| 70-74 | 917 | 1,036 |
| 75+ | 1,073 | 1,065 |
| **Total** | **36,065** | **$ 1,445** |

| Retirees and Beneficiaries | Count | Average Monthly Benefit |
|---|---|---|
| <45 | 530 | $ 1,298 |
| 45-49 | 356 | 1,761 |
| 50-54 | 1,292 | 2,512 |
| 55-59 | 7,677 | 3,016 |
| 60-64 | 22,731 | 2,828 |
| 65-69 | 28,669 | 2,614 |
| 70-74 | 21,650 | 2,364 |
| 75-79 | 15,010 | 2,051 |
| 80-84 | 10,886 | 1,723 |
| 85-89 | 7,779 | 1,336 |
| 90-94 | 3,741 | 1,004 |
| 95-99 | 993 | 796 |
| 100+ | 141 | 777 |
| **Total** | **121,455** | **$ 2,328** |

**OPSRP**

| Dormant Members | Count | Average Deferred Monthly Benefit |
|---|---|---|
| <20 | 0 | $ 0 |
| 20-24 | 21 | 102 |
| 25-29 | 345 | 206 |
| 30-34 | 1,107 | 288 |
| 35-39 | 869 | 322 |
| 40-44 | 798 | 325 |
| 45-49 | 652 | 321 |
| 50-54 | 646 | 298 |
| 55-59 | 530 | 304 |
| 60-64 | 340 | 290 |
| 65-69 | 318 | 122 |
| 70-74 | 165 | 67 |
| 75+ | 15 | 144 |
| **Total** | **5,806** | **$ 283** |

| Retirees and Beneficiaries | Count | Average Monthly Benefit |
|---|---|---|
| <45 | 1 | $ 1,573 |
| 45-49 | 1 | 1,206 |
| 50-54 | 3 | 286 |
| 55-59 | 62 | 179 |
| 60-64 | 171 | 332 |
| 65-69 | 284 | 386 |
| 70-74 | 53 | 371 |
| 75-79 | 6 | 489 |
| 80-84 | 1 | 309 |
| 85-89 | 0 | 0 |
| 90-94 | 0 | 0 |
| 95-99 | 0 | 0 |
| 100+ | 0 | 0 |
| **Total** | **582** | **$ 351** |

**System-Wide Totals**

| Dormant Members | Count | Average Deferred Monthly Benefit |
|---|---|---|
| <20 | 0 | $ 0 |
| 20-24 | 21 | 102 |
| 25-29 | 433 | 211 |
| 30-34 | 1,883 | 407 |
| 35-39 | 3,408 | 838 |
| 40-44 | 4,577 | 1,160 |
| 45-49 | 4,896 | 1,389 |
| 50-54 | 6,719 | 1,533 |
| 55-59 | 8,341 | 1,525 |
| 60-64 | 6,457 | 1,430 |
| 65-69 | 2,966 | 1,210 |
| 70-74 | 1,082 | 889 |
| 75+ | 1,088 | 1,052 |
| **Total** | **41,871** | **$ 1,284** |

| Retirees and Beneficiaries | Count | Average Monthly Benefit |
|---|---|---|
| <45 | 531 | $ 1,299 |
| 45-49 | 357 | 1,760 |
| 50-54 | 1,295 | 2,507 |
| 55-59 | 7,739 | 2,994 |
| 60-64 | 22,902 | 2,810 |
| 65-69 | 28,953 | 2,592 |
| 70-74 | 21,703 | 2,359 |
| 75-79 | 15,016 | 2,051 |
| 80-84 | 10,887 | 1,723 |
| 85-89 | 7,779 | 1,336 |
| 90-94 | 3,741 | 1,004 |
| 95-99 | 993 | 796 |
| 100+ | 141 | 777 |
| **Total** | **122,037** | **$ 2,318** |

## Retiree Healthcare Member Data Exhibits

For the following exhibits, inactive members are counted by lives, not by pool or employer segments.

**RHIA Members**

| | As of December 31, 2012 | As of December 31, 2011 |
|---|---|---|
| **Dormant members** | | |
| Number | 16,260 | 15,948 |
| Average Age | 53.2 | 52.8 |
| **Retired members under age 65 eligible for deferred RHIA benefits** | | |
| Number | 29,007 | 30,231 |
| Average Age | 60.3 | 60.2 |
| **Retired members receiving RHIA benefits** | | |
| Number | 42,995 | 42,163 |
| Average Age | 75.9 | 75.8 |

**RHIPA Members**

| | As of December 31, 2012 | As of December 31, 2011 |
|---|---|---|
| **Active Tier 1/Tier 2 employees of RHIPA employers** | | |
| Number | 24,115 | 25,804 |
| Average Age | 52.0 | 51.5 |
| Average Service | 17.6 | 16.8 |
| **Retired members receiving RHIPA benefits** | | |
| Number | 1,148 | 1,096 |
| Average Age | 61.2 | 61.3 |
| Average Monthly Subsidy Amount | 292 | 284 |

# Actuarial Methods and Assumptions

# Tier 1/Tier 2 (including Retiree Healthcare)

## Actuarial Methods and Valuation Procedures

In September 2013 the Board adopted the following actuarial methods and valuation procedures for the December 31, 2012 and 2013 actuarial valuations of PERS Tier 1/Tier 2 benefits.

| | |
|---|---|
| *Actuarial cost method* | **Entry Age Normal.** Under the Entry Age Normal (EAN) cost method, each active member's **entry age present value of projected benefits** is allocated over the member's service from their date of entry until their assumed date of exit, taking into consideration expected future compensation increases. Thus, the total pension to which each member is expected to become entitled at retirement is broken down into units, each associated with a year of past or projected future credited service. Typically, when this method is introduced, there will be an initial liability for benefits credited for service prior to that date, and to the extent that the liability is not covered by assets of the plan, there is an unfunded accrued liability to be funded over a stipulated period in accordance with an amortization schedule.<br>A detailed description of the calculation follows:<br>• An individual member's **entry age present value of projected benefits** is the sum of the present value of the benefit described under the plan at each possible separation date, determined at the member's entry age using the projected compensation and service at each separation date.<br>• An individual member's **entry age present value of projected salaries** is the sum of the present value of the projected compensation over the member's working career associated with each possible future separation date, determined at the member's entry age.<br>• An individual member's **present value of projected benefits** is the sum of the present value of the benefit described under the plan at each possible separation date, determined at the valuation date using the projected compensation and service at each separation date.<br>• An individual member's **normal cost** for a certain year is the member's **entry age present value of projected benefits** divided by the member's **entry age present value of projected salaries** and multiplied by the member's projected compensation for the year following the valuation date.<br>• An individual member's **actuarial accrued liability** is the member's **present value of projected benefits** less the sum of the present value of the member's **normal costs** for each future year, determined at the valuation date using the projected compensation and service at each future year.<br>– The plan's **normal cost** is the sum of the individual member normal costs, and the plan's **actuarial accrued liability** is the sum of the individual member accrued liabilities. |
| *Tier 1/Tier 2 UAL amortization* | The Tier 1/Tier 2 UAL amortization period will be reset at 20 years as of December 31, 2013. Gains and losses between subsequent odd-year valuations will be amortized as a level percentage of combined valuation payroll (Tier 1/ Tier 2 plus OPSRP payroll) over a closed 20 year period from the valuation in which they are first recognized. |

| | |
|---|---|
| *Retiree Healthcare UAL amortization* | The UAL for Retiree Health Care as of December 31, 2007 is amortized as a level percentage of combined valuation payroll over a closed 10 year period. Gains and losses between subsequent odd-year valuations are amortized as a level percentage of combined valuation payroll (Tier 1/ Tier 2 plus OPSRP payroll) over a closed 10 year period from the valuation in which they are first recognized. |
| *Asset valuation method* | The actuarial value of assets equals the market value of assets, excluding the Contingency and Capital Preservation Reserves, and the Rate Guarantee Reserve when it is in positive surplus status.<br>Market values are reported to Milliman by PERS. It is our understanding that select real estate and private equity investments are reported on a three-month lag basis. This valuation report does not attempt to quantify any effects of the reporting lag. |
| *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. |
| *Allocation of Liability for Service Segments* | For active Tier 1/Tier 2 members who have worked for multiple PERS employers over their career, the calculated actuarial accrued liability is allocated among the employers based on a weighted average of the Money Match methodology, which uses account balance, and the Full Formula methodology, which uses service. The allocation is 30% (5% for police & fire) based on account balance with each employer and 70% (95% for police & fire) based on service with each employer.<br>The entire normal cost is allocated to the current employer. |
| *Allocation of Benefits-In-Force (BIF) Reserve* | The BIF reserve is allocated to each rate pool in proportion to the retiree liability attributable to the rate pool. |

## Economic Assumptions

The Board adopted the following economic assumptions for the December 31, 2012 and 2013 actuarial valuations. The investment return assumption, health care cost inflation assumption, and interest crediting for account balances was first adopted in 2013. All other economic assumptions were first adopted in 2005.

| | |
|---|---|
| *Investment return* | 7.75% compounded annually |
| *Pre-2014 Interest crediting* | 8.00% compounded annually on members' regular account balances<br>8.25% compounded annually on members' variable account balances |
| *Post-2013 Interest crediting* | 7.75% compounded annually on members' regular account balances<br>7.75% compounded annually on members' variable account balances |
| *Inflation* | 2.75% compounded annually |
| *Payroll growth* | 3.75% compounded annually. This assumption represents the sum of the inflation assumption and a real wage growth assumption of 100 basis points. |
| *Healthcare cost trend* | Health cost trend rates are used to predict increases in the RHIPA Maximum Subsidy. These rates include consideration of the excise tax that will be introduced in 2018 by the Patient Protection and Affordable Care Act. |

| Year[1] | Rate | Year | Rate |
|---|---|---|---|
| 2013 | 8.0% | 2036 | 6.2% |
| 2014 | 6.1 | 2037 | 6.1 |
| 2015 | 5.9 | 2038 – 2039 | 6.0 |
| 2016 | 5.5 | 2040 – 2041 | 5.9 |
| 2017 | 6.2 | 2042 – 2043 | 5.8 |
| 2018 | 5.9 | 2044 – 2047 | 5.7 |
| 2019 | 5.8 | 2048 – 2052 | 5.6 |
| 2020 | 5.9 | 2053 – 2060 | 5.5 |
| 2021 – 2022 | 6.0 | 2061 – 2065 | 5.4 |
| 2023 | 6.5 | 2066 – 2072 | 5.3 |
| 2024 – 2025 | 6.9 | 2073 – 2074 | 5.2 |
| 2026 | 6.8 | 2075 – 2076 | 5.1 |
| 2027 – 2029 | 6.7 | 2077 – 2078 | 5.0 |
| 2030 – 2031 | 6.6 | 2079 – 2080 | 4.9 |
| 2032 – 2033 | 6.5 | 2081 – 2082 | 4.8 |
| 2034 – 2035 | 6.4 | 2083+ | 4.7 |

[1] *For valuation purposes, the health cost trend rates are assumed to be applied at the beginning of the plan year.*

## Demographic Assumptions

The Board adopted the following demographic assumptions for the December 31, 2012 and 2013 actuarial valuations.

**Mortality**

**Healthy Retired Members**

The following healthy retired mortality tables were first adopted in the December 31, 2010 valuation, except for the School District male and Police and Fire male table which were adopted in the December 31, 2012 valuation.

| Basic Table | RP 2000, Generational Combined Active/Healthy Annuitant, Sex Distinct |
|---|---|
| School District male | No collar, set back 24 months |
| Other General Service male (including male beneficiary) | Blended 25% blue collar / 75% white collar, set back 12 months |
| Police & Fire male | Blended 25% blue collar / 75% white collar, set back 12 months |
| School District female | White collar, set back 24 months |
| Other female (including female beneficiary) | White collar, no set back |

**Disabled Retired Members**

The following disabled retiree mortality rates were first adopted for the December 31, 2012 actuarial valuation.

| Basic Table | RP 2000, Static, Combined Disabled, No Collar, Sex Distinct |
|---|---|
| Male | 65% of Disabled table |
| Female | 90% of Disabled table |

**Non-Annuitant Members**

The following mortality rates were first adopted for non-annuitant members for the December 31, 2012 actuarial valuation, except for the Other General Service male and School District female rates which were adopted in the December 31, 2010 valuation.

| Basic Table | Percent of Healthy Retired Mortality Tables |
|---|---|
| School District male | 70% |
| Other General Service male | 85% |
| Police & Fire male | 95% |
| School District female | 60% |
| Other female | 55% |

### Retirement Assumptions

The retirement assumptions used in the actuarial valuation include the following:

- Retirement from active status/dormant status
- Probability a member will elect a lump sum option at retirement
- Percentage of members who elect to purchase credited service at retirement.

### Rates of Retirement from Active Status

The following retirement rate assumptions were first adopted in the December 31, 2012 valuation.

| | Police & Fire | | | General Service | | School Districts | | General Service (Including School Districts) | Judges |
|---|---|---|---|---|---|---|---|---|---|
| Age | < 13 yrs | 13-24 yrs | 25+ yrs | <15 yrs | 15-29 yrs | <15 yrs | 15-29 yrs | 30+ yrs | |
| Less than 50 | | | | | | | | 15.00% | |
| 50 | 1.00% | 1.50% | 20.00% | | | | | 15.00% | |
| 51 | 1.00% | 1.50% | 14.00% | | | | | 15.00% | |
| 52 | 1.00% | 1.50% | 14.00% | | | | | 22.00% | |
| 53 | 1.00% | 1.50% | 14.00% | | | | | 22.00% | |
| 54 | 1.00% | 1.50% | 14.00% | | | | | 22.00% | |
| 55 | 2.00% | 7.00% | 20.00% | 1.00% | 2.50% | 1.00% | 4.00% | 22.00% | |
| 56 | 2.00% | 7.00% | 20.00% | 1.00% | 2.50% | 1.00% | 4.00% | 22.00% | |
| 57 | 2.00% | 7.00% | 20.00% | 1.00% | 2.50% | 1.00% | 4.00% | 22.00% | |
| 58 | 2.00% | 7.00% | 20.00% | 1.00% | 8.00% | 2.50% | 13.00% | 26.00% | |
| 59 | 2.00% | 7.00% | 20.00% | 1.50% | 8.00% | 2.50% | 12.00% | 21.00% | |
| 60 | 5.00% | 10.00% | 20.00% | 4.00% | 8.00% | 3.50% | 12.00% | 21.00% | 10.00% |
| 61 | 2.00% | 13.00% | 20.00% | 4.00% | 8.00% | 5.50% | 12.00% | 21.00% | 10.00% |
| 62 | 15.00% | 20.00% | 35.00% | 8.50% | 16.00% | 10.00% | 22.00% | 29.00% | 10.00% |
| 63 | 7.00% | 18.00% | 25.00% | 8.00% | 14.50% | 10.00% | 18.00% | 22.00% | 10.00% |
| 64 | 7.00% | 10.00% | 15.00% | 8.00% | 13.00% | 8.00% | 16.00% | 26.00% | 10.00% |
| 65 | 100.00% | 100.00% | 100.00% | 14.00% | 22.00% | 19.50% | 29.00% | 30.00% | 10.00% |
| 66 | | | | 19.00% | 31.00% | 16.00% | 32.00% | 30.00% | 10.00% |
| 67 | | | | 15.00% | 22.00% | 16.00% | 28.00% | 26.00% | 10.00% |
| 68 | | | | 15.00% | 22.00% | 13.00% | 24.00% | 22.00% | 10.00% |
| 69 | | | | 15.00% | 22.00% | 13.00% | 24.00% | 22.00% | 30.00% |
| 70 | | | | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% |

### Retirement from Dormant Status

Dormant members are assumed to retire at Normal Retirement Age (age 58 for Tier 1, age 60 for Tier 2, age 60 for Judges, and age 55 for Police & Fire) or at the first unreduced retirement age (30 years of service, or age 50 with 25 years of service for Police & Fire).

### Lump Sum Option at Retirement

Members retiring may elect to receive a full or partial lump sum at retirement. The probability that a retiring member will elect a lump sum at retirement is summarized in the table below. These rates were first adopted effective December 31, 2012.

| Lump Sum Option at Retirement | |
|---|---|
| Partial Lump Sum: | 5% for all years |
| Total Lump Sum: | 4.0% for 2013, declining by 0.5% per year until reaching 0.0% |
| No Lump Sum: | 91.0% in 2013, increasing by 0.5% per year until reaching 95.0% |

### Purchase of Credited Service at Retirement

The following percentages of members are assumed to purchase credit for the six-month waiting period at retirement. These rates were first adopted effective December 31, 2010.

| Purchase of Credited Service at Retirement | |
|---|---|
| Money Match Retirements: | 0% |
| Non-Money Match Retirements: | 60% |

### Judge Member Plan Election

All judge members are assumed to elect to retire under the provisions of Plan B.

### Disability Assumptions

There are two disability assumptions used in the valuation - duty disability and ordinary disability. Duty Disability rates are separated between Police & Fire and General Service, while ordinary disability is the same for all members. The rates for duty disability were first adopted effective December 31, 2012. The rates for ordinary disability were first adopted effective December 31, 2010.

| | Percentage of the 1985 Disability Class 1 Rates |
|---|---|
| Duty Disability Police & Fire | 20% |
| Duty Disability General Service | 1.2% |
| Ordinary Disability | 50% with 0.18% cap |

### Termination Assumptions

The termination assumptions were first adopted effective December 31, 2012.

### Termination Rates

Sample termination rates are shown for each group below:

| Duration from Hire Date | School District Male | School District Female | General Service Male | General Service Female | Police & Fire |
|---|---|---|---|---|---|
| 0 | 20.00% | 15.50% | 19.00% | 19.23% | 10.00% |
| 1 | 16.00% | 14.05% | 17.16% | 16.99% | 8.50% |
| 5 | 8.24% | 8.35% | 8.36% | 10.02% | 4.80% |
| 10 | 4.23% | 4.36% | 3.96% | 5.18% | 2.16% |
| 15 | 2.78% | 2.98% | 2.86% | 3.00% | 1.30% |
| 20 | 1.82% | 2.23% | 2.07% | 2.04% | 1.30% |
| 25 | 1.20% | 1.67% | 1.49% | 1.50% | 1.30% |
| 30+ | 1.20% | 1.50% | 1.40% | 1.50% | 1.30% |

For a complete table of rates, please refer to the 2012 Experience Study for the System, which was published on September 18, 2013.

### Oregon Residency Post-Retirement

For purposes of determining eligibility for SB 656/ HB 3349 benefit adjustments, 85% of retirees are assumed to remain Oregon residents after retirement.

## Salary Increase Assumptions

The salary increase assumptions reflected in the actuarial valuation include:

- Merit scale increases in addition to the payroll growth increase
- Unused Sick Leave adjustments
- Vacation Pay adjustments

### Merit Increases

Merit increases are based on duration of service for the following groups with sample rates shown in the following table. The school district rates were first adopted effective December 31, 2012. All other rates were first adopted effective December 31, 2010.

| Duration | School District | Other General Service | Police & Fire |
|---|---|---|---|
| 0 | 3.37% | 3.61% | 5.13% |
| 1 | 3.02% | 3.22% | 4.50% |
| 5 | 1.76% | 1.97% | 2.55% |
| 10 | 0.55% | 1.00% | 1.20% |
| 15 | -0.31% | 0.51% | 0.67% |
| 20 | -0.86% | 0.33% | 0.59% |
| 25 | -1.00% | 0.24% | 0.56% |
| 30 | -1.00% | 0.05% | 0.19% |
| 31+ | -1.00% | 0.00% | 0.00% |

For a complete table of rates, please refer to the 2012 Experience Study for the System, which was published on September 18, 2013.

### Unused Sick Leave

Members covered by the provision allowing unused sick leave to be used to increase final average salary are assumed to receive increases in their final average salary in accordance with the table below. This adjustment is not applied to disability benefits. Local general service females were adopted effective December 31, 2001. The state general service male, state general service female and local police and fire rates were adopted effective December 31, 2010. All other rates were adopted effective December 31, 2012.

| Unused Sick Leave | |
|---|---|
| ***Actives*** | |
| • State General Service Male | 6.25% |
| • State General Service Female | 3.75% |
| • School District Male | 7.75% |
| • School District Female | 5.75% |
| • Local General Service Male | 4.75% |
| • Local General Service Female | 3.00% |
| • State Police & Fire | 4.75% |
| • Local Police & Fire | 7.50% |
| ***Dormant Members*** | 2.25% |

### Vacation Pay

Members eligible to receive a lump sum payment of unused vacation pay are assumed to receive increases in their final average salary in accordance with the table below. This adjustment is not applied to disability benefits. These rates were adopted December 31, 2012.

| Vacation Pay | |
|---|---|
| ***Tier 1*** | |
| • State General Service | 0.70% |
| • School District | 0.25% |
| • Local General Service | 1.00% |
| • State Police & Fire | 0.80% |
| • Local Police & Fire | 2.00% |
| ***Tier 2*** | 0.00% |

### Retiree Healthcare Participation

The following percentages of eligible retiring members are assumed to elect RHIPA and RHIA coverage:

| Retiree Healthcare Participation | |
|---|---|
| ***RHIPA*** | |
| • 8 – 9 years of service | 10.0% |
| • 10 – 14 years of service | 10.0% |
| • 15 – 19 years of service | 15.0% |
| • 20 – 24 years of service | 22.0% |
| • 25 – 29 years of service | 22.0% |
| • 30+ years of service | 30.0% |
| ***RHIA*** | |
| • Healthy Retired | 45.0% |
| • Disabled Retired | 20.0% |

The RHIA disabled retired rate was first adopted December 31, 2008. All other rates were first adopted effective December 31, 2012.

## OPSRP

Most of the methods and assumptions adopted for the OPSRP valuation are the same as those used for Tier 1/ Tier 2. The methods and assumptions that differ for OPSRP are summarized below. The Board adopted the following methods, procedures and assumptions for the December 31, 2012 and December 31, 2013 actuarial valuations.

### Actuarial Methods and Valuation Procedures

| | |
|---|---|
| *OPSRP UAL amortization* | The UAL as of December 31, 2007 is amortized as a level percentage of combined valuation payroll (Tier 1/ Tier 2 plus OPSRP payroll) over a closed period 16 year period. Gains and losses between subsequent odd-year valuations are amortized as a level percentage of combined valuation payroll over 16 years from the valuation in which they are first recognized. |

## Economic Assumptions

| | |
|---|---|
| *Administrative expenses* | $5.5 million per year is added to the normal cost. |

## Demographic Assumptions

### Retirement Assumptions

### Rates of Retirement from Active Status

| | Police & Fire | | | General Service | | School Districts | | General Service (Including School Districts) |
|---|---|---|---|---|---|---|---|---|
| **Age** | **< 13 yrs** | **13-24 yrs** | **25+ yrs** | **<15 yrs** | **15-29 yrs** | **<15 yrs** | **15-29 yrs** | **30+ yrs** |
| 50 | 1.00% | 1.50% | 5.50% | | | | | |
| 51 | 1.00% | 1.50% | 5.50% | | | | | |
| 52 | 1.00% | 1.50% | 5.50% | | | | | |
| 53 | 1.00% | 1.50% | 25.00% | | | | | |
| 54 | 1.00% | 1.50% | 16.50% | | | | | |
| 55 | 2.00% | 5.00% | 20.00% | 1.00% | 2.50% | 1.00% | 2.50% | 5.00% |
| 56 | 2.00% | 5.00% | 20.00% | 1.00% | 2.50% | 1.00% | 2.50% | 5.00% |
| 57 | 2.00% | 5.00% | 20.00% | 1.00% | 2.50% | 1.00% | 2.50% | 7.50% |
| 58 | 2.00% | 5.00% | 20.00% | 1.00% | 3.00% | 1.00% | 3.00% | 35.00% |
| 59 | 2.00% | 5.00% | 20.00% | 1.50% | 3.00% | 1.50% | 3.00% | 25.00% |
| 60 | 5.00% | 15.00% | 20.00% | 3.00% | 3.75% | 3.00% | 3.75% | 20.00% |
| 61 | 2.00% | 8.50% | 20.00% | 3.00% | 5.00% | 3.00% | 5.00% | 20.00% |
| 62 | 15.00% | 20.00% | 35.00% | 7.00% | 12.00% | 7.00% | 12.00% | 30.00% |
| 63 | 7.00% | 18.00% | 25.00% | 6.00% | 10.00% | 6.00% | 10.00% | 20.00% |
| 64 | 7.00% | 10.00% | 15.00% | 6.00% | 10.00% | 6.00% | 10.00% | 20.00% |
| 65 | 100.00% | 100.00% | 100.00% | 14.00% | 40.00% | 14.00% | 40.00% | 20.00% |
| 66 | | | | 17.25% | 33.00% | 17.25% | 33.00% | 20.00% |
| 67 | | | | 12.00% | 22.00% | 12.00% | 22.00% | 30.00% |
| 68 | | | | 10.00% | 17.00% | 10.00% | 17.00% | 20.00% |
| 69 | | | | 10.00% | 17.00% | 10.00% | 17.00% | 20.00% |
| 70 | | | | 100.00% | 100.00% | 100.00% | 100.00% | 100.00% |

### Rates of Retirement from Dormant Status

Dormant members are assumed to retire at their Normal Retirement Age.

## Changes in Actuarial Methods and Assumptions — Tier 1/ Tier 2 and OPSRP

A summary of key changes implemented since the December 31, 2011 valuation are described briefly below. Additional detail and a comprehensive list of changes in methods and assumptions can be found in the 2012 Experience Study for the System, which was published on September 18, 2013.

### Changes in Actuarial Methods and Allocation Procedures

*Actuarial Cost Method*

The Actuarial Cost Method was changed from the Projected Unit Credit (PUC) Cost Method to the Entry Age Normal (EAN) Cost Method. This change will allow PERS to use the same cost method for contribution rate calculations as will soon be required for future financial reporting under GASB Statements 67 and 68.

*Tier 1/Tier 2 UAL Amortization*

In combination with the change in cost method, the Board chose to re-amortize the outstanding Tier 1/Tier 2 UAL as of December 31, 2013 over a closed period of 20 years as a level percentage of projected payroll. Gains and losses between subsequent rate-setting valuations will be amortized over a closed 20 year period from the valuation in which they are first recognized.

*Contribution Rate Stabilization Method*

The “grade-in range” over which the rate collar gradually doubles was modified so that the collar doubles as funded status (excluding side accounts) decreases from 70% to 60% or increases from 130% to 140%. Previously the ranges had been 80% to 70% and 120% to 130%. The modification to the grade-in range was made in combination with the change to actuarial cost method, as discussed at the July 2013 PERS Board meeting.

*Allocation of Liability for Service Segments*

For purposes of allocating Tier 1/Tier 2 member’s actuarial accrued liability among multiple employers, the valuation uses a weighted average of the Money Match methodology and the Full Formula methodology used by PERS when the member retires. The weights are determined based on the prevalence of each formula among the current Tier 1/Tier 2 population. For the December 31, 2010 and December 31, 2011 valuations, the Money Match was weighted 40 percent for General Service members and 10 percent for Police & Fire members. For the December 31, 2012 and December 31, 2013 valuations, this weighting has been adjusted to 30 percent for General Service members and 5 percent for Police & Fire members, based on a projection of the proportion of liability attributable to Money Match benefits at those valuation dates.

### Changes in Economic Assumptions

*Investment Return and Interest Crediting*

The assumed investment return and interest crediting to both regular and variable account balances was reduced to 7.75%. Previously, the assumed investment return and interest crediting to regular account balances was 8.00% and the assumed interest crediting to variable account balances was 8.25%.

*OPSRP Administrative Expenses*

Assumed administrative expenses for the OPSRP System were reduced from $6.6 million per year to $5.5 million per year.

*Healthcare Cost Inflation*

The healthcare cost inflation for the maximum RHIPA subsidy was updated based on analysis performed by Milliman's healthcare actuaries. This analysis includes the consideration of the excise tax that will be introduced in 2018 by the Patient Protection and Affordable Care Act

**Changes in Demographic Assumptions**

*Healthy Mortality*

The healthy mortality assumption is based on the RP2000 generational mortality tables with group-specific class and setback adjustments. The group-specific adjustments have been updated to more closely match recently observed system experience.

*Disabled Mortality*

The disabled mortality assumption base was changed from the RP2000 healthy tables to the RP2000 disabled tables. Gender-specific adjustments were applied to align the assumption with recently observed system experience.

*Disability, Retirement from Active Status, and Termination*

Rates for disability, retirement from active status, and termination were adjusted. Termination rates were changed from being indexed upon age to being indexed upon duration from hire date.

**Changes in Salary Increase Assumptions**

*Merit Increases, Unused Sick Leave, and Vacation Pay*

Assumed merit increases were lowered for School District members. Unused Sick Leave and Vacation Pay rates were adjusted.

*Retiree Healthcare Participation*

The RHIA participation rate for healthy retirees was reduced from 48% to 45%. The RHIPA participation rate was changed from a uniform rate of 13% to a service-based table of rates.

# Summary of Plan Provisions

## Summary of Plan Provisions

The following section summarizes the plan provisions considered in the actuarial valuation. A more detailed description of plan provisions is available from PERS.

| | | |
|---|---|---|
| *Membership* | All employees of public employers participating in this System who are in qualifying positions become members of the System after completing six months of service except those who are eligible for and have elected to participate in an optional retirement plan. Different benefit provisions of the plan apply based on date of hire. | |
| | **Tier 1** | Hired prior to 1996 |
| | **Tier 2** | Hired after 1995 and before August 29, 2003 |
| | **OPSRP** | Hired after August 28, 2003, not a judge, and not a former Tier 1/Tier 2 member eligible to reestablish Tier 1/Tier 2 membership |
| | **Judges** | Members of the State Judiciary |
| *Member Contributions* | **Judges** | 7% of salary |
| | **All others** | None |
| *Employer Contributions* | Set by the PERS Board based on actuarial calculations that follow Board rate-setting policies for employers. | |

## Summary of Chapter 238 Provisions — Tier 1/Tier 2 and Judges

| | | |
|---|---|---|
| *Normal Retirement Date* | **Police and Fire** | Age 55 |
| | **Judges** | Age 65 |
| | **Tier 1 General Service** | Age 58 |
| | **Tier 2 General Service** | Age 60 |

*Normal Retirement Allowance*

For Members who are not Judges, the greatest of the Full Formula benefit, the Money Match benefit, or the Formula Plus Annuity benefit (only available to Members who made contributions before August 21, 1981). For Members with 15 or more years of creditable service, the benefit will not be less than the minimum service retirement allowance of $100 per month, as described in ORS 238.310.

**Full Formula** The percentage multiplier from the table below multiplied by final average salary and years of creditable service plus a prior service pension, if applicable.

| Percentage Multiplier | Membership Classification |
|---|---|
| 2.00% | Fire, Police and Legislators |
| 1.67% | All other members |

**Money Match** The Member's account balance and a matching employer amount converted to an actuarially equivalent annuity.

**Formula Plus Annuity** The Member's account balance converted to an actuarially equivalent cash refund annuity plus the percentage multiplier from the table below multiplied by final average salary and years of creditable service, plus a prior service pension, if applicable.

| Percentage Multiplier | Membership Classification |
|---|---|
| 1.35% | Fire, Police and Legislators |
| 1.00% | All other members |

*Normal Retirement Allowance (continued)*

**Judges**

Final average salary multiplied by the first percentage multiplier from the table below for up to 16 years of service plus the second percentage multiplier for any service in excess of 16 years, but not to exceed the maximum percentage of final average salary also shown below. Judges must elect Plan A or Plan B no later than age 60. A “Plan B” judge must serve as a pro tem judge for a total of 175 days postretirement.

| Plan | Percentage Factor (up to 16 years) | Percentage Factor (after 16 years) | Maximum Percentage of Final Average Salary |
|---|---|---|---|
| A | 2.8125% | 1.67% | 65% |
| B | 3.75% | 2.00% | 75% |

*Final Average Salary*

The greater of:

- Average salary earned during the three calendar years in which the member was paid the highest salary, even if one of those years is less than a full calendar year.
- Total salary earned over the last 36 months of employment divided by the actual months of service during that 36 month period.

Covered salary for this purpose includes the value of member contributions assumed and paid by employers, any payment due to an employer’s participation in the Unused Sick Leave program, and, for Tier 1 members, lump sum payment of unused vacation time.

*Creditable Service*

The number of years and months an active Member is paid a salary by a participating PERS employer and PERS benefits are being funded.

*Prior Service Pension*

Benefits payable on account of Prior Service Credit for a member’s service with a participating employer prior to the employer’s participation in PERS, as described in ORS 238.442.

*SB 656/HB 3349 Adjustment*

All members receive an increase to their monthly retirement benefit equal to the greater of the increase under Senate Bill 656 (SB 656) or House Bill 3349 (HB 3349). The adjustment for SB 656 only applies to members who established membership prior to July 14, 1995. Senate Bill 822, enacted in 2013, limits eligibility for these adjustments to only PERS beneficiaries who pay Oregon state income tax.

**SB 656 Increase**

| Years of Service | General Service | Police & Fire |
|---|---|---|
| 0-9 | 0.0% | 0.0% |
| 10-14 | 1.0 | 1.0 |
| 15-19 | 1.0 | 1.0 |
| 20-24 | 2.0 | 2.5 |
| 25-29 | 3.0 | 4.0 |
| 30 & Over | 4.0 | 4.0 |

**HB 3349 Increase**

$$\left(\frac{1}{1 - \text{maximum Oregon personal income tax rate (limited to 9\%)}} - 1\right) \times \frac{\text{Service prior to October 1, 1991}}{\text{All Service}}$$

| | | |
|---|---|---|
| *Early Retirement Eligibility* | **Police and Fire** | Age 50 or 30 years of service |
| | **Judges** | Age 60 |
| | **General Service** | Age 55 or 30 years of service |
| *Early Retirement Allowance* | Normal retirement allowance, actuarially reduced to early retirement age. However, there is no reduction applied if a member has completed 30 years of service (25 years for police & fire members) or for judges in Plan B. | |
| *Vesting* | Contributions made in any part of five calendar years or attainment of age 50 (45 for police & fire) while working in a qualifying position. | |
| *Termination Benefits* | **Non-Vested** | Payment of member's account balance. |
| | **Vested** | Same as normal (or early) retirement allowance, but commencement is deferred to normal (or early) retirement date. |
| *Optional Forms of Retirement Allowance* | The normal form of benefit is a cash refund annuity (joint and two-thirds survivor contingent annuity for a married judge). All optional amounts are adjusted to be actuarially equivalent.<br>**Options Available**<br>• Life annuity<br>• Cash refund annuity<br>• Life annuity guaranteed 15 years<br>• Joint and 50% or 100% survivor contingent annuity, with or without pop-up feature<br>• Partial Lump Sum: Refund of member contribution account balance plus a pension (under any optional form) of employer-paid portion of the Full Formula or Money Match annuity.<br>• Total Lump Sum: Refund of member contribution account plus a matching employer amount. | |
| *Preretirement Death Benefit Eligibility* | **Judges** | Six or more years of service. |
| | **All others** | Death occurring while the member is an employee of a participating employer or within 120 days of termination provided the employee does not withdraw the account balance or retire, or a result of injuries received while in the service of a participating employer. |
| *Preretirement Death Benefit* | **Judges** | The spouse shall receive a life pension equal to two-thirds of the service retirement allowance. The beneficiary of an unmarried judge shall receive the member's accumulated contributions with interest. |
| | **All others** | The member's account balance plus a matching employer amount. |
| *Additional Police & Fire Death Benefits* | Upon the death of a retired police officer or firefighter, the surviving spouse or dependent children under age 18 will receive a monthly benefit based on 25% of the cash refund retirement allowance due to police and fire service. | |
| *Disability Benefit Eligibility* | **Duty** | Disablement occurring as a direct result of a job-related injury or illness, regardless of length of service. |
| | **Non-Duty** | Disablement occurring after ten years of service (six years, if a judge), but prior to normal retirement eligibility. |

| | |
|---|---|
| *Disability Benefits* | The normal retirement allowance calculated based on the service credit that would have been earned if the member had continued working to age 58 (age 55 for police and fire, age 65 for judge members) payable commencing immediately.<br>**Fire and Police Members' Alternative**<br>In lieu of the above, firefighters and police officers who qualify for duty disability may elect to receive a benefit of 50% of final average monthly salary at the time of disablement.<br>**Minimum Monthly Retirement Allowance**<br>Judges ................................. 45% of final average monthly salary.<br>All others .............................. $100 for a member with at least 15 years of creditable service, actuarially reduced if an optional form of benefit is chosen.<br>**Reduction of Benefits**<br>Whenever a disabled employee's disability benefit and earned income for any month exceed the monthly salary received at the time of disablement or $400, if greater, the disability benefit will be reduced by the excess.<br>For Tier Two members, the disability benefit may not exceed the member's salary at the time of disablement. |
| *Waiting Time Service Purchases* | Members with at least 10 years of combined credited and/or prior service under PERS may elect to purchase service credit for the six-month "waiting time" period worked prior to establishing membership in the system. The waiting time purchase is interest-free and must be purchased in one payment prior to retirement. |
| *Police & Fire Unit Purchases* | Police & fire members may purchase 60-month annuity benefits (up to $80 per month) that must be paid out by age 65 and cannot commence prior to the earliest retirement age. The amount purchased by the member is matched by the employer. In certain situations, such as termination of employment prior to retiring, or working beyond age 65, the employer's matching purchase is forfeited. |
| *Postretirement Adjustments* | All monthly pension and annuity benefits except unit purchases are eligible for postretirement adjustments.<br>**Automatic Adjustments Pre-2014**: Benefits are adjusted annually to reflect the increase or decrease in the Consumer Price Index (Portland area - all items) as published by the Bureau of Labor Statistics.<br>The maximum adjustment to be made for any year is 2% of the previous year's benefit, except for 2013 when the adjustment is limited to 1.5%. Any CPI change in excess of the limit is accumulated for future benefit adjustments which would otherwise be less than the limit. No benefit will be decreased below its original amount.<br>**Automatic Adjustments Post-2013**: In 2014 and future years benefits will be increased annually based on a marginal rate schedule. The increase is calculated as 1.25% on the first $60,000 of annual benefit and 0.15% on amounts above $60,000 of annual benefit.<br>**Ad Hoc Adjustments**: From time to time, as granted by the Legislature, retired members and beneficiaries have received increases in their monthly benefits. |

| | | |
|---|---|---|
| *Supplemental Payments* | For the years 2014 through 2019, retirees are provided a supplemental payment of 0.25% of annual benefit, not to exceed $150. In addition, retirees with an annual benefit of less than $20,000 will receive an additional supplemental payment equal to 0.25% of the annual benefit.<br>These payments are required to be funded out of the Contingency Reserve and do not compound into the retiree's annual benefit used in determining future automatic adjustments. | |
| *Variable Annuity Program* | **Contributions** | Prior to January 1, 2004, a member could elect to have 25, 50 or 75 percent of his or her contributions invested in the variable account. |
| | **Benefit** | At retirement, a member may elect to receive a variable annuity with the funds accumulated in his or her variable account.<br>Alternatively, a member may elect to have all or a portion of the funds in his or her variable account transferred back to the regular account and receive an annuity from the System as though no variable annuity program existed.<br>The employer-provided benefit, however, is based on the earnings the member would have received in the regular account. |
| *Interest Credit on Member Accounts* | **Tier 1 Regular** | Actuarially assumed rate of return until the rate guarantee reserve has been fully funded for three consecutive years and the Board elects to credit additional interest. |
| | **Tier 2 Regular** | Amount determined by the Board based on actual investment earnings of the regular account. |
| | **Variable** | Actual earnings in variable account. |
| *Retiree Healthcare – Medicare Supplement (RHIA)* | **Retiree Eligibility** | All of the following must be met:<br>(a) Currently receiving a retirement allowance from the System,<br>(b) Covered for eight years before retirement,<br>(c) Enrolled in a PERS-sponsored health plan, and<br>(d) Enrolled in both Medicare Part A and Part B. |
| | **Surviving Spouse or Dependent Eligibility** | A surviving spouse or dependent of a deceased RHIA-eligible retiree is eligible for RHIA benefits if they are enrolled in both Medicare Part A and Part B, and *either* of the following criteria are met:<br>(a) Currently receiving a retirement allowance from the System, or<br>(b) The surviving spouse or dependent was covered under the eligible retiree's PERS-sponsored health insurance at the time of the retiree's death and the deceased retiree retired before May 1, 1991. |
| | **Benefit Amount** | A monthly contribution of up to $60 per retiree is applied to PERS-sponsored Medicare supplemental insurance costs. |

| | | |
|---|---|---|
| *Retiree Healthcare – Under Age 65 (RHIPA)* | **Retiree Eligibility** | Retired PERS members who were state employees at the time of retirement, are enrolled in a PERS-sponsored health plan, and are not eligible for Medicare. |
| | **Surviving Spouse or Dependent Eligibility** | A surviving spouse or dependent of a deceased RHIPA-eligible retiree is eligible for RHIPA benefits if they are not yet eligible for Medicare, and *either* of the following criteria are met:<br>(a) Currently receiving a retirement allowance from the System, or<br>(b) The surviving spouse or dependent was covered under the eligible retiree's PERS-sponsored health plan at the time of the retiree's death and the deceased retiree retired on or after September 29, 1991. |
| | **Benefit** | A percentage (as shown in the table below) of the maximum monthly subsidy based on years of service. The maximum monthly subsidy is calculated annually as the average difference between the health insurance premiums paid by active state employees and the premium retirees would pay if they were rated separately from active state employees.<br>The maximum monthly subsidy for 2013 is $323.18 per month. |

| Years of Service with State Employer | Subsidized Amount |
|---|---|
| Under 8 | 0% |
| 8-9 | 50% |
| 10-14 | 60% |
| 15-19 | 70% |
| 20-24 | 80% |
| 25-29 | 90% |
| 30 & Over | 100% |

| | |
|---|---|
| *Benefits Not Included in the Valuation* | Supplemental payments made for all retirees for the years 2014 through 2019 are required to be paid out of the Contingency Reserve. Because the Contingency Reserve is excluded from the valuation assets, the liabilities for supplemental payments are also excluded from the valuation. |

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| *Changes in Plan Provisions* | Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.<br><br>Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first $60,000 of annual benefit and 0.15% on annual benefits above $60,000. The effects of this legislation were reflected in this valuation.<br><br>Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation. |

## Summary of Chapter 238A Provisions — OPSRP

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| *Normal Retirement Date* | **Police & Fire** | Age 60 or age 53 with 25 years of retirement credit |
| | **General Service** | Age 65 or age 58 with 30 years of retirement credit |
| | **School Districts** | Age 65 or age 58 with 30 calendar years of active membership |
| *Normal Retirement Allowance* | A single life annuity equal to final average salary times years of retirement credit attributable to service as fire and police times 1.8% plus final average salary times all other years of retirement credit times 1.5% | |
| *Final Average Salary* | The greater of:<br>• Average salary earned during the three calendar years in which the member was paid the highest salary, even if one of those years is less than a full calendar year.<br>• Total salary earned over the last 36 months of employment divided by the actual months of service during that 36 month period.<br>Covered salary for this purpose includes base pay, plus overtime up to an average amount, plus bonuses, plus member contributions paid by the employer on a salary reduction basis. Excludes payments of unused vacation or accumulated sick leave at retirement, and member contributions "assumed and paid" by the employer. | |
| *Early Retirement Eligibility* | **Police & Fire** | Age 50 and 5 years of vesting service |
| | **General Service** | Age 55 and 5 years of vesting service |
| *Early Retirement Allowance* | Normal retirement allowance, actuarially reduced to early retirement age. | |
| *Vesting* | Five years or attainment of normal retirement age. | |
| *Vested Termination Benefit* | Same as normal (or early) retirement allowance, but commencement is deferred to normal (or early) retirement date. | |
| *Optional Forms of Retirement Benefit* | The normal form of benefit is a life annuity. All optional amounts are adjusted to be actuarially equivalent.<br>**Options Available**<br>• Life annuity<br>• Joint and 50% or 100% survivor contingent benefit, with or without pop-up feature<br>• Lump sum if monthly normal retirement benefit is less than $200 or if lump sum value is less than $5,000. | |
| *Preretirement Death Benefit Eligibility* | Death of a vested member before retirement benefits begin. | |
| *Preretirement Death Benefit* | If member was eligible for early retirement, the actuarial equivalent of 50% of the early retirement benefit the participant was eligible to receive at date of death. If member was not eligible for early retirement, the actuarial equivalent of 50% of the early retirement benefit the participant would have been eligible to receive if he terminated employment on his date of death and retired at the earliest possible date. | |
| *Disability Benefit Eligibility* | **Duty** | Disablement occurring as a direct result of a job-related injury or illness, regardless of length of service. |
| | **Non-Duty** | Disablement occurring after ten years of service, but prior to normal retirement eligibility. |

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| *Disability Benefit Amounts* | **Preretirement Benefit** | 45% of salary during last full month of employment before disability, reduced if the total benefit exceeds 75% of salary. Benefit is payable monthly until normal retirement age. |
| | **Retirement Benefit** | Same formula as Normal Retirement Benefit, except:<br>Final average salary is adjusted to reflect cost-of-living increases from date of disability to normal retirement age, and<br>Retirement credits continue to accrue from date of disability to normal retirement age. |
| *Postretirement Adjustments* | All monthly pension and annuity benefits are eligible for postretirement adjustments. | |
| | **Automatic Adjustments Pre-2014** | Benefits are adjusted annually to reflect the increase or decrease in the Consumer Price Index (Portland area - all items) as published by the Bureau of Labor Statistics.<br>The maximum adjustment to be made for any year is 2% of the previous year's benefit, except for 2013 when the adjustment is limited to 1.5%. Any CPI change in excess of the limit is accumulated for future benefit adjustments which would otherwise be less than the limit. No benefit will be decreased below its original amount. |
| | **Automatic Adjustments Post-2013** | In 2014 and future years benefits will be increased annually based on a marginal rate schedule. The increase is calculated as 1.25% on the first \$60,000 of annual benefit and 0.15% on amounts above \$60,000 of annual benefit. |
| *Supplemental Payments* | For the years 2014 through 2019, retirees are provided a supplemental payment of 0.25% of annual benefit, not to exceed \$150. In addition, retirees with an annual benefit of less than \$20,000 will receive an additional supplemental payment equal to 0.25% of the annual benefit.<br>These payments are required to be funded out of the Contingency Reserve and do not compound into the retiree's annual benefit used in determining future automatic adjustments. | |
| *Benefits Not Included in the Valuation* | Supplemental payments made for all retirees for the years 2014 through 2019 are required to be paid out of the Contingency Reserve. Because the Contingency Reserve is excluded from the valuation assets, the liabilities for supplemental payments are also excluded from the valuation. | |
| *Changes in Plan Provisions* | Senate Bill 822, signed into law in May 2013, eliminated the SB 656/HB 3349 tax remedy payments for beneficiaries not subject to Oregon income tax and limited the 2013 post-retirement COLA to 1.5% of annual benefit. The effects of this legislation were reflected in this valuation.<br><br>Senate Bill 861, signed into law in October 2013, limited the post-retirement COLA for years beyond 2013 to 1.25% on the first \$60,000 of annual benefit and 0.15% on annual benefits above \$60,000. The effects of this legislation were reflected in this valuation.<br><br>Senate Bill 862, signed into law in October 2013, makes targeted changes such as allowing garnishment of PERS benefits for convicted felons. These changes do not significantly affect System liabilities and were not reflected in the valuation. | |

# Glossary

## Glossary

**Actuarial Accrued Liability.** The portion of the present value of prospective benefits allocated to service and compensation before the valuation date in accordance with the actuarial cost method.

**Actuarial Asset Value.** The value of assets used in calculating the required contributions. The actuarial asset value may be equal to the fair market value of assets, or it may spread the recognition of certain investment gains or losses over a period of years in accordance with an asset valuation method.

**Actuarial Assumptions.** Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement and retirement; rates of investment earnings and other relevant items.

**Actuarial Cost Method.** Sometimes called “funding method,” a particular technique used by actuaries to establish the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded accrued liability. Ordinarily, the annual contribution to the plan comprises the normal cost and an amount for amortization of the unfunded accrued liability.

**Actuarial Gain or (Loss).** A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions, during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial cost method.

**Agent Multiple-Employer Plan (Agent Plan).** An aggregation of single-employer plans, with pooled administrative and investment functions. Separate accounts are maintained for each employer so that the employer’s contributions provide benefits only for the employees of that employer. A separate actuarial valuation is performed for each individual employer’s plan to determine the employer’s periodic contribution rate and other information for the individual plan.

**Annual Pension Cost.** A measure of the periodic cost of an employer’s participation in a defined benefit pension plan.

**Annual Required Contributions (ARC).** A financial reporting calculation under GASB 27 that expresses the program cost as a percentage of payroll.

**Combined Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1, Tier 2 and OPSRP active members. This payroll is used to calculate UAL rates.

**Cost Sharing Multiple-Employer Plan.** A single plan with pooling (cost-sharing) arrangements for the participating employers. All risks, rewards, and costs, including benefit costs, are shared and are not attributed individually to employers.

**Employer Contribution Rate.** Consists of the normal cost rate and the UAL rates, plus adjustments for items such as side account rate offsets.

**Funded Ratio.** The actuarial value of assets expressed as a percentage of the actuarial accrued liability.

**Normal Cost.** The annual cost assigned to the current year, under the actuarial cost method in use. The normal cost divided by the applicable payroll is the normal cost rate.

**OPSRP Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for OPSRP active members. This payroll is used to calculate OPSRP normal cost rates.

**Pre-SLGRP Liability.** The sum of Pre-SLGRP Pooled Liabilities and Transition Liabilities.

**Pre-SLGRP Pooled Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for a pool of employers that joined the SLGRP. There are currently two pre-SLGRP pools. One was created for State Agencies and Community Colleges when the SLGRP was formed. The other one was created when the Local Government Rate Pool joined the SLGRP.

**Present Value.** Sometimes called "actuarial present value," the current worth (on the valuation date) of an amount or series of amounts payable in the future. The present value is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**Rate Collar.** A methodology that defines the maximum period-to-period change in employer contribution rate. The width of the rate collar is determined by the current contribution rate and funded status.

**Required Supplementary Information (RSI).** Schedules, statistical data, and other information that are an essential part of financial reporting and should be presented with, but are not part of, the basic financial statements of a governmental entity.

**Statement No. 25 of the Governmental Accounting Standards Board (GASB 25).** The accounting standard establishing financial reporting standards for defined benefit pension plans. The standard has been replaced by GASB Statement 67 for plan fiscal years beginning after June 15, 2013.

**Statement No. 27 of the Governmental Accounting Standards Board (GASB 27).** The accounting standard governing a governmental employer's accounting for pensions. The standard has been replaced by GASB Statement 68 for employer fiscal years beginning after June 15, 2014.

**Statement No. 43 of the Governmental Accounting Standards Board (GASB 43).** The accounting standard establishing financial reporting standards for post-employment benefits other than pensions.

**Statement No. 45 of the Governmental Accounting Standards Board (GASB 45).** The accounting standard governing a governmental employer's accounting for post-employment benefits other than pensions.

**Tier 1/Tier 2 Valuation Payroll.** Projected payroll subject to PERS employer contribution rates for the calendar year following the valuation date for Tier 1 and Tier 2 active members. This payroll is used to calculate Tier 1/Tier 2 normal cost rates.

**Transition Liability.** The difference between the total UAL and the UAL attributable to the SLGRP for an individual employer that joined the SLGRP or the Local Government Rate Pool.

**Unfunded Accrued Liability (UAL).** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The UAL is divided by combined valuation payroll and an amortization factor to determine an initial UAL rate. The final UAL rate can be adjusted by the rate collar.