

# Actuarial Gains/Losses

The next three tables display actuarial gains and losses, expressed as contribution rate changes. Actuaries use gain/loss analysis to compare actual changes to assumed changes in assets, liabilities, and salaries from various sources. We also use this analysis to determine:

- The accuracy of our valuation model and annual processing.
- Why contribution rates changed.
- The reasonableness of the actuarial assumptions.

Actuarial gains will reduce contribution rates; actuarial losses will increase contribution rates. Under a reasonable set of actuarial assumptions, actuarial gains and losses will offset over long-term experience periods.

Change in Employer and State Contribution Rate by Source						
Change in Employer Rate	PERS	TRS	SERS*	PSERS*	LEOFF**	WSPRS
<b>2013 Contribution Rate Before Laws of 2014</b>	<b>12.29%</b>	<b>14.47%</b>	<b>12.88%</b>	<b>12.07%</b>	<b>(5.48%)</b>	<b>8.79%</b>
Remove Rate Floor / Ceiling	0.00%	0.00%	0.00%	0.00%	(0.40%)	0.00%
Remove Plan 1 Benefit Improvements After 2009	(0.14%)	(0.15%)	(0.14%)	(0.14%)	N/A	N/A
Remove Prior Liability and LEOFF 1 Funding Method Changes	(0.11%)	(0.77%)	(1.00%)	0.00%	(2.49%)	(1.46%)
<b>2013 Adjusted Contribution Rate</b>	<b>12.04%</b>	<b>13.55%</b>	<b>11.74%</b>	<b>11.93%</b>	<b>(8.37%)</b>	<b>7.33%</b>
Liability Gains/Losses	0.69%	0.69%	0.80%	0.63%	(0.36%)	0.72%
Asset Gains/Losses	0.61%	1.08%	0.41%	(0.02%)	0.64%	0.67%
Present Value of Future Salaries Gains/Losses	(1.05%)	(1.43%)	(0.85%)	(0.64%)	(0.27%)	(0.36%)
Incremental Changes	0.03%	0.02%	0.00%	0.00%	0.00%	0.00%
Other Gains/Losses	(0.09%)	(0.05%)	(0.17%)	(0.12%)	(0.28%)	(0.09%)
<b>Total Change</b>	<b>0.19%</b>	<b>0.31%</b>	<b>0.19%</b>	<b>(0.15%)</b>	<b>(0.27%)</b>	<b>0.94%</b>
<b>2014 Preliminary Contribution Rate</b>	<b>12.23%</b>	<b>13.86%</b>	<b>11.93%</b>	<b>11.78%</b>	<b>(8.64%)</b>	<b>8.27%</b>
Increase from Applied Rate Floor	0.00%	0.00%	0.00%	0.00%	0.33%	0.00%
Decrease from Applied Rate Ceiling	0.00%	0.00%	0.00%	0.00%	0.00%	N/A
Increase from Plan 1 Benefit Improvements After 2009	0.14%	0.15%	0.14%	0.14%	N/A	N/A
Rate to Amortize Prior Liability	0.11%	0.77%	1.00%	0.00%	0.00%	1.32%
Excess Member Rate	N/A	0.00%	N/A	N/A	N/A	1.08%
Laws of 2015	0.00%	0.00%	0.00%	0.00%	0.04%	0.15%
<b>2014 Adjusted Contribution Rate</b>	<b>12.48%</b>	<b>14.78%</b>	<b>13.07%</b>	<b>11.92%</b>	<b>(8.27%)</b>	<b>10.82%</b>

\*The SERS and PSERS rates include the UAAL rate for PERS Plan 1. The "Other Gains/Losses" category includes the "Total Change" for the PERS 1 UAAL rate in those systems.

\*\*The LEOFF contribution rate is the state's portion for Plan 2 (20% of the Normal Cost) plus the UAAL rate for Plan 1.

Change in Employer and State Plan 2/3 Normal Cost Rate by Source						
Change in Normal Costs	PERS	TRS	SERS	PSERS	LEOFF*	WSPRS**
<b>2013 Normal Cost Before Laws of 2014</b>	<b>7.11%</b>	<b>7.56%</b>	<b>7.70%</b>	<b>6.89%</b>	<b>3.19%</b>	<b>8.79%</b>
Remove Rate Floor / Ceiling	0.00%	0.00%	0.00%	0.00%	(0.40%)	0.00%
Remove Prior Employer Liability	(0.11%)	(0.77%)	(1.00%)	0.00%	0.00%	(1.46%)
<b>2013 Adjusted Normal Cost Rate</b>	<b>7.00%</b>	<b>6.79%</b>	<b>6.70%</b>	<b>6.89%</b>	<b>2.79%</b>	<b>7.33%</b>
Liabilities						
Salaries	(0.05%)	(0.30%)	(0.06%)	(0.12%)	(0.01%)	0.09%
Termination	(0.09%)	(0.31%)	(0.17%)	(0.13%)	(0.01%)	(0.19%)
Retirement	0.03%	0.05%	0.04%	0.00%	0.00%	(0.25%)
Disability	0.01%	0.00%	0.01%	0.01%	0.00%	0.02%
Mortality	0.03%	0.03%	0.04%	0.01%	0.00%	0.10%
Growth / Return to Work	0.56%	1.14%	0.81%	0.82%	0.22%	0.43%
Other Liabilities	0.15%	0.09%	0.13%	0.04%	0.04%	0.52%
<b>Total Liability Gains/Losses</b>	<b>0.64%</b>	<b>0.70%</b>	<b>0.80%</b>	<b>0.63%</b>	<b>0.24%</b>	<b>0.72%</b>
<b>Asset Gains/Losses</b>	<b>0.26%</b>	<b>0.25%</b>	<b>0.41%</b>	<b>(0.02%)</b>	<b>(0.10%)</b>	<b>0.67%</b>
<b>Present Value of Future Salaries Gains/Losses</b>	<b>(0.58%)</b>	<b>(0.76%)</b>	<b>(0.85%)</b>	<b>(0.64%)</b>	<b>(0.14%)</b>	<b>(0.36%)</b>
Incremental Changes						
Plan Change	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Method Change	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Assumption Change	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Correction Change	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Experience Study Change	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<b>Total Incremental Changes Gains/Losses</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>
<b>Other Gains/Losses</b>	<b>(0.06%)</b>	<b>(0.06%)</b>	<b>(0.10%)</b>	<b>(0.05%)</b>	<b>0.01%</b>	<b>(0.09%)</b>
<b>Total Change</b>	<b>0.26%</b>	<b>0.13%</b>	<b>0.26%</b>	<b>(0.08%)</b>	<b>0.01%</b>	<b>0.94%</b>
<b>2014 Preliminary Normal Cost</b>	<b>7.26%</b>	<b>6.92%</b>	<b>6.96%</b>	<b>6.81%</b>	<b>2.80%</b>	<b>8.27%</b>
Increase from Applied Rate Floor	0.00%	0.00%	0.00%	0.00%	0.33%	0.00%
Rate to Amortize Prior Employer Liability	0.11%	0.77%	1.00%	0.00%	0.00%	1.32%
Excess Member Rate	N/A	0.00%	N/A	N/A	N/A	1.08%
Laws of 2015	0.00%	0.00%	0.00%	0.00%	0.04%	0.15%
<b>2014 Adjusted Normal Cost</b>	<b>7.37%</b>	<b>7.69%</b>	<b>7.96%</b>	<b>6.81%</b>	<b>3.17%</b>	<b>10.82%</b>

\*The LEOFF contribution rate is the state's portion only (20% of the Plan 2 Normal Cost).

\*\*The WSPRS normal cost contribution rate applies to Plans 1 and 2.

<b>Change in Employer and State Plan 1 UAAL Rate by Source</b>						
<b>Change in UAAL Rate</b>	<b>PERS</b>	<b>TRS</b>	<b>SERS*</b>	<b>PSERS*</b>	<b>LEOFF**</b>	<b>WSPRS</b>
<b>2013 UAAL Rate Before Laws of 2014</b>	<b>5.18%</b>	<b>6.91%</b>	<b>5.18%</b>	<b>5.18%</b>	<b>(8.67%)</b>	<b>N/A</b>
Remove Rate Floor / Ceiling	0.00%	0.00%	0.00%	0.00%	0.00%	N/A
Remove Plan 1 Benefit Improvements After 2009	(0.14%)	(0.15%)	(0.14%)	(0.14%)	N/A	N/A
LEOFF 1 Roll Forward Funding Method	N/A	N/A	N/A	N/A	(2.49%)	N/A
<b>2013 Adjusted UAAL Rate</b>	<b>5.04%</b>	<b>6.76%</b>	<b>5.04%</b>	<b>5.04%</b>	<b>(11.16%)</b>	<b>N/A</b>
Liabilities						
Salaries	0.00%	(0.01%)	N/A	N/A	(0.04%)	N/A
Termination	0.00%	0.00%	N/A	N/A	0.00%	N/A
Retirement	(0.01%)	(0.01%)	N/A	N/A	(0.02%)	N/A
Disability	0.00%	0.00%	N/A	N/A	0.00%	N/A
Mortality	0.00%	0.02%	N/A	N/A	(0.04%)	N/A
Return to Work	0.00%	0.00%	N/A	N/A	0.01%	N/A
Inflation (CPI)	0.00%	0.00%	N/A	N/A	(0.72%)	N/A
Other Liabilities	0.06%	(0.01%)	N/A	N/A	0.21%	N/A
<b>Total Liability Gains/Losses</b>	<b>0.05%</b>	<b>(0.01%)</b>	<b>N/A</b>	<b>N/A</b>	<b>(0.60%)</b>	<b>N/A</b>
<b>Asset Gains/Losses</b>	<b>0.35%</b>	<b>0.83%</b>	<b>N/A</b>	<b>N/A</b>	<b>0.74%</b>	<b>N/A</b>
<b>Present Value of Future Salaries Gains/Losses</b>	<b>(0.47%)</b>	<b>(0.67%)</b>	<b>N/A</b>	<b>N/A</b>	<b>(0.13%)</b>	<b>N/A</b>
Incremental Changes						
Plan Change	0.00%	0.00%	N/A	N/A	0.00%	N/A
Method Change	0.00%	0.00%	N/A	N/A	0.00%	N/A
Assumption Change	0.00%	0.00%	N/A	N/A	0.00%	N/A
Correction Change	0.03%	0.02%	N/A	N/A	0.00%	N/A
Experience Study Change	0.00%	0.00%	N/A	N/A	0.00%	N/A
<b>Total Incremental Changes Gains/Losses</b>	<b>0.03%</b>	<b>0.02%</b>	<b>N/A</b>	<b>N/A</b>	<b>0.00%</b>	<b>N/A</b>
<b>Other Gains/Losses</b>	<b>(0.03%)</b>	<b>0.01%</b>	<b>N/A</b>	<b>N/A</b>	<b>(0.29%)</b>	<b>N/A</b>
<b>Total Change</b>	<b>(0.07%)</b>	<b>0.18%</b>	<b>(0.07%)</b>	<b>(0.07%)</b>	<b>(0.28%)</b>	<b>N/A</b>
<b>2014 Preliminary UAAL Rate</b>	<b>4.97%</b>	<b>6.94%</b>	<b>4.97%</b>	<b>4.97%</b>	<b>(11.44%)</b>	<b>N/A</b>
Increase from Applied Rate Floor	0.00%	0.00%	0.00%	0.00%	N/A	N/A
Decrease from Applied Rate Ceiling	0.00%	0.00%	0.00%	0.00%	0.00%	N/A
Increase from Plan 1 Benefit Improvements After 2009	0.14%	0.15%	0.14%	0.14%	N/A	N/A
Laws of 2015	0.00%	0.00%	0.00%	0.00%	0.00%	N/A
<b>2014 Adjusted UAAL Rate</b>	<b>5.11%</b>	<b>7.09%</b>	<b>5.11%</b>	<b>5.11%</b>	<b>(11.44%)</b>	<b>N/A</b>

\*The SERS and PSERS rates are to fund the PERS Plan 1 UAAL.

\*\*The LEOFF contribution rate is the UAAL rate for plan 1. The plan has a surplus of assets over liabilities, so no rate is currently payable.