Preliminary Results, Actuarial Valuation

Matt Smith, FCA, EA, MAAA
State Actuary

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Today’s Presentation

- Brief “Actuarial 101” to start
- Preliminary 2011 Actuarial Valuation results
- Projected budget impacts
- Other considerations
- No action required today
Purpose Of Actuarial Valuation

- Determine contribution requirements for 2013-15
- Based on results of June 30, 2011, valuation date
- Consistent with prescribed funding policy
- Provide information on funding progress and developments over the past valuation year
- Certify the data, assumptions, and methods are reasonable and conform with current actuarial standards of practice
Systematic Actuarial Funding

- Prescribed funding policy
- Regular contributions over time
- Investment returns earned systematically over time
  - WSIB mandate: maximize returns at a prudent level of risk
- Investment risk is spread over time
- Supports intergenerational equity
  - Contributions made over members’ careers
  - Today’s generation pays for today’s generation
How Does It Work?

- **Estimate future pension benefits**
  - What will future benefits be?
  - When will they be paid and for how long?

- **Estimate returns on future invested contributions?**
  - What will future investment returns look like?

- **Select an actuarial cost method**
  - What are the regular contributions required over time?
Actuarial Cost Method

- Allocates a pension plan’s cost over a member’s working career
- Determines annual and on-going cost while member works
  - “Normal cost”
  - The regular contributions over time under systematic actuarial funding
- If everything happens as planned, normal cost will accumulate with investment earnings and completely fund a member’s pension at the time of his/her retirement
Measuring Plan Health

- Has everything happened as planned?
- Are we on track with our systematic actuarial funding plan?
- Two key measurements
  - Funded status
  - Unfunded Actuarial Accrued Liability (the “UAAL”)
Funded Status

- Comparison of plan assets to today’s value of earned pensions
  - Point-in-time measurement
- A funded status of at least 100 percent means a plan has at least $1 in actuarial assets for each $1 of earned pension liability
  - On track with systematic actuarial funding plan
Unfunded Actuarial Accrued Liability

- Occurs when a plan does not have sufficient assets to cover earned pension liabilities
  - Funded status less than 100 percent
- Off track with systematic actuarial funding plan
- Requires additional contributions to get back on track
  - Normal cost plus UAAL contributions
  - Intergenerational equity is weakened
- If you don’t get back on track, funding plan will ultimately become pay-as-you-go
2011 Actuarial Valuation Results Are Preliminary

- Concurrent outside actuarial audit underway
- 2011 actuarial valuation finalized following completion of audit and PFC rate adoption in July
Comments On 2011 Results

- PERS 2/3, TRS 2/3, SERS, PSERS, LEOFF, and WSPRS on track with systematic actuarial funding plan
- PERS 1 and TRS 1 remain off track with systematic funding plan
  - Phasing-in larger Plan 1 UAAL contributions to get back on track
  - Full requirements begin in 2015
  - See Appendix for further details
Recent Efforts To Reduce Pension Costs

- Repeal of future gain-sharing benefits
- Repeal of Plan 1 Uniform COLA
- Adoption of new economic assumptions
  - Reduces long-term costs
  - Increases short-term costs
- Reduced early retirement benefits for new hires in PERS, TRS, and SERS
  - Lowers long-term costs as new hires replace current members
Short-Term Cost Increases Remain

- Continue to recognize asset losses from the Great Recession under asset smoothing method
  - See Appendix for further details
- Phasing in larger Plan 1 UAAL requirements
- Adopted new economic assumptions
  - With phase-in of lower investment return assumption
  - See Appendix for further details
- In general, all put downward pressure on funded status and upward pressure on contribution rates in the short-term
  - Especially the Plan 1 UAAL rates
Funded Status By Plan – 2010/2011

The chart above illustrates the funded status by plan for 2010 and 2011. Each bar represents a different plan, with the height indicating the percentage funding level. The horizontal line at 100% represents the fully funded status. Plans such as PERS 1, PERS 2/3, TRS 1, TRS 2/3, SERS 2/3, PSERS 2, LEOFF 1, LEOFF 2, and WSPRS are shown for comparison across the two years, indicating the performance and funding status of these plans over the period.
### Funded Status on an Actuarial Value Basis*

<table>
<thead>
<tr>
<th>(Dollars in Millions)</th>
<th>PERS</th>
<th>TRS</th>
<th>SERS</th>
<th>PSERS</th>
<th>LEOFF</th>
<th>WSPRS</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Plan 1</td>
<td>Plan 1</td>
<td>Plans 2/3</td>
<td>Plans 2/3</td>
<td>Plan 2</td>
<td>Plan 1</td>
<td>Plan 2</td>
</tr>
<tr>
<td>Accrued Liability</td>
<td>$12,567</td>
<td>$18,815</td>
<td>$9,258</td>
<td>$6,299</td>
<td>$2,607</td>
<td>$107</td>
<td>$4,135</td>
</tr>
<tr>
<td>Valuation Assets</td>
<td>$8,883</td>
<td>$20,997</td>
<td>$7,485</td>
<td>$7,141</td>
<td>$2,872</td>
<td>$141</td>
<td>$5,565</td>
</tr>
<tr>
<td>Unfunded Liability</td>
<td>$3,684</td>
<td>($2,182)</td>
<td>$1,773</td>
<td>($842)</td>
<td>($265)</td>
<td>($34)</td>
<td>($1,430)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>($1,044)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>($120)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>($461)</td>
</tr>
<tr>
<td>Funded Ratio</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>71%</td>
<td>112%</td>
<td>81%</td>
<td>113%</td>
<td>110%</td>
<td>132%</td>
<td>135%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>119%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>115%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>101%</td>
</tr>
</tbody>
</table>

*Note: Totals may not agree due to rounding.*

*Accrued liabilities represent the present value of future benefits for current members earned at the valuation date assuming an expected rate of return on assets of 7.9% per year (7.5% for LEOFF 2). All assets have been valued under the actuarial asset method (the “smoothing” method).
## Employer Contribution Rates*

<table>
<thead>
<tr>
<th></th>
<th>Current</th>
<th>2013-15</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERS</td>
<td>6.92%</td>
<td>9.03%</td>
</tr>
<tr>
<td>TRS</td>
<td>7.88%</td>
<td>10.21%</td>
</tr>
<tr>
<td>SERS</td>
<td>7.42%</td>
<td>9.64%</td>
</tr>
<tr>
<td>PSERS</td>
<td>8.58%</td>
<td>10.22%</td>
</tr>
<tr>
<td>LEOFF 1</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>WSPRS</td>
<td>7.91%</td>
<td>7.63%</td>
</tr>
</tbody>
</table>

- PERS, SERS, and PSERS employers pay for the PERS 1 UAAL and employer normal cost.
- TRS employers pay for the TRS 1 UAAL and employer normal cost.

*Excludes administrative expense rate of 0.16%. Current rates based on 2009 AVR plus subsequent legislative changes.
# Plan 2 Member Contribution Rates

<table>
<thead>
<tr>
<th>Plan</th>
<th>Current</th>
<th>2013-15</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERS</td>
<td>4.64%</td>
<td>4.92%</td>
</tr>
<tr>
<td>TRS</td>
<td>4.69%</td>
<td>4.96%</td>
</tr>
<tr>
<td>SERS</td>
<td>4.09%</td>
<td>4.64%</td>
</tr>
<tr>
<td>PSERS</td>
<td>6.36%</td>
<td>6.22%</td>
</tr>
<tr>
<td>LEOFF 1</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>WSPRS*</td>
<td>6.59%</td>
<td>6.31%</td>
</tr>
</tbody>
</table>

*Rate applies to Plan 1 and Plan 2 members.*

- Plan 2 members do not pay for the Plan 1 UAAL (employee normal cost only)
Estimated General Fund State (GF-S) Contributions

Dollars in Millions

<table>
<thead>
<tr>
<th>Biennium</th>
<th>Estimated General Fund State (GF-S) Contributions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011-13</td>
<td>$1,050 $760 $390</td>
</tr>
<tr>
<td>2013-15</td>
<td>$1,440 $870 $570</td>
</tr>
</tbody>
</table>

- Unfunded Plan 1 Cost
- Current Plan Cost
Estimated Local Government Contributions

Dollars in Millions

- 2011-13
  - Unfunded Plan 1 Cost: $930
  - Current Plan Cost: $1,290

- 2013-15
  - Unfunded Plan 1 Cost: $1,070
  - Current Plan Cost: $1,750

Unfunded Plan 1 Cost
Current Plan Cost
All data, assumptions, and methods are reasonable and conform with current actuarial standards of practice.

New Plan 1 funding method includes minimum contribution rates beginning 2015.

All contributions under this method are required to fully amortize Plan 1 UAAL near the previous target date of June 30, 2024.

Failure to make all future required contributions may result in premature pay-go funding in the future.
Other Considerations

- The choice: pay now or pay more later
- Investment returns in 2012 below long-term expectations thus far
  - -1.02 percent ROR from July 1, 2011 through May 31, 2012
  - 13.2 and 21.1 percent RORs for previous two fiscal years
  - 8.77 percent average annual ROR over 20 years ending June 30, 2011
- Full funding and adoption of new economic assumptions support the ongoing soundness of the systems and help manage financial risks
- Opportunity to prevent a temporary decrease in normal cost rates for PSERS and WSPRS
Recap

- 2011 Actuarial Valuation results are preliminary
- All plans except PERS 1 and TRS 1 currently on track with systematic actuarial funding plan
- Phasing in higher Plan 1 UAAL contribution requirements to get back on track
- Recent efforts to reduce pension costs
- Short-term cost increases remain
- The choice: pay now or pay more later
- Full funding and adoption of new economic assumptions support the ongoing soundness of the systems
Questions?
Appendix
Amortization of Plan 1 UAAL

- Phasing in higher Plan 1 UAAL contribution requirements under new method adopted in 2009
- Full requirements begin in 2015
  - Increase from 2.34 (current) to at least 3.50 percent (2015) in PERS
  - Increase from 2.42 (current) to at least 5.75 percent (2015) in TRS
- Paid by employers only
- Expected amortization dates
  - 2025 in PERS 1
  - 2022 in TRS 1
  - Will occur sooner/later under optimistic/pessimistic outcomes
### Calculation of Actuarial Value of Assets

<table>
<thead>
<tr>
<th>All Plans</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(Dollars in Millions)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>a.</strong> Market Value of Assets</td>
<td>$57,350</td>
</tr>
<tr>
<td><strong>b.</strong> Deferred Gains and (Losses)</td>
<td></td>
</tr>
</tbody>
</table>

#### Plan Year Ending

<table>
<thead>
<tr>
<th>Plan Year Ending</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>6/30/2011</td>
<td>5,547</td>
</tr>
<tr>
<td>6/30/2010</td>
<td>1,531</td>
</tr>
<tr>
<td>6/30/2009</td>
<td>(11,090)</td>
</tr>
<tr>
<td>6/30/2008</td>
<td>(2,724)</td>
</tr>
<tr>
<td>6/30/2007</td>
<td>2,058</td>
</tr>
<tr>
<td>9/30/2006</td>
<td>892</td>
</tr>
<tr>
<td>9/30/2005</td>
<td>482</td>
</tr>
</tbody>
</table>

#### Total Deferral

<table>
<thead>
<tr>
<th><strong>Total Deferral</strong></th>
<th>$(3,304)</th>
</tr>
</thead>
<tbody>
<tr>
<td>c. Market Value less Deferral (a-b)</td>
<td>$60,654</td>
</tr>
<tr>
<td>d. 70% of Market Value of Assets</td>
<td>$40,145</td>
</tr>
<tr>
<td>e. 130% of Market Value of Assets</td>
<td>$74,555</td>
</tr>
<tr>
<td><strong>f. Actuarial Value of Assets</strong></td>
<td><strong>$60,654</strong></td>
</tr>
</tbody>
</table>

**Note:** Totals may not agree due to rounding.

*Actuarial Value of Assets can never be less than 70% or greater than 130% of the Market Value of Assets.*
New Economic Assumptions Established In 2ESB 6378

<table>
<thead>
<tr>
<th></th>
<th>Prior</th>
<th>2ESB 6378</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment Return</td>
<td>8.00%</td>
<td>7.90%</td>
</tr>
<tr>
<td>Inflation</td>
<td>3.50%</td>
<td>3.00%</td>
</tr>
<tr>
<td>General Salary Increase</td>
<td>4.00%</td>
<td>3.75%</td>
</tr>
</tbody>
</table>

- 2ESB 6378 assumption changes effective for contribution rate requirements beginning July 1, 2013
- Assumed ROR becomes 7.8 percent beginning July 1, 2015 and 7.7 percent beginning July 1, 2017
- 2ESB 6378 assumed to not revise the 2011 actions of the Pension Funding Council
Projected Contribution Rates

- The next six slides reflect projected employer contribution rates based on:
  - Asset returns through June 30, 2011
  - June 30, 2010, Actuarial Valuation Report
  - Legislative changes through the 2011 Legislative Session

- We plan to update these projections in the fall with our latest data
- Please replace these projections when more recent projections become available
- Please see the 2010 Risk Assessment for further information on projected contribution rates
Projected Employer Contribution Rates – PERS*

*Assumes no future benefit improvements and full funding up to assumed system maximums.
Projected Employer Contribution Rates – TRS*

*Assumes no future benefit improvements and full funding up to assumed system maximums.
Projected Employer Contribution Rates – SERS*

*Assumes no future benefit improvements and full funding up to assumed system maximums.
Projected Employer Contribution Rates – PSERS*

*Assumes no future benefit improvements and full funding up to assumed system maximums.
Projected UAAL Contribution Rates – LEOFF 1*

*Assumes no future benefit improvements and full funding up to assumed system maximums. Also assumes reinstatement of previous state funding policy should a UAAL re-emerge.
Projected Employer Contribution Rates – WSPRS*

*Assumes no future benefit improvements and full funding up to assumed system maximums.