TMRS Rate Stabilization
Part of the Toolkit

October 8, 2012
Mark Randall
Where have we come and where are we headed?
Our retirement plan is that when you get too old to fish, they cut you up and use you for bait.
In 2007, the TMRS Board of Trustees approved the change to the Projected Unit Credit (PUC) actuarial funding method.

Change was needed to improve funded ratios long term and to pre-fund annually repeating benefit enhancements:

- Cost-of-Living Adjustments (COLAs or Annuity Increases)
- Updated Service Credits (USC)
Ad hoc Benefit Enhancements

- These are *additional, one time enhancements granted which impact past accruals only*
  - COLAs and Updated Service Credits
  - These benefits were not accrued while services were received, therefore, were not advance funded for

- In June 2009, Board approved that all future ad hoc benefit enhancements be amortized over a 15 year period with a level dollar payment schedule
Diversification and Restructuring

- HB 360 – 2009 Legislative Session – Diversification
- SB 350 – 2011 Legislative Session – Restructuring
1.4% average increase in active members since 2001
7.4% average increase in retired members since 2001
There are currently 2.3 actives for every retiree, down from 4.1 in 2001
## Summary of System-wide Results

<table>
<thead>
<tr>
<th></th>
<th>December 31, 2011</th>
<th>December 31, 2010</th>
<th>December 31, 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actuarial Accrued Liability</td>
<td>$21,563</td>
<td>$20,481</td>
<td>$21,525</td>
</tr>
<tr>
<td>Actuarial Value of Assets</td>
<td>$18,347</td>
<td>$16,986</td>
<td>$16,306</td>
</tr>
<tr>
<td>Unfunded Actuarial Accrued Liability</td>
<td>$3,216</td>
<td>$3,495</td>
<td>$5,219</td>
</tr>
<tr>
<td>Funded Ratio</td>
<td>85.1%</td>
<td>82.9%</td>
<td>75.8%</td>
</tr>
<tr>
<td>Average Funding Period (Years)</td>
<td>25.6</td>
<td>26.8</td>
<td>27.8</td>
</tr>
</tbody>
</table>

### Minimum Contribution Rates:

<table>
<thead>
<tr>
<th></th>
<th>December 31, 2011</th>
<th>December 31, 2010</th>
<th>December 31, 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Straight Average</td>
<td>8.20%</td>
<td>8.04%</td>
<td>9.20%</td>
</tr>
<tr>
<td>Payroll Weighted Average</td>
<td>12.94%</td>
<td>12.92%</td>
<td>14.25%</td>
</tr>
</tbody>
</table>

$ amounts above are in Millions
Recent Asset Performance

<table>
<thead>
<tr>
<th>Year</th>
<th>Market</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>17.3%</td>
<td>1.7%</td>
<td>12.8%</td>
<td>10.6%</td>
<td>0.8%</td>
<td>7.8%</td>
<td>-1.3%</td>
<td>10.0%</td>
<td>9.0%</td>
<td>2.3%</td>
</tr>
</tbody>
</table>
$ amounts are in Billions

<table>
<thead>
<tr>
<th>Year</th>
<th>Market</th>
<th>Actuarial</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>$8.6</td>
<td>$9.2</td>
</tr>
<tr>
<td>2002</td>
<td>$10.2</td>
<td>$10.0</td>
</tr>
<tr>
<td>2003</td>
<td>$10.6</td>
<td>$10.8</td>
</tr>
<tr>
<td>2004</td>
<td>$11.9</td>
<td>$11.6</td>
</tr>
<tr>
<td>2005</td>
<td>$13.3</td>
<td>$12.5</td>
</tr>
<tr>
<td>2006</td>
<td>$13.5</td>
<td>$13.3</td>
</tr>
<tr>
<td>2007</td>
<td>$14.7</td>
<td>$14.2</td>
</tr>
<tr>
<td>2008</td>
<td>$14.6</td>
<td>$15.1</td>
</tr>
<tr>
<td>2009</td>
<td>$16.3</td>
<td>$16.3</td>
</tr>
<tr>
<td>2010</td>
<td>$18.0</td>
<td>$17.0</td>
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<tr>
<td>2011</td>
<td>$18.6</td>
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</tr>
</tbody>
</table>
Projected Contributions versus Benefits and Refunds

- Includes member and employer contributions
- Includes administrative and investment expenses

Investment Earnings are helping to pay the benefits!
The System-wide Funded Ratio has increased four years in a row to its highest level in 10 years.
Projected Funded Ratio

- 2001: 84.2%
- 2003: 82.8%
- 2005: 82.1%
- 2007: 74.4%
- 2009: 82.9%
- 2011: 85.1%
- 2013: 85.7%
- 2015: 87.0%
- 2017: 89.6%
Historical Payroll Weighted TMRS Contribution Rates


0.0%  2.0%  4.0%  6.0%  8.0%  10.0%  12.0%  14.0%  16.0%

10.60%  10.80%  10.80%  11.20%  12.00%  11.92%  12.15%  12.52%  13.46%  14.16%  14.50%  12.92%  12.94%

Contribution Rate
An example of the antithesis of Rate Stabilization ...
Example of why adopting an ad hoc COLA year after year is not a good thing

Projected Full Rate

Valuation as of December 31,
Example of why adopting an ad hoc COLA year after year is not a good thing

Projected Funded Ratios

Valuation as of December 31,
Sustainability is survival

DB Plan
In Summary

- System-wide Funded Ratio continues to increase
  - Overall asset and liability gains
- Most cities are now paying their Full Rate
- Expectation is for an increasing funded ratio over the next few valuations and continued stability in the contribution rates
Replacement Ratios

- What percent of working income is sustained after retirement?
- What is an adequate income level in retirement?
- Key factors:
  - Health care costs – HUGE and highly variable
  - Inflation
  - Longevity
  - Lifestyle
What replacement ratio in retirement to maintain current standard of living?

“Rule of thumb”: 80%

- Social Security?
  - Roughly 20% to 40%

- How much have you saved?

- Your employer’s (all of them) plan?

Together, these sources form a “replacement ratio”, or percentage of working income that employees can rely on in retirement
Replacement income for Jane Smith

- Retirement Age: 65
- Gross income: $55,000
- Typical calculations show an adequate income in retirement of $41,600 – roughly 76% replacement ratio
Replacement income for Jane Smith

Why is it less?

► Retirees no longer pay FICA taxes on their income to Social Security and Medicare
► Federal income taxes on Social Security benefits are lower than those on employment income
► Jane no longer has to save for retirement, which means a larger share of her income can go to current consumption
► Major expenses may also be eliminated or reduced, such as housing (if a mortgage is paid off) and children’s education costs
► Some expenses related to work (such as clothing and transportation) may be lower in retirement
But …

By far, the largest factor not specifically addressed by these models is health care costs, which are typically a major expense in retirement.

• For a person with “average health care expenses”, Jane may need around 100% income replacement to maintain her standard of living and pay health care costs.
Remember to consult your Actuary!

Probably knows less than you do about the future. However, his inability to communicate in any understandable terms could be useful in some situations.
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