## Funding Schedule Extension

■ July, 2009 -PERAC Actuarial Advisory Committee:

- Stephen Ricci, Ricci Consultants
- Kathleen Riley, Segal Company
- Daniel Sherman, Buck Consultants
- Lawrence Stone, Stone Consulting makes its recommendations.


## Funding Schedule Extension

- Proposed long-term funding solution for Massachusetts systems
- 2008 investment returns were the impetus
- Discussions on extending 2028 began over 5 years ago
- Provide relief responsibly


## Extend Schedule to 2040 (Under 22F)

- Increasing annual amortization 4.0\% maximum
- Appropriation in any fiscal year at least as great as prior year (until fully funded)
- If appropriation would increase more than $8 \%$, it may be adjusted


## Funding Strategies

- Maintain the Budget!
- 2009 valuations (42)
- 2010 valuations (79)
- 2011 valuations (50 scheduled)


## Stay Within 2030 Rules

- Preferred by many systems
- Is it feasible? 30\%-50\% increases using same schedule

■ Many systems must extend beyond 2030
■ Originally expected 60-75\% of locals to extend

## Extend Beyond 2030

■ Can't extend to 2040 unless necessary

- Alternatives
- Shorten schedule
- Lower annual amortization increase


## Short-term Implications

- 2008 investment losses not fully recognized (actuarial value)
- 1/1/11 valuations- 2 more years to recognize
- "Things will get worse before they get better."
- Generally 15\%-20\% returns required (short-term) to maintain position
- 1/1/13 valuation may need to extend further to maintain appropriation


## 2009 Valuations

- Extension to 2030 - very little help
- Significant increases using same schedule (30\%-50\% +)
- Without 2040 option many systems looking at $20 \%$ + increases


## 2010 Valuations

- Situation slightly improved
- Investment gains
- Liability gains (usually)
- 2030 schedules possible (for about 60\% of plans)
- 2040 schedules work for most


## 2011 Valuations

- Situation improved
- Investment gains
- Liability gains (usually)
- Already beginning to reflect 2008 losses (2009 Valuation)


## 2011 PERAC Local Valuations

Results to date: 9 systems
Reduce investment return assumption 3
Add mortality improvement assumption 9
Increase COLA base 3
Recognize another 40\% of 2008 loss 9
No further extension of schedule necessary

## 2011 Valuations

- Generally, no further extension is necessary
- Why?
- Actuarial liability gains
(Primarily salary gains)
- Decrease in active members
- Actuarial value of assets corridor


## 2011 Valuations

- Extremely positive (and surprising?) results
-Expected 5-10 years to deal with loss
-Things can get worse before they get better
-Mindset for 1/13 valuations: Expect schedule will need to be extended


## Funding Schedules Adopted

2009 and 2010 Valuations
As of September 2010


## Funding Schedules Adopted



## When 2040 Doesn't Work

- Example:
- FY13 under current schedule $\$ 1,000$
- FY13 based on 1/1/11 valuation $\$ 1,200$


## Phase-in Schedule

- To get systems back on track
- Schedule ramps up over 3-5 years
- Used for a number of systems under 2028 rules
- 8\% annual increases serve as a phase-in


## Alternative Approach

- Set increase in total appropriation
- For example, 5\% per year increases
- More aggressive funding


## Valuation Funding Schedules

- Regular: 4.0\% annual increasing amortization to 2036
- Alternative: 5.0\% annual increasing appropriation to 2032

FOR ILLUSTRATION PURPOSES ONLY!!!!!

## Investment Return Assumption

- Should it be reduced?
- PERAC "Standard": 8.0\% since 1997
- Pressure to increase in late 1990s
- Pressure to decrease over past few years


# Investment Return and Salary Increase Assumption Example 

\author{

Investment Return 8.0\% <br> Actives $\quad 2,800$ <br> Retirees $\quad \underline{3,200}$ <br> Total Actuarial Liability 6,000 <br> | Assets | 4,000 |
| :--- | :---: |
| Unfunded Liability | 2,000 |
| Funded Ratio | $66.7 \%$ |

}

Investment Return and Salary Increase Assumption Examples

| Investment Return | $8.0 \%$ | $7.5 \%$ |
| :--- | :--- | :--- |
| Actives | 2,800 | 3,000 |
| Retirees | $\underline{3,200}$ | $\underline{3,300}$ |
| Total Actuarial Liability | 6,000 | 6,300 |
|  |  |  |
| Assets | 4,000 | 4,000 |
| Unfunded Liability | 2,000 | 2,300 |
| Funded Ratio | $66.7 \%$ | $63.5 \%$ |

# Investment Return and Salary Increase Assumptions 

- Long-term
- Inflation components

■ Should generally move together

## Investment Return and Salary Increase Assumption Examples

| Investment Return | $8.0 \%$ <br> Current | $7.5 \%$ <br> Current | $7.5 \%$ <br> $*$ |
| :--- | :--- | :--- | :---: |
| Actives | 2,800 | 3,000 | 2,900 |
| Retirees | $\underline{3,200}$ | $\underline{3,300}$ | $\underline{3,300}$ |
| Total Actuarial Liability | 6,000 | 6,300 | 6,200 |
|  |  | 4,000 | 4,000 |
| Assets | 2,000 | 6300 | 4,000 |
| Unfunded Liability | $66.7 \%$ | 2,200 |  |
| Funded Ratio |  | $64.5 \%$ |  |
|  |  |  |  |

## Investment Return and Salary Increase Assumption Examples

Investment Return
Salary Scale
Actives
Retirees
Total Actuarial Liability

| Assets | 4,000 | 4,000 | 4,000 | 4,000 |
| :--- | :--- | :--- | :--- | :--- |
| Unfunded Liability | 2,000 | 2,300 | 2,200 | 2,040 |
| Funded Ratio | $66.7 \%$ | $63.5 \%$ | $64.5 \%$ | $66.2 \%$ |

*current reduced by 1\% at all ages

## Final Observations

- Investment return assumption has the most impact
- Salary scale has the second most impact
- Reduction in investment return assumption should be mitigated
- Measured approach:

No need to reduce to $7.5 \%$ immediately
Over time - maybe?
Monitor all assumptions each year

