Reading Old Hire Actuarial Reports

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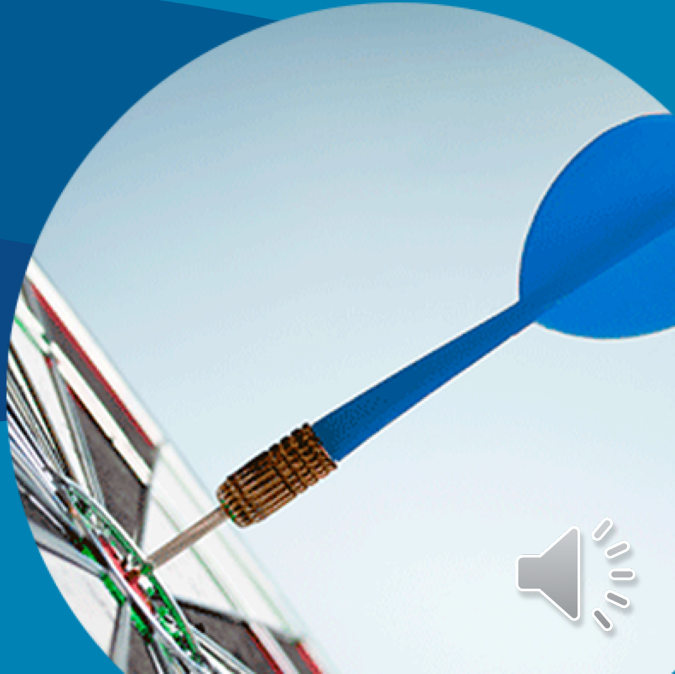

Old Hire Reports

- Each Department has individual liabilities, assets, and funding policy
- Purpose of Valuation:
  – Determine funded level of plan – how do assets compare to obligations?
  – Determine calculated contribution

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The Actuarial Terms we will define

- Actuarial Accrued Liability (AAL)
- Actuarial Value of Assets (AVA)
- Unfunded Actuarial Accrued Liability (UAAL)
- Funded Ratio
- Annual Required Contribution (ARC)

**Examples assume no investments are available, earnings = $0.*

Closed Plan Dynamic

- Last Old Hire member was hired in 1978
- Only 3 members still regular active (non DROP)
- Vast majority of members are in payment phase
- Generally fund benefits over active career so, in theory, would like to have benefits fully funded at this point

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Actuarial Accrued Liability (AAL)

- Because Plans are closed, the accrued liability simply represents the total present value of the annuities over the member's life expectancies.
  - Assume plan has two retirees, age 70 and 75.
  - Assume life expectancy 80 (or 10 and 5 years remaining respectively).
  - Both receive benefits of $10,000 per year

  - Total liability =

$$10*\$10,000 + 5*\$10,000 = \$150,000$$

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Actuarial Accrued Liability (AAL)

- The Actuarial Accrued Liability also represents the *target value of assets* at the valuation date

Actuarial Value of Assets (AVA)

- Investment returns are volatile
- Don't want all that volatility to flow through to contribution requirements
- Smooth assets
  - Assumes investment returns of 7.5%
  - Smooth any deviation from that (above or below) over 5 years
- Smoothed value is the actuarial value of assets

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Unfunded Accrued Liability

- Accrued liability is representative of desired amount in the bank, but…
- That doesn't always mean that's what's in the bank
- Example:
  - Accrued Liability: $50,000
  - Assets: <u>$40,000</u>
  - **Unfunded Accrued Liability**: $10,000
- Flip flopped situation "surplus"

- **Funded ratio** = Assets/Liability = 40000/50000 = 80%

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How did we end up with an unfunded liability?

- Improving Benefit Provisions
  - Ad Hoc COLAs without funding to cover the up front increase in liabilities
- Contributed less than actuarially determined amount
- Asset losses
  - Assumption is 7.5%. May not get 7.5%.
- Demographic losses
  - Mortality – members live longer than expected
  - Less terminations than expected
  - Members retire sooner than expected

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How did we end up with an unfunded liability?

- Other reasons:
  - Assumption changes
    - Plan experience indicates that true cost is higher than previously thought
    - Experience study in 2015 showed longer life expectancy
- Can have flip side gains and end up with a surplus

Amortization Payment

- Difference in total past accruals and current asset levels (UAAL) must be amortized off
- Similar to a mortgage
- Old Hire Plans use average life expectancy of the members for the amortization period
  - But not more than 20 years
  - Need to be able to pay benefits when due
  - Some less funded plans have to amortize more quickly to make sure assets are available

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Amortization of the UAAL

- Additional contributions will be made so that the UAAL will be amortized over a desired period of time
  - In this example, \$10,000 of unfunded liability and 10 years to pay it off
  - Amortization payment = \$10,000 / 10 = \$1,000

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Annual Required Contribution

- "ARC"
- Made up of three components
  - Normal Cost ($0 for Old Hires)
  - Amortization of Unfunded Accrued Actuarial Liability (UAAL)
  - Administrative Expense
- Cannot be less than $0

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Why did my Annual Required Contribution change?

- Benefit modification
- Assumption change
  - None this year
- Administrative expense
  - Floating assumption
- Investment experience
  - Poor investment performance in 2016 along recognition of asset losses that were being deferred as of prior valuation resulted in an overall loss on the smoothed assets for most plans

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Why did my Annual Required Contribution change?

- Salary/rank experience
- Contributions more/less than expected
- Mortality and Other

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This concludes the
Reading Old Hire Actuarial Reports
Presentation.

If you wish further information
or have questions please call

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