Reading Volunteer Actuarial Reports

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Volunteer Reports

- Each Department has individual liabilities, assets, and funding policy
- Purpose of Valuation:
  - Compare budgeted contribution (assumed contribution) to contribution required by statute (calculated contribution)
  - If contributing more than required, what benefit levels can we afford?

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The Actuarial Terms we will define

- Normal Cost
- Actuarial Accrued Liability (AAL)
- Actuarial value of assets (AVA)
- Unfunded Actuarial Accrued Liability (UAAL)
- Funded Ratio
- Annual Required Contribution (ARC)

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Start with a simple example …

- A City hires an employee and agrees to pay the employee $100,000 the day he or she retires in 20 years
- No investments are available
  - (earnings = $0)
- The City would like to save up for this payment throughout the 20 years instead of having to come up with the whole $100,000 at the time of retirement

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Normal Cost

- Therefore, the City will need to save $5,000 per year to accumulate the $100,000
  - $100,000 / 20 years => $5,000 per year
  - The $5,000 can be defined as the Normal Cost
- The Normal Cost can be defined as:
  - The cost of accruing that year's benefit
  - The cost of providing benefits to a new employee

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Actuarial Accrued Liability (AAL)

- So, 10 years into the arrangement the City should have saved $50,000
  - $5,000 each year for 10 years
  - The $50,000 can be defined as the Actuarial Accrued Liability (AAL)
- The Actuarial Accrued Liability represents the *target value of assets* at a specific point in time based on the funding objectives
  - AAL at Year 5 = $25,000
  - AAL at Year 20 = $100,000

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: $40,000
  - Unfunded Accrued Liability: $10,000
- This difference is paid for over time in the amortization payment
- Flip flopped situation "surplus"
- Use "actuarial value" which smooths out investment gains and losses so not *actually* money in the bank
- Funded ratio = $40,000/$50,000 = 80%

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How did we end up with an unfunded liability?

- Improving Benefit Provisions Applied to Past Service
  - Old benefit structure: $100
  - New benefit structure: $200
  - Past accruals under $200 structure: $20,000
  - Past accruals under $100 structure: <u>$10,000</u>
    - Addition to UAAL: $10,000
- Contributed less than actuarially determined amount

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How did we end up with an unfunded liability?

- Other reasons:
  - Asset losses
    - Assumption is 7.0%. May not get 7.0%.
  - Demographic losses
    - Less terminations than expected
    - Members retire sooner than expected
  - Assumption changes
    - Plan experience indicates that true cost is higher than previously thought
  - Can have flip side gains and end up with a surplus

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Amortization Payment

- Difference in total past accruals and current asset levels (UAAL) must be amortized off
- Similar to a mortgage
- Statutes require maximum amortization period of 20 years
  - Reset at each valuation

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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, lets assume 10 years
  - Amortization payment = $10,000 / 10 = $1,000

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Amortization Payment

- Difference from a mortgage:
  - Additional principal payments against a mortgage decrease the time to pay off the liability, not the future payments
  - In the actuarial valuation, payments above the required amortization payment decrease the required amortization payments in the future
    - “Refinance” each year
    - Seen on table 5 under Expected Changes

Administrative and Other Ongoing Expenses

- Administrative:
  - Administrative charges for usual FPPA services
- Other ongoing:
  - Typically insurance premiums are paid from the trust
  - Outside of administrative charges for usual FPPA services
  - Very few departments have this

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Required Contribution

- Referred to as the Calculated Contribution in the report (CC)
- Made up of three components
  - Normal Cost: $5,000
  - Amortization of Unfunded Accrued Actuarial Liability (UAAL): $1,000
  - Administrative and Other Ongoing Expenses: $250
  - Calculated Contribution = $6,250
- Cannot be less than $0

Why did my calculated contribution change?

- Expected change
  - Contributions larger or smaller than required
- Benefit modification
- Assumption changes
  - None
- Investment experience
  - Favorable for this valuation
    - Good returns during 2019 and 2020
- Demographic experience

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This concludes the
Volunteer Study Sample Report
Presentation.

If you wish further information
or have questions please call

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Fire and Police
Pension Association

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