

Actuarial Valuation Basics

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What is an actuarial valuation?

- “Snapshot” at that date
- Estimated future cash flows
- Present value terms
- Actuarial assumptions
- How good are the assumptions?
 - Gains and losses
- “True-up” prior valuation

Actuarial Valuation Cycle

- Preliminary review
- Data preparation
- Asset preparation
- Valuation specifications
- Valuation run and summary
- Final report and presentation

How often should a valuation be performed?

- At least every 2 years
 - avoid unpleasant surprises
- Interim valuation in off year
- Private sector requires annual
- PERAC with help of private actuaries
- Looking to meet 2 year goal for all systems

What is actuarial funding?

- Advanced funding
- Costs should be paid during working lifetime of employee
 - taxpayers receiving benefits of employee's service
 - not put off for future generations
- Pay current (normal) cost plus "past service" cost
- Level dollar vs. increasing

What are the basic actuarial assumptions?

Membership Characteristics

- Longevity
- Termination
- Disability
- Retirement

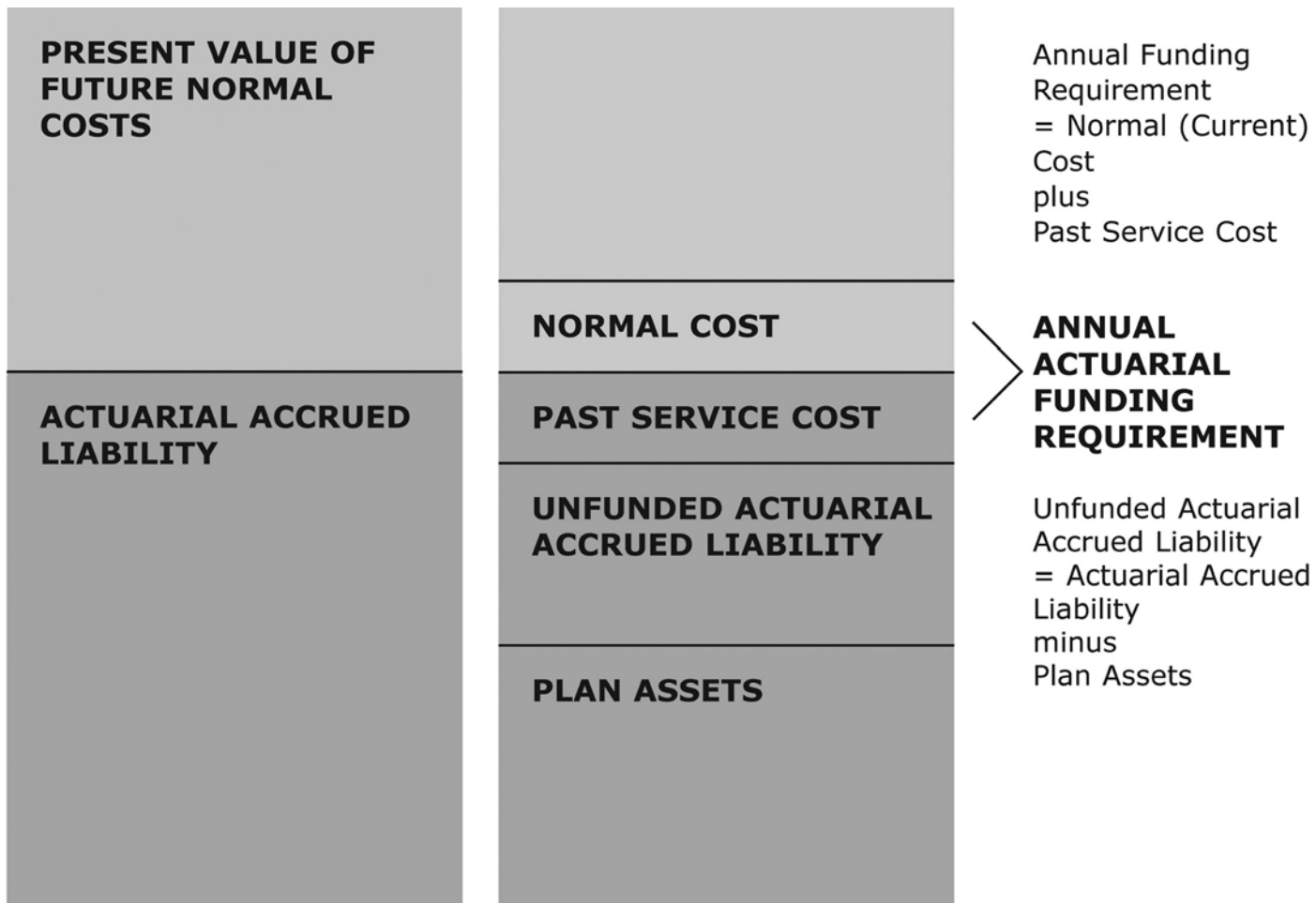
Economic Characteristics

- Investment return
- Salary increases
- Inflation
- COLA increases

What are actuarial liabilities?

- Present value of future benefits
- Present value of future normal costs
- Normal cost
- Actuarial accrued liability
- Unfunded actuarial accrued liability

Present Value of Future Benefits



Determination of Liabilities for Actuarial Valuation

Total Normal Cost for the system is the sum of Normal Cost for each individual participant.

Total Actuarial Accrued Liability for the system is the sum of the Actuarial Liability for each individual

UAL vs. Funded Ratio

Different views of funding with same components

- Actuarial Accrued Liability and Assets

UAL = Liability - Assets

- Dollar Amount

Funded Ratio = Assets/Liability

- Percentage Basis

What exactly is 100% funding?

Normal cost still applies

- Benefits accruing in current year

100% is a moving target

- Different valuation systems produce different results.
- What is the benchmark? 95%? 105%?

Funding status can change

Plan Changes

- Employee contributions
- Benefit enhancements

Non-pension

- Post retirement healthcare funding

Conservative Actuarial Approaches

Adopt more conservative assumptions

- Investment return
- Salary scale
- Longevity

Actuarial value of assets

- Adopted by Commonwealth
- Reduce volatility

More aggressive funding schedule