Actuarial Assumption Considerations Unique to Public Safety Plans

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Elizabeth Wiley, FSA, EA, MAAA, FCA
Why Consider Assumptions?

To produce estimates of the plan as close as possible to the ultimate cost of the plan

– Ultimate cost of the plan can only be measured when all benefits are paid

– It will then be:

  Benefits paid from the plan
  PLUS
  Administrative Expenses
  PLUS
  Investment Losses
  MINUS
  Investment Gains
Actuarial methodology determines the size of the “tank”
Actuarial Assumptions - General

• Two general types: demographic and economic
• Who “owns” them?
• Considerations
  – No “right” answer, but need to be reasonable
  – Need to consider the specific plan characteristics and objectives
  – Must meet actuarial standards of practice
Why Public Safety Different?

The characteristics of public safety plans tend to be different from those of general employees in several ways:

• On-job risks
• Earlier retirements generally
• Work schedule impacts on service and salary
• DROP plans more prevalent
Disability

- Development of disability assumption
- Division of disability assumption
  - Into on- and off-duty
  - Based on type (such as permanent and total versus partial)
- Mortality assumptions for disabled members
  - Definition of disability?
  - Any health or other benefits of disability versus service retirement?
- Disability cutback considerations
Death

• Development of mortality assumption
  – Pre-retirement considerations
  – Post-retirement considerations

• Division of mortality assumption
  – Into on- and off-duty
  – Based on type (if benefits vary)

• Valuation of lump sum death benefits
Mortality Improvement

- Not public safety specific, but subject of increasing awareness and concern
• Public safety member contributions tend to be higher
  – Refunds for termination are thus larger
  – Methodology for valuating terminations more significant as larger part of liability

• Consider impact of changes in policies related to post-retirement health on retirement assumptions
• Do vesting and benefit service differ?
• Considerations for service accruing at rates other than one year a year
  – Can sick leave or other basis be used to accrue more service?
  – Does work schedule and plan definition of service result in other accrual?
• Assumptions about prior military and other service purchases
  – Particularly if free or subsidized
Salary

• Alignment of data and plan definition of salary?
  – Certification and other differentials
  – Periods over which salary measured for benefit calculation versus provided for valuation

• Consider unusual things that can impact?
  – Lump sum at termination (drag-up pay)
  – Overtime pay, including possibility of catastrophic events

• Salary schedules considered in salary increase assumption?
• Methodology used to model
  – Actually model DROP versus assumed equivalence or load
  – Value based on assumptions versus value most valuable option
• DROP election rates, if applicable
• DROP interest rate assumption, if variable
• Valuation of options to leave lump sum in plan, is applicable
Other Demographic Assumptions

• Marriage assumption
  – Often very different by gender for public safety

• Optional form election assumptions for subsidized forms

• Remarriage assumptions
  – Remarriage penalties more common in public safety plans
QUESTIONS?