



Pre-Retirement Survivor Benefits

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Overview Of Today's Presentation

- Current pre-retirement survivor benefits
- Options to improve pre-retirement survivor benefits
- Pricing discussion



Current Pre-Retirement Survivor Benefits

- The spouse of an active member who dies with at least 10 years of service (YOS) or while eligible to retire may choose to receive an annuity for life
- The annuity is reduced using the retirement Joint and Survivor (J&S) 100 factors
- The law does not specify that the benefit be actuarially equivalent



Retirement J&S Option Factors

- Applied upon member choice at retirement
- Reduces member's benefit to fund ongoing survivor benefit
 - Actuarially equivalent to single life benefit
- Factors developed for each J&S option
 - Continuation percentage (100, 67, and 50)
- Based on age difference between member and beneficiary
 - Member's age minus beneficiary's age
 - Maximum difference + 40
 - Minimum difference -20
- Calculation assumes average retirement age 55



Example: Post-Retirement

- 55-year old member retires and selects J&S 100 percent benefit
 - Spouse age 50
 - Final average salary - \$75,000
 - Years of Service - 25
- Value of single life annuity in first year - \$37,500
 - $2\% \times 25 \text{ YOS} \times \$75,000$
- J&S 100 percent reduction factor - 0.855
- Value of J&S 100 percent annuity in first year - \$32,062.50
 - $0.855 \times \$37,500$



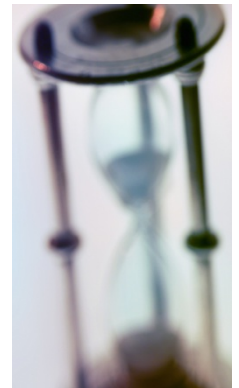
Example: Pre-Retirement

- 40-year old member dies in the line-of-duty
 - Spouse age 35
 - Final average salary - \$60,000
 - Years of Service - 15
- Value of unreduced single life annuity in first year - \$18,000
 - $2\% \times 15 \text{ YOS} \times \$60,000$
- J&S 100 percent reduction factor - 0.855
- Value of J&S 100 percent annuity in first year - \$15,390
 - $0.855 \times \$18,000$



Ways To Improve Pre-Retirement Survivor Benefits

- Option 1 - Change the J&S assumptions
 - Maintain current J&S model, but use assumptions for pre-retirement deaths
 - Two-lifetime model
- Option 2 - Design a new factor
 - Set the survivor benefit actuarially equivalent to the member's benefit had they retired on the day of death
 - One-lifetime model
- Option 3 - Eliminate the factor



Comparing Examples

- 40 Years old the Member dies in the line-of-duty
 - Spouse age 35
 - Final average salary - \$60,000
 - YOS- 15
- Value of Unreduced single life annuity in first year - \$18,000
 - $2\% \times 15 \text{ YOS} \times \$60,000$

	Factor	First-Year Annuity Value
Current Benefits	0.855	\$15,390
Option 1	0.895	\$16,110
Option 2	0.963	\$17,334
Option 2 – 45 year old spouse	1.044	\$18,792
Option 3	1.000	\$18,000



Implications Of Specific Options

■ Option 1

- Extra table implies additional administration required
- Same model as current J&S factors
- Better actuarial equivalence under J&S model

■ Option 2

- New factors to implement and administer
- Actuarially equivalent for the group
- New policy of actuarially increasing benefits

■ Option 3

- No table to administer or develop
- Easy to explain



General Implications

- All options increase cost of the benefits
 - Option 2 will always cost the plan more than Option 1
 - Option 3 will cost the plan more than Option 2 on average
- Consistency with other plans - a policy issue



Option 3 – Pricing

- Some questions to answer
 - Prospective or Retroactive?
 - Impact all members - active and vested terminated?
 - Duty and non-duty deaths?
- We priced a **prospective** option
 - Included all members
 - Included all pre-retirement deaths
 - Have not set an assumption for survivors selecting annuities
- Pricing a retroactive option in progress
 - Prospectively increases benefits for current survivors of active deaths



Need Assumption For Survivors Selecting Annuity

- Combination of two things
 - Member must have qualified survivor at time of death
 - Survivor must select the annuity over the return of contributions
- Current assumption
 - Varies for non-duty deaths from zero at younger ages to over 50 percent at higher ages
 - Constant for duty-deaths at 60 percent
- We priced a range
 - No change in the assumption (low)
 - Constant 60 percent for all deaths (high)



What Are The Preliminary Results?

	Low cost	High cost
Member Rate Increase	0.03%	0.09%
Local Government Rate Increase	0.02%	0.05%
State Rate Increase	0.01%	0.04%
Members Impacted in first year	About 4	About 7



Option 3 Pricing Observations

- Fiscal note for prospective option would likely be somewhere in between the high and low estimates
- Range for retroactive options would be higher
- More questions to answer if retro is chosen



Wrap-up

- Current pre-retirement survivor benefit has retirement J&S factor applied
- Many options to improve benefit if desired
- Option 1 refines the J&S factors by using assumptions for pre-retirement survivors
- Option 2 defines an actuarially equivalent factor for the group
 - Policy consideration - actuarially increases benefits
- Option 3 eliminates the reduction





Questions?

