SOCIETY OF ACTUARIES

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Second-to-die (continued)

Simultaneous death

In summer 1993, the Society of Actuaries research staff surveyed companies issuing last survivorship policies. Highlights of the results are reported by Jack Luff and Bob Vose in the boxed story on this page.

It is rightly believed that last survivor policies are subject to an extra hazard, because of the possibility that both lives will die simultaneously or within 30 days of each other in a double tragedy. It is necessary to add provision for double tragedy to cost-of-insurance rates, but the extent is for the actuary involved to judge. The matter of heartbreak, or the theory that on the first death, the surviving spouse immediately becomes substandard, creates another judgment call for the actuary.

The family policy marketed by Life Insurance Company of Georgia in 1957 specifically recognized the double tragedy hazard. That policy paid the usual life insurance and double indemnity benefits on the husband and wife, but it paid triple indemnity for a double tragedy. That company is still issuing double tragedy coverage on its joint life policies. A double tragedy accidental death rider also may make sense for last survivorship policies.

Need for generator

To handle last-survivorship insurance in a satisfactory way, it is necessary to have up-to-date information about mortality of each insured, subdivided by age, sex, smoking status, select status, and substandard status (if any). It also is necessary to have a computer program to generate cost-of-insurance rates when the individual characteristics are entered. Generator results are needed in the field for illustrations to be made. This is a highly individualized product. The flexibilities of universal life handling also appear necessary to this product.

Following are results using the Bragg Associates Generator:

Life 1:	Male, aged 77, nonsmoker, standard
Life 2:	Female, aged 72, smoker, standard
Basis:	Bragg Older Age Select and Ultimate Life Tables
Loading:	Net of any double tragedy, heartbreak, or other loading

The deferred nature of the second-to-die risk (as compared with the single-life risk) is evident. If funded on a level premium permanent basis, the second-to-die product can be expected to generate very high early reserves and cash values.

Duration	Net Annual Cost-of-Insurance (per $1,000)	Female, Age 72, Smoker Single Life (for Comparison) (per $1,000)
1	.07	7.00
5	3.18	17.32
10	21.08	36.74
15	79.87	86.41

Popularity

As of November 1993, last survivor life insurance is being issued by at least 50 companies. Average size policies are believed to be extremely large. Associated products (such as first-to-die) also are issued.

It is exciting that we finally have achieved the ability to custom-tailor a product to the specific need; each case is unique. The last survivor phenomenon is here to stay.

Jack Bragg is an actuarial consultant at John M. Bragg and Associates, Inc., Atlanta, and past president of the Society of Actuaries.

Study of simultaneous deaths under second-to-die policies

by Jack Luff and Bob Vose

In light of the increasing popularity of second-to-die plans and widespread interest in the frequency of simultaneous death claims, the Committee on Individual Life Insurance Experience Studies undertook a simplified study of such deaths. Deaths were determined as both insureds dying from a common cause or within 30 days of one another.

Twenty-nine companies contributed data, resulting in an exposure of 170,000 policy years. Exposure was approximated as the mean number of policies in force.

Seven simultaneous deaths occured, resulting in a rate of about .04 per 1,000. Causes of death included four aviation accidents and three auto accidents. The committee plans to update the study later this year to include 1993 results.

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