

He shows this (a) by first treating the observed claims over a period of years as a single average Poisson distribution and then (b) by subdividing the claims into three groups of equal numbers consisting of small, medium and large claims respectively.

The basic premium is the same for cases (a) and (b) but the reinsurance premium differs as the following figures show. These have been calculated on the assumption that the claim distribution is of the form e^{-x} .

	Example I		Example II		Example III	
claims	number of claims per policy and year	amount of claims	number of claims per policy and year	amount of claims	number of claims per policy and year	amount of claims
small	1	1	0,8	0,8	0,6	0,6
medium	1	1	1	1	1	1
large	1	1	1,2	1,2	1,4	1,4
premium \int_0^{10}	1,35 %		1,45 %		1,70 %	
premium \int_4^{10}	0,183 %		0,221 %		0,270 %	

The reinsurance premiums have been expressed as a percentage of the maximum upper limit ($M = 10$).

Introduction to Insurance, by ALLEN L. MAYERSON, The Mac Millan Company, New York 1962, 438 pages.

It is a rather risky attempt to write a book about the whole complex insurance business and this may be the reason why very few authors have tried to give a general survey. Clearly such an enterprise called for an expert and it needed an author of the scope of Allen L. Mayerson, Associate Professor of Actuarial Mathematics at the University of Michigan to comply with this heavy task.

The book is consumer oriented and hence concentrates on the types of insurance the individual will need for himself. It does not, of course, deal with the detailed structure of rates, or of the statistical and mathematical basis of insurance, but some guidance is given to the reader on the broad level of premiums charged for the various classes of insurance.

The book is divided into three parts: In chapters 1 to 7 the basic principles are outlined for property as well as for personal insurance. In chapters 8 to 15 the various types of property insurance are discussed, while chapters 16 to 19 deal with personal insurance. At the end of each chapter the most important features are summarized and review questions test the understanding of the students.

The whole book has been used for two years at the University of Michigan in a fifteen week course of three hours weekly. It gives a most interesting and extensive approach to a complex field for the college student, the consumer or the novice insurance agent as well as to foreign experts who are not familiar with the U.S. insurance market.

M. Derron

HANS AMMETER, *Das Maximum des Selbstbehaltes*, Verzekeerings-archief 1958, pp. 219-246, Actuariëel Bijvoegsel 1958, pp. 101-106, 's-Gravenhage.

The first part discusses, in non-mathematical language, the detailed implications of collective risk theory in the determination of the maximum net retention. Three notions are of predominant importance:

- (a) The financial stability of the annual results
- (b) The solvency of the company in relation to its reserves and
- (c) The costs-situation as regards reinsurance and other safeguards.

The arguments are illustrated by numerical calculations based on theoretical models. (c) represents a typical case of "operational research"; by varying the maximum retention the insurer may endeavour to minimise the costs. Of the various ways of reinsuring risks the author prefers a combination of stop loss reinsurance and individual excess reinsurance.

The second paper is the analytical counterpart of the first one and deals with the methods and distributions on which the calculations are based, stress being laid on the applicability of the negative binomial distribution. Upperbounds e^{-Ru} for the ruin probabilities are derived by solving the equation $\int_{-\infty}^{\infty} e^{-Ry} dG(y) = 1$ where u is the initial reserve and $G(y)$ the profit distribution.

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