

ASTIN BULLETIN

A Journal of the International Actuarial Association
CONTENTS

EDITORS:

Hans Bühlmann
Switzerland

D. Harry Reid
United Kingdom

CO-EDITORS:

Alois Gisler
Switzerland

David Wilkie
United Kingdom

EDITORIAL BOARD:

Björn Ajne
Sweden

Marc Goovaerts
Belgium

Jacques Janssen
Belgium

William S. Jewell
USA

Jean Lemaire
Belgium/USA

Walther Neuhaus
Norway

Jukka Rantala
Finland

Axel Reich
Germany

James A. Tilley
USA

EDITORIAL AND ANNOUNCEMENTS

Editorial	1
The XXII ASTIN Colloquium Montreux	5

INVITED PAPER

J. LEMAIRE Cooperative Game Theory and its Insurance Applications	17
--	----

ARTICLES

M. DE LOURDES CENTENO, O. SIMÕES Combining Quota-Share and Excess of Loss Treaties on the Reinsurance of n Independent Risks	41
H. RAMLAU-HANSEN Distribution of Surplus in Life Insurance	57

WORKSHOP

J. LEDOLTER, S. KLUGMAN, C. S. LEE Credibility Models with Time-Varying Trend Components	73
Th. MACK A Simple Parametric Model for Rating Automobile Insurance or Estimating IBNR Claims Reserves	93
R. SCHNIEPER Separating True IBNR and IBNER Claims	111

DISCUSSION PAPERS

P. BROCKETT, M. GOOVAERTS, G. TAYLOR The Schmitter Problem	129
R. KAAS The Schmitter Problem and a Related Problem: A Partial Solution	133

SHORT CONTRIBUTIONS

C. M. RAMSAY A Note of the Normal Power Approximation	147
Book Review	151
Letter to the Editors	153
Actuarial Vacancy	155

Centerick

EDITORIAL POLICY

ASTIN BULLETIN started in 1958 as a journal providing an outlet for actuarial studies in non-life insurance. Since then a well-established non-life methodology has resulted, which is also applicable to other fields of insurance. For that reason *ASTIN BULLETIN* will publish papers written from any quantitative point of view—whether actuarial, econometric, engineering, mathematical, statistical, etc.—attacking theoretical and applied problems in any field faced with elements of insurance and risk.

ASTIN BULLETIN appears twice a year, each issue consisting of about 80 pages.

Details concerning submission of manuscripts are given on the inside back cover.

MEMBERSHIP

ASTIN and AFIR are sections of the International Actuarial Association (IAA). Membership is open automatically to all IAA members and under certain conditions to non-members also. Applications for membership can be made through the National Correspondent or, in the case of countries not represented by a national correspondent, through a member of the Committee of ASTIN.

Members of ASTIN receive *ASTIN BULLETIN* free of charge. As a service of ASTIN to the newly founded section AFIR of IAA, members of AFIR also receive *ASTIN BULLETIN* free of charge.

SUBSCRIPTION AND BACK ISSUES

ASTIN BULLETIN is published and printed for ASTIN by Ceuterick s.a., Brusselsestraat 153, B-3000 Leuven, Belgium.

All queries and communications concerning subscriptions, including claims and address changes, and concerning back issues should be sent to Ceuterick.

The current subscription or back issue price per volume of 2 issues including postage is BEF 1700.

Back issues up to issue 10 (= up to publication year 1979) are available for half of the current subscription price.

INDEX TO VOLUMES 1-20

The Cumulative Index to Volumes 1-20 is also published for ASTIN by Ceuterick at the above address and is available for the price of BEF 400.

Copyright © 1989 Ceuterick