NOTES ON OTHER ACTUARIAL JOURNALS


BELGIUM

Association Royale des Actuaires Belges, Bulletin 71, 1976


Taylor, G. C. The chi-square test of a graduation by linear-compound formula.


Cameron, B. D., et al. Some results of graduation of mortality rates by the Whittaker-Henderson and spline fitting methods.


FRANCE

Bulletin de l’Association des Actuaires Diplômés de l’Institut de Science Financière et d’Assurances, 34, 1977

Malignac, G. L’Indexation des contrats. A brief account of the various indices which may be used in adjusting contracts, and particularly insurance policies, for inflation.

Labreque, G. Emprunts amortissables par tirages au sort ou rachats en bourse. (Loans repayable by drawings or purchase).

Wicker, A. Caisse nationale de l’énergie-obligations 3% (National energy fund—3% issues). A yield study.

Bulletin Trimestriel de l’Institut des Actuaires Français 88, 1977

Gallais-Hamonno, G. Les résultats financiers des SICAV 1964–1975. (The financial progress of the SICAV 1964–1975). SICAV are Sociétés d’investissement à capital variable, viz, a special type of investment trusts designed to combat inflation and subject to legislation promulgated in 1964. There were 8 sociétés in 1964, today there are 91. 

Laversanne, P. Étude d’une provision pour risque croissant en assurance décès de groupe d’emprunteurs. (Study of a provision for increasing risk under group life assurance covering loans.) The problem arises under simplified administration of group life business, due to ageing of the assureds. Profit sharing is considered and helpful graphs are included in the paper.

Malinski, M. La réserve de capitalisation. The ’capitalisation’ reserve is a statutory provision against depreciation of assets and falling yield, required to be made by life offices.

Petauton, P. Des Polynômes orthogonaux par rapport à une loi de Probabilité GAMMA. Application à l’évaluation du coû't moyen d’un bonus automobile. (Some orthogonal polynomials with relation to a Gamma probability distribution. Application to calculation of mean cost of car insurance bonus.)

Barbot, J. La Somme disjonctive et la différence symétrique—Leurs applications au calcul des probabilités. (The disjunctive sum and the symmetric difference. Their application to the calculus of probabilities.) The first two of five parts of a paper on set theory.

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GERMANY

**REICHEL, G.** Carl Friedrich Gauss—30 April 1777 bis 30 April 1977—und die Professoren-Witwen-und-Waisenkasse zu Göttingen. The article attempts to reconstruct the development of the actuarial functions employed by Gauss for the valuation of the Widows and Orphans Fund for Professors at the University of Göttingen in 1845 and 1851 and describes some of the reasoning underlying specially interesting aspects of the valuation report. It also throws light on his working methods and is illustrated by copies of some of Gauss's manuscript papers.

**PILZWEBER, K. AND VON CHOSSY, R.** Analyse einer Bestandsentwicklung bei verallgemeinerter Aus- scheideordnung. Examines the development of an assurance portfolio on the basis of a deterministic model allowing for decrements depending on age, duration and time.

**LAUX, H.** Über den Einfluss von Veränderungen der wartezeitverkürzenden Faktoren auf die Wartezeiten im Bausparkollektiv. Examines the effect on savings collectives for building purposes (Bausparkassen) of sudden and gradual changes in the main factors affecting the waiting period preceding the allocation of loans.

**HEUBECK, G. and ENGEBROKS, H.** Ein einfaches Näherungsverfahren zur Abschätzung von Rentenbarwerten bei Zins oder Indexvariation. Calculates approximate values for life annuities, including those increasing at a compound rate, without the use of survivorship functions.

**VAN DELDEN, TH.** Verkleinerung des Kursrisikos bei fondsgebundenen Policen. Describes a method for limiting the loss suffered by holders of unit-linked policies in the event of a collapse of the stock market.

**STEINMÜLLER, H.** Dynamisches Versicherungsgleichgewicht. Examines the process of continuing mutual adjustment of premiums and claims with the help of a system of difference equations.

**FORSTER, E.** Die Oszillation von Prämien. Examines the same process as the article by Steinmüller (above) with a slightly different model and concludes that under certain conditions premium oscillations relate to financial anti-selection.

ITALY

**JEWELL, W.S.** The use of collateral data in credibility theory: A hierarchical model.

**COPPINI, M. A.,** Mito e realtà: La 'Giustizia sociale' realizzata dai registri previdenziale. (Myth and reality: 'Social justice' achieved in insurance schemes.) Deals with compulsory pension and health insurance schemes, and includes tables, based on various assumptions, to illustrate their development.

**BELLIERI DEI BELLIERA, A.,** Su alcuni modelli di mercato al migliore offerente. (On some models of a market for the best tender.) Uses the theory of games.

**RAGANELLI, V.,** Modello stocastico dell'evoluzione di un titolo azionario e rischio connesso con il suo acquisto come investimento. (Stochastic model of the growth of an ordinary share and the risk connected with its purchase for investment).

**TORGIGIANI, M.,** Su una più generale definizione di accoppiamenti distinti. (On a more general definition of different arcs.)

**TORGIGIANI, M.,** Alcune osservazioni su un procedimento di trasformazione degli accoppiamenti massimi in un grafo bipartito finito. (Some observations on a process of transformation of the maximum arcs in a finite bipartite graph.) Both papers by this author deal with graph theory.
Notes on Other Actuarial Journals

SCANDINAVIA

*Scandinavian Actuarial Journal. 1977*

Thorin, O., *On the infinite divisibility of the lognormal distribution.*


Arnold, B. C., *Recurrence relations between expectations of functions of order statistics.*


Hakulinen, T., *Net probabilities in the theory of competing risks. The problem of the hypothetical elimination of a cause of death is considered.*

Vaeth, M., *A note on the sampling distribution of the maximum likelihood estimators in a competing exponential risks model.*

Hassanein, K. M., *Simultaneous estimation of the location and scale parameters of the gamma distribution by linear functions of order statistics.*

Taylor, G. C., *Upper bounds on stop-loss premiums under constraints on claim size distribution.*

Hougaard, H., *Outlines of a new model for valuating life assurances.*

Mattsson, P., *Some reflections on different disability models.*

Shiu, E. S. W., *Moments of Two Distributions in Collective Risk Theory.*

Berg, S., *Sampling from a Population in Which Some Units are Duplicated and/or Overlap.*


Zehnwirth, B., *The Mean Credibility Formula is a Bayes Rule.*


Borch, K., *Administrative Expenses of Insurance Companies: An Experiment with Norwegian Statistics.* Applies the standard linear regression method to company data: the comments are illuminating.

This volume concludes with an index covering 1968–74.

1977

*Supplement*

The Board of the Filip Lundberg Foundation presents a survey of research on ruin probabilities:

- Thorin, O., *Ruin probabilities prepared for numerical calculation.*
- Wikstad, N., *How to calculate ruin probabilities according to the classical risk theory.*
- Grandell, J., *A class of approximations of ruin probabilities.*

SWITZERLAND

*Mitteilungen der Vereinigung schweizerischer Versicherungsmathematiker, 77, 1977*

De Vylde, F., *Iterative Credibility.* Formulates in general terms and solves the two-dimensional credibility problem.

Teilchenbach, U., *Berechnung der Verteilung der Schadenzahlen bei bekannter Verteilung der Wartezeiten. (Calculation of the distribution of the number of claims for a given distribution of the time intervals between claims.)*


Kunz, P., *Die demographischen Rechnungsgrundlagen der 9. AHV-Revision.* Describes the demographic basis underlying the 9th revision of the Swiss social insurance system.

Hülser, E., *Betrachtungen zur Sterblichkeit nach Zivilstand und Todesursachen.* Compares Swiss
population mortality rates for 1968–73 by sex and marital status with each other and with rates for 1958–63 with some references to the effect of different causes of death.

DUBEY, A. Probabilité de ruine lorsque le paramètre de Poisson est ajusté a posteriori. Considers a risk process with a Poisson parameter which is a stochastic variable.

LEMAIRE, J. Selected Procedures of Regression Analysis Applied to Automobile Insurance. The author concludes with an acknowledgment of Hallin’s work (see next paper).

HALLIN, M. Méthodes statistiques de construction de tarif. Gives an improvement of a statistical method of tariff construction proposed by P. Pitkänen at the 20th International Congress of Actuaries, but as that method relies on strict distributional assumptions which do not seem to be fulfilled in actuarial problems, it suggests a new, non-parametric selection procedure which does not depend on such assumptions.

HORT, M. Etude numerique de l'évolution séculaire de la mortalité. The paper treats the expectation of life as the expected value of a stochastic variable. It calculates the variances and standard deviations of these variables for mortality tables relating to different periods and compares them with each other.

UNITED STATES OF AMERICA
ARCH
1976.2
This issue consists of papers presented at the Ann Arbor Actuarial Conference. Some of them are obviously intended to be lecture handouts rather than finished papers.

HARTIGAN, J. A. Introduction to Clustering. A brief introduction to the problem of cluster analysis, describing some techniques and the general problems involved, and including a bibliography.

HOGG, R. V. Classification and discrimination. The author briefly describes a type of cluster analysis, and an outline of a problem for which it was used—an attempt to classify policies in force or lapsed by a set of policyholder characteristics (age, occupation, etc.).

SHALL, M. L. and SHALL, C. E. Underwriting Individual Disability Income Insurance with Discriminant Analysis. A brief description of a discriminant technique used to select good and bad indemnity risks.

ZIOCK, R. Predicting Policyholder Behavior by Discriminant Analysis. A Discriminant Technique was used to select policyholders likely to convert term assurance policies, or to buy an additional policy.

LOMMELE, J. An Econometric Model of Workmen's Compensation. An attempt to relate total written premiums, earned premiums and incurred losses in this type of insurance to general economic factors such as GNP and wages.

BRZEZINSKI, J. R. Pedoe Analysis Using Multivariate Statistics. A derivation of formulae relating new business and other expenses to number of policies issued, sums assured, etc. The formulae were derived by multiple regression using data from a large number of insurance companies.

MILLER, R. G. Canonical Correlation Applied to Life Insurance Market Research. Canonical Correlation is described and used for two different applications—first, to relate policy type to personal details of policyholder (age, sex, etc.), and second to relate the type of business of an insurance company to its 'personal details' (size, mutual or corporate, etc.).

Society of Actuaries Record
1.1 (1975)

FRIEDMAN, IRVING S. Persistent Inflation A New Way of Life?
Digest of discussions on
Insurance Company Regulation Resulting from Consumerism
Ordinary Pricing, Product, and Marketing Adaptations to an Inflationary Economy
Agency Compensation and Consumerism
Notes on Other Actuarial Journals

Ordinary–New Products
Pension Plan Principles and Practices
Group Pricing, Product and Marketing Adaptations to an Inflationary Economy
Impact of Inflation on Life Insurance Companies
Professional Relationships with Certified Public Accountants
Health Insurance—Legislation and Inflation
Life Insurance Assets and Liabilities and their Difference
Pension Problems—The Economy and ERISA
Degree, Depth and Frequency of the Revival Reports to Company Management
Individual Health—Loss-of-time
Teaching Session: Effective Communications

1.2. (1975)

Friedman, Irving S. Inflation—Illusion and Reality.
Digest of further discussions on the topic in Record 1.1.

1.3 (1975)

Lurie, Alvin D. An Overview of ERISA
Digest of discussions on:
Plan Termination Insurance
Future of Society, the Economy, and Pensions
Actuarial Reports under ERISA
Public Employee Retirement Systems
Actuarial Principles and Practices for Pension Plans
Investment of Pension Funds
Social Security and Other Social Insurance Programs
Audit Guide and Accounting for Pension Costs
Plan Design under ERISA
The Enrolled Actuary and ERISA Responsibilities
Effects of ERISA on the Marketing and Administration of Individual Policy Retirement Plans
Meeting a Population's Retirement Needs
Funding Requirements under ERISA
Actuarial Methods and Assumptions under ERISA

1.4 (1975)

Mendell, Jay S. The Actuary as a Futurist
Digest of discussions on:
National, State and Provincial Health Care Insurance
Social Security in the United States
Future Education of the Actuary
Relationship of the Actuary to the Policyholder
Public Role of the Actuary
The Future for Pensions
Pension Reporting Requirements and Fiduciary Responsibilities
Impact of ERISA on Other than Pensions
Reserves, Contingency Reserves, and Surplus for Life Insurance Companies
Financial Analysis and Corporate Strategy in an Insurance Company
Impact of Economic and Population Trends on Insurance and Pension Operations, Pension Funding and Valuation
Teaching Sessions: Corporate Models and Management Principles