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NOTES ON FOREIGN ACTUARIAL JOURNALS

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FRANCE

Bulletin Trimestriel de l'Institut des Actuaires Français, No. 190, March 1950

J. Loisel. *Le crédit mutuel et son équilibre financier*, pp. 21–101. The system adopted on the Continent differs somewhat from the Building Societies' arrangements in this country. The author discusses the subject and deals with the legal position in France and theoretical aspects of the subject.

B. Périer. *Calcul des réserves par la méthode Co et variantes*, pp. 103–117. The method was given by Meier in the Swiss Bulletin in 1943 and 1945 (see *J.I.A.* Vol. LXXII, p. 124 and Vol. LXXIII, p. 155) and is here described with numerical applications to various kinds of insurance.

HOLLAND

Het Verzekerings-Archief, Vol. XXVIII, No. 3, 1950

I. Moltke. *Insurance of under-average lives in Denmark*, pp. 161–178. Reviews the application in Denmark of Pedersen's method of rating substandard risks. Essentially the method classifies substandard cases into a number of mortality categories (now seven) represented by 'constant' and 'age' modifications of a basic Makeham table. Less than 5% of all risks are declined. The data supplied show how successful the technique has been since 1916. A paper highly recommended for study by students and actuaries interested in 'extra risks'.

C. Campagne. *Eerste congres van de toezichthoudende overheidsinstanties voor private verzekering*, pp. 179–184. Records the resolutions of the first congress of insurance departments of western European governments which was held at Brussels in October 1949. The resolutions passed at the congress are given in French. The next congress will be held at Amsterdam in 1952.

Th. C. L. Kok, *Benadering koopsommen voor dalende tijdelijke verzekeringen bij overlijden*, pp. 185–200. Proposes the approximation

$$\frac{1}{D_x}\sum_{t=1}^{n}(n-t+\tfrac{1}{2})\,C_{x+t-1} \doteq \tfrac{3}{8}nA^{\frac{1}{x}\overline{n}|}_{x\frac{1}{2}} + \tfrac{1}{8}nA^{\frac{1}{x}}_{\overline{xn}|}$$

and shows that, provided n is not greater than about 40 or 50, the results are likely to be good.

W. J. C. De Heer. *Een sterfte-formule, die vrijwel dezelfde voordelen biedt als die van Makeham*, pp. 201–210. A new proof of du Motel's (1896) theorem defining the mortality laws satisfying the relation

$${}_tp_{\overline{wwx\ldots(n)}} = {}_tp_{\overline{www\ldots(n)}} \text{ all } t>0.$$

E. STELLER. *De wetenschappelijke balansen van het Algemeen Burgerlijk Pensioenfonds*, pp. 211–240. A critical review of the change in valuation method made by a large Dutch pension fund.

G. W. DE WIT. *De sterftedaling in Nederland sinds* 1870, pp. 241–279. A careful attempt to forecast Dutch mortality rates. An interesting development of linear regression methods leads to a table for the year 2000 which lends itself to Makeham representation even at young ages.

SWITZERLAND

Mitteilungen der Vereinigung schweizerischer Versicherungsmathematiker, Vol. L, 1950, Part 1

E. MARCHAND. *Le Cinquantenaire de l'Institut des Actuaires Français*, pp. 21–24. A short report on the jubilee of the French Institute.

W. GRÜTTER. *Die Deckungsfrage in der privaten und in der öffentlichen Versicherung*, pp. 25–33. This paper advances the view that, whilst all private pension schemes should be funded, those of public corporations may be partially unfunded, while social insurance systems do not need to be funded at all.

W. SAXER. *Die Deckungsfrage in der privaten und in der öffentlichen Versicherung. Eine Entgegnung auf die Ausführungen von Dr Grütter*, pp. 35–42.

W. THALMANN. *Kapitaldeckungs- oder Umlageverfahren in der sozialen Unfallversicherung? Eine Entgegnung auf die Ausführungen von Dr Grütter*, pp. 43–48.

E. and A. URECH. *L' infection et la mortalité par tuberculose, leur fréquence et les problèmes actuariels qu'elles soulèvent*, pp. 49–76. In view of the heavier mortality from tuberculosis among those who are infected after about age 20 than among those infected earlier, is it wise to continue measures which defer the average age of onset of infection? This interesting paper answers the question affirmatively.

W. WEGMÜLLER. *Neue Rechnungsgrundlagen der Eidgenössischen Versicherungskasse*, pp. 77–110. A review of the three multiple decremental tables based on the observations of the Swiss Federal Pension Fund during the years 1924–35, 1932–46, and 1942–48, respectively. The interesting comparisons made will be discussed in more detail in a review to appear in this *Journal*.

O. W. SPRING. *Analytische Betrachtungen zur Änderung des Rechnungszinsfusses und der Sterbetafel bei Versicherungswerten*, pp. 111–132. A study of the general differential equation $F'(t) = (\mu_{x+t} + \delta)\, F(t) + \Phi(t)$, where $F(t)$ and $\Phi(t)$ are both, in general, functions of mortality and interest, leads to useful relations whereby to judge the effect of mortality and interest changes.

H. JECKLIN. *Algebraische Begründung einer Klasse versicherungstechnischer Approximationen*, pp. 133–140. A simple and neat algebraic argument shows how approximations relating, e.g., to annuity values can be extended to net premiums and policy values. Formulas like

$$ {}_tV_{x\overline{y|}} \doteq {}_tV_{x\overline{|}} + {}_tV_{y\overline{|}} - {}_tV_{\overline{|}} \doteq 1 - \frac{(1 - {}_tV_{x\overline{|}})(1 - {}_tV_{y\overline{|}})}{1 - {}_tV_{\overline{|}}} \doteq \frac{{}_tV_{x\overline{|}}\, {}_tV_{y\overline{|}}}{{}_tV_{\overline{|}}} $$

are derived as immediate consequences of a general theorem.

E. ZWINGGI. *Ein Verfahren zur Berechnung des Barwertes der stetig zahlbaren Leibrente*, pp. 141–155. The formula

$$\bar{a}_{x+t:\overline{n-t}|} = \left[\prod_{s=0}^{t/\Delta-1} f(x+s\Delta)\right]^{-1} \sum_{s=t/\Delta}^{n/\Delta-1} \frac{\Delta}{2}\{1+f(x+s\Delta)\} \prod_{w=0}^{s-1} f(x+w\Delta),$$

where $f(x)=\{1-\frac{1}{2}(\mu_x+\delta)\,\Delta\}/\{1+\frac{1}{2}(\mu_x+\delta)\,\Delta\}$ and Δ is chosen according to the degree of accuracy required ($\Delta=\frac{1}{4}$ generally gives three-decimal accuracy), is quite simple to apply and eliminates the necessity of forming the l_x column.

CHR. HANSEN. *Zur Technik der retrospektiven Lebensversicherung*, pp. 156–172. A treatment of 'retrospective life assurance' on the lines of the author's contribution to the Institute's Centenary Assembly.