Towards Statistically Based Fidelity Rates, by ZENAS M. SYKES, Jr.

Fidelity rates have been established in the past primarily by the use of "informed judgment", in accordance with the position of fidelity-surety underwriters that statistical ratemaking methods were not applicable to the bonding lines. During the last several years, this position has been modified somewhat as underwriters have recognized the increasing similarities between fidelity bonding and casualty insurance; the rate structure, however, has yet to reflect the shift of opinion. The replacement of individual and schedule bonds by blanket coverages, particularly in the bank and commercial fields, with the accompanying shift in underwriting attention from the principal to the obligee, is probably the fundamental cause of this change in position, but there have been other more direct pressures towards statistically sounder fidelity rates.

The author indicates some of the problems which will have to be solved in placing fidelity rates on a statistical basis.

The Compensation Experience Rating Plan—A Current Review, by DUNBAR R. UHTHOFF.

The experience rating plan used in Workmen's Compensation contains certain constant value factors, such as $ 1,500 maximum primary loss, which have changed in significance with inflation. The author provides a careful review of the effect of these changes and suggests steps to correct them.

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Quelques considérations sur la probabilité de „Ruine" du point de vue discontinué, by C. CAMPAGNE. *Het Verzekerings-Archief*, Actuariëel Bijvoegsel, January 1959. 's Gravenhage.

The paper is an analysis of the discontinuous process representing the financial positions at the end of successive years. The starting point is the integral equation for the ruin probability $\delta(u)$:

$$\delta(u) = \int_{\nu_1}^{\infty} f(x)dx + \int_{\nu_1}^{\infty} \delta(\nu_1 - x)f(x)dx$$

The value ν_1 represents the initial reserve u, augmented by the annual gross premium $(1 + \lambda)P$; hence $\nu_1 = u + (1 + \lambda)P$. The net premium $P = \int_0^{\infty} f(x)dx$ is the expectation of the claim variable x. When $f(x) = \frac{e^{-p}p^x}{x!}$ i.e. a Poisson distribution, an upper bound for $\delta(w)$ is given by e^{Ru} in which R is the negative root of $1 - e^{-R} - (1 + \lambda) R = 0$.

This result can be generalised to arbitrary functions $f(x)$ in which case the same estimate $\delta(u) < e^{Ru}$ results, R now being the negative root of

$$e^{-P(1+\lambda)R} - \int_0^{\infty} e^{-Ru}f(x)dx = 0, \lambda > 0.$$

In the case when $\lambda = 0$ the relation $\delta(u) = 1$ holds identically.