

best living authorities upon the whole field of life insurance. The death and lapse rates being known, it is an easy matter to calculate the rates that ought to be charged for insurance. It is in this way that Mr. Fouse determined the net premium for age 40 to be \$17.03, at a 4 per cent. basis. If this is the very lowest sum that can be charged for ordinary life insurance at this age, and allow nothing for expenses, possible losses in investments, lowering of the rate of interest, extra mortality due to unhealthy seasons, how can it be possible to carry on life insurance and endowments at expectancy on a premium of \$10.56? But we are told that assessments can be made, if required. Just so with the premium of \$17.03. It is constructed upon the flexible system, and provides for the possibility that it may not be sufficient; and that an assessment may occasionally have to be made. This is what should be understood as the assessment system. Not to make assessment whenever a claim occurs; or to start out on a premium rate ridiculously too low, and, later on in the history of the association, bolster up the tottering structure by extra calls. No. The true assessment plan is quite different. It consists in fixing the rates at such an amount as will, in all probability, prove sufficient; and still reserve the right to make at times a special extra call to adjust the reserve on hand, if, as the result of a careful valuation, it is found to be insufficient. Here we have the level premium plan, with the safeguard of a call to adjust the financial standing of the order, or society. This is known as the flexible premium plan.

On this plan of insurance, conducted at the lowest rates consistent with safety, there can be no surrender values. Everything that lapsing members leave behind them is confiscated to the benefit of the persisting members. Taking it for granted, as the outcome of much experience, such as that collected by Meech, Fouse and Neison, that there will be a certain lapse rate in addition to the death rate, the rates are struck so as to carry those only who remain in the society, by forfeiting the gains from those who lapse. But to carry out this system of assessment insurance a valuation of the business should be made at short intervals, certainly not further apart than five years. At each of these valuations, if the reserve or surplus in hand is too small, it should at once be adjusted by a special levy or assessment. But how is this to be done?

The answer to this question involves several other principles in the science of life insurance. It has been shown that by applying the principles of life insurance mathematics to a society, so as to calculate on lapses, as well as deaths, a premium can be obtained that furnishes insurance at lowest rates consistent with safety. In the same manner, by applying our knowledge of lapses and deaths, commutation single premiums can be obtained and the annuity value of