RATEMAKING FOR FIRE INSURANCE

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DISCUSSION BY N. J. BENNETT

I can think of few more conflicting emotions of a professional sort than the feelings of an actuary with an essentially casualty training on first being introduced to the rituals of fire ratemaking. His whole background, built on an often complicated and yet reasonably systematized base, has left him inadequately prepared for the deceptive simplicity of the design for fire rates laid before him. Probably he will be, as was this reviewer not too long ago, quite unable to decide whether he is viewing the record of a successful old professional which it might pay him to emulate, or whether what he sees is an anachronism which has thrived on luck and lack of vigorous opposition.

This paper must be read carefully and in conjunction with the several earlier papers on fire statistical procedures. It is extremely gratifying to note the increasing variety and complexity of papers on fire insurance and to find that the descriptive and definitive papers which were pure necessity a few years ago are giving way to more critical discussions which can draw on earlier writers for fundamentals. Those who are still strangers to the 1921 Standard Profit Formula or who have failed to become intimate with major perils, occupancies, coinsurance, conflagrations, balance point loss ratios, and all the idiom of this field will come to find authors on fire subjects increasingly difficult to follow. This is as it should be, and Mr. Magrath was able to present a broad survey of current practices by relying on our good sense to discover, if we have not already done so, that Messrs. Graves and Finnegan have relieved him of any obligation save passing reference to the complexities of statistical collection and preparation.

This paper serves an admirable purpose as a logical step forward in the series of introductory and elementary papers on fire insurance which followed this Society's broadened scope of activities. It sets out accurately a venerable method of ratemaking which brooks no neutral attitudes. Fire ratemaking produces either the iconoclast eager to tear down and rebuild or the equally fervent disciple of the status quo, usually in a position to make the decisions, who counters with, "Leave it alone, it works." Although there is no logical necessity for preferring grey when confronted with black or white, this paper shows that while there is much that is confusing or unreasonable in fire ratemaking there is, all the same, a great deal that is comfortably familiar and basically sound. The happy medium in our desire for improvement thus would seem to offer a more appropriate and attainable goal for our immediate efforts than a wholesale indictment of a method which has only just begun to show its Achilles' heel.

Mr. Magrath comments particularly on two typical problems which illustrate quite well the irritations many technical people encounter in trying to understand fire rates. In describing the formula treatment of loss adjustment expense, he discovers, as did the New York Insurance Department, that the only common sense method is to treat it as a function of loss. This seems, unhappily, not to be the method of Inter-Regional. One of the first steps of an analyst in testing a method or formula is to find its extreme or limiting values. Such a simple test here at the advisory organization level would have displayed the dangers in boldly shifting items between loss and expense provisions. The second comment again concerns loss adjustment expense, but now the problem is one of semantics. The words "allocated loss adjustment expense" as described by Inter-Regional must be interpreted in some non-familiar fashion to become meaningful. This is a wasteful and confusing situation which could be eliminated without a second thought. It is possible for terms to be defined consistently for the entire fire and casualty industry without yielding principle.

Two memorable sentences appear in this paper. The first occurs in discussing the 1958 New York revision. "An *adverse* experience trend was apparent, so it seemed desirable to use the latest possible experience and use a weighting factor emphasizing the more recent years." Although the reference is to a particular case, it is not clear that the modifier of "experience trend" is a variable to which should be assigned prevailing values whatever they are. The statement as it stands has unfortunate implications. The second sentence is a gem which is reminiscent of the Bible for succinctness and clarity. Describing a minor adjustment in formula made, somewhat reluctantly, at the behest of the New York Insurance Department, the author says simply, "The change was accepted for purposes of harmony."

Perhaps the most striking feeling one gets in reading this paper is a suspicion that the title might better have been "Ratelevel Making for Fire Insurance." Class adjustments receive but a cursory glance. This imbalance, it should be added, shows no improper emphasis by the author but only reflects the almost exclusive concern throughout most of the country with over-all adequacy. Mr. Magrath, after displaying the venerable New York Credibility Table, which must hold some sort of record for durability, does outline a proposal for determining credibility and making class adjustments which was once discussed by committees of the EUA. That someone has been thinking of this problem is evident—and particularly welcome news. That this particular scheme has serious shortcomings, however, the author demonstrates at once by simply testing an extreme case. The desire of the actuary, moreover, to proceed further along these lines becomes somewhat less than overwhelming when he considers the problems involved in recasting the awesome distribution of the range into a malleable and practical form.

When once the fundamentals put down in this paper are assimilated and the casualty ear becomes attuned to the atonality of the fire ratemaker's scale, a certain very broad question arises. Exactly what is the 1921 Standard Profit Formula and what is its relationship to fire rates? The caustic reply that the answer should be obvious is exasperating because the answer is anything but obvious. Anyone who has made even a casual effort at reconciling the "formula" to current rating methods finds variance and opposition between the two, or complete silence on the part of the formula at a critical stage. This bewildering complication is the consequence of an unfortunate historic identification of accounting results with the production of rates for a future period. Rating methods capable of meeting the complementary demands of the industry and regulation need far more flexibility and imaginative treatment than can be given under a strict analysis of financial results.

The current method of measuring a company's financial progress and strength is well suited to the particular nature of the insurance transaction. This method which is obviously as applicable to Workmen's Compensation or Automobile Liability as it is to Fire Insurance is restated as part of the Standard Profit Formula. Yet, whereas the former two lines see no embarrassment in seeking entirely different statistical and mathematical techniques for ratemaking, once the contributions to surplus have been measured, fire insurance has felt some constraint toward loosening the tie between the accountant and the actuary. With an observable shifting of fire business among types of carriers and away from classic patterns into multiple line policies, there seems to be little doubt of the need for the broadest possible approach to fire rates. Such an approach will almost certainly be recorded and debated in our *Proceedings* as has been Workmen's Compensation ratemaking for many years.

The addition of papers such as this to our *Proceedings* needs no justification. The precursor of this modern series of educational endeavors by members of the Society was undoubtedly Mr. Marshall's well-known paper on Workmen's Compensation Ratemaking. Despite the coexistence of more esoteric papers on Compensation for the well-informed actuary, Mr. Marshall found a wide audience among actuaries as well as many others. Those whose work does not permit them the luxury of playing a part in the development of particular methods in the ever-changing insurance world, or who haven't access to the necessary sources of information find these fundamental statements invaluable. Mr. Magrath is to be thanked for accurately recording much of the current theory and practice of fire insurance ratemaking and for providing a solid base upon which to build.