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MISCELLANEOUS

A. When in the growth of a company does automation become a likely source of future expense savings? What have smaller companies done to utilize the advantages of automation?

B. What types of persistency studies are currently most helpful to management in its attempt to improve persistency, and how are they used?

C. What are the advantages and disadvantages of effective catastrophe and stop-loss reinsurance as compared with regular reinsurance?

MR. JAMES W. KEMBLE: A punch-card record system is a form of automation, and even the smallest of companies should be able to make a start at effecting future expense savings by establishing such a system. The biggest problem is the determination of when machine changes are appropriate, and there is no unique or "pat" answer to this problem.

One method by which smaller companies can utilize the advantages of automation is by sharing the expenses of operating a common machine installation with another company. The Farm Bureau Life and the Farm Bureau Mutual (both affiliates of Iowa Farm Bureau) have shared an IBM 650 computer since 1956. I have serious doubts whether we could support such a machine today for our life operation. We have approximately 110,000 policies for slightly more than $500 million in force, and I am not sure this is sizable enough an operation to support such a machine. Our life company uses it about 40% of the time, mainly on actuarial and accounting work.

A shared computer program is being developed by the American Mutual Life Insurance Company and a bank located in an adjacent building. This project is now in the programming stage. Daytime hours will be used mostly by the insurance company and late afternoon and evening hours by the bank.

MR. CHARLES H. BARNABY: Several small mortgaging companies in Houston are investigating the joint use of a computer. They have come to the conclusion that 25,000 mortgage records would justify an IBM 1401 computer with one or two tape units. I don't know if 25,000 policies of a life insurance company will justify a 1401, especially if tape units are involved.

There are significant advantages in small companies joining together in using computer facilities, especially if they are close together. However, I wouldn't want to minimize the transportation problem of punch cards.

MR. WILL R. MULLENS: Efforts to improve persistency should be directly related to the field force, since that is the primary source of your persistency or lack of it.

The Business Men's Assurance Company computes a persistency index for each branch office quarterly, using essentially the same computation as for the National Quality Award of the Agency Management Association. We are attempting to develop some sort of competition between the branch offices in order to improve their persistency.

At the beginning of each month we list for each branch office and salesman the first year premiums which will come due during the ensuing month. Then on the 5th and 20th of each month we send the same type of list on those policies which are past due. This enables each salesman to check each policyholder and attempt to preserve the business.

MR. WILLIAM H. PHILLIPS: At the Aid Association for Lutherans, first year lapse ratios and two-year persistency ratios are computed quarterly for each general agency and for each district representative. A first year lapse is defined as a policy that has not paid all the premiums for the first year. The two-year persistency ratio is that percentage of the current and prior calendar year's business which is in force at the end of the current calendar year. Failure to meet a specified persistency requirement automatically disqualifies for attendance at the President's Club. An excessive first year lapse rate can be overcome by additional production equal to three times the excess percentage applied to the prior year's production.

Our persistency study of the company's total business is broken down by sex, by juvenile and adult, by term and permanent plans of insurance, by binding receipt and nonbinding receipt, and by policyholders and new clients. We provide our field force with an annual report, with a breakdown of each agent's business under the same groupings. Where the individual district representative's persistency is weak, this report may suggest to him and his general agent ways to improve it.

MR. DALE R. GUSTAFSON: In the past, at the United Benefit, we have tried various approaches to the persistency problem, only to find that they had no measurable impact on persistency. These included home office conservation efforts, bonuses to managers and salesmen with good persistency, restrictions on the issuance of monthly business, and restrictions on the issuance of individual cases which show a poor score on a persistency rater. I submit that by these methods you are not attacking the first principles, you are not hitting at the basic reason.

I submit that persistency is a result of sophistication and is determined the moment the application is signed. Many companies have taken the approach that if you want to improve persistency, you should quit writing the people who give bad persistency. Other companies are attempting to stay in and promote ways to write insurance on the unsophisticated market, the young married man, the truck driver, the unsophisticated high school graduate. If we don't want to leave the market we are going to have to find ways to write the business at a profit.

MR. FLOYD A. BASH, JR.: In Farmers & Bankers we annually prepare a two-year persistency study classified by mode of premium payment at the time of issue. While the results of this study are interesting, random fluctuations due to small size minimize any real significance the study may have. The end result is that more time is used in rationalizing the fluctuations than in interpreting the data for any important information it may contain. For a small company, persistency studies are of doubtful value.

In an effort to improve persistency, a persistency rater is completed for every application. In addition we prepare each month a persistency ratio for each agent for the twenty-four month period just closed, using the National Quality Award system. Agents get recognition in three classifications on the basis of these ratios.

MR. LYLE H. BARNHART: Seven years ago the Fidelity Life Association began writing a basic life policy for college seniors only, with a note on the first premium payable in 18 months. About 90% of the first year premiums are collected. The Company, however, receives a full first premium on all cases, either from the individual or through the agent's reserve, which is set up and taken out of his commission.

About 65% now pay some of the second premium. This is an improvement from previous experience, the reason being that we are keeping in touch with the seniors, writing them letters, birthday cards, and so on.

MR. L. D. FORBES: The advantages usually mentioned in connection with the stop-loss method of reinsurance are that it would enable the reinsured company to limit fluctuations in mortality more directly, effectively, and more economically than is possible through the use of conventional or proportional reinsurance methods. It is generally suggested that the economy would, in part, result from the fact that no individual records would be necessary—there would be only once a year administration involving a single premium payment by the reinsured company and a single benefit payment would be made by the reinsurer if the total claims on the reinsured line were sufficiently high.

The disadvantages of stop-loss reinsurance will be easier to understand, I believe, if we outline briefly the conditions which would seem to be essential parts of an effective stop-loss reinsurance coverage. It would provide for reimbursement of all or, more likely, a specified portion, such as 90%, of the losses of the reinsured company in excess of a pre-established limit during a specified period. The specified period would be a calendar year in most instances. The losses referred to would be net after deduction of benefits received under existing proportional reinsurance. Continuation of proportional reinsurance methods would be required, at some level, in order to simplify the determination of the stop-loss premium and to prevent the drastic alteration of the stop-loss premium by relatively few cases on individual lives. War losses would have to be excluded or limited. Catastrophic losses would be limited either through a limit on the claims which would be included on behalf of any one event or by an over-all limit on the reinsurer's total liability. Because of the very nature of the coverage and the amounts at stake the reinsurer would need to retain the right to cancel the coverage and the premium rate determination process could not be guaranteed.

With this sketch of the likely characteristics of an effective stop-loss coverage in mind, I think we are in a position to analyze the scheme.

A significant disadvantage arises from the fact that the reinsurance coverage will not parallel the coverage which gives rise to the reinsurance. The reinsured company would likely have no catastrophe or general war exclusion provision paralleling that incorporated in the reinsurance treaty. Proportional reinsurance provides full catastrophe and war risk coverage on the business specifically reinsured. The insurance coverage of the insuring company is noncancelable and the price is guaranteed. The reinsurance coverage is, however, cancelable and the price is not guaranteed. Comparison of the cost of stop-loss reinsurance with the cost of proportional reinsurance is also made difficult by the absence of guarantees. The price for stop-loss would certainly be adjusted upwards should the initial estimate prove low. This consideration together with the cancelability of the coverage is particularly important when the market for the coverage is thin, as it is likely to be. The reinsurer may then be in a very strong bargaining position.

Unfortunately, a review of the work done to date in the area of determining stop-loss premiums, while most impressive, leads me to the conclusion that the mathematical models which have been devised are inadequate when contrasted with the realities of actual business situations. The very nature of the business, with so much at stake in the form of possible losses, and considering the inadequacies of the rate determination process, make it seem likely that the contingency loading used will, of necessity, be very large.

It is usually mentioned that administration of stop-loss reinsurance would be very simple. The premium is generally quoted as a percentage of insurance in force or expected claims and is payable either in one sum or in instalments. In either event it would be adjusted when the final premium base for the calendar year became known. However, determination of the premium rate, no matter how simply it is finally expressed, is most difficult and is, of course, an administrative problem. It is axiomatic under the stop-loss method that any risk in the reinsured company's covered portfolio can contribute to a claim upon the reinsurer. This is one of the factors that make the determination of the reinsurance premium much more difficult rather than more simple. That this difficult task would probably, as a practical matter, be accomplished in an approximate manner does not mean that administration of stop-loss is inherently simpler. It merely means that buyer and seller alike have agreed to the use of approximate methods. Approximate methods could also be used for proportional reinsurance, although premiums are customarily determined quite precisely and at the clerical level because the process is simple and because only those relatively few cases specifically reinsured are involved.

Another aspect of the relationship between the reinsurer and the reinsured company is affected by the reinsurer's participation in each and every risk. The stop-loss reinsurer will be affected by and have an interest in a number of decisions and considerations which the reinsurer under the proportional method could and would ignore. The advantage of having the reinsurer participate directly in the reinsured company's collective risk must be weighed against the controls which this would require and the freedom of action which the reinsured company would lose.

Certain disadvantages will result from any attempt to accomplish savings by giving the reinsurer less information regarding the nature of individual risks. An underwriting check, valuable to both parties, will be lost. What might be considered one of the most significant contributions of the life reinsurance business (contributions to the development of underwriting standards) is made possible by the reinsurer's unique ability to serve as a focal point for a portion of the substandard business generated by a very large number of companies. This business, consistently coded for purposes of analysis from the evidence of insurability secured at issue, enables reinsurers to perform an essential function. This task cannot be eliminated. It would have to be accomplished through other means.

In summary, the advantages of stop-loss reinsurance are simply stated. The real advantage, in my opinion, is that it strikes more directly at the problem of controlling mortality fluctuations. Disadvantages arise from certain features inherent in stop-loss—*e.g.*, the fact that the reinsurance coverage does not parallel the underlying coverage and the loss of freedom of action on the part of the reinsured company. Other disadvantages relate to problems which may be solved through further work such as the inadequacies of present methods of determining premium rates. The advantages and disadvantages require most careful consideration and evaluation by buyers and sellers alike.

MR. BILLY N. JOYNER: An insurance company of suitable size will realize that in the long run it must pay its own mortality cost. It will look to reinsurance first to level out inconvenient fluctuation in surplus and second to obtain sophistication in the underwriting department.

Under conventional reinsurance, there is no real assurance that the losses paid to you will in any way parallel the mortality experience you had. The risks on which reinsurance is obtained are not necessarily the ones which contribute materially to the fluctuation itself. For the underwriting aspect, the operation of the experience rating refund may tend to cause the reinsurer to take a more liberal attitude to risks than if he were faced with the final responsibility of paying the costs.

Now one might ask, "What is a better way of doing this?" It would seem that a stop-loss reinsurance arrangement would effectively level out mortality costs from one year to the next and in addition eliminate reinsurance records on individual lives.

MR. ROBERT C. TOOKEY: I should like to change the question to read, "How can a nonproportional stop-loss reinsurance plan be integrated into a company's regular reinsurance program?"

In stop-loss reinsurance, the reinsurer pays that part of the aggregate claims over a given period which exceeds the stipulated amount for that period. This recognizes the fact that the financial stability of the company is affected not by the occurrence of a single loss but rather by the accumulation of them. Stop-loss reinsurance, although new in the life insurance field, has been used in the fire and casualty insurance business for a number of years.

Accurate calculation of stop-loss reinsurance premiums from readily obtainable data poses a most formidable problem. The mathematics is quite complex when one considers the effect of the fluctuating tendency of the basic probabilities involved. One way to by-pass this problem is through the use of Monte Carlo techniques using modern electronic data processing machines.

A stop-loss reinsurance plan would be appropriate as a supplement to regular reinsurance. Since the stop-loss reinsurer would have the right to get off the risk at the end of a calendar year, the ceding company should not make any radical increases in its present retention limits, lest it be left with more than it can handle. Moderate retention limits would keep the stop-loss reinsurance premium down, and the regular life reinsurer would continue to receive a worth-while cash flow which would justify the continuation of underwriting and other services.

It would appear that any nonproportional reinsurance plan might best be offered in the form of a liability coverage by a casualty company as a supplement to and not a substitute for the standard life reinsurance plans now available in this country.