## TRANSACTIONS OF SOCIETY OF ACTUARIES 1960 VOL. 12 NO. 32

## **OFFICE METHODS**

What changes in office methods have been made or are contemplated by the smaller companies in order to control expenses? In particular:

- A. For what types of operation have smaller companies found electronic machinery practicable?
- B. What changes have been made to simplify policies and policy issue procedures?
- C. What recent changes have been made in underwriting rules, e.g., nonmedical, inspections, etc.?

MR. JAMES G. BRUCE of the Columbian National had made studies in connection with the Hartford Fire Group as to the possibility of pooling their resources and making use of the 650 calculator. The investigation is still under way but the preliminary indications are that on valuation procedures alone they could save the time of six clerks a year in exchange for 45 hours time on a punch card 650. He estimated the final saving at \$16,200. He emphasized the fact that by pooling the use of electronic machinery it is possible to make considerable savings in clerical time without incurring the considerable capital outlay required and the large amount of over-all planning necessary before a machine of the 650 type can be economically used by a smaller company.

MR. CHARLES A. McCONAGHY of the Home Beneficial Life addressed his remarks principally to section B. He indicated how various card files had been consolidated over the years into a basic file of business in force sorted according to branch office and debit. They have found that the record of business by plan, year and age can be handled entirely outside of the Actuarial Department by clerks who are familiar with the accounting procedure, and they feel that the accuracy of their accounting records has been much improved under this arrangement. By making corresponding changes in the collection files and the valuation files throughout the year, they are able to keep these files in perfect balance. This system has definite advantage in that the year-end valuation can be made quickly and accurately by applying valuation factors to these groups. Similarly it is a very simple job to obtain deferred premiums at the end of the year from these files.

MR. JAMES M. BATES of the Home Security Life discussed the application of the IBM RAMAC to the operations of a medium sized combination company, with business about equally divided between weekly premium and ordinary. At the present time they have approximately onehalf of their planned operations on the machine and they are adhering to their estimated time schedule quite closely. In their feasibility study, they determined that if they could replace 12 clerks and a thousand points of other IBM equipment then they could justify the use of the 305 RAMAC.

At present they are doing their weekly premium underwriting on this machine. They key-punch two cards when an application comes to the home office. These cards are then passed through the machine which automatically compares the information with preset criteria and checks the date of birth with the age and the premium. Height and weight are also checked and certain other information is compared within the machine. The machine then indicates whether or not an inspection is required and whether a medical examination is required. If the card fails to pass for any reason, there is a form which is printed out by the machine stating exactly why the card failed to pass. The case is then referred to a clerk so that the application may be given special handling. The cards that pass through the machine are automatically routed to the issue unit for preparation of the policy.

In addition their RAMAC produces a weekly agent's register which combines all the information on weekly premium business, monthly debit ordinary business and regular ordinary business. The same form carries production and convention point qualifications for the agents. It was necessary to reorganize many of the procedures in the company to take advantage of the capabilities of the RAMAC. They changed from a weekly premium department and an ordinary department to a single new business department which handles all types of applications and issues all types of policies. After that point the new Policy Service Department takes over. As a by-product of this particular program the machine also writes another report which gives all of the agent's production records and other information which had previously been transferred manually to an agent's ledger card. A copy of all this information is furnished to the district manager for his information, the copy being prepared by the machine at the time the original run is made. In addition, the machine prepares the agent's accounts except advances and arrears for the current week or current month. All the agent has to do is fill in the advances and arrears in order to turn in his collection report.

General ledger accounting is also done on the RAMAC by having the record of every check that is written processed through the machine. The machine has enough storage capacity to contain all of their ledger accounts. When a new item of information is passed through the machine it merely updates the particular account affected. When they want an asset, liability or income statement, all they do is send one card into the machine and it writes out the desired statement by following a previously prepared program. They believe that it is entirely feasible to program the machine in such a manner that it will ultimately be able to print out the pages of the annual statement.

To date they have not saved any money through the use of the machine, but they anticipate there will be substantial savings in the future in that they will not need to make large additions to their clerical staff once the machine is in full operation. As far as routine underwriting is concerned they find that it eliminates the fatigue factor and is consistent in that every case is treated alike. They have found that by having the machine available they are able to do things that would not have been done otherwise. In the valuation field they were able to make tests very easily of the effect of changing the valuation from preliminary term to net level. The machine will also grind out nonforfeiture values from basic functions after putting the interest rate into the machine.

MR. HENRY F. SCHEIG of the Aid Association for Lutherans described their issue operations involving a card IBM 650. The computer calculates all the required rates and selects the correct policy form and also indicates if any special state requirements are necessary. The resulting cards are then processed on an IBM 407 to produce all home office and field records. Their machine handles an average of 275 policies per day but a maximum on some days of 500 or more. The policy writing operation has not been mechanized to date. They have found by experience that the IBM 650 does a very excellent editing job while the policy records are being produced. It is practically impossible to have inconsistent policy forms produced, since the machine will point out such inconsistencies.

MR. GEORGE E. IMMERWAHR of the Monumental Life stated that his company has adopted the IBM Tape 650 and that its main operation has been the conversion of the home office's duplicate set of agents' Weekly Premium debit books to tape. His company receives a summary sheet prepared by the agent each week listing each account on which a collection has been made, the amount collected and the new date to which premiums have been paid. The information from this summary sheet is used to update either the duplicate debit books or the tape where the tape has superseded the duplicate debit book. The tape is updated in a weekly cycle, with punch card input for collections as well as for issues, lapses, revivals and transfers.

While they are satisfied with the system as it is developing, they have run into two problems. The first problem is that updating tape is a "blindfold" operation, such that any errors in policy numbers or account numbers on the summary form or on lapse and transfer schedules cannot be detected until the machine run has been completed. Under the manual procedure where the record was in visual form, many such errors would have been detected in advance. The second problem is one of scheduling. When all 900 debits are on tape, the number of hours required each week for all the tape to pass through the machine will be such that each debit can pass through the tape only once each week, and the variety of separate transactions that were formerly processed at different times in different departments must all be scheduled concurrently.

Advantages are a more effective and accurate accounting control and valuable by-products that were not possible under the manual system of updating their debit books.

MR. RALPH P. WALKER of the Wisconsin National Life reported that he had programmed an IBM 602A very successfully so that it produced gross premiums through asset share calculations. Following this successful application, they had planned to make rate book calculations involving the 1958 CSO table on the IBM 602A calculator. However, the length of time that would have been necessary to complete the calculations was considerable, so he looked into the possibility of using an IBM 650 owned by a neighboring company. After writing up a program for the 650, they were able to produce all of their nonforfeiture values, terminal reserves and mean reserves on both the net level and modified basis for all durations and for all issue ages in a running time of 14 hours. The number of calculations involved was in the neighborhood of  $\frac{1}{2}$  million. It took another 14 hours to "de-bug" the program but they felt that the over-all time spent indicated the vast superiority of the electronic equipment over punch card equipment for this type of work.

In connection with section C, CHAIRMAN WILLIAM C. BROWN reported that the Colonial Life had increased their nonmedical limit to \$10,000 from age zero to 9, \$25,000 from age 10 to 30, \$15,000 from age 31 to 35 and \$5,000 from age 36 to 40. This was coupled with an increase in the regular medical examination fee to \$10. His company will now write level term insurance policies on the nonmedical basis with amounts limited to one half of those used for permanent insurance.

MR. BRUCE's company has increased its nonmedical limits to \$25,000 from age zero to 30. From age 31 to 35 the limit is \$15,000 and from age 36 to 40 the limit is \$5,000. He reported that it appears almost axiomatic that policy size will often be limited artificially to the maximum of the nonmedical limits in order to escape the medical requirements. They feel that the increase in nonmedical limits recently made will be of considerable benefit in raising the average size policy. However, they felt it was necessary at the same time to train the agents in the true meaning of nonmedical so that they will underwrite the case more carefully before it is submitted to the home office. They are endeavoring to instill in the minds of their agents that the phrase "nonmedical" does not have the same meaning as "no medical." In other words they are emphasizing the fact that it is the responsibility of the agent to obtain medical information. His company feels that it is definitely advisable to raise nonmedical limits in view of the recent increase in medical fees to \$10 per examination.