

**TRANSACTIONS OF SOCIETY OF ACTUARIES
1964 VOL. 16 PT. 2**

DIGEST OF SMALLER COMPANY FORUM

MARKETING

- A. What rates of agent turnover are currently being experienced? Are rates of agent turnover increasing or decreasing? Do rates of turnover vary significantly with the method of compensation?
- B. How can smaller companies compete successfully with larger companies in the recruiting and retention of agents? What particular advantages can the smaller company offer a prospective agent?
- C. To what extent is the changing pattern of income distribution of the population causing changes in the marketing methods of life insurance companies?

Boston Regional Meeting

MR. DWIGHT K. BARTLETT III: At the Monumental Life, in our debit office operation, our agent turnover rates for the past ten years are as shown in the accompanying table.

1954.....	14.1%	1958.....	20.5%	1962.....	24.9%
1955.....	17.6	1959.....	20.7	1963.....	29.9
1956.....	19.3	1960.....	20.0		
1957.....	17.5	1961.....	29.9		

The 1963 rate is artificially inflated due to a fifteen-week strike among 30 per cent of our agents. We feel that the increasing rate of turnover experienced in the last several years reflected general business conditions as well as higher goals set for our agents. We also feel that the rate has passed its peak and hope that our improved selection and training techniques will enable our agents to meet our higher standards in the future.

In order to place more emphasis on the sale of new business, we, as well as a number of other debit companies, have replaced some of the guaranteed compensation provisions in our agents' contracts with a new element based on growth in premium income in force on their debits from all lines. As a result, in 1963 approximately 32 per cent of the average agent's compensation arose from the sale of new business. In addition, in an effort to reduce turnover on small debits with poor earnings in spite of reasonable production, we are experimenting with a form of annualized commissions in several districts.

We have felt no particular problem in competing with large companies for debit agents. The size of our average debit office, about fifteen men, enables us to offer the prospect of quicker advancement to the level of staff manager or manager.

Since our introduction of Monthly Debit Ordinary in 1942, we have experienced a continuing decrease in the proportion of our business, both by volume and premium income, issued from the Weekly Premium line. By volume, it dropped from 65 per cent in 1958 to 42 per cent in 1963. While we anticipate a continuation of this trend because of the increased sophistication of the buying public, we are still firmly convinced that there is a place for insurance sold on a home-collection basis. The increased purchasing power of the lower-income groups has led us to stress much more heavily the approach of selling for needs rather than on a package basis. During the last five years, this has increased the average size of our ordinary policies from \$2,935 to \$4,085.

MR. J. BRUCE MacDONALD: At the Westmount Life, we feel that a small company can compete successfully in recruiting and retaining agents by knowing better its abilities and limitations. It cannot excel in everything; it must specialize.

In our company, we are geared to large producers and offer personal service, specializing in the solving of business, estate, and tax problems. Our entire home-office staff is prepared to give unstintingly of its time and to discuss our agents' problems with them. We attempt to offer solutions that are fresh and imaginative, but sound, and are not bound by precedents set years ago.

This formula has worked for us. We have recruited approximately fifty full-time career agents, of whom almost half write in excess of \$1,000,000. With a portfolio of only about half a dozen plans and no decreasing term of any kind, with no unusual policy features and with rates that are respectable but not the best, we wrote \$24 million of business in 1963 with an average policy of \$43,000. Our agents wrote a substantial volume of surplus business which was placed with other companies. This would have substantially increased our volume if we could have accepted it. We hope that in the future this surplus business can be reduced.

Chicago Regional Meeting

MR. MAYNARD I. KAGEN: A career agent program was started at the Continental Assurance Company about six years ago. In our original plan, new agents were paid training allowances over a three-year period. These training allowances were expressed as a percentage of net an-

nualized commissions. Annualized commissions plus training allowances were credited to an agent's account. The agent was paid a salary, with the amount of the salary being charged to his account. The salary paid to an agent could be adjusted on the basis of his account balance. The plan had no specific validation requirements, relying only on home-office and agency manager control and judgment in regard to the termination of agents.

Last year we introduced a new financing plan. Under this plan, training allowances are specific amounts which decrease from month to month over a two-year period according to a schedule which is the same for each new agent. In addition to these training allowances, an agent is paid the actual commissions which are earned according to a soliciting agent's contract. An agent will be terminated automatically at the end of two, six, or twelve months if he has not met validation requirements specified at these points. The home office and agency manager still have the authority to terminate an agent between validation check points or even if he is meeting validation requirements. Furthermore, we feel that the pattern of decreasing training allowances will perform a self-elimination process, in that a man who is not producing will not survive long on his training allowances.

We would expect our turnover rate on this new plan to be higher than that under the old plan because of the more direct control over the termination of unsuccessful agents. Our limited experience to date bears this out. Under the old plan, the survival rates to the end of two months, six months, and one year were 75 per cent, 41 per cent, and 19 per cent, respectively. Under the new plan, the survival rates to the end of two months and six months are 72 per cent and 35 per cent, respectively.

Both our plans seem to indicate higher turnover rates than those shown by L.I.A.M.A. studies. Those studies indicate six month and one-year survival rates of 55 per cent and 30-35 per cent, respectively. The L.I.A.M.A. studies also seem to indicate that turnover rates over the last five or six years have been increasing.

MR. NORMAN F. BUCK: I think the industry knows, the L.I.A.M.A. knows, and probably everyone who has studied the subject knows a great deal more about selection of agents than we can possibly use. Probably everyone who is responsible for the selection of agents could double the retention rate or the success rate of his new agents if he had enough prospective agents from which to choose. However, the difficulty is that we do not have knocking on our doors enough people interested in coming into this business of selling life insurance. Therefore, we have to go down the

scale a little and take people that are marginal. Then we must post-select as quickly as possible.

In the Lincoln National Life Insurance Company we have found that the second quarter is the most important time, and the moment of truth comes at the end of six months. A general agent or manager can say to a prospective agent, "If you will give me six months of your life, we will know whether you have what it takes to make a success in this wonderful business of selling life insurance, which will give you a career, a great deal of satisfaction, and a great deal of freedom to use your time as you see fit." The kind of person we are looking for to become a successful agent probably will be willing to gamble six months of his life on this. If he is not willing, then we probably do not want him anyway.

MR. GENE P. ARCHER: The rates of agent turnover among new financed agents for the American Hospital & Life Insurance Company have declined significantly since 1961 coincident with a change in our top home-office agency management staff. We do not think the method of compensation has any bearing on agent turnover rates. We do feel that the pre-eminent factor in successful agency development is an honest and realistic administration of whatever development plans are agreed upon between agency management and top management.

The accompanying table shows our experience since 1961 in hiring new financed agents compared with the survivors of this group.

Year	Number of New Financed Agents	April, 1964 Survivors
1961.....	29	1
1962.....	41	3
1962.....	4	1
1963.....	35	10
1964.....	5	5

NOTE: The experience under our current agency director, who started September 1962, is shown separately in the table.

We have tried to make use of L.I.A.M.A. statistics and our own understanding of the probabilities of the situation. To date, 25 persons have not survived who were contracted some time in 1963. Eighteen of these 25 nonsurvivors, or 75 per cent, were terminated during the first three months under contract and over half of these were terminated in the first or second month. It was painful at times to follow so completely our established plans, but we did, and now we are rather proud of it.

We do not think there is really any great problem competing with large

companies in recruiting and retention of agents. The ability to recruit depends largely upon the manager's attitude, and if his attitude prevents him from recruiting, you have the wrong man as manager.

We feel the smaller company has many advantages to aid it in recruiting; some of these are

1. We can give the new agent much personal attention.
2. The new agent has better communication with company officers.
3. Special requests often receive the personal attention of a company officer.
4. This closer personal relationship, possible only in the smaller company, is ego-satisfying and is one of our sales points in recruiting new agents.

We do not feel that changing patterns of population or income distribution is the problem for us that it would be for a large company. Our company is a long way from having a saturated market either from the standpoint of manpower in our existing offices or in the opening of new offices. There are many more suitable operating locations available to us than we can possibly enter in the next five years without any regard to population or income patterns.

MR. JOHN C. ANGLE: As to whether smaller companies can compete successfully with larger companies in recruiting and retention of agents, I would say that they have been able to in the past. The record shows that the total amount of individual life insurance in force in the 15 largest companies is a smaller part of the total of all individual life insurance in force today than it was fifteen years ago. I doubt, however, that there is a single formula or pattern of success that can be recommended to every company. Each company has certain strengths and attractions that it can offer a prospective agent. It is probably well and favorably known in its own home state. It will usually have a number of agencies that are favorably known in their localities of operation. The character and strengths of present agents and general agents are of utmost importance in the recruiting and retention of agents. The closeness of field and home-office people is an important asset to a smaller company. Prompt and considerate assistance from the home office can do much to bolster the morale of an agent and make him want to remain a part of the company.

Smaller companies may have oversold their compensation plans as a prime reason for joining a smaller company. Over a long pull, competitive premiums and a cordial, understanding work atmosphere should be of far greater importance.

It is better for a smaller company to attempt to do one or two things superlatively well than to spend itself in a frantic attempt to compete in all lines and all markets. Specialization can be the key to marketing success for a smaller company.

ELECTRONIC DATA-PROCESSING

- A. What has been the experience of the smaller company with respect to generalized programs developed by manufacturers of electronic computers for the complete data-processing of individual life insurance policies?
1. What functions are performed?
 2. Are these programs well enough documented so that they can be used and modified readily?
 3. What are the problems involved in installing and using such a system?
- B. What use are smaller companies making of random access? What plans have smaller companies made toward the use of "information systems"?

Boston Regional Meeting

MR. WILLIAM L. BARBER: I am bothered by the fact that there are not more generalized canned programs available for the insurance industry similar to the ones which the banks are successfully using. I believe that insurance companies are not so vastly different from each other. We all have the same product, subagents, general agents or branch managers, commissions, dividends, cash benefits, and loans. Yet manufacturers have found it difficult to come up with generalized programs.

I.B.M. has recently developed its '62 C.F.O. (Consolidated Functions Ordinary) set of programs aimed at the smaller companies, probably with fewer than 100,000 policies in force. This fairly extensive set of very well-documented programs utilizes a tape 1401 system to handle the ordinary functions of billing, premium and commission accounting, valuation, etc.

Several small companies, including the two or three in the Southwest that were used for obtaining technical information during the development of the system, are using the C.F.O. program in total. At least two or three of the larger medium-sized companies, with over 600,000 policies in force, are finding it possible to utilize certain portions of the program because of its excellent documentation. The future of the C.F.O. package is uncertain since the advent of the newly announced I.B.M. 360 series. At Union Mutual, we would probably have tried to use the C.F.O. system if it had been available when we developed our own system. I believe that the future holds great promise for the availability of generalized programs.

MRS. ANNA MARIA RAPPAPORT: We at the Standard Security Life Insurance Company of New York recently became interested in the possibility of installing I.B.M.'s C.F.O. system. In an effort to determine the expenditure in time and money required to install the system in other

companies, we wrote to thirty which I.B.M. indicated were either having the system installed or were considering its use.

Two companies have the system installed and are completely satisfied with it. Neither had to make more than minor modifications, although one did not use the valuation programs at all and the other has not yet used them.

Five companies are in the process of conversion. Three of them indicate very few problems or changes required, although one of the three has been writing business for less than a year and has tailored its procedures to fit the system. That company was fortunate in having access to a 1401 used by its parent company. The other two companies are encountering substantial problems.

Fifteen companies are committed to the system and have the equipment on order. Seven of these companies have not made detailed studies of the work that will be required to install the system. Six feel that substantial modifications and additions to existing programs will be required. Two are planning to share the equipment needed.

Three companies are still studying the system as well as the new I.B.M. 360 system recently announced. Two of the three feel that extensive changes would be required in order to use the C.F.O. system.

Five companies did not respond to our questionnaire.

Our conclusion is that the C.F.O. system may be an excellent system for many companies, especially for the newer ones but will require very substantial modification before it can be used by others. Complete installation seems to involve a minimum of five man-years of programming plus clerical support.

We are not working toward a C.F.O. system. We rent an I.B.M. 1620 with two 1311 disk-storage drives, operating to get an immediate return from every program that is written. Our major applications include policy issue, premium billing, commission calculations, statement preparation, actuarial calculations, and rate-book preparation. There are many other applications which we expect to install gradually.

The random access feature of our equipment is now being used for life policy issue. Rates at quinquennial ages for all plans of insurance and required programs are stored on the disk packs. We have also used the equipment to complete all calculations and rate-book pages for a new line of participating policies, making use of Fortran in all phases of this job.

Our plans include an issue program for individual health insurance and also putting our entire master file in disk storage. As we work toward an integrated system, many of our programs will require some modification, since all are originally constructed to solve an existing problem.

MR. GEORGE B. KYLE: Kentucky Central Life Insurance Company has approximately 110,000 ordinary policies in force, including a sizable number of monthly debit ordinary policies and a substantial number of heterogeneous policies acquired through seven different mergers.

We are in the process of converting to I.B.M.'s C.F.O. system for our regular ordinary business. We hope that eventually it can be modified to handle monthly debit ordinary and individual health insurance. We feel that it is absolutely essential for a member of the Actuarial Department, as well as our programmers, to attend the school on the I.B.M. generalized program, in spite of the excellent documentation of the C.F.O. programs.

Two types of program modifications are encountered—simple modifications, such as the addition of another mortality table to the tape library for reserve and cash value computations, and modifications in the basic assumptions of the system. The latter type has far-reaching effects on several programs, and many such changes could render the entire package useless.

Major problems in installing such a system are found in the inconsistencies and omissions in our present records and in other errors developed in our existing system. Also, cash value programs are applicable only for minimum values, so new programs must be developed for all departures from minimum values.

MR. IAN M. CHARLTON: My comments are prompted by Mrs. Rapaport's discussion. With respect to the '62 C.F.O. program, we at Peoples Life, Washington, D.C., attempted to use these programs for the purpose of developing policy values for a new series of policies. We ran into these particular problems.

First, the '62 C.F.O. series is primarily an administrative series of programs for daily cycle and is awkward for actuarial figures in policies.

Second, my company had purchased a 1401 I.B.M. 6-tape 12K system, and we found that the '62 C.F.O. programs needed all this plus other special features, such as a multiply-divide device.

Third, in the series of programs with respect to actuarial figures there is a terminal reserve valuation series which produces only terminal reserves. We understand that in this last year independent work was done by the Dallas office of I.B.M. Company in reserve values for annual statement purposes, but the documentation on this, as I understand it, is not complete at this time. Additionally, the series of reserve programs appears to be not adaptable to continuous functions and thus a user of '62 C.F.O. would have to prepare mean reserve factors in advance.

The fourth problem was in the developing of cash values. My company wished to carry higher than minimum values, and we determined that the CV series for cash values is prepared only for minimum values; and if you care to carry something over minimum, it has to be modified. These programs are very detailed and have many branches and plugs in them for the purpose of handling valuations, and modification should be approached with caution.

The last problem we ran into was the A31.0 program, which handles terminated policies going on extended term insurance. These programs are very general in order to take care of many ways that extended is calculated. Some calculated values are below those in published volumes. If it is your company's feeling that disapproval by the Insurance Department would be incurred if some extended insurance values were a few days below those of published values, then you should use cash values to the higher penny rather than to the nearer penny.

MR. CHARLES E. WILSON: At Teachers Insurance and Annuity Association, we have a 1401-8K machine with a multiply-divide device. Since we cannot use C.F.O. on this size machine, we must take a straightforward approach of writing our own programs. I believe that this may be more practical than trying to modify a C.F.O. program. With an input deck of only 131 cards, we produced output of 150,000 cards with nearly a million values in running time of $94\frac{1}{2}$ hours. The logic was sketched out in less than two months, the programs written in another month. We calculated nonforfeiture values, net premiums, and terminal and mean reserves for forty plans of insurance at all issue ages. Output was in the order required to produce reserve books and nonforfeiture values insert pages for policy forms, as well as providing I.B.M. cards for our gross premium computation.

MR. M. G. ROY WALLACE: At Loyal Protective Life Insurance Company, we are using a tape 1401 with 1311 disk packs. Our master record is stored on disks, as are the daily cycle program steps which are called into the computer's memory by a "monitor" program developed by I.B.M. The monitor enables us to store and use a 12K program on an 8K machine. The monitor, plus the scan disk feature, has made remarkable daily processing speeds possible.

Daily input is entered in random order transaction batches, then sorted and processed serially. A disk pack on a disk drive may be interrogated at any time and status report printed with a minimum of interruption to the program. This enables us to answer status requests several times a day.

Premium billing is a separate program, with the corollary ability to collect information for special billings while premium notices are being printed.

We have no plans to tie our computer into interrogation units located at branch offices or within home-office departments. We do have a Telex installation in our Toronto and Oakland offices which, by means of paper-tape communications, speeds up information exchange between those offices and our home office in Boston; but the Telex has no direct connection to the computer.

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MR. MICHAEL KAZAKOFF: The '62 C.F.O. programs prepared by I.B.M. deal only with individual policies and are made up of the following three phases:

Phase I.—deals with the calculation of valuation premiums, reserves, cash values, etc., or more generally, the development of rate tapes.

Phase II.—deals with the usual file maintenance and data-processing functions that are encountered after policy issue.

Phase III.—deals with the valuation runs.

In the case of Continental Assurance Company, we had embarked on a change from a 705 consolidated functions system to a 1410 system. The '62 C.F.O. package seemed desirable in that it provided a starting point, a check list, and some saving in programming and planning. However, in order to use the system many modifications were required.

We have not progressed very far in our undertaking, and because of the announcement concerning I.B.M.'s new hardware, we may go no further with this approach. However, here are a few of the troublesome areas that we have encountered: commissions, dividends, preliminary term, individual health policies, surrenders, reporting of interest on dividend deposits, and premium calculation routines.

MR. HARLOW B. STALEY: An I.B.M. 1311 attached to a 4K, Card 1401, has just been installed at the Farm Bureau Life Insurance Company. We have three major applications in mind:

1. New business issue. Stored on the disk pack will be: (a) program segments, (b) premium rates, (c) agent information including the agent's name, and (d) a record of the status of cases in process of issue.

The programs will audit the input data for consistency and for items requiring special handling, print record cards, print the policy data sheet, and punch the necessary in-force and accounting punched cards.

2. Compute and print, along with policy status, the information necessary for

our most frequent types of transactions: (a) surrender, (b) lapse, (c) reduced paid-up insurance, (d) extended insurance, (e) premium loans, and (f) maximum loans. The necessary factors will be stored on the disk.

3. Calculate dividends from dividend factors stored on the disk. This will permit us to calculate dividends while the notices are being printed.

MR. HENRY F. SCHEIG: Until recently the cost of real random access was too great for all but the very large companies, and most of us had to be content with daily-cycle consolidated functions operations, providing a maximum of 24-hour access.

With the capacities and lower cost of the recently announced generation of computers, true random access and powerful information systems will be within our reach.

Some uses of random access and information systems that we see are the following:

1. *As storage for program steps, monitors, and tables.*—This is probably one of the most common present uses of random access storage for smaller companies.
2. *Policy status.*—By having all or a portion of the in-force master records available in random access storage, it becomes feasible to inquire as to policy status through the console or through remote terminals. Status can be available both in the home office and in the field.
3. *New business issue.*—Random access memory is sometimes used for the storing of rate tables when the variety and number of plans prohibit their calculation from basic values. This permits the processing of new business as it occurs by eliminating the necessity of processing by plan and age sequence.
4. *Distribution of premiums.*—This distribution in random access can be accomplished while sequentially processing premium payments against a magnetic tape master file or while processing against a master file stored in random access.
5. *Distribution of production by agent, G.A., state, plan, etc.*—All facts relating to each agent (payroll data, contract date, etc.) may be stored for use in preparing reports for agency operations.
6. *Numeric or alpha index.*—By developing and keeping the index in random access and having it immediately accessible, external hard-copy files may be eliminated. In addition, it becomes possible to locate all the insured's policies by referring to any one of them.
7. *Education.*—Some companies are investigating the possibilities of storing education courses in random access, and under program control, provide individualized instruction to its people through the use of terminals. By analyzing the individual's response to the questions, the course of instruction can be tailored to fit the individual's need.

8. *Sales tools.*—
 - a) To contain the information necessary to do estate planning on a scheduled or demand basis.
 - b) To make status and values available to the agents directly. Since all the policies of an insured can be referenced, the agent can be supplied with a complete inventory of the insured's values and holdings.
9. *Investment accounting and status.*—Besides the normal accounting functions, calculations, and annual-statement preparation, it is feasible to maintain the current investments status in the system.
10. *Costs and budgets.*—Current data available for inquiry with automatic notification of those situations that are out of line.
11. *Storing of mortality, statistical, geographical, and actuarial tables.*—The storing of large amounts of data that can be readily retrieved for use in studies, in developing trends, and in analyzing potential. It permits the use of a system for looking into the future as well as a means of recording facts.
12. *Statistical models.*—By simulating various operations we can have powerful management tools not previously available. For example, it would be fairly simple to construct a "cash-flow" model to project the availability of funds for investment. More complex models could simulate agency manpower, agency financial information, investment portfolio performance, sales, unassigned surplus, and ultimately a complete corporate model.

MR. NORMAN H. NELSON: The Country Life has over \$1 billion of insurance in force and has 350,000 policies. We are two months away from being fully operational on the '62 C.F.O. programs. We are operating with the 1401 system, with 12,000 positions of storage and five tape drives. We are using 80 per cent of the '62 C.F.O. package. We have been very well pleased with the performance to date.

MR. GENE P. ARCHER: The generalized programs developed by I.B.M. called '62 C.F.O. are very well documented by 16 standard-sized three-ring notebooks of material from the manufacturer. Minor modifications can be made by the user, but any major modification runs the serious risk that it may destroy the package due to the complexity of the programs.

Problems peculiar to installing '62 C.F.O. would include:

1. Making company policy agree with the C.F.O. system. This is a very specialized answer to a generalized problem (and not the other way around as the salesman will lead you to believe), and we have found that it is usually easier for management to agree to a modification of policy than it is to re-program the package.
2. There are some areas that are overautomated, for example:
 - a) If the billed to date is after the paid to date on a bank draft, the system

has assumed that there has been a returned item and automatically changes the policy from bank draft to direct pay.

- b) To change an existing Agent's Interest Trailer, the system deletes the old trailer and adds a new one. Both transactions would be input in the same daily cycle. If the computer processes the delete transaction, but rejects the add transaction, you will be left with a record which indicates that no commission is to be paid. When the add transaction is corrected and re-entered at a later daily cycle, the computer rejects it again, saying that no commission is paid on the policy. At this point, you have to input a change to the record itself before you can use the daily cycle programs to add an Agent's Interest Trailer. There are a number of other areas that are a little overautomated and could result in automatic action being taken that is not desired.

Problems in installing any system, whether a package of completed programs is provided by the manufacturer or not, would include:

1. Educating employees to use the new system.
2. Conversion to the new system. The building of an adequate and accurate Master Record is the major problem of installing the '62 C.F.O. system. Our machine will not arrive for two more months, but we have already converted all our group insurance, most of our individual health policies, and the bulk of our ordinary life policies to tape records.
3. Securing adequate test time before the equipment arrives. We have used 250 hours of actual machine time, and our testing is not completed.

FORECASTING AND CONTROL OF OPERATING RESULTS

- A. What methods are used by smaller companies to forecast "operating results"?
- B. For how long a period is it practical to extend such forecasts?
- C. To what extent are "budgets" used as a method of controlling "operating results"?
- D. How successful have budgets been in achieving desirable levels of control of "operating results"?

Boston Regional Meeting

MR. CLAYTON L. JACKSON: We used statistics of United Life's operations to develop alternative assumptions which were summarized by use of the model office technique to determine the effect on certain financial results. These model office studies were compared for anticipated effect on corporate assets, total capital, rates of capital to assets, earnings after expense of new business, book value per share, and annual sales of new business needed to produce the desired growth. These were reviewed by the president and the actuary and the alternatives narrowed to five. With a strong belief that planning should be a cooperative effort participated in by all management affected by the decision, a special meeting was held with all executives, other officers, and department heads who would ultimately be responsible for achieving plan goals. This group reviewed the model office calculations and a memorandum listing the possible objectives of this "Third Long Term Plan." As a result of this review, the group determined the objectives to be set. After this meeting a preliminary description of the plan was prepared and reviewed by this same group. This group made a large number of suggestions which were included in the final write-up of the revised plan. This revised plan was reviewed by a committee of the Board, and, after making the few minor revisions suggested by them, it was presented to and adopted by the Board. Following this, each department head prepared a departmental plan which was summarized and discussed in a meeting of the whole group. These Long Term Plans are prepared on a 5-year basis since shorter periods of time do not give a view sufficiently far into the future and longer planning is less significant for the more remote years, having to be revised before the plan expires.

MR. IAN M. ROLLAND: At the Lincoln National of New York we too use the model office technique but forecast operating results for only one

year at a time since forecasts for more than one or two years in the future can be subject to sizable errors. However, we believe the long-range forecasts do have the value of furnishing management an idea as to how a company might develop based on a given set of assumptions. In using and interpreting these forecasts, the possibility of large deviations should be emphasized.

The most detailed part of our projection is expenses due to the importance to us of New York Section 213 limits. We can very accurately forecast our operating expenses by studying each expense category in the light of the previous year's results and contemplated future activities.

Long-range reserve forecasts seem to me to be the area most subject to error. Even small percentage errors in this forecast could have a significant effect upon operating results. We calculate average reserve factors at each year end by year of issue and plan, and from this we determine the average age at issue which determines the reserve factor for the next year end. We assume that the distribution of business by plan will not change materially, and we then compute an average reserve by year of issue based on the volume in force at the end of the prior year. Total year-end reserves are then forecast by applying these factors to a projected in force after deducting estimated lapses. Following the same principles, reserves for new business are projected separately. Reserves for Disability, Accidental Death, and Annuity benefits are projected by an "Arm-Chair" method.

Premium income is estimated by applying an average premium per \$1,000 to the projected in force at the end of the year and then adding estimated premiums collected on insurance lapsing between the policy anniversary and the end of the year.

In our case, since assets have been quite stable from year to year, projecting investment income is relatively easy. Other items in our projection are relatively unimportant and are estimated by considering trends in previous years and plans for the future.

MR. J. BRUCE MACDONALD: As a new company, Westmount Life is most interested in the problem of surplus strain. Before we began operations, I constructed a model office on the basis of certain assumptions. I assumed all premiums to be on an annual basis, which overstates premiums but also overstates commissions and reserves. However, the surplus strain was predicted rather accurately. Early this year I revised the model office to take account of a different distribution of business by plan and the additional branch offices which we opened earlier than originally planned.

Certain nonactuarial factors, such as recessions, epidemics, interest fluctuations, etc., can have a rather marked effect, as well as the rate of company expansion. However, with this tool we can judge what we can and cannot do by way of expansion or what additional capital will be required to finance future expansion.

MR. LAWRENCE J. FINNEGAN: The Boston Mutual is a combination company with just under a billion in force and growing at the rate of \$100 million per year. With this rate of growth we need a week-to-week awareness of what our annual results will be so that we can modify controllable items to achieve predetermined goals. Three years ago we changed from a general expense budget to an expanded income and expense budget and then to a forecast of the complete gain from operations by line of business. Since then we have refined our forecasts and plan further improvements in the form of greater detail and longer projection periods.

We believe that forecasting will better enable us to measure the effect of specific plans and programs against the total operation, make each company official capable of influencing results more aware of the over-all effect of his success or failure to meet his goal, and provide a basis for appraising actual results as they develop.

Although our budget approach is still in the development state, the results are apparent today. We have experienced an actual decline in general expenses the last two years and, more important, we are experiencing a greater awareness and control of results as they unfold.

MR. JOHN PHELPS: Speaking as a director of American States Life, which has just finished four and one half years of operation, I can report that we made much the same type of projection as Mr. Rolland commented on. The only similarity between our projection and the actual result was that the actual production happily exceeded the projected production and this made the over-all projection meaningless. As a result of this, our conclusion is that projecting more than two or three years ahead is little more than an interesting academic exercise.

MR. PAUL J. OVERBERG: At Allstate Life we have set up a computer program to run out our forecasts which we use to demonstrate to top management the effect of various assumptions. Our projection will be done annually as a by-product of our valuation run. We project reserves by plan, which is not too difficult since we issue only six plans of insurance. We make three standard forecasts with high, medium, and low production assumptions, but we have the capacity to also vary the lapse rates

and other assumptions. However, since we are a small, rapidly growing company, mortality, interest, and expense factors are relatively unimportant compared to the effect of lapses and production.

MR. GERALD G. TOY: At George Stennes and Associates, one of the life insurance accountants on our staff and I jointly prepare short-term forecasts or budgets. Our target is to develop all the lines of the summary of operations a year hence. Our accountant compiles accumulative monthly projections since it is of great importance to a smaller company to know its position month by month. One of the primary advantages of this system is that a well-trained clerk can handle it and bring it up to date with a half-day's working time each month.

Chicago Regional Meeting

MR. LALANDER S. NORMAN: At the American United we use a "scoreboard" system which combines budgeting and forecasting for the purpose of controlling operating results. This scoreboard shows all insurance income and gross investment income. From the total income we deduct current policy payments (claims and benefits) and future policy payments (increase in reserves). Next we show the deduction for all administrative expenses which we attempt to keep under close control by budgeting. The scoreboard is completed by deducting commissions, taxes and fees, and all other charges to determine a gain from operations, and after deducting policyholder dividends we arrive at the net gain from operations. Our scoreboard shows the results for each of the last three years and the estimate for the current calendar year. Our estimates may be revised quarterly to reflect actual experience.

Our budgeting of administrative expenses is done on a departmental basis. Each department head meets with the Budgeting Committee to justify the budgeted expenses and review the plans for the year. Modifications may be made in the requested budget at this time. Deviations from the approved budget require approval of the Budget Committee. We believe that this process has developed a cost-consciousness in our company which has been partially responsible for reducing our expense ratios every year since 1952.

While budgeting of expenses for more than one year does not make sense, I believe that projections on a broad basis for perhaps five or preferably ten years are essential to keep everyone working toward the same goals. These projections also help us to visualize the problems we will inevitably face in developing personnel and planning facilities to fit our rapidly expanding needs.

MR. JOHN S. THOMPSON, JR.: At North American we recently completed a long-range forecast of future operating results under our ordinary business. Our method is to make the forecast for business in force and future production separately. Asset share calculations were the basis for estimating future income on each of these two classes of business.

In estimating future income on production of 1964 and later, we used a model office representative of the plan and age distribution that we anticipate and we assumed that new business would grow at the rate of 10 per cent per year. For the forecast of future results on in-force business, the model office was the actual business in force, and future estimates were based on asset shares developed for a network of plans and ages.

We found that it was necessary to extend the forecast to a period of twenty years. To show results for a shorter period, such as ten years, fails to illustrate the importance of the deferred income on new business. This is especially important when the projected results are shown separately for new business.

We have been operating under a budget system for about two years. In conjunction with the annual budget, a short-range forecast is made for each item of income so that, in effect, every item of income is budgeted. At the close of each calendar quarter, actual results are compared with original estimates.

The annual review of personnel needs has made it possible to keep personnel and, in fact, all expense items rather close to actual needs. Another advantage of the budget system is the expense-consciousness that it promotes. Finally, a budget makes it possible to determine whether the company is growing as originally anticipated.

In spite of the few minor disadvantages in the use of the budget, however, we have found it to be an excellent management tool.

MR. ROBERT H. JORDAN: My discussion deals primarily with a technique for forecasting, aimed at the new company but also adaptable to an older company. The basis of the technique is to develop a set of independent forecasts, one for each year's sales and then to combine them. The independent forecasts are made by reference to a model forecast of a representative block of business.

This forecasting method is concerned primarily with the development of such elements of an operating statement as claims, commissions, net investment income, premiums, and surrenders. No attempt has been made to provide a means of forecasting sales; a forecast of sales, or method of making forecast of sales, is presumed to be available. While no method of forecasting general expenses (essentially the page 4, line 23 figure) is

explicitly developed, it is expected that the results for the forecasting of other items, when brought down to a net result that can be labeled "operating result before general expenses," will have an impact on whatever method is used.

This method has the advantages of easy comprehension of results; recomputation for a new production schedule is speedy; practically every experience factor is separately handled so that revised assumptions may easily be used (or their effect studied); and, in most cases, select factors are employed, avoiding the pitfalls involved where aggregate factors are used.

From the viewpoint of using the results, I would guess that a ten-year forecast is as long as anyone might feel he could reasonably use, and even that is, in my view, a rather long forecast. After all, even a one-year sales forecast can easily be out of date within a year, and it is upon sales forecasts that all other results are based. Further, experience factors for such items as mortality, interest earnings, and lapses are subject to cyclic as well as secular change. In any year such change may be of little consequence but, when accumulated over the years, can be of great importance.

In my opinion, budgets are the answer to the problem of controlling "operating results." It is quite practical in a settled situation to budget expenses for the coming year, and by application of the method described earlier, to develop a sales objective that will produce the desired operating result. Or, if the sales forecast is not to be altered, one can apply the technique and determine as the end-result the amount of expense that can be permitted to achieve a desired operating result.

INCOME AND EXPENSE ALLOCATIONS

- A. What methods are being used by the smaller multiple line company to allocate the following expenses to investments and line of business:
1. Federal income taxes?
 2. Executive salaries?
 3. Service department salaries, such as personnel, actuarial, claim, legal, and data-processing?
 4. Office space and data-processing rental and depreciation?
 5. Office supplies, furniture and fixtures, etc.?
- B. What methods are being used by the smaller multiple line company to allocate investment income by line of business?

Boston Regional Meeting

MR. ELGIN R. BATHO: Questions A and B are closely entwined at the Berkshire Life where, for years, we have charged federal income tax as an investment expense. It seems to me that the change in the format of pages 4 and 5 of the 1963 Convention Blank was a change in presentation and not in principle. Accordingly, we continued to allocate both net investment income and federal income taxes in the same manner and by the same principles as previously.

Our approach to allocating investment income by line of business may be unique in that the allocation is in proportion to the amounts of the mean historical funds by line of business. The mean historical funds are amounts, carried forward from year to year, which would be, theoretically, standing to the credit of each line of business if net investment income were allocated proportionate to the actual operating results for the line, including in these results not only the usual reserve funds but also the portion of unassigned surplus of the company earned by each line of business. This, in effect, rewards the profitable lines and penalizes the unprofitable lines.

We recently undertook a comprehensive Functional Cost study to give us a rough guide for allocation of expenses for asset share purposes as well as for use in the annual statement. Each clerk was asked to indicate an appropriate percentage of time allocable to life, accident and health, and investment in each of thirty-nine different functions. Certain items of direct expense, or general company overhead, which were not readily allocable to these three lines, such as executive salaries and salaries of certain service departments, were distributed between these three lines in the same proportion as the total of the thirty-nine functions. On the other hand, the allocation of office space and data-processing rental could be made on the basis of either the area occupied or on the basis of a time study.

As the Berkshire is not too active in group insurance, the problem of subdividing these expenses between group and ordinary is not too difficult. We merely estimate group expenses as a per cent of group premiums. The balance is all allocated to ordinary, which is then split among insurance, annuities, and supplementary contracts by applying a system of appropriate weights to the number of new and in-force contracts and policies. The insurance expenses are divided among life, disability, and double indemnity by using weighted first-year and renewal premium ratios. While this is a rough and ready approach, it does produce reasonable results.

MR. STUART M. SHOTWELL: At the Loyal Protective we determine our net investment income for life and health insurance by using a mean fund approach. For purposes of determining mean funds for health insurance, we use Exhibit 9 reserves plus group contingency reserves.

In allocating federal income tax, we distinguish between Phase I and Phase II taxes. Phase I tax is divided between life and health insurance by a "free interest" factor, which is derived from net investment income by deducting interest required to maintain reserves. Means of mean reserves are used to allocate Phase I taxes to the life insurance, disability, and double-indemnity lines of business. The Phase II tax is allocated on the basis of line 32(a) of the Summary of Operations. In allocating between life and health, we assume a loss if there was a loss shown on line 32(a). However, in allocating the life tax to insurance, annuity, and supplementary contracts, we use zero if there was a loss in a particular column.

Our executive salaries are allocated on the basis of estimates by the executives themselves as to time spent on investments, and the balance of any such salaries is allocated to life and health insurance on the basis of mean policies in force.

Other salaries are allocated to life and health based on studies made department by department each year. Home-office rental is allocated according to the ratio of these other salaries.

Of course, any direct expenses that can be assigned to either life or health are so allocated.

Depreciation on data-processing equipment is allocated on the basis of mean policies in force. Rental of data-processing equipment is allocated on the basis of special studies made periodically. Other items, such as furniture and fixtures, and some miscellaneous expenses are allocated on the basis of mean policies in force (or ratio of new business or premiums, if necessary).

MR. RALPH J. HASBROUCK: Although we at Security Mutual of New York do not use the historical fund approach for distributing investment income, I have often thought it far more desirable than the traditional method. We have not shifted because of the desire to maintain consistency with our past allocation practices.

Prior to 1963 we allocated federal income tax in proportion to net investment income. In 1963 we made a change and allocated it along the principle mentioned by the Loyal Protective. However, in distribution of the Phase II tax we took into account only positive gains, although I think a good argument can be made for taking negative gains as well.

Our allocation of other expenses is based on a system of cost centers. These cost centers are related to the organizational structure but are not necessarily the same. Overhead expenses, such as personnel, part of legal, purchasing, and executive salaries, are allocated in proportion to salaries. Other mixed expenses are allocated to line of business based on diaries, time studies, samplings, or judgment.

We also have a budget system which has been operating for seven to eight years. Each department head prepares an estimate of expenses for each cost center under his control. These are reviewed by his supervisors and may be modified. All cost centers are brought together and compared with past expenses. This review may bring about certain reductions. Nondepartmental costs, commissions, and reserve estimates are added to give a forecast of the earnings for the year.

Chicago Regional Meeting

MR. JACK L. MORGAN: At the Hoosier Farm Bureau Life Insurance Company our Phase I taxes are allocated in the same manner as investment income (based on mean invested assets), and our Phase II taxes are allocated on the basis of gain from operations.

Our department and division managers estimate the proportion of time spent by their personnel on matters concerned with each line of business. Executive salaries are allocated on the basis of the salary distribution of department or division supervised. Salaries in the service department areas are allocated on the basis of totals excluding their salaries. Office space, data-processing rental, office supplies, and furniture and fixtures are allocated on the basis of the salary ratio.

MR. THEODORE L. ANDERSON: At the Federal Life Insurance Company we participate in an L.O.M.A. intercompany cost study together with thirty-two other companies, and we feel this is quite revealing and worthwhile. While the L.O.M.A. basis does not completely meet our requirements, it is easy to make modifications for our own purposes.