TRANSACTIONS OF SOCIETY OF ACTUARIES
1968 VOL. 20 PT. 2 NO. 57

DIGEST OF SMALLER COMPANY FORUM

I. *Variable Annuities and Mutual Funds*

1. What commitment of capital and manpower must be made in order to enter the equity business? Can a small agency force produce enough business to justify the necessary expenditures and efforts?
2. What assistance can smaller companies expect from reinsurance companies?
3. What life insurance–mutual fund packages are being offered? How successful have sales been? What special problems are encountered?

MR. ROBERT W. NINNEMAN:* I have, since last fall, headed a task force in my own company, the Northwestern Mutual Life, in the development of a variable annuity contract. The commitment started approximately the first of September, 1967, is continuing at full speed at the moment, and will go on at least through the end of this year and sometime into 1969.

This is not something that is done overnight. We started with a task force headed by myself, a lawyer; two other lawyers, one with SEC experience and one a recent law school graduate; and two actuaries, one a Fellow and one an Associate in the Society.

This group has been working on the project on a full-time basis since last fall. On a part-time basis we have had an investment man, several agency-department people who have moved in and out of the project from time to time, and several fellows from our education section who developed a course on securities and variable annuities which we hope will enable our agents to pass the NAIC-SEC variable annuity exam.

We have gradually involved people from the employee plans division of our company, including pension trust, TSA, and H.R. 10 experts. They are developing sales materials and master plans with which these variable annuity contracts can be used.

So, from a manpower point of view, I would say that a company going into a study as thoroughly as we have has to be talking about a commitment of between six and ten people for a fairly long time.

One of the tasks involved is the drafting of a contract almost from scratch, using contracts of other companies that are available but obviously working in our own ideas.

* Mr. Ninneman, not a member of the Society, is executive assistant at Northwestern Mutual.

The same is true of the SEC filings and the research that goes into the kind of an approach the company wants to take. For, example, should the variable annuity separate accounts be created within the parent company, or should a subsidiary be established?

Once that question is answered, what kind of investment company will be used, a management company or a unit investment trust with an affiliated mutual fund? The latter is a technique which offers a great deal of flexibility, and I think it is going to receive increasing attention in the coming months.

With regard to the cost, I think you can plan, very roughly, on an outlay of between $50,000 and $100,000 for outside help of one kind or another and the various SEC filing fees, in addition to the cost of the internal staff assigned to the project.

MR. WILLIAM T. TOZER: American Republic has formed a subsidiary, American Republic Assurance Company, to enter the variable annuity field. The individual variable annuity field, requiring SEC filing and other matters, is a very complex and involved arrangement, much more complex and involved, I think, than many people realize.

We have at the present time approximately twelve people working full time in the Assurance Company on variable annuities with quite a bit of assistance in manpower from the parent company. And, as Northwestern Mutual has done, we have secured some very strong legal assistance in Washington to help in our SEC filings.

There are three areas of regulation: (1) the area in which you must file your prospectus and sales material with the Securities and Exchange Commission in order to sell your policies; (2) the area in which you must set up some arrangement for a broker-dealer to do the marketing; and (3) the area in which you must have your salesman pass security exams approved by the SEC.

I would like to address myself briefly to the second question on today's list. American Republic is willing to offer assistance to smaller companies who would be interested; by making our products available to them, they can then market variable annuities without the necessity of designing their own contracts and prospectuses and submitting them for review by the SEC. At the present time it takes six to twelve months for an SEC review and costs twenty-five to seventy-five thousand dollars in outside legal fees.

There are routes that a small company can take without having to set up its own separate accounts. Setting up a separate company to remove the SEC from the parent company creates problems of moving surplus and capital to this subsidiary and getting it licensed in various states.

I think the variable annuity is a very exciting field, but I wish to emphasize that you should do some very serious investigation before leaping into this field, because you can spend a vast amount of money on this project and then find yourself in a worse mess than if you had not acted at all.

MR. BRIAN L. BURNELL: While listening to the previous speakers, I became even more aware than I was before of the many problems you have in the States that we do not have in Canada.

Our company, the Maritime Life, recently introduced a form of variable life insurance policy. It is a form of permanent insurance under which a portion of the statutory reserve is held in a separate investment fund. The assets of this fund are held completely separate from the rest of the company's assets. Although the separate fund could be invested in bonds or mortgages, virtually all of ours is invested in equity shares at the present time. These policies are credited with their due share of the "excess" investment earnings of the separate fund each year.

We felt that for a company of our size it made much more sense to get into this sort of product rather than a variable annuity plan at the present time. In particular, it is very closely akin to the sort of product that our field force is accustomed to selling, and therefore the additional training required should be minimal.

In terms of capital involvement and manpower, the requirements were considerably less than those described by the previous speakers. In fact, in a company our size it simply was not practical to assign even one person to work full time on this job for any great length of time. We did have considerable help from outside legal counsel, however; we also had some outside help in preparing sales material and art work.

I should add that through the various stages of the development of this plan we discussed it in considerable detail with our agency offices. I myself found it very helpful to have this opportunity to try to explain to them what we were trying to do and found that I received some very helpful suggestions in the process. As a result, I think that the plan we devised was much better than it would otherwise have been.

MR. P. WILLIAM FORESTER: The Paul Revere is in both the individual and the group variable annuity field. Our agents are selling the individual variable annuity and doing quite well.

As far as the relative merits of a variable annuity and a mutual fund are concerned we started out with the variable annuity and only recently announced that we are going to form our own mutual fund. This is because of the problem of getting licensed. While the Paul Revere Life Insurance Company is licensed in fifty states, the variable annuity company is licensed in twenty-six states, so that we cannot cover every state with variable annuities. If you want to get 100 per cent coverage, you have to consider the mutual funds.

For our agency force in general, the individual variable annuities have worked out very well. Although they have not sold much group as yet, we hope to concentrate in that area in the future.

MR. NINNEMAN: I think the choice between the variable annuity and the mutual fund depends on how deeply the company wants to get committed to the equity market at the outset. Our company, for example, wanted deliberately to go into this market on a gradual basis to find out what the problems were and how we could meet them; for that reason we decided to issue variable annuities only in the so-called tax-sheltered annuity market.

I think that a company which has a background like ours would probably use the same group. Other substantial companies, as well as the smaller ones, are going into the mutual funds directly. I think the concern there is that premium dollars, which otherwise would have flowed into the parent life company, will go into the mutual fund.

Furthermore, existing cash values can be raided and put into the mutual fund by agents who believe they are doing the right thing. This is a source of concern, and our company is going to wait to see what develops before going too far in this direction.

II. *Expense Analysis and Allocation*

1. What methods are being used by smaller companies to allocate expenses by line of business for
   a) An actuary working on several lines of business?
   b) The executive department?
   c) Expenses charged to home-office agency departments?
   d) Advertising and sales promotion?
   e) Federal income taxes?
   f) Data-processing equipment?
2. What benefits have smaller companies derived from participation in the LOMA functional cost analysis?
3. What are the significant trends in unit costs? What methods of allocating costs on a per policy, per $1,000, and per cent of premium tend to provide the greatest stability in unit costs over the years?

MR. WILLIAM A. HALVORSON: One of the advantages that I have had as a consulting actuary is that I have not had to be responsible for the expense analysis and allocation methods to be used within a large and complex life, health, and group insurance company. I have seen enough of this from the outside to appreciate the advantage I have had. Therefore, I feel unusually qualified to speak on this subject, not being inhibited with the restraints of any particular company.

Actually, what I would like to present to you today is a brief outline of one of the steps we take in making a profit/performance appraisal of a client company. The appraisal usually requires us to determine how the company is doing within each of its major lines of life insurance and health insurance, further broken down by individual, franchise, or group.

By using exposure studies and expected claim levels for each of the different lines, it is possible to arrive at an actual to expected mortality or morbidity ratio. The more difficult project is to determine whether the company's expenses, being charged to the line, are consistent with the expense margins that have been built into the premiums for each of the lines of business.

I wish to assure you that we have not found any uniformity in a company's expense rates, even for similar lines of business. Therefore, there is no quick and easy way to determine what a company's actual expenses should be. About the only frame of reference we can adopt in this case is to look at the asset share studies, or profit margin studies, and to test some of our own a priori expense assumptions against the company's actual experience, taking into account the new production and business in force. If there appear to be major discrepancies between the company's assumed expense rates and the expense rates we would normally expect to find, we, of course, keep that in mind when we make specific profit studies based upon the company's own policies and premiums.

The net result of all this research is to arrive at the assumed expense rates that have been built into the company's premiums for all major lines of business. Once these *formula* expenses are determined for the company, we are then in a position to apply such formula expenses to the company's actual business written and business in force by lines of business. This automatically provides the *aggregate formula expenses* for each line of business.

Once these formula expenses by line of business have been determined, we are in a position to compare the actual expense allocations of the company with the assumed expenses.

Now we come to the analysis. If the sum of all our formula aggregate expenses by line of business equals the company's total expenses, there would not appear to be any great problem to the company in aggregate. However, if the company is writing an increasing volume of business in a particular line where they are incurring considerably higher expenses than produced by the *aggregate formula expenses* for that line, the company is obviously headed for difficulty or, alternatively, there is something wrong with their expense allocations. The chances are that, if the expenses for that particular line show a reasonable pattern from year to year, in view of the growing block of business, the allocation methods are probably approximately correct. In this case the company must immediately review the prices that it is charging for products in that line in order to bring the allocated expenses into harmony with the expense assumptions used in pricing. If, on the other hand, the pattern of expenses as charged does not appear reasonable, in view of the increasing block of business, perhaps there is something wrong with the allocation method, and particular attention should be placed upon review of the methods used to allocate sales overhead, general overhead, and other nondirect expense items.

This entire process—which is the normal one we go through in the appraisal of any company's operations—has led me to create a name for it. The expenses allocated to each line of business by use of the formula expenses built into the premium margins for each line we call the "Formula Aggregate Method of Expense Allocation," or FAMEA, for short. We believe it is most important to a company to know what these expenses would be by line under the FAMEA method. We doubt, however, that any company could long survive by using this method for allocating its actual expenses for statement purposes, and we do not recommend it for that purpose. But we believe that for a new line in an old company this method might be one of the most useful tools available in making the difficult decisions that are necessary in determining what expenses to allocate to the new line.

It can also be a very useful tool for establishing a general competitive balance among the different lines of business. In other words, it is important for any company to be sure that it does not reduce its premiums on one line in the interest of beating competition, if this is going to hurt the other lines. Inevitably, in the premium-making cycle, competitive decisions have to be made which affect either the expense margins or profits. The FAMEA method permits a ready forecast or projection of operations which can assist management in deciding how competitive they should be—or can be—in any particular line. Without this type of forecast tool using formula expenses as compared to expected budget expenses, I am not sure how management can make rational decisions with respect to pricing.

Therefore, although I am not suggesting that companies use FAMEA exclusively for expense allocation, I am recommending that all companies determine their expenses by line as if they were under a FAMEA method. They should then review the differences between their actual expense allocations and the FAMEA expenses for reasonableness, as an integral step in managing their corporate affairs.

MR. BRIAN L. BURNELL: We have participated in functional cost analysis for the past five or six years.

I think it is fair to say that during the first year or two we were a little skeptical about some of the results that were being produced, but this may well have been due to the way in which some of the expenses had been allocated in the past. During the past two or three years we have improved our methods of allocation, and we do now feel that we are at a point where the unit costs have a significant meaning to us.

We have found these unit costs to be extremely helpful to us in making studies of the company's premium scales and dividend scales on participating policies. In addition, we feel that these unit cost figures are going to be helpful to us in making calculations of the company's "adjusted earnings." This, in turn, will play a major part in setting meaningful objectives for the company and in providing some means of finding out whether or not we are measuring up to these objectives.

MR. JAMES A. GLATHAR: This will be our third year in the LOMA study, and we have not used any personnel other than the present personnel who are doing the job. We hope, after this year's results are analyzed in the generalization in Chicago, to work in the high-cost areas, of which we have some.

This may entail transferring someone or hiring someone. I will have to see how far we are going to go.

MR. FRANKLIN C. STAUFFER:* This is our second year of participation. As yet we do not feel that the comparisons with other companies are meaningful to us. This is a result of the fact that our own allocation of functional costs is not as accurate as it should be.

Being a small company, with only $100 million of insurance in force, our home-office organization is not departmentalized by major function. Consequently, we find that a function is performed, in some part, in different areas as a part-time duty of several employees. Therefore, as yet, our functional cost allocations are somewhat arbitrary in some instances. We continue to refine our functional analysis and believe that our costs for the third year of participation will be valid for purposes of comparison.

One officer has the part-time duty to work with the accounting and data-processing personnel to keep the data up to date throughout the year. He represents the company at the annual conference of the cost-comparison group.

Participation has encouraged us to take a hard look at some of our expenses and has enabled us to eliminate some fat. Of more importance, these cost studies are forming the basis for internal reorganization for a efficient operation.

MR. CHANDLER L. McKELVEY: One thing that we have found is that our efforts to combat inflation have led primarily to reducing costs in the per $1,000 category. What we find is a trend toward higher per policy expenses. We are currently taking a look at our policy fee and discovering that the one that looked satisfactory five years ago is inadequate now, while our per thousand or percentage premium has held more steady.

MR. IAN M. CHARLTON: Peoples Life is a combination company. We have found that our average premium per $1,000 declined until about three years ago and that it has held steady since, although we have indications this year that the average premium per $1,000 is commencing to rise.

As for the policy costs, we have found a steadily rising unit cost even

* Mr. Stauffer, not a member of the Society, is president of Protected Home Mutual Life Insurance Company.

though our volume is increasing. However, we know that we have been investing a good proportion of these expenses in future developments. The average-size policy has improved extremely well, allowing us to level out the expense assumptions in the premiums.

Peoples Life has established a method for developing Exhibit 5 directly from the trial balance. At the same time, we distribute expenses by line of business, keeping expenses for riders separate. The distribution of expenses is based on a decision of a committee of three persons; this committee is responsible for the distribution by line as well as the formula distributing expenses on a per $1,000 basis, on a per policy basis, or as a per cent of premium, as well as whether the expense is due to regular maintenance of the business or is additional expense due to the acquisition of new business.

The subdivided amounts of expense are accumulated in one way for the annual statement and in a second way for premium assumptions.

We reanalyze our expenses each year and do a model-office study, using our asset share programs to determine the appropriateness of the factors as well as the over-all expense allowance. We have found that our premiums have been satisfactory over the last two or three years. We have found our policy fee should be increasing year by year; however, this is not a practical thing to do. As an alternative, we take the approach that the assignment of expenses on a per policy basis or a per cent of premium basis leaves room for leeway. We reanalyze the premiums and come out with expense assumptions which can be included with the premiums. Taking these, we then attempt to determine whether the final factors can be justified by redistributing the volume of expenses on our in force, using the recomputed assumptions.

Reconstruction of the premium on the adjusted expense basis (but keeping the policy fee fixed) allows us to examine the adequacy of premiums for the entire portfolio and also to get some idea of how much subsidy the smaller-size policies need in comparison with the larger.

Two years ago we changed our pricing system to place policies into three bands—namely, under $5,000, $5,000 but under $10,000, and over $10,000. With the flexibility of changing the limits of size to which each premium applies, we are able to protect ourselves with respect to coverage of expenses by the premium dollar.

III. *Recent Developments in Individual Ordinary Products, Excluding H.R. 10 and Equity-oriented Products*

1. What new life insurance products designed to minimize the effects of inflation (other than variable annuities and mutual fund packages) have been introduced?
2. What new life insurance products designed for mass-merchandising techniques have been introduced:
   a) Using group underwriting?
   b) For sale through banks?
   c) Sold over the counter in stores?
   d) Other?
3. What other new policies or benefits have been introduced and with what success?

MR. MAYNARD I. KAGEN: Republic National has a rider which provides annual renewable term coverage. The amount of coverage under the rider each year is adjusted according to the change in the consumer price index. The annual charge for coverage under the rider each year is an attained-age rate for the amount of coverage in that year plus $2.

The individual apparently has no choice. He either buys the amount of coverage as determined for that year or the rider terminates.

The rider has a conversion privilege to convert the amount in force at the time of conversion. The rider also provides that, if the consumer price index is discontinued as a means of measurement, the individual may continue the level of insurance then in force for the lifetime of the rider.

Continental Life and Accident has an endowment policy which provides for annual units to be credited to the policy. The value of these units is adjusted by the Dow-Jones average, and these units have values which go toward increasing the cash value of the policy and the amount of insurance.

One interesting point is that these units have a minimum cash value, which seems to involve an element of risk for the company. I do not know whether some insurance department regulations forced this onto the company or not.

One other item is that Empire Life of California apparently has made an across-the-board cost-of-living increase on some of their term policies without any charge.

MR. IAN M. CHARLTON: On the students' safe plan, we have nothing which is not used, but our marketing process might be interesting. We do market this by mail on an abbreviated application, so we have a form of underwriting which is more liberal than usual. We mail only in our own territory, and, as the applications come in, we assign them to an agent in this particular territory. We pay the man a commission, even though he did not write the case in the first place.

The thought behind it is that we expect the agent to convert this term insurance over to a form of term plan of insurance, and this has worked out in a great many cases.

We have analyzed our lapses on this particular policy, which amounts to term to age 28 and life to 65 thereafter. We found that our lapses have been about one-third of those of our regular business, and the lapses are to a great extent covered by reissuance on a permanent basis. We compensate our agents for converting by paying first-year commissions on a new policy on the excess of premiums.

MR. RUSSELL A. LINE: Midland Mutual has a policy that was introduced May 1, 1967; although it is new for our company, it probably is not new in the industry.

During the last eight months of 1967 we paid for about $61½ million of this policy, which would represent about 43 per cent of our 1967 paid-for production. The average policy was about $66,000, and the average issue age about 28; the annualized premiums represented about 13 per cent of our first-year annualized life premiums.

In 1968, for five accounting periods out of thirteen, we have paid for about $15½ million, which represents about one-third of our total paid-for production. The average policy has dropped by about $5,000, down to $61,000, and the annualized premium currently represents about 9 per cent of our first-year annualized life premiums.

This policy is issued at ages 15–45 and consists of a combination of paid-up life at 85 and decreasing term insurance. I might indicate that, in the production figures given above, the term portion counts at the full initial amount.

The initial amount of decreasing term insurance for one unit of policy is $9,000 for ages under 31; $8,000, for ages 31–33; $7,000, for ages 34–36; $6,000, for ages 37–39; $4,500, for ages 40–42; and $2,500, for ages 43–45. For one unit of policy the amount of decreasing term insurance drops by $1,000 at ages 31, 34, 37; $1,500, at age 40; $2,000, at age 43; and $2,500, at age 46.

The policy is designed so that the death benefit for an equal number of units is identical at each attained age. In other words, if a man buys one unit at issue age 28, the death benefit at attained age 35 is identical to the death benefit at attained age 35 for one unit of the policy purchased by a man at issue age 34.

Our minimum issue amount is five units. For ages under 31 this amounts to $50,000 of insurance.

At the time of the reduction in the amount of decreasing term insurance, the insured has an option to purchase a new policy (called an option policy) for the amount of the reduction without evidence of insurability. An insured insurability rider may also be attached to this policy. Thus, at ages 31, 34, 37, and 40, the option date of the policy corresponds to the option date of the rider.

The premium on the policy reduces at attained age 46 to an original issue age premium for a paid-up-at-85 policy.

In order to arrive at a price that was felt to be competitive, some of the compensation on the term element was reduced and some was eliminated. This was agreed to and accepted by the field force. As a matter of fact, the field force had quite a bit to do with the basic design of the policy. They even suggested cutting the compensation in order to arrive at a price they felt would be competitive. This was done in the hope of selling a competitive and appealing product in the young-age market and of tying up the client for his future insurance purchases. In other words, the agent is sacrificing current money in the hope of future money from a controlled client.

We are using an automatic issue system with respect to the option policy on this policy. Basically it operates in the following way. The general agent is notified ninety days before an option date. He receives basic information about the policy, an application form, and a declination form. We automatically issue a paid-up-at-85 policy and send it to the general agent sixty days before the option date if we have not heard anything from the general agent. If we have not heard anything from the general agent within thirty days of the option date, we send a letter directly to the insured.

We feel that this policy and procedure give the agent a great psychological advantage in placing the option policy. The psychology is even stronger than it is in the case of automatic issue of option policies on the basis of the insured insurability rider, since in this situation the amount of insurance is actually reducing—the client is losing coverage that he has actually had unless he accepts the option policy.

MR. VERNON J. SMITH: We recently revised our guaranteed insurability rider at Western States. This new rider provides much more flexibility, as well as additional options which were not available in our old rider. Our agency people have named this rider the "Futurama Flexiplan."

This rider provides the usual guarantee to purchase additional insurance at ages 25, 28, 31, 34, 37, and 40. In addition, we allow the regular option to be replaced in the event of marriage, birth, or adoption. However, the alternate option does not necessarily replace the next regular option. The insured is given the privilege of indicating which of the regular options an alternate option will replace.

During the ninety-day period following marriage, birth, or adoption, the company automatically provides term insurance coverage equal to the option amount. The new policy issued under the alternate option upon marriage, birth, or adoption normally would be dated the ninety-first day following the event. However, the insured may elect any other date during the ninety-day period if he so desires.

Upon marriage the insured's new spouse has the right to purchase any permanent plan without evidence of insurability, the family plan rider may be added to the base plan, or the bride and groom may purchase a joint life plan.

Upon birth of a child (or adoption) the insured may elect to purchase a five-year term policy up to one-half the regular option amount in lieu of exercising the normal alternate option. We plan to make the five-year term insurance available as a rider as well as a policy, although our language in the rider does not guarantee this.

Finally, we have included a one-time mortgage option following the purchase of a home. This option allows the purchase of a decreasing term policy equal to the option amount without replacing one of our regular options.

Our agents appear to be very excited about this new rider. However, I am unable to give you any indication of the sales success, since it was only recently introduced.

IV. *Interim Financial and Operating Statements*

1. How frequently should such statements be prepared?
2. What information should be included, and how is it used?
3. What methods are used for estimating or computing reserve liabilities, dividend liabilities, and other items?
4. To what extent are the results compared with prior years, projections, and/or budgets?
5. To what extent are the results analyzed and interpreted by the company actuary?

MR. JOSEPH R. PICKERING: My company is a subsidiary of Investors Diversified Services. IDS, the parent company, has always prepared a monthly operating statement, and when the life company was started, we had to go along with it; we have been preparing and will continue to prepare a monthly statement.

This statement for the life insurance company contains the information on the balance sheet and operating statement, the first three pages of the Annual Statement. It is modified a little for reasons that I will discuss a little later, but we show what we call "premiums available," which is the gross premiums received less commissions and premium taxes, less the reserve increase.

This amount, then, is premium available for claims and expenses and, hopefully, profit.

The accounting department or the controller's department does by far the most work on it, but there are some thirty-five or so nonledger accounts which are supplied by the actuarial department. We develop the increase in life insurance reserves every month through a gain-and-loss type of calculation. As you are all aware, at the end of the year for the annual statement, you have the reserves at the beginning of the year, calculate reserves at the end of the year, and balance with tabular costs.

During the year we go the other direction. We have the reserves that we started the year with, we calculate the tabular cost, and we balance with the reserves. The method starts at the beginning of the year when we project the year-end reserve—we have the beginning of the year and the year-end reserve, add up the net annual premiums, and, by valuation basis, calculate the tabular interest and determine the tabular cost on the business in force at the beginning of the year. Then in various groups we express this tabular cost as a percentage, or so many dollars per $1,000 of amount of insurance in force.

Because of the age of our company, these figures trend upward, and we project these or grade these in month by month. Each month we take the amount in force by the various plan groupings, multiplying by the dollars per $1,000, and determine in this way the tabular costs.

This is the life reserve. There are a number of other reserves for things like waiver of premium, ADB, for what we call "nominator" (the premium payor benefits), and annuities which we do not have very much of yet. For these we approximate on whatever basis seems appropriate at the time.

The reason we have expressed the operating statement on a premium-available basis is that we used to express the statement to show gross premiums and then somewhat further down we would show reserve increase which is, of course, a deductive item.

This caused a good bit of confusion in the company. As a result, we decided to express it on a net basis and show just the premiums available. We do this every month. It is compared primarily with what we call the current-year plan. It is a budgeted figure.

Because the premium-available basis is a fairly stable figure, we are able to explain differences from plan. The method we use should agree precisely with the year-end reserves when we prepare the annual statement in the normal method.

A few years back, we were off rather substantially. We discovered much too late an error in our technique; we were off some $100,000, and it was tough to explain to our board why December looked so bad.

So what do we do now? At the end of September we go through a year-end-reserve calculation for the upcoming year, and through this we can approximate even closer or detect any errors that may be in the gain and loss method we use monthly.

In the last few years we have been coming within $25,000 of the year-end reserve with an increase in reserve on the order of $10 million.

MR. ROBERT H. DREYER: I do not know how often presidents want to see interim statements, but from the workshop this morning I would judge that a lot of actuaries of larger companies prefer to see them annually, as of the end of the year.

At Milliman & Robertson we aid in the development of many new and small companies, and we frequently prepare a ten-year forecast of the company's proposed operation. Using model-office techniques, our own machine programs, and appropriate assumptions, the forecast results are presented in a form which closely parallels page 5 of the Annual Statement.

As experience develops, the forecast can be used as a basis of comparison with actual results. To do this, we frequently adjust the forecast to reflect the actual production achieved, since this is typically the area of experience showing the greatest variation from the original assumptions. After this adjustment management can analyze its experience to date, relative to its original assumptions, on an item-by-item basis. Those of our clients who have such a forecast and prepare interim statements have found that the forecast, even though on an annual basis, can be useful in analyzing interim results.

MR. ROBERT MERRITT: We do a monthly report for company management and the board of directors that consists of a balance sheet; a sources of surplus statement; a breakdown of expenses, where available; data on new investments; and a policy exhibit, which includes not only individual insurance but group and health and some other things, which is sort of in transition.

As this operates in regard to ordinary insurance, there is a system which, oddly enough, was set up about thirty-five years ago by accountants as an outgrowth of a management consultant survey; the accountants still operate it in the sense that they put the monthly statement together as they put the annual statement together. The general accounting department of our company has much more statement responsibility than I think is customary, and the corollary of this is that we have some rather unusual things operating, such as a ledger liability account for policy reserves which is augmented by net premiums and tabular interest and decreased by tabular mortality, very much as Mr. Pickering described.

The tabular cost is what we try to estimate and work with, and the reserve then becomes the balancing item. The same is also true for individual annuities, disability, and things of that sort.

This, then, means that our surplus statement is a surplus statement by source in the format of the pre-1938 gain and loss exhibit and the analysis of increase in reserve, which, as I say, is probably for the reason that that was when it was developed.

As Mr. Dreyer said, of course, this gives you your sources of surplus, hopefully correctly, but certainly in relation to your valuation standard, and, as was brought out in the workshop that some of us attended this morning, this is not really what you expect. The sort of information Mr. Dreyer provides for his clients is really probably more relevant for the new and small company, that is to say, not exhibiting experience in relation to the valuation standard which you did not expect anyway but rather in relation to your premium assumptions.

As I said, the general accounting department is bringing together pieces of information that we do not have, particularly with respect, say, to investments; so, when the whole monthly story is assembled, there is generally a small scale huddled between the general accounting department and our department before it is finalized.

It then goes to company officers and is discussed with what is called the "president's cabinet," after which it is eventually presented to the directors by the executive vice-president.

I would like to tell you a little about changes on the horizon which we have not implemented yet but which will come out of our new valuation system (I say "new," although it began in 1966). We are now making quarterly valuations, each one being a mean reserve as though the valuation date were the end of a twelve-month period.

When you want to do this sort of thing, you have two choices of how to pick up reserve data. I am not that much of an EDP man, but, as I understand it, on the CFO system you carry along reserves associated with individual policies and obtain your data by summing these up in appropriate groupings. We did not go that way. We decided to scan the file, put out messages pertaining to the various features on the policy, and then sort these messages in the appropriate order and match them against a factor tape. This, of course, has the advantage, if it is an advantage, that it clearly separates the responsibility for keeping the records, which, in our company, is in the so-called insurance service department, from the responsibility of valuation itself.

On the other hand, we have found that it is quite expensive in terms of the time required to do this scanning and sorting. The input, I might say, is what is called the security dump tape of the last day of the quarter. The security dump tapes are put out daily for just that purpose—security—and normally are retained less than a week; those at the end of the quarter (I believe currently there are twelve reels) are passed through this scan, which puts out the messages that I mentioned, which are then sorted and eventually condensed and matched against a tape.

The scanning and sorting programs currently, with about 375,000 ordinary policies, take eighteen hours of time more or less, whereas the valuation program takes an hour or two. This is on a 1410.

We have a 360 now, and, as I understand it, there is something called "using the 360 as an emulator." With this we anticipate cutting the time almost in half; this is still a good deal of time. This is a consideration that you might want to keep in mind in deciding which way to go.

MR. CURTIS D. GREENE: We have a 360 with tapes and disc packs. Our master file is about 250,000 punched cards. At the 1967 year end we copied them on tape for semipermanent use as a detail file, and we also tested a group valuation program.

We are now trying to do quarterly valuations with mean durations refigured for every policy as of the closing date of the quarter. We make a new detail tape by combining transaction cards for the quarter with the previous tape file. The updated tape is then sorted, summarized, matched with a factor tape, and the listing and totals are printed. This takes several hours, but it is not an unreasonable item, and we feel it is going to give us some good by-products.

One thing I would like to obtain from this process is a developing history of our average reserves by date of issue and by plan. This would improve our control and point out discrepancies.

The Ohio Insurance Department does not want a one-shot valuation in January because it requires so much checking. This means that we do extra handling to supply their needs on a system that does not serve our internal quarterly reports. Average reserves derived in the computer would help to confirm the accuracy of the new method and would let them inspect the reasonableness of our valuation with less effort. Then we may be able to drop the extra system.

Our internal reports are quarterly and on the same incurred basis as the annual report. Operating figures are given for five lines of business following our own staff setup, not the classes required in the Convention Blank. Each page shows current year to date, prior year for the same period, percentages within each year, and percentage changes between years. Another page shows the surplus account, summarizing operating results and explaining nonoperating items. A balance sheet follows.

This report is prepared by the actuary with written comments on each page to point out or explain trends, results, special items, or the effect of previous decisions. Sometimes I explain how last year's figures were misleading. For instance, we may know now that last year's claim reserve missed the mark, so the operating results need adjustment for proper comparison.

The financial report is sent to all board members one week before the meeting. They also receive four other reports from department heads about objectives and accomplishments measured in other ways. This system has reduced the actual meeting time spent on presenting reports.

Someone asked about the Mandatory Securities Valuation Reserve. We simply calculate the gains and losses every quarter and obtain the formula contribution for the proper fraction of the year. We are following our investment results directly on a quarterly basis.

MR. A. ANTHONY AUTIN, JR.: At the Pan-American Life, we prepare interim financial statements quarterly. These are pretty much in the form of the Summary of Operations page of the Annual Statement, and they do include an analysis in the change in our surplus account.

As far as the calculation of the reserve items is concerned, we actually run our major data-processing programs each quarter, so that we do have at least the major life reserves on an accurate basis. We have not been calculating our dividend liability, active life premium waiver reserve, or our active life accidental death benefit reserves on an actual basis each quarter. In these three areas we use our budgeted cost. Of course, these reserves are calculated accurately at the end of each year.

The results for each quarter and for the year to date are compared with our budget for the year.

With regard to topic IV, 5, the report is prepared in the actuarial department and the actuaries are responsible for analyzing results. We have been fairly successful in recent quarters in breaking down the difference in the operating profits from budgeted profits by sources. Hence, we have been able to indicate how much of the difference was contributed by excess mortality (or in some cases mortality gains), excess expenses, and so on.

MR. CHANDLER L. McKELVEY: It is a basic tenet of information management that reports should be timely, they should be in such form that realistic action can be taken based upon the results, and the period of the report should be such that it provides information that is meaningful for management action.

I would like to ask whether profit and loss, which is basically what we are talking about, monthly or quarterly, with all the approximations and with all the difficulty that goes into it, provides the kind of information that leads to realistic action. Even if there is some realistic action that can be taken, is it worth the effort?

I think we all have sales projections and watch our premiums, death claims, expenses, and lapses. These are the nuts and bolts, the building blocks of the business, and, if something goes wrong, we can begin to take action. But, does profit and loss provide something that is meaningful and on which action can be taken?

MR. LAURENCE K. SMITH: At Mutual Trust Life we make an estimate at the beginning of the year for surplus and gains from operations and revise it quarterly. The revised figures frequently are out of line, for at the end of the year we find that our original estimate was correct. There are many one-time fluctuations during the year which cause distortions. Perhaps after September one could use year-to-date figures for an estimate, but forecasts based on the semiannual or the first-quarter information can give some very wild results.

MR. MITSURU KADOYAMA: In California all domiciled companies have to submit quarterly statements to the department. It is essentially the Annual Statement, pages 2, 3, and 4, and the reconciliation of ledger assets.

In the area of policy reserves, we used to estimate year-end reserves and prorate in interim quarters. The other income and expense items were essentially on an accrual basis, causing a bias in the results because of the treatment of reserves. We are now on CFO and get exact valuations quarterly. This results in statements reflecting actual performance by quarter.

Regarding the question that was raised, of what value is this process? Along with the statutory quarterly statements, we have been producing rather detailed statements for the directors. I must admit that we have never done much in-depth analysis of the statements, but they have provided us with early indications of trouble areas before year end. It is not always feasible to correct the problems, but at least the year-end results do not always come as a surprise.

In reviewing the quarterly statements, we actuaries generally come up with some quick conjectures about what is causing problems and then resort to the usual actuarial technique of trying to find the right assumptions to arrive at our predetermined conclusions. This does force us to make studies in areas where previously we had only conjectured.

MR. AUTIN: I would like to comment on the question of why we should look at financial reports on a quarterly basis.

I think there is some merit in looking at, say, the first quarterly report; while it may not be indicative of what the annual report will look like, it does reflect the experience which you have had to that point, to the extent that you can accurately reflect what the experience was. I think that in projecting the end-of-the-year results it is better to anticipate that the remaining three quarters will experience average results which should be added to the first-quarter results to obtain an end-of-the-year picture.

If the experience has been bad (or good) for one quarter, management should know about it. I do not think that we should just sit around and hope that the experience in the remaining quarters will help average out the bad (or good) experience of the first quarter. On the average, the results will not average out.

V. *Federal Income Tax*

1. What use, if any, do smaller companies make of the specialists in life insurance taxation of CPA firms; and have they been satisfied with the results?
2. What specific questions have the IRS auditors raised regarding the following:
   a) Reserves considered life reserves?
   b) Due and deferred premiums?
   c) Deferred maternity reserves?
   d) Expense accounts?
   e) Agents' debits balances?
   f) Substandard reserves?
   g) Reserves to strengthen settlement options?
   h) Guaranteed insurability reserves?
   i) Group claim-stabilization reserves?
   j) Group dividend liability?
   k) Mortgage escrow funds?
   l) Premiums paid in advance?
   m) Reserves for nondeduction of deferred premiums?

MR. JOHN F. McMANUS: North American Life Insurance Company of Chicago has retained a CPA firm to aid and advise us in the preparation of our annual federal income tax return, in the financial planning which would involve income tax questions, and in the audit of our rates by the Internal Revenue Service.

An item not listed under question 2 which was raised in the audit of our return involved the approximate re-evaluation of reserves as provided in Section 818(c). The method which we used for the re-evaluation of family plans and combination policies was questioned. As far as combination plans were concerned, the auditor took the position that we should revalue reserves as outlined in the *ALC-LIAA Joint Bulletin 1267* of November 10, 1966.

MR. EARL S. MAGNUSON: United Security Life has a holding company and through the years has acquired a few other subsidiary corporations.

We are using a CPA firm to help us in the intricacies of the corporate tax area, and it is also a great help in the area of life insurance taxation. Holding companies can definitely make use of CPA firms and other consulting firms.

MR. CURTIS D. GREENE: We have a problem on topic 2*a*, "What reserves are considered life reserves?"

The problem is disability waiver of premium riders attached to life policies. Our revenue agent has decided that these riders are like other health and accident coverages and therefore do not count as life reserves if there is an automatic termination of the benefits before age 60. He has gone back to the definition of noncancellable health and accident in IRS Regulation 1.801-3, which we think was only made to separate life companies from nonlife companies. He has extended it to analysis of our regular reserves in Exhibit 8 for disability riders attached to life policies.

We had a number of years of issue on both disability income and waiver of premium where benefits terminated at age 55. He disallowed that part of our reserves and permitted us an unearned premium reserve on the same business.

So we agreed on a figure for calculating purposes. He was not difficult about arriving at that number. This does mean, however, that a substantial chunk of our disability reserves has been tossed out; therefore, the required interest on them does not become a deduction.

MR. ROBERT MERRITT: I think this may be peculiar to the Hartford area, but there the IRS has attempted to challenge the validity of disabled life reserves as a life reserve. I do not remember the exact grounds for this, but it has something to do with the language of the law talking about "accrued benefits." It is a semantic challenge; in effect, they are trying to say that this is a claim reserve pure and simple and therefore not eligible to be classified as a life reserve.

Naturally, we are concerned about this, but, as I say, I think it is in Hartford only.