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DIGEST OF SMALLER COMPANY FORUM—PHILADELPHIA REGIONAL MEETING

I. *Expense Analysis and Allocation*

1. How, in the most elementary fashion, may a smaller company allocate expense by line of business, determine its acquisition expense and investment in new business, and set up management controls to keep expenses in line? What pitfalls confront the uninitiated? As growth and experience make development feasible, in what order should refinements be added?
2. In the case of smaller companies has participation in the LOMA Intercompany Comparison Analysis Program justified the expense? Does the fact that a smaller company's figures may be more approximate and more volatile than those of a larger company impair, significantly, the value of a comparison with other companies and with previous years?
3. A few years ago the LOMA discontinued releasing the Middle Range of Functional Costs developed each year in this program as misleading because it included companies of various sizes. With this not available, what industry data remain to serve as bench marks for smaller companies? Have studies similar to those made for Canadian companies by Pedoe and McCracken been made of United States companies?
4. If it is generally true that expense analysis shows higher expense rates for smaller companies than for large, how do smaller companies allow for this? Does the ratio of first-year expenses to renewal differ significantly in smaller and larger companies?
5. Does the pattern of expenses on ordinary policies written by combination companies differ significantly from that of ordinary companies? How significant are the differences on monthly debit ordinary business?

MR. ANDREW M. STIGLITZ: One of the points covered this morning was the allocation of development expenses, such as the installation of data-processing equipment and/or the development work geared toward getting the data-processing equipment under way. The consensus seemed to be that the expenses should be allocated to the lines of business that will be using the equipment or benefiting from the results of the development expenses.

With the establishment of a new department the same problem arises as a result of high start-up expenses. The adjusting of reports to management for start-up expenses is very difficult, and the solution seems to be to wait three to five years until expenses have settled down before concerning yourself with whether expenses are at the proper level.

Another part of the session this morning was on the question of allocation of costs across lines of business. If time studies or sample activity counts are used, care must be exercised to assure that the result is representative of the average of the total year. In the area of unit costs, small changes of allocation between lines of business can generate considerable swings in unit costs. In order to avoid having this cause a distortion in unit costs used in rate-making, the idea of using averages of more than one year's unit costs seems appropriate.

Another point made with regard to unit costs was that, if you are using unit costs in rates on simply a first versus a renewal basis, you might be surprised if you look at expenses on a true, functionalized base.

In terms of setting functions and defining functions, LOMA definitions continue to be the best. If anybody has questions or is trying to get answers on functional costs, the LOMA study definitely is the best place to look.

MR. MELVIN L. GOLD: It is axiomatic that the president of a company should know how much money is actually being earned by the life insurance operation, yet I wager that most insurance executives do not.

A simple analysis would be to remove from the gain from operations the interest on capital and surplus (which has no relation to the insurance operation) and then to break the remainder into (*a*) gain from renewal business and (*b*) investment in new business. A $200,000 gain from operations may mask a $500,000 gain from renewal business and a $300,000 investment in new business. Compare your investment in new business with what you are getting—the replacement of lapsed business, the increase in in force, the building-up of an agency force. Are you getting your money's worth? This investment in new business is one use of risk capital. What is risk capital worth these days? At least 10 per cent. So let us accumulate investment in new business at the higher interest rate reflecting the risk involved. Are you still getting your money's worth? Are you investing surplus or dissipating it?

The prime reason that so many small companies dissipate surplus is that their chief executive officers do not understand the life insurance business; they do not know what provision for expenses is implicit in the rate structure of their policies; and they will not take the time to discuss this with the actuaries.

Actuaries are in the best position to tell how well a company is doing and whether it is heading for trouble—but too often we have abdicated this role. It is a pity, since so often the company cannot judge its own progress. I am told that in Canada, if a company gets in trouble without

the company or the insurance department's being forewarned, the actuary is called in for an accounting. We ought to adopt this philosophy in the States. An actuary's prime purpose is not to calculate reserves but to tell management how it is doing and where it is going.

MR. BRUCE G. LINDSAY: Lamar's participation in the LOMA cost study came about as a result of our desire to design a sophisticated budgetary system. We felt we could kill two birds with one stone by setting up our accounts to do a dual allocation, by function and by department.

Full standardization of allocation by all companies participating in the study has not been achieved, and, quite frankly, it probably will not be. The complexity and variation of functions among companies are too great to arrange for every company to allocate expenses on exactly the same basis. However, the LOMA procedure goes a long way in that direction and is very useful in establishing comparative "norms."

We have found participation in the study very useful. Each year we make a detailed comparison of Lamar Life's expense experience to the experiences of other participating companies similar in size and type of business to Lamar.

Our comparative position in total is reviewed in detail with top management. In addition, each department's comparative position is reviewed with all supervisory-and-above personnel of each department. We have gotten a very favorable reaction on the departmental level, and we have found that employees are very interested in their respective performances.

At the moment we do not directly use the functional-cost factors derived from the study in our gross premium calculations. We do keep track of trends in unit expenses and justify or determine the cause of any abnormal fluctuations. We have spotted some problem areas that, except for the cost study, might have gone unnoticed and uncorrected.

Intercompany comparison of each functional cost is difficult and somewhat meaningless. We therefore compare ourselves function by function to the average of the other companies chosen for comparison. We are very interested in where Lamar stands, in comparison with other companies, in total company expense related to some norm, as the number of $1,000's of insurance written, per policy written, and so on. We feel this gives us an idea of our relative performance as a team. We use the study to draw everyone's attention to the necessity of economical performance. We encourage ideas on how to reduce all functional costs. We are more concerned however, with keeping total company expense as level as possible. We do not get unduly worried from a comparative standpoint about being high in one area, because it is usually found that we will be low in another.

We intend to continue to participate in the study, and we would like to see more companies our size participate in it. We feel that any company that participates will find it beneficial. The degree of benefit, of course, really depends on management's attention to the individual items and on how much effort is made to reduce them. Once the program is established, the year-to-year maintenance cost is not too bad. The majority of the items come out as by-products of the accounting system.

MR. JOHN C. BERTRAM: I was delighted to see that Jack Bragg included in his new paper some conventional expense factors which he considered appropriate for a combination company.

These expense factors include all servicing commissions, both first-year and renewal; the medical and expense factors are shown separately. After adjustment is made for this, it appears that in his factors less is allocated per policy and more per dollar of premiums than is generally the case in strictly ordinary companies.

It also appears that the ratio of first-year expenses to renewal is smaller than that for strictly ordinary companies, coming closer to the five to one ratio used by one reporting organization.

I am particularly interested in this and wonder if these two differences—more allocated per dollar of premium and less per policy, and more allocated in renewal years than in first years—are common in the industry.

MR. JOHN M. BRAGG: The factors deal with industrial life, monthly debit ordinary, and regular ordinary separately.

Generally speaking, the MDO factors have a higher percentage of premiums than do the regular ordinary factors. This is largely a result of the higher collection commissions. Also, they have a higher allocation per thousand but a far lower allocation per policy.

Proportionately, more of the expense has been considered renewal than first year in the case of MDO and regular ordinary; the medical and inspection expenses are also lower for MDO than they are for regular ordinary, largely as a result of a smaller percentage of the MDO business being inspected.

MR. KENNETH L. GITTINGS: The Colonial Life has a somewhat unusual problem in the allocation of expenses for rate-making purposes in that we operate both a combination operation—weekly premium, MDO, and notice ordinary—and a brokerage operation in the large urban areas.

Within the last year we have come out with an entirely new portfolio of ordinary products, including changes in premiums, values, and policy forms. The main feature of the new portfolio is the introduction of two

separate series of policies—a lower-amount series for policies under $15,000 and a higher-amount series for policies of $15,000 or more. There are different premium and cash-value levels in the two series, and they will be sold through both marketing operations. This posed major problems in the allocation of expenses, since the two operations have distinctly different levels and patterns of expense and we were operating to a large degree in the dark when it came to determining the distribution of the two types of business by number of policies, amount of insurance, and so on.

The one problem that I wanted to comment on this afternoon is that of determining the precise form that the general overhead expense unit should take in the asset share studies (once the allocation problems are solved). A good example of an expense of this type is the president's salary; I can present a good case for using one of the many units (number of policies, amount of insurance, etc.) or a combination thereof in distributing the president's salary. Whether it is unfortunate or not, what this can lead to is a choice of unit which presents a particular segment of the portfolio in a favorable competitive light. I might also add that in nonparticipating asset shares it seems to me that it is particularly important to take into account future increases (or decreases) in both the numerator, the amount of expense, and the denominator of the particular unit chosen.

While I have not done extensive reading on the subject of allocations, what I have read does not shed too much light on this particular problem. If anybody has any answers, I will be happy to listen to them.

CHAIRMAN RALPH E. EDWARDS: We have used the Pedoe-McCracken approach for industrial, based on our expenses over about a ten-year period. We have no idea whether it is right, but it gives an actual to expected that can be carried forward.

II. *Adjusted Earnings*

How useful are adjusted earnings (*a*) for evaluating company management, (*b*) for purposes of the investment community, and (*c*) in assessing the company for acquisition or merger? In what way, if any, is adjustment made for the potential profit of business already in force?

MR. FREDERICK S. TOWNSEND: We have not used or even considered using adjusted earnings to evaluate company management. In a retrospective nature the trend of adjusted earnings and the current growth rate in adjusted earnings may reflect the things which are going on in the company and therefore management's ability, but other than that the numbers themselves really cannot evaluate management for you.

On item *b* (for purposes of the investment community), adjusted earnings are an absolute necessity. In looking at a company for the purpose of making an investment decision, you look at qualitative factors and at a number of quantitative factors, which are the statistical tables, ratios, and the like, which you develop. Any investment officer in any institution will want to know the price/earnings ratio on any stock before he buys it, and you cannot determine a price/earnings ratio unless you know the market value, which you do know, and the earnings, which you divide into such market value. This is one of the problems that we have today in life insurance stocks. We really do not know what we should be using for adjusted earnings. If you attended yesterday's session, you obtained some background on this subject.

With respect to item *c* (the use of adjusted earnings in assessing the company for acquisition or merger), first of all, it is a prime function of management to maintain the value of its stock in effecting any merger or acquisition, and one of the considerations which must be very strongly involved is that you do not dilute your per share earnings. If you have a stock-for-stock exchange basis and issue too many shares of your own company for too few of the other company, it is possible to have a significant dilution in the per-share earnings of perhaps 10 or 20 per cent. This could cause a definite drop in the market value of the stock, thus doing your stockholders a disservice.

If you take these remarks to heart, you will probably say, "What one should try to do is not simply to keep pro forma earnings per share level but perhaps to improve or accelerate earnings per share through the merger terms." We see this in the casualty industry, where the use of convertible preferred stock is being used to introduce leverage into the earnings per share. I suspect that with the creation of holding companies in the life industry we will begin to see convertible preferred stock issued for the shares of life insurance companies. Some people call it a "paper trick."

In the casualty industry what you are generally doing is acquiring a company that has a series of historical underwriting losses for many years, which may be a reflection upon management. You acquire an investment income account which is substantially in excess of the preferred dividends you are going to pay. Right away you have increased your earnings without issuing additional common shares. If you change the investment portfolio around and if you increase investment income by 20 per cent before preferred dividends, this could represent a 40 per cent increase in investment income after preferred dividends.

Adjusted earnings should very definitely be taken into account when making a merger or acquisition proposal.

MR. EDWIN E. STANCIK: Milt asked the question, "Has anybody had a president ask him about figuring up an adjusted earnings or an adjusted value for the company?" Well, yes. It was asked of me. After gathering up the material that was available, and even before Mel wrote his fine paper, I wrote an internal report that looked at six approaches, some of which were similar to that of Mel. These approaches were (1) the dollars-per-thousand method, (2) the Bowles & Tillinghast index, (3) the J. C. Bradford method, (4) the actuarial method, (5) the Bear, Stearns adjusted earnings method, and(6) the financial analysts method.

The dollars-per-thousand method was one of the earliest in use. This method is still widely used because of its simplicity. The application of this method, however, is like throwing darts at a board, since it fails to recognize specific characteristics and differences in individual companies. Without a doubt, inequities and discrepancies in the market valuations of life stocks have occurred through the use of this method.

The Bowles & Tillinghast index, which has been around for about fifteen years, departs from the gain in insurance in force technique and relies generally on premium income levels. It is simple to apply and convenient, but as a result it is only an indication of value or a bench mark.

I thought the third method was fairly good. This was the J. C. Bradford method. Is anybody familiar with it? It is like a "glorified" or "refined" dollars-per-thousand method. The approach takes into consideration an additional dimension—quality of business. It also includes a two-pronged reserve adjustment—one adjustment for the interest assumption and the other for valuation method.

The actuarial method, with which we are all most familiar, measures the present value of future profits on existing business, and on future production, if you please. This is by far the most complex and unwieldy method of all.

The Bear, Stearns adjusted earnings method seeks such adjustments to

the earnings that result from practices that differ from generally accepted accounting principles. The method recognizes a reserve adjustment. It does not develop an adjusted value.

The final method is currently being worked on by the Life Insurance Earnings Adjustment Committee of Financial Analysts in New York. The committee has adopted for ordinary insurance a method of amortizing acquisition expenses for a period dependent on an assumed average policy life. The reserve adjustment for interest is an adaptation of the formula used in the federal income tax return. The reserve adjustment for method has not been agreed upon but might be the tax method if another does not present itself. The group and industrial lines are still in the mill. Since my company is a combination company, I had to resort to my own means of determining the value of our industrial insurance.

I applied actual figures to three successive years. All the methods except one produced adjusted values which were very close to each other. In each of the years the variance was less than 5 per cent.

On the adjusted earnings, there were two items worth noting. Five of the six methods clearly showed a dip in earnings in the middle year. Also, for five of the six the widest spread in the amount of adjusted earnings in two of the three years was less than 15 per cent and was just over 20 per cent in the third year.

I look at my company as being typical and very much like a model in many ways, even to its having a balanced mix of business. Almost any methods that may be applied to it, therefore, may come out with relatively close results.

If anyone is required to go through this exercise—it was a wonderful experience for me, and I learned a great deal in the process—and if your company's figures provide results close together, why not average them and use the average as the best value?

MR. B. FRANKLIN BLAIR: We usually think of adjusted earnings as applying only to stock companies. Line 33, however, is just as unsatisfactory as a measure of earnings for a mutual company as it is for a stock company. Mutual companies should, therefore, also be giving considerable attention to adjusted earnings, both for corporate planning purposes and for the determination of dividends to policyholders.

The adjustment, of course, will vary considerably from what would be used for stock companies, because most of the mutual business is done on a net level, premium reserve basis and is participating. But, bearing in mind the necessary changes that have to be made in calculating adjusted earnings, I believe that all mutual companies would gain a great deal from looking at their properly adjusted earnings.

III. *Variable Annuities and Mutual Funds*

1. At what stage of growth should the smaller company consider writing variable annuities? What are the problems of writing individual variable annuities in contrast to group? Can they be solved satisfactorily?
2. In the selling of mutual funds along with life insurance, what relative emphasis should be placed on each? How can a smaller company be as effective as a large company in developing life insurance sales by having mutual fund facilities?
3. What type of combined products can be devised for a mutual fund security and a life insurance policy?
4. Of what relative significance are technical complications, marketing problems, and management psychology in the development of a successful program involving mutual funds and life insurance?

MR. MILTON F. CHAUNER: The American Management Association had quite a seminar, as many of you know, earlier this year. There were many insurance company representatives there, but I think there were more investment people. The discussions were centered around aspects not primarily actuarial in nature. Instead, they dealt with such topics as the practical problems of getting into the business, what part of it to go into, whether variable annuities should be sold on an individual or group basis, and the various approaches to handling mutual funds along with life insurance sales.

MR. HAROLD GILBERT: Our Richmond company, Fidelity Bankers Life, organized a no-load mutual fund, the Variable Stock Fund, in 1957. At that time we were looked upon as mavericks, and I suppose we were. As a no-load fund there was profit for neither the company nor the agent, and this fact has dominated its development. We developed it initially in connection with a group annuity on a professional association, and the program worked well. It grew very slowly and currently has less than $3 million of assets.

The Variable Stock Fund (VSF) has been used primarily to supplement the purchase of fixed-dollar insurance products. What it has given us essentially is an equity element which can be used in connection with a fixed-dollar product to keep the equity wolf from the door.

In the last couple of years the VSF has become a very pertinent adjunct to our portfolio, and we have been experimenting with its various uses.

As a smaller company I think it is important to note that we made the decision not to get into variable annuities but to use our no-load fund to meet the challenge of the equities. We have made sure that our fixed-

dollar products have liberal conversion privileges. We have developed some settlement options designed to supplement the pattern of distribution of equities held by a trustee. The distributed shares may be liquidated or not, as the individual requires, on the basis of his current need for income. For example, one of these settlement options will pay a fixed-dollar level income for a number of years, n, approximately equal to the optionee's life expectancy; then the income increases by a factor of $(1.03)^n$ and starts to escalate at an annual rate of 3 per cent. If the shares are distributed to the optionee over the same n-year period, and if the share value also increases at a rate of not less than 3 per cent per year, the total income realized in the tth month following the option date will never be less than $(1.03)^{(t-1)/12}$ times the amount of initial income. This is an example of what can be done by co-ordinating an equity product with a fixed-dollar product to meet the variable dollar challenge.

MRS. ANNA M. RAPPAPORT: Many problems face the brokerage company wishing to sell mutual funds. First, it is much harder to train brokers than it is to train full-time agents. Second, many brokers already have their own fund connections. Third, it is very difficult to convince a broker to change his method of operation and type of sale.

MR. DONALD S. GRUBBS, JR.: I had a number of prepared remarks, but I find that most of the areas were quite well covered yesterday at the session on variable annuities. There are several aspects, though, that are peculiar to smaller companies.

Why does a smaller company want to get into equity products at all? There are several reasons. One is that they may make a profit on the sale of the equity product itself. Second, they may produce additional income for their agents, thus making it easier for the company to attract and retain agents. Third, they may find that it stimulates the sale of more life insurance, which is their main interest. One company found that the addition of the sale of mutual funds did increase the sale of cash value life insurance.

What kind of product should be offered? That depends somewhat on what your objective is. If your objective is to sell more life insurance, you will want a package product. One combination is to sell an investment of $50 monthly (in terms of units of premium) half of that investment to go into a fifteen-year contractual mutual fund, the other half to go into a fifteen pay life; this may have with it fifteen-year decreasing term, the decreasing term used as completion insurance and the fifteen pay life as permanent protection. The amount of the decreasing term would initially

be $4,500, the amount needed for completion insurance, and the amount of the fifteen pay life would be whatever the premium could provide, which would vary with age.

How does a small company get into the market at all? By far the easiest and least-expensive way—which the small company is particularly interested in—is to sell existing mutual funds through existing broker dealers. You can license your agents through an existing broker dealer. By astute and legitimate bargaining with the broker dealer, an arrangement can be made which will not only provide income for the agents but will provide income for the insurance company and its owners. This might be a first step, an interim step, which will give the company more time to develop its own broker dealership. So the use of existing mutual funds rather than the establishment of your own fund may be easier, since you will be offering a product with a reputation and performance. While you are selling existing mutual funds, you may want to establish your own mutual fund, gradually developing a performance record which you will be able to sell in future years.

IV. *Research in Agency Operations*

1. Even though rules of thumb require qualification and can be misleading, can they, nevertheless, be useful to actuaries (particularly in small companies) in talking with agency people? Such rules of thumb might include (*a*) investment over and above contract commissions required to bring an agent through to success; (*b*) investment required to bring an agency or district through to success; (*c*) the value of an agent's business to a company; (*d*) the number of years required for a scratch debit to reach the point where no subsidy is necessary; (*e*) acquisition costs as a percentage of first-year premium or per $1,000; (*f*) the ratio of renewal premiums to first-year premiums to be reached before a book profit can be expected. What specific figures are suggested?
2. Considering both combination and strictly ordinary operations, what are the significant differences in agency operations between large and smaller companies in respect to such items as acquisition expenses, ratio of supervisory costs to agents' compensation, cost of training, cost and period of financing, type of compensation (total amount payable, ratio of first year to renewal, vesting, etc.), size of agency or district, markets cultivated, and the like?
3. Can any general statement be made about the costs and success of acquiring business through personal producing general agents, or brokers, in comparison with the traditional managerial and general-agency systems? What is the relative incidence of such costs?
4. Are agents' earnings keeping pace with the times? If not, what are the reasons? Is the problem more acute for smaller companies? For management or general-agent method of operation? For debit companies? Will the increasing cost of collection force a change in the debit method of operation?
5. The LIAMA has developed a new Manpower and Production Projection (MAPP) to help companies determine their manpower and production results for periods ranging from one to twenty years. How useful has this been to smaller companies?

MR. JOHN C. BERTRAM: Some of us in the smaller companies have found that, if we are unwilling to furnish figures because we are uncertain about their exactness, the president will get the figures from the agency department, or from his wife, or from a friend in the oil business.

When management wants some fast answers, it seems to me that it might perhaps be better for an actuary to furnish the best estimate that he can. But where does he get these estimates? Published figures are very hard to find, and they are hard to dig out. Hopefully some will be found here.

I wonder if we could assume that actuaries are not so dissimilar in their thinking that every time we use a term we have to define it and qualify it.

Let me start the ball rolling with regard to item *a* of question 1, "investment over and above contract commissions. . . ." You probably read in the edition of March 16 of the *National Underwriter* that Dudley Dowell of New York Life, stated, "We know from a study we completed about two years ago that it cost us about $50,000 on an allocated basis to bring an agent through his third year." That surely startled all of us in my company.

Those of you who went to the morning's meeting led by Norm Fuhlrodt will recall that Bill White of Connecticut General gave figures in almost that same range. I think he started out with a top of $75,000, then he had an offset of $25,000 in loading and $25,000 value of the business that had been written. This, of course, is $50,000 (presumably per survivor), disregarding the value of the business.

With regard to item *b*, "investment required to bring an agency or district through to success," the LIAMA attempted to measure this in File 314, entitled "Developing New Agencies." On the assumptions they used, they obtained what they called an "above-average cost" of about $3 per thousand. And, of course, Jim Anderson included a method of estimating the costs of agency development in his paper.

Regarding item *c*, "the value of an agent's business to a company," I just do not have any figures. I have heard some, but I cannot remember what they are. If anyone does have figures, I wish they would tell us. This is the type of thing that would be very helpful when we are talking to our agency people.

Regarding item *d*, "the number of years required for a scratch debit to reach the point where it is no longer subsidized," you can, of course, work that out. You can take your collection commission rates, the minimum you pay, what you expect in the way of yearly increase—in our case we estimate that it takes about ten years.

With respect to item *e*, "acquisition costs as a percentage of first-year premium or per $1,000," in its monthly letter for September, 1967, a reinsurance company included this:

> Unvouched for but interesting is the tabulation of average first year acquisition costs of ten well established life companies that have made some comparisons:
>
> Commission, 72 per cent
> Agency expense, including field office operation, 45 per cent
> Actuarial medical issue, 30 per cent
> Taxes, 5 per cent

Regarding item *f*, "the ratio of renewal premiums to first-year premiums," I recall reading somewhere that a study had been made which

indicated that generally renewal premiums must be at least 4 times first-year premiums before a book profit can be expected.

MR. NORMAN T. FUHLRODT: I will review briefly some of the points covered by the members of the panel on "Research in Agency Operations" at the concurrent session this morning. They discussed the operations within their own companies as well as the research being carried on by the Life Insurance Agency Management Association and by organizations outside the insurance industry.

I pointed out the importance of the field force and its need and desire for top guidance from the actuaries. I also pointed out the need for the proper attitude toward the agent and the agency operations by the actuary.

I think an imaginative actuary is invaluable, and I believe that this is more true in companies our size than it is in the larger ones. We need actuaries who can work through motivation. The job is not simply one of working with figures or costs. Much can be done to improve agency operations in such fields as persistency by motivating the agent to improve. Our company (Central Life Assurance Company) improved persistency of its business by placing minimum persistency requirements into many of its operations. Qualifications for leaders' clubs, conventions, presidents' month, campaigns, and all agency contests include persistency factors. Not only do we have minimum persistency requirements, but we also base the points earned on the level of the agent's and the agency's persistency.

We not only discuss and work on persistency at every agency meeting or agent contact; we also provide the agency and the agent with complete statistics concerning each agent's persistency of business over a ten-year period.

Persistency is just one example of where the actuary can be helpful to the agency department. In a smaller company, I think, we actuaries are more valuable in working on some of these procedures than we are in taking a too scientific approach. Just presenting facts to agency managers, such as facts on selection of agents, agency survivorship rates, and the like, is very helpful. Giving your agency man confidence as a result of your interest and backing will do miracles for him, for your field force, for your company, and for yourself.

If there are any two men in the company who need each other more—and I say this both ways—if there are any two men who can complement each other more than the actuary and the agency man, I do not know who they are.

MR. JOHN S. MOYSE: I presented a survey of combination company compensation at the June, 1967, meeting of the Southeastern Actuaries Club. In this survey each company was asked to apply its own compensation plans to the records of five hypothetical agents, ten hypothetical assistant managers, and ten hypothetical managers. Eighteen companies responded.

The records of the five agents varied according to productivity and debit size; other assumptions, such as lapse rates, were the same for all agents.

Five of the assistant managers had five agents each; all the agents on each staff had the same record—one staff for each type of hypothetical agent. The other five assistant managers had six agents each. Five of the ten managers had three five-man staffs; the other five had four six-man staffs.

Each company separated compensation into two classes. One class was sales compensation, which was defined to be all compensation dependent on production, such as first-year sales commissions and premium increase. The other class was nonsales compensation, or compensation not dependent on production—primarily debit salary.

To apply the results of this survey to the subject under discussion, the eighteen respondents were divided into nine large and nine small companies.

One conclusion is that, for all assumptions and all levels of field employment, the small companies averaged more in sales compensation than the large companies. Another conclusion is that on smaller accounts, and on staffs and agencies with less business in force, the large companies average more in nonsales compensation than the small companies, because some large companies have high minimum base salaries. This high minimum is less expensive for the companies, since they have fewer smaller operations.

Since large companies have a higher productivity and more business in force per account, per staff, and per district than the small companies have, the small companies either have to pay more per unit or have to pay less compensation.

MR. BERTRAM: I would like to present to you one other person, whom I asked to discuss question 5. This is a new program developed by LIAMA. In it the average company data are fed into a computer—the number of agents entering each year, the survival rate, the production rate, and so on—and the program is developed to recruiting needs and the total production for up to twenty years.

MR. WILFORD A. LEONARD: We have used the Manpower and Production Projection service provided by LIAMA. For a cost of $200, you get eight projections, and each projection can go up to twenty years.

Our agency department made the decision to use the service, and the actuarial department became involved because it had to analyze the statistics which our agency department had been accumulating.

The company has to provide certain figures for LIAMA. These include the number of agents under contract by calendar year of contract, agents' survival rates by calendar year of contract, agents' production by calendar year of contract, agents' production in year of termination, and the proposed number of new agents to be hired each year. The unit of production can be thousands of insurance, premium income, commission earnings, or any unit the company decides to use. The company can indicate projected changes, if any, in the hiring of new agents, in production levels, and in the termination of agents. Changes can be on either a percentage basis or a flat amount.

I believe you can use up to ten different classes of business based on calendar year of contract. At the Jefferson Standard we decided to use six classes.

LIAMA provides a very complete printout showing year-by-year projections of production for each class of agents and total for the company. The printout also shows the assumptions you make with respect to the hiring rate, the termination rate of agents, the production rate, and so forth. We chose a ten-year projection because anything beyond that seemed to be all guesswork.

We think that the service is probably worth the $200 that it costs. It is something that perhaps any company with programming talent could do for itself, but I doubt that it could be done for that price. LIAMA was very co-operative and helpful in interpreting the results to our agency officers involved.

I might point out a few pitfalls. The effect of compounding what may appear to be very modest, reasonable improvements in production level, agent termination rates, and so on, over a ten-year period will give results that are probably too optimistic. With eight different runs available, however, you can use assumptions providing for no increases in some or all of the factors involved. The difference between the results obtained using all favorable assumptions and those obtained using all unfavorable assumptions is pretty large. I believe it is essential for anyone using this service to see both extremes.

MR. JOHN E. HEARST: The earnings of agents in the combination companies with which I deal as consulting actuary have been decreasing. The reasons are that the weekly premium business is not competitive; the conditions in the street are bad (for example, there is a large number of holdups); and few of the agents have sales goals or incentives for increasing business. Because of these problems, the companies now have open debits which they have been unable to fill.

Some of the companies are trying to correct this situation by training their agents to sell ordinary products. In one case, at least, it appears that this will effectively increase the agents' earnings and offset the drop in industrial business.

MR. BERTRAM: Our situation is similar. Our agents' earnings have increased about 3 per cent a year in the last five years, which, with inflation, is hardly satisfactory progress. Only about 2 per cent of that increase came from increased production. The rest was due to liberalization of our contract.

This problem of cost of collecting the weekly debit has led us, as it has many companies, to emphasize monthly debit business and ordinary, particularly preauthorized check. We have an annualized commission reserve system and have tried the idea of annualizing half the annualized commission on a preauthorized check case and paying that out immediately. We tried that a month ago, and an agent got a check for $800 the first week, mainly from such business.

V. *Interim Financial and Operating Statements*

1. What exhibits, analyses, and reports are prepared? What separations are made by line of business or first year and renewal?
2. What methods are practicable for determining such items as life and claim reserves, deferred and uncollected premiums, dividend liabilities, tabular cost, and reserves released? To what extent are computers used for these?
3. Do interim statements reveal significant information not otherwise readily available? How is this information used, and how frequently is it needed?

VI. *Projections*

1. What projections are prepared, how frequently, and how far in the future? What specific techniques are employed to determine gains by source, investable cash, premiums, expenses, claims, dividends, and reserves?
2. To what extent are these forecasts utilized in such calculations as asset shares, model offices, and present values of book profits?

MR. ROBERT L. LINDSAY: Certain states require filing of quarterly statements for all domiciled companies. These states include New York, California, and Ohio. Others require a balance sheet of small and new companies where the levels of surplus and new business are of greater importance for reasons of solvency.

Many discussants felt that interim reports which show actual results for the year to date are of limited value because of fluctuations and the difficulty of estimating reserves and related items. It was mentioned, however, that a reasonable comparison can be made against comparable results for the previous years for the same period of time as long as the same basic methods of estimating items are continued.

Few companies release interim statement results to the public, because they might be misleading as a result of fluctuations and inaccuracies.

It was interesting to observe that the smaller companies have developed electronic methods for computing reserves for interim statements while the larger ones seem to use the gain-and-loss method, which involves estimates of tabular cost and so forth.

The reasons for these differences in methods may arise from the vast number of valuation cells and the expense involved in completing reserve runs for large mutual companies as well as from the fact that smaller companies may be more alert and sensitive to changes which would affect their surplus position. In any event, interim statement figures should not be released without an adequate explanation of results.

Projections have been covered at great length at this spring meeting, and they were also touched upon in our workshop. Virtually all companies project a budget for the coming year, but all do not project past that point; in many circumstances, perhaps, the latter is the best approach. It has been said that a projection is only as good as the underlying assumptions, and that is probably where most of us go astray.

One of the most crucial assumptions is that of production, and yet most production assumptions which enter projections are really production goals which, unfortunately, are infrequently attained.

An unrealistic production assumption can vitiate any projection; projections are therefore often made for several levels of production. In the actual preparation of the projection, one gentleman pointed out that certain relationships are rather stable, for example, controllable expenses as a percentage of income, and so forth; it is therefore simple to project certain items. However, we did not really go too deeply into these methods at the workshop.

Many companies have developed checks on actual expenses in comparison with those budgeted, but few have gone to any great length to measure their results in all areas.

MR. CLAYTON L. JACKSON: At United Life & Accident we have a computer projection program for forecasting statutory earnings and growth in surplus as related to different assumed amounts of new business.

The principal factors used in this program are persistency, cost per thousand of new business, and earnings per thousand of renewal business. These are applied to the initial amounts of insurance in force and initial amounts of surplus, together with the assumed amounts of new business, to produce the statutory earnings each year and the surplus at the end.

The program also produces adjusted earnings using dollars-per-thousand values as applied to the increase in business in force. These adjusted earnings are very approximate, but they do serve a useful purpose in comparing the eventual earnings from different amounts of new business proposed for a given year.

We have been preparing projections at approximately five-year intervals, each time projecting for five years into the future.

We have also been preparing quarterly reports on much the same basis as convention reports insofar as earnings and surplus are concerned. We do separate our life operation between first year and renewal, and this is the source of our cost of new business and earnings from new business used in the projections.

We actually calculate the reserves and all the other actuarial items four times a year, and, except for the problem of business not being distributed uniformly through the year, this works fairly well.

MR. W. GILBERT COOK: On our interim quarterly statements we divide out the experience for each of our group lines—group life, group health, and group annuities—and individual health.

In estimating policy reserves for group life insurance, we are concerned with both group one-year term insurance and a fairly large amount of permanent insurance, which produces problems similar to those of individual ordinary life policies in this area. The possible distortion arising from estimates of these permanent reserve increases for different times of the year is perhaps more serious for group than for individual policies. To make sense out of our figures, we use the analysis of increase in reserve backwards. Starting with the tabulated reserves at the beginning of the statement period, we determine the tabular premiums for the period. We also compute an estimated cost of insurance from the mean amount of insurance in force and tabulate the amount of reserves released. From these items we can estimate a tabular interest figure and put together a policy reserve increase figure which is proper to match with the amount of permanent insurance premium included in our statement.

For the one-year term insurance our punched-card file supplies data for each case from which an appropriate unearned net premium reserve may be obtained. We can also derive from this file the amount of premium earned for each incomplete policy year for each group in force. This is useful to estimate dividend liabilities.

Twenty or so of our largest groups are treated individually with more accurate calculations for each case, and the remaining groups are all handled together in bulk. For the first-quarter statement we do this very roughly, using the dividend percentages of last year's experience. As we go through the year, we develop more refinement by introducing claim figures and relating these to return rates applicable to these bulk calculations.

For claim liabilities we have developed a history of follow-up material for life and health separately. From this we obtain ratios that we can apply to amounts of claims already reported to us to obtain estimates of the amounts of claims outstanding at the end of the statement period.

An item which is still troublesome for us is the estimation of the split of expenses by lines of coverage. Our total incurred expense figures are reasonably good, but we have not yet solved the problem of allocating them properly for interim statements.

MRS. ANNA M. RAPPAPORT: The Standard Security Life Insurance Company of New York prepares financial statements each quarter. Some of the items are prepared exactly, and some are estimated. All cash items, life reserves, life claim reserves, and due and deferred premiums are prepared exactly. Health claim reserves, dividend liabilities, and expense accruals are usually estimated.

Each quarter, all major items of the life reserves are valued exactly, and only the minor items are estimated. Health, active life, and claim reserves are usually estimated in the aggregate by examining the year-by-year growth and then projecting the total figure. The year-to-date premium volume is examined, and an adjustment is made for any major change. The dividend liability is estimated, using the liability at the end of the prior year and the dividends paid to date.

The quarterly summary of operations is split between individual life, individual health, and all other lines. Year-end ratios are used to split the expenses and taxes by line. Each item of the year-to-date results is always shown as a percentage of the projected results for the full year. General insurance expenses of the company are split between those expenses which are directly related to new business, agency development allowances, and all other general expenses.

Each of the members of the executive committee and the board of directors receive a copy of the quarterly statement, and they follow these operating statements carefully. Very often the results may indicate that a change in the timing of some company program is in order. If this is so, appropriate action is taken immediately.

Projections are prepared every year in March or April, and these are updated at the end of the third quarter. Projections are used by management as an aid in determining the budget. The budget items for new programs and total agency development are set up with the projections and profit objectives in mind. The company has been using projections for several years; it finds that they have been a good indication of operating results and have proved extremely valuable to the management of the company. As was previously mentioned, projections are used to control the operation during the year, rather than being passively accepted. The greatest value of a projection is in the analysis of the deviations from it and the correction of these deviations.

The following techniques are used in preparing the projections. The agency department supplies the sales data. Life sales are projected in terms of amount of insurance. The life reserves are projected using a gain and loss approach. Claims are projected using average mortality rates. Premiums are projected by taking the amount in force by duration, project-

ing that by applying lapse rates, and then multiplying the projected amounts by average premiums. Health sales are projected by the agency department in terms of premium volume. Claims are projected using loss ratios. Reserves are related to premiums and then projected.

General insurance expenses are projected in terms of the company's operating budget. These are then increased or decreased, depending upon what projects management decides to undertake for the next year.

Projections are normally done for the current year and for the next two years. It takes about three working days to prepare a set of projections. The company also prepares a detailed budget and projected cash flow. Each quarter the actual expenses are compared in detail to the budget.

The use of projections and budgets has enabled the company to follow its progress and to compare its progress with its objectives. Deviation from these objectives is revealed early enough that corrective action can be taken.

MR. BARRY L. BLAZER: For most small companies the projection of operations is dominated by the ordinary insurance line of business. In describing one way to project the financial operations of smaller companies, I will attempt to answer three questions: (1) What form should the projection take? (2) How should the projection be prepared? (3) How often should the projection be prepared?

What form should the projection take? Since the primary instrument for measuring the financial experience of a life insurance company is the annual statement, a format similar to that of the summary of operations, page 4, would be most logical. Such a format would permit periodical comparisons of actual experience with projected experience. In addition, the projected experience should separate the insurance operations from other operations. For example, interest income on capital and surplus should be separately identified in the projection of operations.

How should the projection be prepared? Asset shares and model offices, two old and respected actuarial techniques, can be used by small companies to prepare meaningful projections. All too often asset shares prepared in the development of ordinary premium rates are simply filed away until the next time the premiums are revised. A projection can be readily developed, however, from available studies of asset shares by model-office techniques. Additional assumptions are needed.

The first assumption that would be made in preparing a projection is that each asset-share cell represents a cell in the model office. Second, the composition of the existing business portion of the model office would be determined by the amounts of insurance in force at each cell. Finally, the

future production portion of the model office would be constructed by applying the relative distribution of insurance issued for the last year or two to the assumed level of future production.

With regard to the amount of future production, more than one level is appropriate. Bob Lindsay mentioned earlier that all too often the company, in making a projection, will assume a production level which is a goal rather than a realistic appraisal of production capacity. Two projections should be made, therefore, one based upon the goal and one based upon a more reasonable or realistic assumption.

How often should the projection be prepared? Each year, as Anna has stated, the company should review the projection after the annual statement is prepared. With the information available from such a review, management may choose to alter the direction of the company. In such a case a revision of the projection will be necessary. By using the asset-share–model-office technique, it would be easy at least to revise the projection to reflect the current insurance in force or changes in the projected level of future production.

One problem associated with projecting operations by asset-share techniques for the smaller company is expense rates. One of the reasons that asset shares are not often used in making a projection of operations is that the actuary, particularly the new-company actuary, has rightly assumed in the asset shares expense rates of a well-managed young life insurance company. Lack of meaningful data and competitive considerations usually make this assumption necessary. Although this assumption will understate the company's actual expenses, a meaningful projection can be prepared if an adjustment is made to reflect additional expenses in excess of the formula expenses.

The actuary knows that the actual expenses of the new company will approach those assumed in the asset share under sound management. Therefore, management is, or should be, interested in knowing what period of time will be needed for this to happen. How long will it take? Will it take three years? Will it take five years? Will it ever happen?

I am going to spend another minute or so talking about interim statements. Bob Lindsay mentioned that many small companies now calculate their reserves by computers and that they have used computer systems to calculate the reserves at interim valuation dates. Such methods could also produce the due and unpaid and deferred premium items and could be used to prepare interim policy exhibits. Another possible computer application for the small company is the calculation of reserves released by death and by other terminations for page 6. The smaller company could reduce the peaking of work loads—something we are all concerned about—by using computer systems to generate these items throughout the year.

MR. JOE B. PHARR: A computerized projection similar to that already discussed is available to our clients.

The purposes of these projections might be described as follows: to be able to project reasonably the summary of operations for both the ordinary and the industrial life lines with related effects on unassigned surplus; to be able generally to provide information found on page 15 of the Annual Statement; and, as a by-product, to indicate the value of future statutory profits on business in force at the end of each given calendar year.

The projection technique is that of the model office. Input data are utilized directly from a computerized gross premium analysis system. The data are by plan of insurance, issue age, mode of premium payment, and so forth.

Additional input data are those of capital, unassigned surplus, statutory reserves on business in force, and amount of insurance in force at the beginning of the projection year by year of issue, plan, age, and mode of premium payment.

Estimates of amounts of new business to be written in future years are obtained from the agency department along with rough estimates of the plans of insurance involved as well as issue ages.

Additional projection details include a computation by the calendar-year basis, variation of lapse rates by mode of premium payment for the first two policy years, premiums computed on an earned basis net of reinsurance, claims net of reinsurance, and increases in loading on gross deferred premiums.

In order for a new company to have reasonably competitive gross premiums, it is necessary to use expense assumptions which are likely to be applicable to a rather mature company. In order to reflect properly the "lack of maturity" in a new company's projections, a line in the summary of operations is added to allow for the excess of actual general insurance expense over expected general insurance expenses which were inherent in the establishment of gross premium scales. These excess general insurance expenses can be expressed either as a percentage of the expected general insurance expenses or as a flat dollar amount.