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DEGREE, DEPTH, AND FREQUENCY OF ACTUARIAL REPORTS TO COMPANY MANAGEMENT

1. Chronicle and/or interpretations of the past. Scope and frequency of reports.

2. *Forecast of the future:*
   a. Under current corporate policy.
   b. Recommendations for changes in response to probable inside/outside influences.

3. Alert on early warning basis to emerging trends,
   a. Within industry (competition) and/or allied money markets
   b. Within regulatory climate (federal, state)
   c. Within socioeconomic climate

   which will affect the growth, solvency, planning, etc., of the company?

CHAIRMAN BARTON H. CLENNON: Our topic today is both challenging and interesting - actuarial reports to management.

In my opinion, actuaries have fallen short of providing the most meaningful and timely reports. The emergence of GAAP has increased the activity in this area and, hopefully, our profession will take this opportunity to make up for our past shortcomings.

Today we are going to hear from two stock company representatives and one individual employed by a fraternal. They are going to review what their companies have done and what they expect to do.

MR. ROBERT A. LYLE: It is my purpose this morning to report to you on some of the things we are doing at Aid Association for Lutherans (AAL) in the area of reporting to management.

I am a member of the Corporate Planning staff at AAL, formed five years ago. Headed by a planning officer, the Corporate Planning staff consists of five individuals whose backgrounds combine the fields of management, economics, accounting, business administration, actuarial mathematics, statistics, computer programming, and systems management. Thus, in discussing our activities, my remarks shall be addressed to a somewhat broader topic than actuarial reporting.

In basic terms, our purpose may be stated as follows:

(a) to coordinate all planning processes;
(b) to provide input to the planning process;
(c) to develop new planning tools for use by management; and

(d) to evaluate the execution of plans.

It is not necessarily the function of the Corporate Planning staff to develop plans, but rather to serve as a conduit of information to management so that it can carry out the planning function effectively. To fulfill this role, the planning staff both reports directly to top management and interacts with management at all levels.

Let me discuss some of the areas of our involvement in reporting to management.

PROJECTIONS

Projections of future performance are a key function of the planning staff and the major emphasis of my personal involvement in this group. At present, we are using a fairly simple algorithmic model developed on a time-sharing system. Input to the model comes from many areas in the company. The agency division, for example, provides forecasts of new business, and the investment division provides estimates of yield rates on new money and the distribution of invested assets. The model produces forecasts of such items as insurance in force (by number and amount), claims, reserves, and dividends, assets and investment income, gain from operations, and changes in surplus.

These forecasts have been put to a variety of uses by management. Typical applications include budget evaluation, analysis of proposed dividend scales, and assessment of investment strategy. For example, an upper limit can be established on the budget by comparing projected gain to the desired gain. Forecasts can be especially valuable in setting dividend scales, where the more traditional asset share analysis does not reveal the total impact on the company of a change in scale.

Generally, forecasts are made quarterly (more often, if needed), covering the current year plus the next three years. Forecasts for operational planning seem to lose much of their validity beyond a three to five year period, although we have at times made special projections for periods as long as thirty years. A much simplified model that emphasized the particular parameter of interest is used in such cases.

AAL currently plans to introduce a much more sophisticated corporate model to improve the accuracy and extent of our forecasting. The new model will also provide greater ability to ask the "what if" type of questions, to perform sensitivity analysis, and to explore relationships between variables.

Still, our experience with the simplified model has been quite fruitful. One of the benefits has been that the projection process forces the company to make a thorough analysis of historical data. Such analysis often provides valuable insights into past performance. In particular, we are often given clues as to how things have been changing, or where deviations from expected performance have occurred.

PLANNING AND BUDGETING MANUAL

The Planning and Budgeting Manual was developed by our staff to disseminate planning information and planning premises to all management personnel. The loose-leaf format facilitates updating.

The manual contains five major sections, the first of which is an analysis of environmental factors. This section, updated annually, consists of a compendium of data, observations, predictions and opinions, gathered and edited by the Corporate Planning staff. The discussion of environmental factors includes such topics as population trends, public attitudes about life insurance, governmental influences, Social Security, national health insurance proposals, inflation, and changes in technology.

The second major section of the manual deals with objective and policy analysis. Corporate goals and objectives are stated and amplified with explanatory material.

An analysis of our competitive position is found in the third section. Summary comparisons are made of AAL and a select group of other insurers. Comparisons are updated annually. This information helps management see how the company is faring relative to our competitors in the marketplace and helps to point out areas of potential improvement.

The fourth section contains projections of a number of measures of corporate performance. The indexes illustrated are those that have proven to be of general use and interest to management. Several years of data are included in order to facilitate comparisons of past trends with projected future trends.

The last section of the Planning and Budgeting Manual consists of budget information and analysis. Guidelines for budget preparation and explanation of various analytical tools used in budget analysis are found here.

MANAGEMENT BY OBJECTIVES

A few years ago, AAL began to use the popular MBO system of management. As part of this program, the planning staff has been involved with the interdepartmental coordination of the goal-setting process and with the measurement of progress toward goals. Measuring the company's progress is an especially important facet of reporting to management, for a clear understanding of past goal achievement is required before management can effectively set future goals. Such information also helps point out weaknesses in the goal-setting process.

ACCOUNTING SYSTEM

AAL is presently installing a comprehensive computerized accounting system. Not only will the new system provide more efficient execution of the accounting function, it will also expand our management reporting capabilities. Whereas expense reports were previously available only by operating unit and account, we will soon have the ability to produce financial reports using almost any base desired. Functional expense analysis will be much easier and costs associated with project teams will be readily determinable. Further, it will not be necessary to predetermine the reports to be prepared. The system includes a report-writer capability which allows the generation of virtually any type of report at a moment's notice, using any of the data in the system.

BUDGET VARIANCE REPORTS

The budget variance report, prepared following the fourth and eighth months, is a reestimate of the budget based on actual expenses incurred to date. This provides top management with a progress report on actual vs. budgeted expenses. AAL is currently moving towards a functional budget concept that will incorporate estimates of units of activity as well as estimates of dollars of expenditure. Budget allocations can then be made on the basis of programs and activities that may cross division or operating unit lines. The functional budget concept will provide two important advances in the realm of management reporting. First, it will provide expense control in terms of unit costs rather than absolute dollars. Second, in addition to reporting dollar variances from budgeted amounts, the variance report can explain the variances in terms of unit costs and level of activity. Thus, the budget variance report will not only point out problems to management, but it will also provide much of the information needed to pinpoint and solve the problems.

OPERATING EXPENSE INDEX

The operating expense index is simply the ratio of actual expenses to the expenses expected on the basis of pricing assumptions. By substituting budgeted for actual expenses in the numerator, estimated future values of the index can also be determined. Successive values of the index let management see how expenses are changing relative to the underlying base.

LOMA STUDIES

AAL participates in the intercompany functional expense and staffing studies conducted by LOMA. Many of LOMA's categories are less than ideal for purposes of internal analysis, but the studies are a valuable source of information for management because data on the same basis is available for other companies. Differences, where noted, must be interpreted carefully. Nevertheless, the LOMA studies have, in the past, highlighted some areas of concern, leading to further analysis and, in some cases, to follow-up remedial action.

CHART SYSTEM

With the assistance of a management consultant, the planning staff has developed a system of charts to convey graphically a broad array of management information. We have charts on sales (by a number of classifications), personnel data, investment data, Lutheran population, and many other types of information. The charts contain monthly or quarterly data, with trend lines, yearly averages, and other indicators superimposed on the basic data. They are normally displayed in a readily accessible area, and are used by management and the Board of Directors to quickly review the company's progress.

THE FUTURE

What, then, of the future. We have found the area of reporting to management to be highly dynamic. Management's need for information is constantly changing, and we must always be searching for ways to present more accurate, more pertinent,and more timely information.

I have already touched on some of our efforts toward the future. We are installing a corporate model that will provide much more accuracy and flexibility in our projections. Our new accounting system will provide information never before available to us. Efforts in the area of a functional budget are expected to greatly expand our cost control and management reporting capabilities.

Various other efforts directed toward the future are also being made. Most significant is the work of a project team that is seeking to define the needs for financial information existing throughout the company and to establish a coordinated system for supplying this information.

In summary, reporting to management is a vital, complex, ever-changing challenge. Solving problems in this area can be a source of great satisfaction, whether management reporting is an occasional responsibility or, as in my case, forms the essence of your job.

MR. JOHN A. MAURER: Today we are here to consider the types of reports the actuary should produce for management, what is currently being done in this area, and what has been done in the past.

At our company, the plans for reporting to management can be summarized under six major headings:

1. Company Earnings by Line of Business
2. Agency Performance
3. Product Analysis
4. Market Evaluation
5. Statistical Studies
6. Corporate Planning

Although the main thrust of my remarks will be directed toward what we plan to do in these areas of reporting to management, some comments about past and present activities might be useful to add perspective to this very complex and challenging field.

Management reporting activities in the past might be characterized as follows:

-- Periodic reports were generally limited to company earnings by line of business on a statutory and a federal income tax basis as required by governmental agencies, and certain agency performance measures that were needed for agents' compensation and incentive programs.

-- Statistical studies and product profitability analyses were usually only carried out as part of the development of new rate books or additional product lines.

-- Reports concerned with corporate planning were usually produced in reaction to a specific immediate need and were of questionable value in many cases.

Generally, management reports were put together from information that was required to be developed for other purposes, namely, statutory reporting and agency compensation. Consequently, actuarial data, such as gross premium assumptions, were either nonexistent or maintained in such a fashion as to make their use for performance measures or earnings analysis unduly burdensome. Meaningful expense analysis had to await the coming of age of the cost accounting or profit center idea.

Developments over the past few years have significantly improved the actuary's ability to provide management with meaningful and useful information:

-- Periodic reports have been expanded to include GAAP earnings. Statistical studies needed to develop GAAP assumptions are being produced on a more routine basis now so that periodic validation of assumptions can be accomplished.

-- Functional expense analyses that were carried out as part of the GAAP effort are now being used to compare actual and expected expenses on any activity unit and a budgeted expense basis.

-- Partly as an outgrowth of GAAP requirements and partly as a result of the need to price products in a more scientific manner, the quality of the information available to produce management reports has been greatly enhanced. The rapid growth in computer technology has given us the tool necessary to utilize this information for corporate planning purposes. Reports to management are now being made that reliably forecast operations into the future and that place realistic values on blocks of business or possible acquisitions.

As always, the future holds the greatest challenge to actuaries as they endeavor to clarify and quantify company operations. The following indicate some of the advances in management reporting that I would expect to see as actuaries succeed in taming the computer and in gaining a firmer grasp on the design of insurance systems:

-- Periodic earnings reports will be expanded to include earnings by profit center, value-added earnings, and an analysis of earnings by source (the profit load plus the deviations due to actual experience differing from what was expected).

-- Agency performance reports will measure not only an agency's production, but the value of that production to the company compared with its cost. Persistency reports will translate lapse rates into bottom line numbers. Statistical studies will be done continuously and used to update the profitability of product lines and markets so that management can shift its emphasis when needed to better meet company goals.

-- Corporate planning will finally come of age as management is provided with reliable forecasts of cash flow, GAAP and Value-Added earnings, and Federal Income Taxes, enabling it to evaluate various investment and tax strategies. Expansion of agency forces or possible acquisitions will be viewed not only in terms of future profitability, but also in relation to the timing of future profits and the probable impact on the company's tax posture and dividend policy.

I would now like to describe in a little more detail some of the management reports that we intend to produce at our company. These particular reports will fall under the headings of Company Earnings, Agency Performance, and Corporate Planning.

Our basic Company Earnings report to management will be prepared monthly. This will be a report that presents monthly and year-to-date earnings by line of business on a GAAP basis. Capital and surplus funds will be treated as a separate line of business into which the earnings from the insurance lines of business will flow and to which an appropriate share of investment income will be allocated. Following the bottom line, GAAP earnings will be the increase in the present value of future GAAP earnings on in force business which, when added to the current GAAP earnings, will result in what we call the Value-Added earnings.

Supplemental to the basic earnings report will be an analysis, by line of business, of the GAAP and Value-Added earnings by source. This analysis will start by presenting the earnings that were expected on the basis of GAAP assumptions. It will then list the additions to or the deductions from the expected earnings due to actual experience deviating from that which was assumed, thus reconciling the actual GAAP and Value-Added earnings.

We feel that this report with the Value-Added earnings feature and the analysis of earnings by source will allow management to better gauge the effectiveness of the company's current operations. It will focus attention on those areas of activity where improvement is needed as well as highlight those areas where performance is satisfactory in relation to company goals.

With respect to Agency Performance, we plan to produce two reports to management which will measure the results of our individual agencies. The first report will present the same information that is contained in our GAAP earnings by line of business report but will take these items down to the agency level thus presenting agency earnings from past as well as current production.

Our second agency performance report will combine the normal production figures (policies, amount, annualized premium) with an analysis of the profitability of the business produced. The intent of this report is to focus entirely on an agency's current sales efforts.

Unit factors representing the expected present value of profits immediately after issue are applied to the corresponding units of insurance produced by the agency during the reporting period. The sum of these products gives us the starting point for determining the agency's profitability performance. I'll call this the "Basic Value of Business Issued."

The next item developed is the "Persistency Adjustment" which will be either an increase or a decrease in the Basic Value of Business Issued depending on whether the agency's recent first year persistency is better than or worse than that which was initially assumed as the company average for the particular mix of business produced by the agency. This adjusted figure is then represented on the report as that agency's "Value of Business Issued"

Next, a comparison is made between the actual acquisition costs allocated to the agency and that which was expected to be incurred in connection with that agency's level and mix of business produced. Finally, the agency's profit for the period is calculated by deducting the actual acquisition expenses from the Value of Business Issued and a profitability index is established as the ratio of profit produced to annualized premium issued during the period.

This report is intended to give agency management the information necessary to evaluate agencies on the basis of profitability to the company. If the profitability of an agency is unsatisfactory, the information contained in the report will indicate whether this is due to inadequate production, poor quality, or an unduly heavy proportion of issues with low profit margins.

In the area of Corporate Planning, our current efforts are being directed toward providing management with a comprehensive forecast of company operations. This report will project such items as:

GAAP Earnings
Cash Flow
Federal Income Taxes

Value of Business in Force
Capital and Surplus Funds

These projections will be made for the current year as well as the next five to ten years. The system which produces the report will rely upon a fairly sophisticated model of business in force and future issues together with our actual investment portfolio. There will be flexibility built into the system so that "what if" questions may be readily answered. For example, trends in experience developed through examination of the analysis of earnings-by-source reports could be introduced into the projection system so that the future impact of these trends could be quantified, thus giving management the information necessary to determine whether or not remedial actions should be taken now.

Areas of corporate planning where we expect this report to be quite useful include:

-- Measuring the effectiveness of different investment schemes,
-- Setting a corporate dividend policy that can be maintained over the long haul, and
-- Evaluating tax strategies and gaining a more realistic measure of deferred income tax, which is especially important under GAAP accounting.

Also, should the company be considering an expansion of its agency force, entrance into a new market,or a possible acquisition, the future probable impact of such decisions can be made quite apparent.

Those, then, are examples of the type of information that we intend to make available to management.

We are not unmindful of the significant efforts involved in bringing these plans to fruition, but we do not intend to miss this opportunity to see that management gets the information it so sorely needs.

In my opinion, too few actuaries have met the obligations in this area that their professional training imposes upon them. The time for excuses is past. The opportunity is here and the time to take advantage of it is now.

MR. JOHN W. PAIGE: My remarks this morning may seem somewhat inconsistent - and they probably are.

In the original format, I was charged with the task of reporting on actuarial reporting to management as related to my company. However, a slightly different approach may be more valuable to this session. The information contained in my remarks is a composite of three job experiences, the director of a formal Corporate Planning department in a medium-sized company in a profit turnaround situation, later as the executive responsible for the entire insurance operations of a smaller company, and finally as the senior administrative and financial officer for a smaller company experiencing extremely rapid growth and change.

To protect the innocent, none of the material discussed here will be related to any specific company. The basic concepts used have been very similar in all three situations but, because of the practical restraints created by wide variations in the allocation of time and resources, the approaches have varied widely.

The primary purpose of actuarial reporting to management seems to be the development of short and long range financial plans and projections with due consideration of the impact of alternative choices and changing circumstances, both internal and external, to the company. Ideally, this should be a formally structured document resulting from interaction with the various groups within the company, recognition of input from sources outside the company, with the final report tempered by the use of actuarial judgment. Sometimes, late at night in the final stages of the development of a corporate plan, I have had some philosophical arguments with myself about whether the use of the two words, "actuarial" and "judgment," are redundant or mutually exclusive.

The development of the plan is only the first and easiest step in this particular phase of actuarial reporting. The second and more important step is monitoring actual results versus those planned, determining the reason for deviations from the plan, and recommending action to get back to planned results.

In the development of the corporate plan, the first question to ask of management is, "What business are we in?" For an insurance company this may seem to be an unnecessary question. However, you might consider the possibility that the more unnecessary the question seems to management, the more necessary in fact that it may be. Answering this question will help determine the necessity for and the content of actuarial reports to management.

The next step is to take stock of the resources available. This may create the need for actuarial reports reflecting the nature, quantity, and quality of existing insurance in force, assets, and marketing areas of the company. The actuary must also attempt to anticipate the future experience to be derived from each of these elements and many more.

On the more practical side, the actuary will receive inputs of marketing goals from those responsible for this area. He must then evaluate these goals as to their realism in terms of level of production, effect of new marketing schemes, acquisition costs, product mix, and expansion plans. Since actual results will be measured against plans, if the actuary has any serious doubts about the practicality of the marketing goals, he must work with the marketing group to eliminate any misunderstanding about the statement of goals.

Another major input to any corporate plan is the expense assumptions. Budgets must be examined to see if expense levels are consistent with expense levels used in the pricing of products. Expense assumptions should be examined to see if they reflect the most probable estimate of what emerging expenses will be. At this point, many "What if" questions should be asked as they relate to the budget. If the actuary has accepted responsibility to develop any portion of the action programs to correct for deviations, he should understand what flexibility is actually available in this area.

Expected claims experience must be determined. Proper regard must be given to historical trends of the company, effect of recent changes either in pricing, marketing, or product emphasis, and possible future regulatory actions.

After acceptable underlying assumptions are available, the development of the plan can begin. In the companies with which I am familiar, this has been done by developing separate profit and loss statements by line and subline. I have one practical suggestion to those who might be doing this for the first time. In our first plan, investment income and general expenses were allocated to each subplan. Unfortunately, during the year, the investment department changed their basis of allocation and management changed the basis of expense allocation to lines. Although total investment income and total budget were very close to planned, the bottom-line experience of the lines and sublines varied widely from the plan. I believe that we spent more time explaining the impact of the changing allocations than we did describing the claim experience that was having a greater impact on the company.

In our second year, we went to the concept of "operating margin" by line as the item to be monitored. Investment income and general expenses were then shown below these items. The concept of operating margin seemed to provide a much more tangible concept for measuring the success of action programs in various areas.

I realize that I have said very little about what we might consider the basic actuarial reports required, such as measurements of mortality, morbidity, persistency, product profitability, and so forth; but I believe the selection of what reports are required and their necessity flow very readily by asking the questions:

1. What business are we in?
2. Where are we going?
3. How are we doing?

In terms of socioeconomic developments external to the company, the actuary must venture into areas which may be new to him and report to management. Changing investment conditions may have an impact, not only on the investment income of the company, but more importantly on the product mix obtained by the marketing department. Changes in consumer attitudes and regulations related to those attitudes may also have a significant impact on the validity of any long-range projection. The actuary must attempt to report to management on the probable impact. Consumer attitudes toward personal expenditure also impact the insurance company plans. As an obvious example, a trend towards the purchase of smaller automobiles or a decline in the value placed on the status of owning a new car could seriously affect companies operating in this segment of the credit insurance market.

Changing economic conditions also impact insurance company planning. Inflation pressures may seriously impair the validity of expense levels used in product pricing and long-term projections.

These are only a few of the external factors that the actuary must evaluate in reporting to management.

Although we have been taught that it is the job of the actuary to substitute facts for appearances and demonstrations for impressions, the actuary may also find that it is important to modify the impressions of other members of the management group to be more in line with the impressions of the actuary in those areas where refined demonstration may not be possible and facts as we used to define them may not be available.

MR. RICHARD S. ROBERTSON: During the discussion, the question of procedures used to allocate expenses to profit centers came up. Some of you may be interested in an unusual approach to expense allocation which the Lincoln National Corporation is using for its management reporting. The only expenses that are allocated are those directly allocable, such as commissions, and those under the direct control of the manager of the cost center. Indirect expenses, such as staff costs, executive costs, and the like, are not allocated at all but rather are reported as common costs. We find this to be a more effective way of measuring the contribution a profit center makes to corporate objectives and therefore a better tool for evaluating the manager.

Because not all costs are recognized, care must be taken in the use of these management reports. The revenue less costs reported by the operating unit do not represent the profit of that unit, and we take care to avoid calling it such. Rather, we refer to it as the contribution or the operating contribution of the unit. If the management reports are to be used as part of the pricing process, it is important that provision be made for covering the indirect expenses.

This allocation philosophy is used for management reporting only. Where regulatory authorities require a cost allocation, as in statutory accounting, allocation is necessary. Also, for organizations reporting on different Federal Income Tax returns, it is necessary that each organization receive its fair share of all costs.

At present, this allocation philosophy is used only in parts of the organization. It is used for most allocations between corporations within the corporate family and is carried through to shareholder reporting. It is also used throughout our life insurance marketing organization, which is a separate organization, and our title insurance and trust service operations. Lincoln National Life, however, follows the statutory practice of completely allocating all expenses. Many of us believe the management reports for Lincoln Life would be more meaningful if indirect expenses were not allocated.

MR. WILFRED A. KRAEGEL: The third item of the program for this session relates to an early warning for emerging trends. For those who may not be aware of it, the Institute of Life Insurance has just such an early warning system, called the Trend Analysis Program. This program was set up in November 1970 and involves 100 monitors in life insurance companies around the United States. The monitors abstract articles and books relevant to the future of life insurance and its environment, and these abstracts are shaped into a Trend Report several times a year by the ILI staff and an industry steering committee. If your company is a member of ILI, the material should be in your offices, or you can call Project Director Edith Weiner at ILI.