

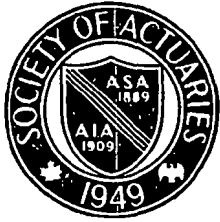


SOCIETY OF ACTUARIES

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# The Actuary

The Newsletter of the Society of Actuaries

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## THE NEW LIFE COMPANY ANNUAL STATEMENTS IN CANADA

by David R. Johnston

Out of the labors of several groups over the last seven years\* a new method of financial reporting for Canadian life insurance companies came into use beginning with year-end 1978. This article describes the changes, contrasting them with GAAP developments in the United States.

The objective was the same in each country—to modify the traditional conservatism of assets and liabilities so that reported earnings would no longer differ so widely from those that emerge under Generally Accepted Accounting Principles used for other industries. The Canadian approach nevertheless recognizes the special nature of life insurance by maintaining conservative margins in the balance sheet for protection of policyholders.

Major differences between United States practice and the new Canadian procedure are: (1) the new Canadian system applies equally to mutual and stock life companies; (2) the new Canadian law does not provide specific limits on valuation bases to be used; (3) by law the policy reserves in Canada must be the same in statements for policyholders and shareholders as for statutory reporting.

The major changes introduced by the new legislation are:

(i) *Improved assumptions for valuation of liabilities*

The actuary used to have to certify that his reserves made "good and sufficient" provision for future obligations, and that they satisfied statutory requirements. Maximum interest assumptions were  $3\frac{1}{2}\%$  for life insurance and  $4\%$  for annuities, except that, if the actuary felt a higher rate was more appropriate for a block of business, he could seek its approval from the Superintendent of Insurance. The law also specified a number of acceptable mortality tables, again allowing the actuary to seek approval of another table if he desired.

Now the valuation actuary must give his opinion that the valuation assumptions used, for both existing and new business, are appropriate to the circumstances of the company and the policies in force. (Also, he must declare that the reserves make good and sufficient provision for future obligations, and are not less than reserves calculated on the minimum basis described later). The assumptions must be acceptable to the Superintendent. No interest rates or mortality tables are specified, either in law or regulations. Furthermore, the use of withdrawal rates and provisions for administrative expenses and dividend expectations are now contemplated by the law.

These changes have suddenly given Canadian actuaries much more responsibility in determining policy reserves. In anticipation of this added responsibility, the Canadian Institute of Actuaries formed a committee to study the subject.

This committee has worked from the premise that there is now a need for professional standards in the valuation of life insurance policies, and that such standards not be merely a reaction to the new legislation, but should constitute good profes-

\*See Michael Rosenfelder's article, *The Actuary*, January 1976. The participating bodies were the Canadian Institute of Chartered Accountants, the Canadian Institute of Actuaries and the Canadian Life Insurance Association, with their views brought together and put into law by the Federal Superintendent of Insurance.

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## EDITORIAL BOARD CHANGES

Early retirement (retroactive to December 1978) has been requested by *Colin E. Jack*, who has aided this Newsletter meritoriously since January 1975. His services to *The Actuary* are warmly commended.

*Michael B. McGuinness* of Toronto has joined us as an Associate Editor. Canadians, in particular, will please regard his requests for contributions as authoritative.

*Charles A. Groeschell* of Milwaukee is welcomed as Competition Editor. His sole occupancy thereof awaits only "C.E.'s" announcement of results of Competition  $\Omega$ .

*Andrew C. Webster* is promoted to Editor Emeritus.

E.J.M.

## ACTUARIES AND COMMUNICATION

by Linda M. Delgadillo

*Society Communications Manager*

The other day in the meat market, Ed the butcher asked me what kind of job I had and whom I worked for. Imagine his puzzled look when I told him, "Society of Actuaries."

"Oh," he carefully replied, "that sounds interesting."

When I asked him if he knew what an actuary was, he thought for a moment and then said, "Well, it rhymes with mortuary—is there a connection?"

"Close enough," I answered.

Then I thought a while longer about how I could explain the actuary's work to Ed. I knew he had a reputation around the neighborhood as a betting man, so I talked about actuaries in betting terms.

I said, "Well, Ed, actuaries use numbers—you know, statistics—to predict the future. They study the chances of something happening, bet on the odds,

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## Letters

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and have the highest respect for their actuarial expertise. We merely believe that the designations ASA and FSA are educational in nature and should be reserved for those who have earned them through educational achievement.

Admission to the SOA on some other basis would be acceptable in our opinion. Perhaps the suggested designations FASA (Fraternal Associate of Society of Actuaries) and FFSA (Fraternal Fellow of the Society of Actuaries) could be used. The rights and privileges of members with such designations would correspond to those of members with the designations ASA and FSA respectively.

If the desired goal of consolidation is membership in the SOA for FAA members who are currently non-members, then admission on the FASA, FFSA basis or on a similar basis should be acceptable to everyone. If this is not acceptable, then perhaps the desired goal is not merely membership but the ASA or FSA designation.

*Keith W. Matzen, A.S.A., A.F.A.A.*  
*Frank C. Metz, F.S.A., A.F.A.A.*

\* \* \* \*

Sir:

The plan of the proposed merger of The Fraternal Actuarial Association and the Society of Actuaries is, I suggest somewhat unfair to the members of the Society when it is proposed that Fellows and Associates of the Association will be transferred to the Society as Fellows of the Society. I have no quarrel with the abilities of the FAA members but the Society as "the pre-eminent educational organization for actuaries in North America" should not be handing out Fellowships without requiring the passing of a series of examinations of an acknowledged high standard. The fact that, in the present case, there would be only a few individuals involved, may explain, but does not excuse the proposed action.

This is not the end of the program. We are told that because of unique circumstances this action will not be considered as a precedent for future mergers. Since apparently we are still a long way from the completion of reorganization a not dissimilar situation could arise. To take an extreme example: the

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## Annual Statements in Canada

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sional standards independent of the legislation. They can go beyond the legal requirements, and can cover areas that the law does not address. The committee felt that to neglect this would be to leave the way open for standards to be set later by others.

As a result, "Recommendations for Insurance Company Financial Reporting", with Explanatory Notes, are being developed by the Canadian Institute, covering five areas:

- (a) Verification of data.
- (b) Assumptions for a valuation of policy liabilities.
- (c) Methods for a valuation of policy liabilities.
- (d) The Actuary's Report in published financial statements.
- (e) The Report by the Valuation Actuary in the government statement.

A preliminary version of these Recommendations was approved "in principle" at our June 1978 Meeting. The aim is to get, if possible, full approval of Recommendations during 1979, with the benefit of 1978 year-end experience.

Recommendations for choice of assumptions centre around two basic points:

- (a) assumptions should be made about each contingent event that materially affects the company's income;
- (b) each assumption should reflect both expected experience and provision for adverse deviations.

Interest rates for annual premium business are expected to be currently in the region of 7%, decreasing for future policy or calendar years, and mortality rates to be those in modern tables, perhaps modified to reflect individual company experience. For participating insurance, such assumptions are appropriate if explicit provision is made for future policy dividends. However it is likely that most actuaries will not make specific provision for dividends but will achieve the same result by using conservative assumptions.

Tests of the effect of withdrawals on reserves are expected, but at the outset many actuaries may choose not to use withdrawal rates in their reserve calculations, particularly if their reserves are the greater of the calculated liability or the policy cash value. Some actuaries no doubt will use withdrawal rates.

*(ii) Deferral of acquisition costs*

The old Canadian Modified method of valuation effectively deferred an amount of expense equal to the difference between a whole life net level valuation premium and a one year term valuation premium. Most Canadian companies, however, held net level premium reserves so that no acquisition expenses were deferred.

Under the revised law, deferral of acquisition expenses again may be achieved in the reserve calculation process. The maximum expense which may be deferred will be 150% of a net level valuation premium. This limit in practice will often force some conservatism in the amount deferred. The Superintendent preferred that expense deferral be effected in the reserve calculation rather than by setting up a deferred expense asset, because of the judgmental nature of the calculation.

Minimum reserves (for both existing and new business) are the net premium reserves deferring acquisition costs up to 150% of the net level premium, except that, if withdrawal rates are not used, the minimum will be the greater of the reserve so calculated or the policy cash value. Greater reserves may be held but, if so, minimum reserves are to be disclosed. Furthermore, if the reserves held are not on the net level premium basis, the government statement requires reserves on this basis to be disclosed also. Both these disclosure requirements will aid inter-company comparability.

The effect of all this for 1978 appears to be a significant reduction in reserves held, particularly for companies which had previously held net level premium reserves. With some exceptions, companies appear to have released between 4% and 10% of their policy reserves on existing business. The amounts released tend to be proportionately greater for non-par than for par business.

(iii) *Spreading capital gains and losses*

Prior to 1978, the full amounts of capital gains and losses on securities were recognized in the year they were realized. Unrealized capital gains and losses were not reflected. This created inappropriate fluctuations in reported surplus or income. Also, it encouraged investment decisions made with a view to the effect on the statement. And, it tended to create inequities between generations of policyholders.

To overcome these problems, the amended law provides for inclusion of some realized and unrealized capital gains and losses in investment income, as indicated below, thus spreading gains and losses over a period of years. Asset values are adjusted accordingly.

- (a) Bonds and Mortgages. When a gain or loss is realized, it is not taken into income at once but is spread over 20 years, or to maturity if sooner. Asset values of bonds, which are basically amortized cost, are adjusted to include the unamortized amount of the gain (a reduction in values) or loss (an increase in values). Unrealized gains and losses are not recognized.
- (b) Stocks. The capital gains and losses included in investment income each year will now be 7% of the unamortized portion of all realized and unrealized gains and losses at the end of the year. Unrealized gains and losses amortized through investment income are added to or subtracted from asset values. The unamortized portion of realized gains and losses is held as a bulk adjustment to the asset value.

Treatment of capital gains and losses on other investments is unchanged.

(iv) *Recognition of assets previously considered non-admitted*

In the past, assets such as furniture and advances to agents, were not admissible. Increases therein had to be written off as expenses. Now they may be reported as assets. Advances to agents will be written off when deemed unrecoverable and furniture will be depreciated normally.

*Appropriations of Surplus for Solvency Purposes*

Valuations of both assets and liabilities are now permitted on bases suitable for companies in a long-term business. Asset values do not directly reflect market values but gains and losses are reflected by adjustments spreading their effect over a number of years. Inclusion of previously non-admitted assets eliminates what was previously a distortion to income. In determining liabilities, significant amounts of acquisition costs are spread over the premium paying period, and thus may be less than the policy cash value, and in some cases even be negative.

The effect is a much better reflection of the company's real annual income. It was felt, however, that there should be additional conservatism in the balance sheet in regard to:

- (a) valuation of securities where there is risk of default and of mismatching of assets and liabilities;
- (b) asset values of furniture and advances to agents where there is risk these may not be realizable under adverse conditions;
- (c) use of policy reserves that are less than the amount payable on surrender.

To accomplish this, the new law requires the following surplus amounts to be set aside, or appropriated, from free surplus:

- (a) asset values: an amount which in practice will generally be 1½% of the bond and mortgage portfolio;
- (b) furniture and advances to agents: the full amount of the asset held;
- (c) liability values: the excess of policy cash values over policy reserves for policies to which this applies, including any negative reserves. No appropriation is required if a cash value floor is built into the policy reserve calculation and if negative reserves are not used. Since, however, this practice tends to distort the reported income compared to that of a company which does not build such a floor into its policy reserves, it appears that for 1978 calculating policy reserves without such a cash value floor is a minority practice.

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**Letters**

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American Academy of Actuaries has as members practically all actuaries in the various component bodies which have varying interests. Is it not possible that the Society may yet be under pressure to grant Fellowship to MAAA's in another set of unique circumstances?

A. C. Webster

\* \* \* \*

Sir:

It will come as no surprise to you that I favor the proposed merger of the Fraternal Actuarial Association with the Society of Actuaries, although I hope you will record this letter as formal support from a Fellow of the Society.

My real purpose, however, is to commend you on the mailing which you sent out in this connection. I thought it was a first-class job of informing the members of the issues and demonstrating concern and recognition for contrary views. May the venture close as auspiciously as you have started it.

Robert C. Winters

\* \* \* \*

Sir:

Your memorandum on this topic arrived today, and I would like to respond briefly by voicing my support both for the proposed merger and for the manner in which it is being accomplished.

I am one of the many FSAs who value highly that professional designation and who would voice vehement protest if I thought its value were measurably diluted by conferring the designation on a host of unqualified individuals. I do not believe granting the designation of FSA and ASA—with the asterisk in the year-book—on FFAAs and AFAAs, respectively, would dilute the designation. In fact, the designation would probably enhance the designation, as these individuals can be expected to continue to make worthwhile contributions to our profession as they have in the past.

To treat this merger on its own merits is sound practice. Accordingly, I would assume that a future merger of the Society and another group of individuals would be so treated — offering every member a chance to comment on the merger based on the merits of its own particular set of circumstances.

Steven A. Harrold

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## Actuaries and Communication

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and then tell you what your insurance will cost."

Now you and I know there are better ways to describe the actuary's work, and we also know that actuaries are not confined to the insurance business.

But that's not important to Ed. What he understands are numbers, odds, and insurance, especially the last, since he has tried to protect his business through insurance coverage.

What an audience understands and what is important to it is the basis for communication. How to communicate with audiences like Ed the butcher, or anyone else, is in terms they can understand and appreciate.

This is one of the main goals of the Society's communications program. In trying to make the word "actuary" better known, we must reach different audiences and communicate with them in terms they feel comfortable with.

You as actuaries must do the same thing. In formal communication situations, as for example, with a new client, do your homework and know whom you are communicating with. You should try to determine your audience's technical knowledge of your work, and then decide whether you need to cover the fundamentals of your subject and which terms, if any, you must define.

You should also try to commit yourself to help your audience, and not assume that your audience understands your subject. And above all, keep your audience's convenience in mind while you are trying to get your message across.

I try to incorporate these principles in the Society's communications efforts in several ways. For example, when I send a suburban newspaper a news release announcing that an actuary has achieved an FSA, I explain what an accomplishment it is by comparing it to receiving a Ph.D. degree in mathematics.

When I answer a young person's request for actuarial career information, I talk about the study time involved, the courses to study, the types of jobs available, the outlook through the 1980's, and the salary ranges.

When I try to publicize the research findings of various Society committees, most recently the 1979 Build and Blood Pressure Study, I talk about people among the statistics.

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### Valuation Actuary

It is now required that each Board of Directors formally appoint its "valuation actuary". There is only one "valuation actuary" for a company, and this ensures that he can obtain the information he needs for valuing liabilities. Changes in this appointment must be reported to the Department of Insurance. The new law permits the auditor, in giving his opinion in published statements, to rely on the valuation actuary's valuation of liabilities but does not require him to do so. Most auditors express reliance on the actuary's valuation.

### Conclusions

These changes in the law were intended to produce an income statement more nearly on a G.A.A.P. basis, while not diminishing the concern for solvency. It appears from 1978 statements that the amounts of income reported on the new basis have generally been increased, to between 25% and more than 100% above what they would have been. The size of the increase depends mainly on whether the old basis of reserves was net level premium or Canadian Modified, what the mix of business is between par and non-par, the amount of new business relative to in-force business, and how much of the acquisition costs have been deferred. If the amount of new business sold is abnormally low, income may actually go down, because renewal increases in reserves are higher under the new procedures.

As noted, policy reserves have generally been decreased by amounts in the range of 4% to 10%. This has produced increases in total surplus, including appropriations, in the range of 40% to 100% or more. Since there is discretion in the size of some of the surplus appropriations (e.g. contingency reserves), there has been less uniformity in the increase in reported free surplus, the range of increases being from zero to over 100%.

Many actuarial matters remain to be fully resolved, including:

- when should changes be made in valuation assumptions for a block of business?
- what are the criteria for an appropriate valuation method, particularly in provision for cash values and deferral of acquisition expenses?
- what is an appropriate margin for adverse deviations in a valuation assumption?
- how should deferred income taxes be determined and disclosed?
- what obligations of an insurance company should be within the valuation actuary's jurisdiction?

The Canadian Institute is actively trying to produce general agreement on such matters. All matters on which a consensus can be reached will be incorporated in its Recommendations for Financial Reporting. An ongoing committee will keep the Recommendations current with accepted actuarial practice. □

It's not difficult to discuss mothers, wives, babies, people living, and, people dying and weave them into discussions about birth trends, mortality ratios, and marriage statistics.

Actuaries can do the same thing. Next time you speak to a nonactuarial group, like the Rotary Club, Kiwanis, PTA, or other civic groups, talk about how you as an actuary affect their lives and how your work can be responsible for the solvency of major companies.

When you talk with high school or college students, create an exciting picture of career opportunities and challenges. Behind the statistics you study are human lives. Tell young people about them and what you do for them.

Most importantly, talk about your

work not only with your peers, but among your personal contacts, friends and family. Discuss what's happening in health, retirement, sex discrimination.

And above all, remember your audiences. Each one is different from the other. Show them consideration. Put yourself in their place, and determine their information needs about the actuarial profession. Then provide them with that information clearly, concisely, and coherently. □

### Deaths

Harry E. Clark—FSA 1970  
E. Forrest Estes—ASA 1928  
Kenneth Oldham—ASA 1975  
William T. Watson—ASA 1927