



SOCIETY OF ACTUARIES

Article from:

# The Actuary

September 1982 – Volume 16, No. 7



# The Actuary

The Newsletter of the Society of Actuaries

VOLUME 16, No. 7

SEPTEMBER, 1982

## EXPENSES AND MANAGEMENT

by Ardian C. Gill

With a superabundance of inflation-driven forces threatening the life insurance industry, the problem of expense control sometimes seems an artifact of an earlier era. Yet, after assembling and studying data on expenses of ordinary life insurance, I am persuaded that the subject needs current and constant attention because (a) if ignored, a small expense problem will almost inevitably rise to major significance, and (b) expense control is a measure of the effectiveness of management in difficult times.

This second point deserves elaboration. In an expanding market, said Hamermesh and Silk, *Harvard Business Review*, March 1979, a high-expense, high-profit operation is possible, but in a stagnant or declining market (such as characterizes individual life insurance today) efficient manufacturing and distribution are essential for continued profitable operations. A company's ability to produce a life insurance product at competitive cost is clearly related to its level of expenses; hence any index that measures a company's expense level and trends has particular value in a non-expanding market as a measure of its ability to manage.

The difficulty of measuring management effectiveness is compounded in the life insurance industry because of product complexity and inconsistencies in accounting practices which render the usual earnings per share figure invalid for mutual companies and at least suspect for stock companies; thus some other index is needed.

### Expense Studies in Canada

Beginning with Arthur Pedoe's work (*T.S.A.* XIII (1961), 1), various formulae have been employed in Canada to measure expense trends and levels.

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A cordial welcome to our newest Associate Editor, Deborah Adler Poppel, F.S.A. 1980. Deborah's first contribution to our columns was "Ode to A Part Three Student," April 1979 issue.

## WHO ARE THE NEW FELLOWS?

by Deborah Adler Poppel,  
Associate Editor

The quintessential new fellow is a 28 year old married man who has been taking exams for 6½ years. At least, according to the respondents to a questionnaire prepared by Benjamin N. Woodson, Fred A. Deering, and Thomas P. Bowles, Jr. for presentation at this past spring's New Fellows luncheons. The questionnaire was sent to all who had reached fellowship in May or November of 1981, and about 160 (60%) responded.

The demographic data, however, was less interesting than the response to subjective questions. The majority of respondents were bullish on the actuarial career, feeling that it offers job satisfaction, economic rewards, and challenge. Most would encourage others to enter the field, but some specified "clear caveats regarding difficulty of achieving success."

But reaction to the industry in general was much less favorable. Only 25% feel that the short range (5-7 years) future of the industry is "Bright", with 15% calling it "Dim", and the balance "In-between." Interestingly, they felt the long range (10-15 years) prospects to be better—45% "Bright" and only 2% "Dim."

When asked if the industry provides any disservices, a startling 50% gave marketing-related answers, ranging from "overzealous agents" to "failure to educate the public" to "toleration of

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## FINAL-SALARY PENSIONS IN THE U.K.

by Kenneth G. Buffin

"Valuation of Final-Salary Pension Schemes," a paper by R. B. Colbran, F.I.A. submitted to the Institute of Actuaries in London last April, contains much of interest to North American actuaries, including a review of major ways in which United Kingdom and North American actuaries differ in their approaches to valuing these plans.

The author observes that our profession's advice determines the amount that British industry takes from working capital and shareholders' funds to be set aside in pension funds, and thus actuaries greatly influence the national economy. The paper stresses the actuary's responsibility to ensure that employers neither be misled into thinking that their pension liability is less than is likely nor be encouraged to overprovide. The author mentions the importance of achieving stability of pension costs as a percentage of payroll and acknowledges the concerns of participants for benefit security, and of accountants for proper recognition of liabilities.

Operating in an environment of relatively little regulation, the U.K. pension actuary relishes this freedom but desires that the Institute give guidance to its members on acceptable practices. Indeed, one of the author's main recommendations is that the Council of the Institute act to discourage members from using one particular funding method, the "Discontinuance Target Method," in widespread use in the U.K. for insured pension plans, which, as he undertakes to demonstrate, results in lower contribution levels than do methods designed to produce stable contribution rates over a long period.

The Aggregate Method, used most commonly by consulting actuaries, has

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## Expenses and Management

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These consist of unit expense factors to be applied to companies' annual statement figures to produce a tabular or base-year expense. In the formula used for the longest time, the Canadian Institute's Expense Committee reproduced the average expenses of the nine largest Canadian life companies in 1969. Out of perversity or delicacy the result was dubbed Formula 70. A company's actual expenses ratioed to the tabular, i.e., formula, expenses created an index similar to the CPI.

Later, the Committee divided companies into three size groups and found that the smaller companies operated at a lower expense level than the middle sized, while the large companies were lower than either group, a result since duplicated in some LIMRA studies of U.S. companies (Douglas J. Bennett, "Bigger May Be Better," *Best's Review*, December 1981). While results by size group are interesting, those by individual company are revealing to those who agree that expense levels measure managerial effectiveness.

### The TN&W Index

Putting these asides aside, I will now describe a formula patterned after Formula 70 and derived from LOMA data of the era 1976-77. This not being a scientific paper, I won't describe the process beyond saying that unit expenses of twelve companies were studied and a relatively homogenous group of eight mutual companies was used to produce crude factors which were then applied to thirteen mutual companies and adjusted to reproduce essentially their then expense levels as a group. (This combined ratio was .995 in 1976 and 1.002 in 1977). Taking a leaf from the Canadian maple tree, I first called the result Formula 80. The Canadians one-upped me by coming out with a Formula 80 of their own so, like Joseph Heller when Mila 18 preempted the original title of *Catch 22*, I've retitled my effort the TN&W Index.

Like Formula 70 its chief virtue is that it reproduces the companies' total expenses as described, but from observation of companies I have worked with, I think its shape is right, for large companies anyway. The formula allowances are:

- A. 120% of first year premium
- B. 5% of renewal and single premiums
- C. \$50 per policy issued
- D. \$1 per thousand of new issues
- E. \$13 per policy in force at year end.

These factors are applied to direct business only, avoiding the distortions of reinsurance transactions. Some might argue for a small per thousand renewal expense factor, but would do so unsuccessfully with me. In any event, the formula's precision will not be defended; its utility will. Actuaries or controllers should feel free to adjust the formula so as to reproduce their own expenses as 100 in whatever base year they pick.

The expenses measured are commissions and general expenses (page 5, column (3), lines 21 and 22A of the U.S. annual statements). A case can be made for including line 23 (insurance taxes); in that event, factor B should be increased to 7%.

After that lengthy wind-up, here's the pitch. First, the mutuals for 1976, 1980 and 1981:

### MUTUAL COMPANIES

Company	1976	1980	1981
A	93.6%	108.4%	104.4%
B	106.1	106.4	112.1
C	94.9	98.9	93.1
D	104.3	121.6	133.3
E	93.2	126.6	119.2
F	115.6	114.5	123.6
G	77.2	79.6	81.1
H	115.1	129.4	139.9
I	87.8	94.7	98.0
J	113.6	124.5	129.3
K	101.0	104.2	113.0
L	103.0	107.9	109.1
M	106.7	108.6	114.6
13 Company Total	99.5	104.5	106.9

The 13 companies as a group seem, superficially, to have held their own against inflation. Percentage items are, however, inflation-immune, and face amounts have more than kept up with inflation, which leaves only per policy expenses. For those, the implied inflation rate was 7.8% from 1977 to 1980 and 3.9% for 1977 to 1981. The 1981 rate was 12.4%.

The same formula applied to twelve large stock companies produced the following results for the last three years.

The two companies with the lowest index numbers are part of a multiple line operation; perhaps even more interesting, so are the three outstandingly high companies. Total index numbers are not shown because this group is a mixed bag and aggregates may not mean much.

### STOCK COMPANIES

Company	1979	1980	1981
N	118.3%	121.9%	132.1%
O	81.5	81.7	71.7
P	113.5	124.2	132.4
Q	128.9	134.5	121.0
R	136.5	135.5	158.7
S	83.7	87.9	94.6
T	113.6	129.7	121.9
U	93.3	94.0	119.2
V	123.4	123.2	123.8
W	111.3	110.6	107.9
X	82.6	86.9	90.2
Y	72.6	77.3	73.0
Z	147.7	137.4	142.2

Actuaries seeking to crack my alphabetical code will be faced with a task similar to finding the mathematical progression for Lexington Avenue subway stops, the next term of which is "Astor Place". Since the underlying data are from public documents, anyone curious (about either company names or the Astor Place remark—Ed.) is invited to phone (212) 490-3460 for details.

A highly placed insurance executive was quoted recently in the *Wall Street Journal* as saying, "Expenses will be the battleground of the eighties." Yes, but where shall that battle be fought? Only about 20% of the total formula expenses are for issue and maintenance; the balance are related to premiums and are mostly sales expenses. Since the first law of expense control is, "Go after the big numbers," the battle will be fought over sales compensation. Some readers will recall a similar war among automobile insurance writers beginning in the fifties and sparked by one of the two low-index-number stock companies; in life insurance a similar beginning has been sparked by early entrants to the universal life field.

The correlation between new business and a good index number is obvious from the formula. Since expenses affect the product's price, we would expect high correlation between expenses and production, a conclusion supported by the fact that the auto companies referred

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## Expenses and Management

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to have now passed the then largest such companies. I will not predict the same for life companies, but it's worth noting that they are not immune from the need cited earlier to improve manufacturing and distribution costs. It will be a test of management skills to bring that about; it is hoped that the index will reasonably measure the success achieved. Recent results suggest that some, such as Company O have managed their expenses (ergo their affairs, well, while Company H seems headed elsewhere in a handbasket. □

## Pensions in U.K.

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the merit of simplicity in producing a single contribution rate without separate normal cost and past service cost components, but the author notes that a separately calculated new entrant rate would usually be lower than the aggregate rate, and he acknowledges that the method produces a tapering of contribution rates over an extended period owing to the usual influx of new entrants. The method's inflexibility is another disadvantage; this makes its popularity in the U.K. surprising to North American actuaries.

In commenting on the principal U.S. methods, the author expresses puzzlement that, in inflationary conditions, supplemental liabilities not covered by normal contributions are funded in the U.S. by annual payments in constant dollars rather than as a level percentage of payroll, the prevailing U.K. practice; also the use of multiple amortization schedules for different items of unfunded supplemental liability is regarded in the U.K. as unnecessarily complicated. In discussing the Frozen Initial Liability Method the paper criticizes as actuarially unrealistic the concept of a uniquely determined frozen liability but acknowledges its accounting nicety.

## The Discontinuance Target Method

The author presents a number of problems associated with the Discontinuance Target Method. This system, unfamiliar to many North American actuaries, takes into account future benefits over only a limited period, commonly twenty years; salary increases are projected only to the end of that period al-

though interest, at the valuation rate, is taken into account beyond that; common practice is to assume an influx of new entrants to maintain a stable membership during the limited period.

The general effect is to produce a contribution rate lower, often substantially so, than by more conventional methods. The method, widely used by life companies for insured pensions, has, says the author, "undoubtedly been sustained by the selling of schemes on initial outlay rather than yield on the underlying contract." The paper attacks the method as "undoubtedly the least satisfactory of all the methods described," and appeals for a strong lead from the Institute's Council to discourage its members from any association with it. Conceding that the Institute cannot insist that an employer fund at a certain rate, the author suggests that possible contributions at lower levels can be revealed provided the employer is told of the full potential cost on an actuarially acceptable method.

## Valuation Assumptions

The paper also treats critically the much-favored U.K. concept of valuing assets as discounted values of future income, and states the author's strong preference for market values.

A common U.K. practice is to set assumptions implicitly so as to allow for future pension increases. Comments the author:

"In practice the actuary will probably compromise somewhere in the wide range between a low real rate and the current rate of interest . . . He may prefer to present the valuation as on a high rate of interest with a specific, related, pension increase rate. Tactically, however, the actuary may find it easier to have his views accepted if he uses a more moderate rate of interest and merely mentions that in times of high interest this will give some margin to augment pensions."

The author's closing plea is that actuaries freely admit the possibility of variation and make sure to show employers the nature and extent of their risk.

*Ed. Note: FIASCO, July 1982, reports a packed house and plenty of controversy in the discussion of Mr. Colbran's paper. Readers may borrow copies of both the paper and the FIASCO article ("Retired Hurt") from any of the many Institute members on this side of the Atlantic. This newsletter welcomes discussions. □*

## New Fellows

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high, if not unconscionable, commission levels." Few saw these failings as a challenge to pick up the gauntlet, as only 5 of the 160 cited marketing as their primary career interest. (14 and 16 respectively gave it as their second and third choice.)

A solicitation for opinions of the exams and the educational system resulted in a not-surprising deluge of comments, about half of which were favorable (or at least not unfavorable). Most of the criticisms centered on out-of-date study notes, emphasis on memorization, and the use of the exams as a tool to limit the size of the profession. Some questioned the statistical validity of the exams, i.e., whether the "best people" are passing. And finally, one helpful respondent enhanced our historical perspective by informing us that "the exams were harder when I used to be a student."

In response to "What are the most important characteristics for success (on the exams)?" amid the expected (persistence, discipline, technical ability), one lone respondent answered "Preparation H". □

## Deaths

N. Douglas Campbell, F.S.A. 1939  
John K. Dyer, Jr., F.S.A. 1946  
Ralph E. Kennon, F.S.A. 1925  
A. Ross Poyntz, A.S.A. 1935  
George T. Prentice, F.S.A. 1928

Contributions to the Actuarial Education & Research Fund, 208 S. La Salle St., Chicago, IL 60604, in memory of a deceased member, are acknowledged to the donor and member's family. □

## JORDAN BRAILED

The Iowa Commission For The Blind reports that they have completed braille *Life Contingencies*, and a student is using the product. The Commission is able to make a duplicate for somebody else, perhaps for less than \$100.

We would be pleased to put anybody wanting a copy into touch with the Commission. And we hope that the student who acquired that first copy will let us know how satisfactorily the book is fulfilling its purpose.

E.J.M.