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Retention Analysis cont'd.

7. *Psychological impact.* The shock created by signing checks for claim amounts significantly greater than to what one is accustomed could cause knee-jerk decisions which could affect an underwriter's willingness to take necessary risks.

Clearly, any decision to change retention *must be the decision of the company.* With that in mind, M.I. Low Life should consider the issues raised in this report, plus any other plans likely to financially affect it. If the current retention of M.I. Low is $50,000, it might be difficult to justify the extra claim expenses predicted by increasing retention to $75,000 or $100,000. However, if M.I. Low Life is currently at $100,000, the marginal increase in claim expense is relatively minimal if retention is increased to $125,000 or $150,000. If retention is currently at $100,000, an argument could also be made to decrease retention to $50,000. Perhaps the expected decrease in claims would be more than enough to offset any profits given up by such a decision. [One factor which cannot be ignored in making decisions such as these is the cost of reinsurance.]

As is true with any statistical model, an analysis of retention is subject to some claims fluctuations due to statistical error, invalid assumptions, invalid data, or any other invalid input into the analysis.

Consider a company wanting to increase retention and at the same time insure against adverse mortality. Such a company could purchase Stop Loss insurance to cover losses beyond the claims predicted by the retention analysis. A typical Stop Loss program covers, up to a company selected maximum benefit, 90% of net retained claims beyond a loss limit point. The minimal premium for Stop Loss coverage will generally be much less than the profits realized from an increase in retention. Furthermore, large losses caused by accumulated unexpected claims, if they occur, will be controlled. Stop Loss coverage then, could be the answer for a company on the verge of increasing retention, but wanting added insurance from experiencing increased claims resulting from such a decision.

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Spotlight on the Sections

The Investment Section

by Robert D. Hogue

The SOA Board recently approved forming another special interest section, the Investment Section. During the new section's organizational period, 10% of the Society's Fellows applied for membership. A look at the employment status of this 10% indicates that a small number are involved in investment-related work. It seems that, if their present duties have not caused them to join, then their perceived future duties have.

In truth, I am surprised that so few chose to enroll. For over a decade our industry has been changing in ways that are severely affecting both its fundamental operations and our roles and responsibilities within it. Actuaries used to be first concerned with rates of mortality, morbidity and persistency and second with those of interest and expense. Today the reverse is true, and it is this single observation which explains most of the changes occurring within the industry and the profession.

The attention we are paying to our future, indicated by our research and meeting discussions, underpins the claim that ours is a spread business dominated by the need to attain satisfactory interest margins while controlling expenses to avoid declining margins. Our environment is crowded with surprises. Two major multiline companies are abandoning the individual life business; a few life insurance companies have announced the discontinuance of universal life insurance sales; and an increasing number of prospective acquirors of life insurance companies require that those companies have no interest sensitive product lines. Other companies bemoan the passing of surplus relief treaties as a ready source of capital for acquiring new interest sensitive business. Some of these companies see direct debt financing as an attractive alternative. Still others are turning away from investing in new life insurance issues and are searching instead for ways to get into the funds management business. All this activity indicates a theme of reactions to risk in a volatile economy.

There are many changes occurring within our industry and our profession to which we must react. I suggest that actuaries wishing to expand their investment-related expertise concentrate on the following:

1. The Life Insurance Business is a Funds Management Business.

It seems obvious that the Cannibal Life scenario is on its projected course. Even those avoiding it through product line limitations and market withdrawal are subject to its effects. A switch to registered products represents its ultimate acceptance.

2. Life Insurance Companies Will Continue to Diversify and Consolidate.

The prospect of further deregulation of the financial services industry has spurred a new wave of interest in diversification within the life insurance industry. In addition to mergers and acquisitions, consolidations are now taking the form of line of business divestitures and joint ventures. There is more interest in mutual company mergers, which will eventually lead to a wave of transactions. The number and total value of life insurance company mergers and acquisitions increased rapidly over the last three years, and activity levels in all industries since the beginning of the year indicate that the pattern will return.

3. Life Companies Will Increase Their Attention to Capital Management.

Access to growth capital is an increasing concern for most companies. They are avoiding growth opportunities such as the introduction of registered products because of their capital constraints. In the last few years the mushrooming concept of the financing subsidiary has been accepted by all but the smallest of companies. Capital allocation by company and product line is a central concern of most corporate officers.

4. Industry Focus on Volatile Financial Markets Will Increase.

Most actuarial research over the past few years has centered around the analysis of risks labeled C-1, C-2, C-3, and C-4. Much attention has been given to C-3, with C-4 picking up market share since October 1987. The researchers and regulators are gradually injecting volatility analysis into our craft. Fluctuating interest rate

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Investment Section cont'd.

levels of the early 1980s and the recent market adjustment also impel our managements to expect our increased attention to it.

The actuarial role has continuously broadened, diversified and splintered into a number of specialties for as long as we can remember. Only the more aware of us can keep track of its many organizations, and none of us can maintain working knowledge of all its many specialties. Unfortunately, forces beyond our control have compelled us to create one more section and one more specialty. As is always the case, the cycle requires extending what we know and do by including new disciplines. In this case they are those required by the four realities listed above.

The Investment Section, as is true with all new organizations, will evolve to meet the expressed needs of its members. At present, the four realities listed previously appear to be the most logical focus for our professional development. Extending our expertise to include enhanced knowledge of investment topics will generate these initial targets:

1. Modeling

Corporate models used for model office projections and scenario testing incorporate sophisticated asset submodels in only the most highly developed examples. However, the methodologies underlying them are rapidly becoming familiar to actuaries whose roles require that familiarity. Section programs should be developed to expand these applications to include generic instrument types. For example, a typical banker's model includes submodels for bond pricing, collateralized mortgage obligations, securitized receivables and option pricing. Under the current state of the art, these four cover the universe.

2. Corporate Finance

Today's actuary must deal with diversifying and divesting product lines and subsidiaries. He already has the skills to determine value and expected return. He should add to this a working knowledge of corporate finance in order to evaluate alternative deal structures in terms of their impacts on the resultant organization. As is true with insurance schemes, the primary ingredients are cash flow, accounting treatment, and tax impact.

3. Capital Management

A number of actuarial papers have covered the approaches available for measuring return under insurance schemes. Even more has been written on the allocation and use of company surplus. These sources, along with standard techniques used by finance professionals, should be organized and presented as a body of knowledge on capital management for insurance companies. This base should be developed further as industry focus on capital management intensifies.

4. Investment Instruments

Actuaries need basic education in the investment instruments available to their companies. They are increasingly pressured to work in partnership with their investment staff counterparts to meet their joint requirements of unified balance sheet management. To fully function each must learn the products of his partner. Fortunately the actuary has less to learn than his investment staff counterpart because investment instruments offer far fewer options and involve fewer and simpler variables than do the products developed by the actuary. Thus, a trend may develop toward more actuaries working in their companies' investment departments.

Actuaries who survive the rigorous examination ordeal emerge as super technicians and problem solvers. Although their careers frequently take them beyond actuarial responsibilities, they tend to rely on their backgrounds when becoming involved in other areas such as marketing, finance, data processing, underwriting, and so on. Many eventually move even further to management or professional technical positions in other disciplines, still relying on their actuarial knowledge throughout their careers, even though some deny it.

The creation of the Investment Section entails the creation of the "investment" actuary.

This actuary will measure the impact of alternate applications of company funds based upon his four principal perceived current requirements. His scope will cover specific products, product lines, lines of business and separate companies. To fill his role, he must have a solid working knowledge of actuarial science. Added to this will be an advanced knowledge of insurance products, corporate finance, capital management and investment instruments.

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The Job of the Papers Committee

by Kenneth A. McFarquhar

In a recent issue of *The Actuary*, Dave Jeggle, Director of Publications, encouraged members to write for some of the Society's publications, including the *Transactions*. The *Transactions* is somewhat different from other journals in that papers which are submitted must be reviewed and approved by the Papers Committee in order to be published.

The reviewing or refereeing process which has been in place for some time now is undergoing some significant changes. An Ad Hoc Committee of the Papers Committee has been studying the entire process which a paper undergoes before its publication in the *Transactions*, and some revised procedures have been proposed. In my capacity as chairperson of that Ad Hoc Committee and as former chairperson of the Papers Committee, I would like to report on these changes.

After researching reviewing processes used in other organizations and trying to combine the best procedures to meet the Society's and authors' needs, a new reviewing process was proposed. The process first begins when an author submits a paper to the Society office. Papers are sent here to preserve the author's anonymity, and so all correspondence with the author is handled through this office. Next, the submitted manuscript goes to the Papers Committee chairperson, who in turn consults with a senior reviewer. It is their responsibility to recruit four other reviewers who are experts in the paper's subject matter. To ensure that the most capable specialists review the paper, the senior reviewer may call on Section members or other sources outside the Society to assist in this process. All completed reviews are sent back to the senior reviewer.

When the paper begins the reviewing process, the author will receive a letter advising him of the likely review time. Papers are usually reviewed within 4-5 weeks, but occasionally a reviewer may need to extend that deadline. If such a delay does occur, the author will be notified to that effect. If a reviewer is unable

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