

History of the small Policies

by Julie A. Hunsinger



The October 1875 issue of the Insurance Times, a month before the American Prudential opened, contains a quote that is still relevant today:

Who needs life insurance most? The poor or the rich? The families who are entirely dependent on the daily or weekly earnings of their head, or those who have other sources of maintenance?... The complaint is general, however, that life insurance fails to reach those who most need it, and upon whom it is calculated to confer the greatest benefit.

This quote, written before the advent of the small policy in the United States, explains why insurance is now offered in smaller units: to provide it for those who most need it.

The current NAIC investigation into small policies is an investigation into fair

policyholder treatment of small face value life insurance. To fully understand this type of insurance, we must understand its history.

From the ancient Mediterranean world up to 16th century England, individual underwriters issued life insurance to merchants and travelers who were generally wealthy. The insured would pay a single premium in exchange for coverage for a limited period of time, such as during a long voyage or pilgrimage. Without mortality tables, early insurance was basically a wager on whether someone would survive the coverage period, and premiums were set arbitrarily. The first life insurance companies were formed in the mid-1700s and sold life insurance policies to the public, but widely available life insurance for working class people did not arise in England

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Small Talk from the High Chair

by Edward J. Slaby

As I begin my term of service as the Chair of the Smaller Insurance Company Section, it is my duty to give the members of the Section my observations on what direction we should be heading.

I have been a smaller company actuary for over 20 years, so I think I have a lot of the same viewpoints and reflexes that are found in the membership of this Section.

My initial involvement with the Section Council was not very promising; several years ago I ran for a seat on the Section Council and was unsuccessful. Then two years ago I had a chance conversation with Chris Desrochers, then Section chair, who reminded me that all actuaries should be involved with their profession. I risked my pride and ran

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From the Editor

by James R. Thompson

Did you watch the Olympics? There was a lot going on. They have added many events over the years. What began in ancient times with ten events (the decathlon) has expanded to many more since the revival of the event over a hundred years ago. There are more sports, both team and individual, to keep track of than I can follow. While watching the swimming events, I learned that the center lanes are

where they place those with the best qualifying times. Thus life in the fast lane is towards the center.

Keeping up with industry events is getting to be like that. But how to judge what is the fast lane with so much going on? First we have some events which are generally perceived as large-company events — XXX term insurance and equity-indexed products. The XXX term insurance regulation was supposed to create a level playing field. Problems with this will be addressed by Jim Van Elsen. Some of the difficulties of complying with X factor determination, which is an aspect of this, will be addressed by Lloyd Spencer and Robert Guth. A current status of the product design will be addressed by Mary

Bahna-Nolan. What goes on with this product affects the relative sales of this and other products such as whole life and U.L. The smaller companies which may be outclassed by advantages that some larger companies may enjoy will have their sales affected. Thus, we must watch this issue.

Equity-indexed products are not usually for small companies. Larger companies may find themselves losing annuity sales, for example, due to competition from this. Whether to enter the market and, if so, how? How to compete against it? These are concerns of smaller companies.

Some opportunities for smaller companies are other events. One opportunity is the technological ability to use desktop databases. Efficiencies can help a smaller company. This is addressed by Jim Berger. A regulatory opportunity that benefits smaller companies (how novel!) is discussed by Rodney Keefer.

But the main events seem to be the problems of too much regulation. An emerging issue is the smaller policies. Small policies are not necessarily sold by smaller companies, but such policies are often sold by some niche marketers. Unless you think your company does not sell them, keep in mind that policies under \$25,000 are considered small. This includes a lot of whole life sales. This market often includes fraternal basic membership policies, policies sold through funeral homes, final expense policies often sold by direct mail, and home service (debit) policies. Some background is given by Julie Hunsinger and Andy Hansen in their respective articles.

A problem for all companies is getting policy forms approved. This can also be a problem for a large nationwide company if some few states disapprove a form, or are slow to approve it, or demand modifications. But this can also be a problem for smaller companies,



Jim Thompson

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Editor's Corner

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particularly if they do not have a staff to deal with the situation. Norm Hill addresses this issue as SPOF (single point of filing). This is part of the federal versus state regulation debate and has significance in light of the coming election.

Finally, there is regulation affecting valuation and asset liability analysis. One is a New York regulation dealing with liquidity, where some companies can get in trouble due to a lack of it.

John O'Sullivan has come from the recent valuation actuary meeting with some timely information. Bob Brown has a discussion on some modifications of the RBC (risk-based capital) requirements reflecting C-3 risk. I have an article on a recent proposed change in the AOMR (Actuarial Opinion and Memorandum Regulation). This is important because there is still time for input.

This is quite a long list of events. You

may choose which one deserves the center lane.

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Chairperson's Corner

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again, and this time was successful. I have enjoyed working with Rod Keefer, the outgoing Section Chair, over this past year. On behalf of the Section, I wish to thank Rod for his contribution to the success of the Section and his fine stewardship of our traditions.

Next year is the eighth anniversary of the founding of the Smaller Insurance Company Section. There have been many

helped the Section in the past will once again be of service as "friends of the Section."

My agenda for the coming year is primarily to continue the quality and usefulness of the meeting sessions and other communications sponsored by this Section. I hope we can expand the informal, spontaneous approach to presentations that has been so well received and

believe that there are new issues raised by the changes to the Society's exam syllabus. The Section should discuss these issues. How will we recruit and train the future generations of actuaries to be effective in the eclectic skill set of the small company actuarial shop?

There are many fast-breaking events that affect small companies. This Section will continue to develop the use of e-mail and the Internet to speed the sharing of information within our membership.

Finally, with all of the pressure and deadlines we face, what about the sheer fun of actuarial work? I'll have a more detailed look at that in a future column, but I would like your thoughts as well.

It's a privilege to serve this Section as its Chair, and I look forward to a productive and challenging year.

"I hope we can expand the informal, spontaneous approach to presentations that has been so well received and which encourages greater participation by attendees."

individuals who served this Section and who helped it grow in numbers and influence. Special recognition goes to the editor of this newsletter, Jim Thompson, who has been instrumental in getting out your ideas and messages over the years. It is my hope that many of you who have

which encourages greater participation by attendees. The members of this Section, perhaps more keenly than others, are concerned for the survival of their companies in a changing business environment. We will continue to address this theme in our Section activities. I

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until the 1830s, or in the United States until the 1870s.

Before insurance companies were formed to serve the less affluent, many Friendly Societies were formed in England and the United States in the 1830s and 1840s to provide benefits for the working class. When death or debilitation befell a member of the group, a sum was collected from the other members in the mutual benefit method. For instance, in a group of 500, \$0.10 would be required from each member to cover the \$50 benefit promised by the society, with administrative fees taken from the benefit. The administrators of these insurance systems were working men with little mathematical or statistical expertise and thus were not able to foresee the problems that would plague their organizations. By 1850, it was estimated that over three million American and English working men belonged to the various friendly societies.

The insolvency of so many friendly societies soured public opinion on life insurance. In 1853, the *New York Times* denounced all life insurance, saying, "He who insures his life... must be a victim of his own folly or others' knavery."

In that same year, A. B. Johnson, a Baltimore banker and economic writer, echoed a popular myth when he suggested that widely available small policies in Britain had caused mothers to murder their children to collect the death benefits. However, he could never cite a single instance of infanticide.

Gradually, blind mistrust of insurance turned into debate over how lower income working people should protect against unforeseen contingencies. Most insurance experts ruled out ordinary life by the late 1860s, when some ordinary life companies tried to market small policies

to the working class. These early ventures failed because no adequate system of collection was in place, and they did not provide coverage in small enough units for lower-income people.

The push for insurance for the masses was fueled by three events. The first occurred April 24, 1871, when Henry Harben read a paper before the Institute of Actuaries of England about the history of the *British Prudential*. The paper proved to the British insurers that industrial insurance did, in fact, work, and it attracted the American insurers' attention to industrial policies. The second event was increasing public dissatisfaction with the failing friendly societies, a dissatisfaction augmented by an influx of English emigrants lauding the industrial policies of the British Prudential. The third event was the high mortality rate brought on by unsanitary conditions and malnutrition in the industrial cities. The working class demanded insurance to protect against sudden loss, and the city governments demanded mass insurance to alleviate the costs of paupers' burials.

With increased public support, arguments for mass insurance grew stronger. In October 1874, the editor of the *Insurance Times* wrote about "the duty of supplying the need of life insurance to the industrial masses." Earlier that same year, insurance commissioner Julius Clark delivered a report to the Massachusetts Legislature strongly in favor of implementing an industrial insurance system similar to that of the British Prudential. His report marked the end of a lopsided debate over whether life insurance for the poor would lead to infanticide and catastrophic financial ruin. Industrial insurance's reputation had emerged unharmed, and the public clamored for affordable life insurance.

Around this time, John Dryden came to Newark, NJ to found the first industrial insurance company. He had consulted with insurance experts, assembled a board

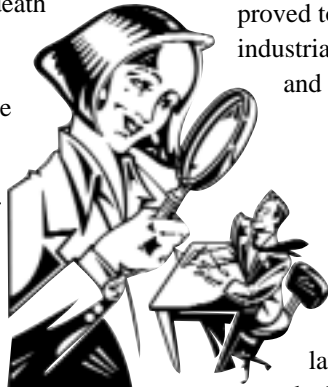
consisting of the most respected businessmen in Newark, and founded the Prudential Friendly Society (later the Prudential Insurance Company of America) in 1875. It was a friendly society in name only, for its business practices resembled those of the British Prudential.

The Prudential Friendly Society issued its first policy on November 10, 1875, and had 4,816 policies in force at the end of 1876. The Prudential grew to show success, with 43,715 policies in force in 1879 when the John Hancock Mutual Life Insurance Company and the Metropolitan Life Insurance Company of New York began their industrial policy branches. All three expanded phenomenally. In 1891, the "Big Three" as they were called, held 95% of all industrial policies in force. By 1900, Met Life had 4,855,756 policies in force, Prudential had 3,406,189 policies, and John Hancock had 1,069,197 policies.

The volume of industrial insurance business continued to increase until the mid-1950s, when the distinction between industrial insurance and ordinary life blurred. Ordinary life policies began to be issued widely on a monthly payment plan with smaller premiums on the home collection system, which became monthly debit ordinary (MDO). With higher wages than in the 19th century, the American worker could now afford to pay monthly premiums, and because the average wages increased steadily over the years, Americans could afford the larger policies they wanted and usually found them in the ordinary life market.

Recognizing this trend towards larger ordinary life policies, Met Life, John Hancock, and Prudential stopped writing new industrial policies altogether in the late 1960s. In 1973, Met Life went one step further and began to phase out its entire debit system. This resulted in ceasing to appoint new collection agents and discontinuing all its debit products.

Since then, industrial insurance accounts for very little of the new life insurance sold or in force. In 1985, it was 0.5% of all legal reserve life insurance in force, compared to 4.4% in 1965. But



The Status of Proposed Revisions to the AOMR

by James R. Thompson

When an actuary renders an opinion on the reserves of an annual statement, sometimes he also develops an actuarial memorandum describing an asset adequacy analysis. This is governed by the AOMR (Actuarial Opinion and Memorandum Regulation). Based on the company size in net admitted assets and on various ratios (annuity reserves to net admitted assets, capital and surplus to the sum of cash and invested assets and non-investment grade bonds to capital and surplus), smaller companies many have to perform this analysis and develop a memorandum.

The current AOMR requires annual analysis for companies over \$500 million in assets and triennial analysis for companies over \$100 million in size. Others can be completely exempt by staying within the ratios.

History of concerns

OVER THE YEARS, REGULATORS have been concerned with innovative products and newer asset types. Some companies could be participating in risky behavior and not have any analysis. The current regulation has

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while the small policy's progenitor is quickly disappearing, the small policy is still alive in the forms of ordinary life, final expense, and pre-need insurance, which do, and will for years to come, serve the needs of their policyholders.

As it was in 1875 before the Prudential introduced the small policy on a large scale in the United States, no criticism can diminish the value of small policies. The elderly and moderate/lower-income people need life insurance and are able to serve their needs with small policies. The history of small policies, which for a long time was the history of industrial insurance, has demonstrated that people of all means want life insurance, and people of lesser means need it most.

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specific rules for exemption and only addresses the amount of annuities — not UL or other products like equity-indexed life. From time to time, efforts have been made to refine this.

This year I witnessed the development of a new proposal which might succeed. At the March meeting of the Life and Health Actuarial Task Force (LHATF) and also at the meeting of the National Association of Insurance Commissioners (NAIC), the regulators all agreed they wanted to get rid of the smaller company exemptions and the mandatory seven interest scenarios for the cash flow testing but also rely more on professional judgment.

At the September (third quarter) meeting, they put an official proposal on the table for exposure. This proposal could work its way up the ladder for adoption by the LHATF, then the Life Committee of the NAIC, and finally the NAIC by March or June 2001.

This is a significant proposal. The regulators think it has been exposed enough, but I believe many smaller companies have not discussed this because of the usual time pressures. I witnessed various industry groups making comments, but I am not sure all of the smaller companies have been paying attention. Thus, I think we should begin looking at how this proposal will affect various companies. Will it be helpful? Expensive? Less expensive?

Outline of changes

UNDER PURPOSE, THE PROPOSAL mentions giving the requirements for a statement of actuarial opinion and memorandum. Formerly, it referred to guidelines and standards.

Under Scope, it allows the appointed actuary to use professional judgment in performing the asset analysis and developing the opinion and memorandum consistent with relevant ASOPs (Actuarial Standards of Practice). "However, the commissioner shall have the authority to specify specific methods of actuarial analysis and actuarial assumptions when, in his or her judgment, these specifications are necessary for an acceptable opinion...." A memorandum shall be required each year

Under Definitions, that for Asset Adequacy analysis removes the specific mention of various forms it may take. Thus, this is more general. In the Opinion, the reliance language has been modified to state that the actuary has reconciled the underlying basic asset and liability records to annual statement. At the discretion of the commissioner, language in the opinion referring to the

adequacy of reserves in light of the assets may be omitted for single-state companies.

How This Might Affect Whom

NOTE THAT EVERY COMPANY (and fraternal society) must provide a memorandum annually. But what tests are required in the memorandum are left to professional discretion (subject to the actuarial standards of practice). This may save work. Let us say that a company uses cash flow testing for all or some of its business. Over a year, if conditions remain the same, it might be up to professional discretion to demonstrate that conditions are the same and refer to the previous year's study. This would probably save time and money overall.

Another problem is the commissioner can impose his/her own requirements on the appointed actuary. One might tacitly assume that such requirements will be developed in a reasonable manner and will deal with innovative assets and liabilities. The open-ended language will allow the regulators to keep abreast of changing conditions. But it also allows the regulator to impose detailed conditions on smaller companies selling traditional products with traditional assets. Some fear the discretion.

If the proposal passes, every company will have to do some sort of analysis at least once. This would probably take the form of a gross premium valuation. Remember that ASOPs being developed would require this. ASOPs are not subject to state approval. Thus, the Academy will be able to set the details and the states (with input from the companies) will have no ability to limit this. This lack of limitation is what some fear.

In order to placate the concerns of the smaller companies, the one-state exemption was included. This means a company operating in a single state might obtain the consent of the commissioner to omit the memorandum. Many one-state companies exist. This includes some fraternal and some companies in the burial business as well. It also includes some substantial farm bureau companies and large fraternal in single states. Should single-state operations be the criterion for exemption? There are some companies in only a handful of states who would not be exempt.

The smaller insurance company Section members have learned over the years that their input is valuable. Prior to the December meeting, make your opinion known to Mark Peavy at the NAIC or to the management of your company.

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Using Monte Carlo Simulation to Understand Mortality

by Robert W. Guth

This is the first year for appointed actuaries in the United States to review X factors and evaluate actual mortality experience that is emerging. Monte Carlo simulation has been suggested as a useful tool in this evaluation. Considerable attention has been given to the subject in seminars, in a draft practice note, and in an exposure draft Actuarial Standard of Practice. This article attempts to provide a simplified explanation of how Monte Carlo simulation can be used by a small company to evaluate its mortality experience.

Anticipated mortality, according to the proposed Actuarial Standard of Practice, is best evaluated in terms of face amount, not policies. There is little statistical theory for developing a distribution of benefits incurred by a block of policies. Monte Carlo methods make it possible to test actual experience of face amount paid out in death claims against the distribution of expected claims suggested by the mortality table, which are 20-year select factors and X factors for a specific block of business. For a small company or a small block of business, Monte Carlo methods overcome concerns about whether the data set is large enough, because the results converge to the underlying distribution given enough simulation trials. The method is useful whether the purpose of the analysis is (1) to derive anticipated mortality over several years in order to set X factors, or (2) to evaluate the past year's mortality in order to certify adequate X factors for the current year.

In the following description of a Monte Carlo simulation, the Monte Carlo testing simulates death claims of a particular business for many repetitions. The results provide a distribution of death claim payments and further provide

confidence intervals that can be used to establish a rejection region for particular X factors. The simulated distribution is unique and appropriate to the particular policies being analyzed.

In this analysis, I used Microsoft Access 97, with database tables of policyholder records, and also a Visual Basic for Applications module that performed the calculations in the study. I used several years of experience for understanding anticipated mortality, and a single year for evaluating emerging experience.

Input variables are listed below:

1. For each policy, the effective date, paid through date, and factors required to determine the X factor group to be analyzed.
2. For each insured, the birth date, gender, and benefit amount.
3. Overall, the beginning and ending date of the study, and actual benefits paid.
4. Life table assumptions, such as life table, select factors, gender, smoker status, and X factor assumed.

The program consisted of several steps:

1. Initialize each policy record, computing duration, and exposure period.
2. Initialize a random generator over the 0 to 1 uniform distribution.
3. For each X factor individually to be tested (or group of X factors in aggregate), simulate benefits for each selected policy in the block of business, and sum the total dollars of benefits for each simulation.



4. Repeat the simulations for 1000, or as many times (N) as needed, to obtain a stable distribution.
5. Sort the distribution from lowest to highest, and save the Y^{th} percentile result.
6. Repeat these results for each X factor to be tested.

To simulate the benefits, determine the number of years to simulate. For each policy and each year:

- 1) Compute the exposure between 0 and 1 years.
- 2) Compute the duration at the beginning of the year.
- 3) Look up the q_x , select factor, and X factor for that year.
- 4) Let qx be tabular qx times tabular 20-year select factor times X factor.
- 5) Let simulated q_x ($\text{Sim}Q_x$) be a random number.

Now determine whether a death was simulated as follows:

- 1) There is no death if exposure is zero;
- 2) For a whole year of exposure, there was a death if $\text{Sim}Q_x < q_x$.
- 3) For a partial year of exposure, there was a death if $\text{Sim}Q_x < q_x$ times exposure.

If a death is simulated, that policy is ended. Otherwise, an additional year is simulated if the exposure is longer than a year. At the end of the study period for a policy, the total benefit paid is summed into a simulation total, and the next policy is simulated until all selected policies are simulated.

After a simulation run is completed, the resulting N values are sorted from lowest to highest. Assuming that the company's regulator desires the Yth percentile as the rejection region, the Yth percentile can be calculated, and comparisons can be made to actual benefits incurred.

If the number of policies sampled is too small, the Yth percentile of benefits may be zero. For example, consider policies sold to an age 30 female nonsmoker on an age nearest birthday basis. The q_X is 0.00124 and the select factor is .31, for

expected death rate of 0.0003844. If the rejection region is the 95th percentile, and if the expected deaths follow a Poisson distribution, one year of experience for 133 policies still has a 95th percentile of zero. Note that (1 - q) ^ 133 = .95015, whereas (1 - q) ^ 134 = .949785. If the X factor cell being tested consists of only age 30 female non-smokers, sales of at least 134 policies are needed to give a one-year 95th percentile larger than zero dollars.

A simplified example illustrates the Monte Carlo method below (Table 1). The example uses only 25 runs, which is normally too few, but which is adequate to illustrate the method. This example used 4,000 lives over one year. Assume that actual benefits incurred were \$350,000. These benefits are at the 53.8th percentile if the X factor is 1.00, at the 61.5th percentile

if the X factor is 0.70, and at the 76.9th percentile if the X factor is 0.40. If the rejection percentile is set at the 75th percentile, an X factor of 0.40 would be rejected, whereas an X factor of 0.70 or 1.00 would not be rejected.

Monte Carlo simulations provide a simple but powerful way to analyze mortality distributions with limited experience. In the simulation with X = 1.0, the average cost of benefits was \$437,000, ranging from 0 to \$1,020,000. This method took only a couple of days to program, and could be applied to as many samples of business as needed.

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Table 1. Example of Monte Carlo simulations

Order of Runs from Lowest to Highest	Percentile	Benefits X = 0.40	Benefits X = 0.70	Benefits X = 1.00
1	3.8%	0	0	0
2	7.7%	0	0	55,000
3	11.5%	0	0	197,527
4	15.4%	0	0	200,000
5	19.2%	0	90,000	200,000
6	23.1%	0	200,000	225,000
7	26.9%	0	225,000	250,000
8	30.8%	0	250,000	250,000
9	34.6%	0	250,000	260,402
10	38.5%	0	250,000	300,000
11	42.3%	75,000	250,000	300,000
12	46.2%	100,000	260,402	320,000
13	50.0%	115,737	300,000	330,000
14	53.8%	125,000	300,000	350,000
15	57.7%	150,000	320,000	400,000
16	61.5%	200,000	350,000	536,000
17	65.4%	260,402	365,737	590,737
18	69.2%	295,000	375,000	600,000
19	73.1%	300,000	400,000	650,000
20	76.9%	350,000	500,000	700,000
21	80.8%	356,000	506,000	750,000
22	84.6%	400,000	600,000	800,000
23	88.5%	500,000	750,000	815,000
24	92.3%	565,000	815,000	850,000
25	96.2%	600,000	820,000	1,020,000

Things You Need to Know Before Entering the Equity-Indexed Annuity Market

by Brent A. Mardis

DOES YOUR SMALL COMPANY HAVE WHAT IT TAKES TO SURVIVE, OR WILL YOU BE THE NEXT TO GET BOOTED OFF THE EIA ISLAND?

So you think you'd like to enter the equity-indexed annuity market. Equity-indexed products can put an enormous amount of additional strain on not only small companies, but also, more importantly, on small actuarial staffs. Over the next few paragraphs, I'll try to describe *some* of the areas of concern in developing EIA products. By no means is this an all inclusive list of concerns, but hopefully, it will provide you with a better idea of what needs to be done before the first EIA premium dollar hits the front door.

Design

WHAT WILL YOUR EIA product look like? Five years ago when the first round of products was entering the marketplace, I predicted it would take an extended period of low returns (0-3%) before a dominant product design would emerge. We have seen low returns this year, and we continue to see new products hit the market. I have not seen any one particular design entering or leaving the market at a greater pace than any other design. You still see a good mix of annual reset, and multi-year point-to-point products being sold.

When the first products were introduced, most products used a participation rate to determine the index credit. Shortly thereafter, asset fee rates (margins or spreads), and caps were introduced. All three potential moving parts still exist today. The most recent trend I'm aware of is a return to the participation rate products. These newer EIA products are using participation rates with caps instead of the good old days of participation rates only.

On top of deciding how you'll determine your index credit (participation rate, asset fee rate, cap, or some combination), here is a nice, long laundry list of design decisions you'll need to make: annual reset vs. point-to-point, averaging vs. no averaging, calculation of minimum guaranteed contract value, length of contract term, surrender charge schedule, re-entry features at end of contract term, commissions, single vs. flexible premium, treatment of flexible premiums, S&P 500 vs. Dow vs. NASDAQ vs. all the other indices, partial withdrawal options, free partial withdrawals based on premium vs. fund value, and last but certainly not least, a catchy marketing name for your product.

Remember there is a lot of variety in the EIA marketplace today. No one product design has proven more dominant than the others. Somehow, some way, there always seems to be room for the next product to have just a little bit different twist than the last.

Pricing

THE EASIEST WAY FOR a small company to price an EIA product is to have a consulting firm do it for you. Over the years, we have been able to develop our own pricing models, but it takes time to develop the knowledge of how to structure these models. Our company's first and part of our second generation of products were priced by consulting actuaries.

The difficulties with pricing an EIA product using traditional pricing methods deal mainly with reserves and the inclusion of options. You need to be able to

calculate reserves using one of the Guideline 35 approved methods. Most traditional software packages have not allowed for easy inclusion of Guideline 35 reserve methods. The other big obstacle is trying to include the option components of the EIA products. Your pricing systems must allow you to buy options, as well as give you the ability to value the option and eventually sell the option.

Another decision to be made is how many equity scenarios you will use in pricing your product. We have used anywhere from 300-900 historical scenarios in pricing some of our products. The number of scenarios used is dependent on the number of years you are pricing over, the type of index being used for crediting purposes, and your ability to gather historical data. We also use a deterministic set of scenarios: level growth, up/down patterns of growth, and no growth are all helpful in understanding how different growth patterns affect the profitability of the product.

If you are strapped for actuarial resources, you are better off for many reasons to let the consulting world help you out.

Administration System

CAN YOUR EXISTING ADMINISTRATION system handle equity-indexed products? In dealing with EIA products, make sure your system will calculate the product's index credit correctly. As part of this calculation, your system will also have to handle the input of the closing index (whether it be S&P, Dow, or some other) each day.

Setting up the index crediting function is more complicated than building an interest rate table. Your system needs to



be able to handle the benefit design you select. Your administration system will need to be able to handle participation rates, asset fee rates, and/or caps. How much additional programming will it take to get your administration system ready for your EIA product? Before moving forward, you will need to be sure that your administration system will be able to issue and maintain the EIA product you have developed.

Issuing

HOW OFTEN WILL YOU issue your product? Due to critical mass concerns in buying index options, you will likely not start out by issuing your EIA product on a daily basis. When we started selling these products back in 1996, we issued them every Wednesday. We have grown enough that we can handle daily issuance since then. How often you issue is up to you. I'm aware of companies that issue monthly, and even some companies that issue on a semi-monthly basis. In the beginning, you should balance your marketing department's opinion on this issue with the economics of purchasing options.

Hedging

THE ART OF BUYING OPTIONS has many different concerns. First is from whom will you buy options? There are many "counterparties" available to purchase options from, but not many will be interested unless you show promise to someday gain critical mass. Critical mass is about \$1 million worth of S&P 500 premium per purchase. Until you reach this level of production, you'll still get people to bid on options, but you will not see very competitive prices. This concept of critical mass goes hand in hand with the question of how often to issue the policies.

Also, depending on the structure of the product, you may have additional concerns. If you are buying options for a multi-year point-to-point product, you'll have persistency concerns. Because the options won't pay off for a number of

years, there is great potential to have bought too many or even too few options. Without a long history of lapses on these products, your guess on persistency is probably as good as anybody's. All of our products are annual reset products, so we do not have the persistency concerns of the multi-year products.

Options are available for almost any kind of product structure; you just need to be able to get enough premium in the door to make buying them cost efficient. As with almost everything pertaining to being in the EIA market, you can find people willing to help you purchase your options.

Filing

ONCE YOUR PRODUCT IS designed and priced, you will have the privilege of trying to get it approved. Some states are easier than others are, and, of course, not every state is the same. Again, product filing is an area for which you might want to consider using consultants. A lot of the same consulting firms that will price your EIA product will also be more than happy to help you file the product.

Before you file, make sure your compliance staff has reviewed the specific EIA regulations of each of the states you'll be filing in. You will save a

were five years ago. Over the years, our company has developed, in our opinion, very good working relationships with the insurance departments that have the most specific EIA filing requirements. It takes time and a lot of product filings, but eventually you can develop a very good idea of what each state will require when filing EIA products. Your first filing will not be fun, but it can be done. Have patience and keep good notes.

Reserves

WILL YOUR CURRENT RESERVE system handle any of the methods required under Actuarial Guideline 35? To date, we have handled the calculation of our EIA reserves via a spreadsheet method. Spreadsheets have worked nicely for a while, but there is a limit to the number of policies they can effectively handle.

We have looked to outside vendors to help us with calculating EIA reserves. Again, there is a cost to purchasing a reserve system, but if you can find a vendor that can handle your EIA product designs, I believe it will be money well spent.

Make sure that when you select one of the methods approved by Guideline 35, it is a method in which you'll be able to easily obtain the necessary option pricing

"Setting up the index crediting function is more complicated than building an interest rate table. Your system needs to be able to handle the benefit design you select. Your administration system will need to be able to handle participation rates, asset fee rates, and/or caps."

lot of time if you can identify any state-specific filing requirements prior to filing. On your first EIA filing, be prepared for a lot of frustration and a lot of additional work. The good thing about starting today is that state regulators are a lot more educated about EIA products than they

information. There are some Guideline 35 methods that work better than others for certain designs. You need to study each method to find the one that will fit well with your product and will fit with your reserve system.

(continued on page 10, top)

Things You Need to Know Before Entering the Equity-Indexed Annuity Market:

continued from page 9

Cash Flow Testing

THE BIGGEST OBSTACLE AGAIN is the ability of your modeling system to handle EIA's. You need to have a system that can buy, sell, and value the specific options that back your product. You also need a system that allows for the proper calculation of the policy's index credit. Make sure your system allows you, in some fashion, to generate or at least input equity scenarios. We run our fixed interest annuities and equity indexed annuities in separate models. We do this so we can isolate the index options that back our EIA products.



Once you have your model created and running accurately, you need to determine what is an appropriate number of scenarios to run to achieve the necessary comfort level with the cash flow testing results. We currently use three different scenario sets in

running cash flow testing on our block of EIA products. The first is the New York 7. The second set includes at least 100 stochastic scenarios. The last set involves what we call an NY 7 version of equity scenarios. We use the 7 interest rate scenarios in conjunction with 7 equity scenarios. In the seven equity scenarios, we use equity growth patterns that mimic the interest rate patterns of the NY 7. The result of the 7 interest rate scenarios and 7 equity scenarios is 49 scenarios which test set changes in both interest rates and equity growth rates. The aggregate results of the

three scenario sets have been enough to give our auditors and me a comfort level with our EIA products that allows me to sign the Actuarial Memorandum.

Final Thoughts

WHEN THE DAY IS OVER and you think you're ready to enter the EIA market,

think again. If you can't get a strong commitment to sell EIA's from your marketing staff, and more importantly your field force, the cost both financially (to the company) and emotionally (to the actuary) will not be worth it. This is definitely a market where achieving critical mass is nothing less than critical. There have been a lot of companies that have entered this market and eventually left because they could not generate enough EIA premium to justify all of the additional costs associated with developing, administrating, selling and maintaining a block of equity-indexed products.

Good luck!

Brent A. Mardis, ASA, MAAA, is vice president and chief actuary of American Equity Individual Life Insurance in West Des Moines, IA. He can be reached at bmardis@american-equity.com.

2000 Annual Meeting in Chicago

Taking a break from discussing section activities during the Annual Meeting in Chicago are members of the Smaller Insurance Company Section Council —

L to R — Ed Slaby (2000-2001 Section Chairperson), Susan Reitz (2001 Spring Mtgs. Program Committee Rep.), Rod Keefer (1999-2000 Section Chairperson) and Paul Retzlaff (2000-2001 Secretary/Treasurer). Dale Hall (2000-2001 Vice-Chairperson) joined in later.



August 11, 2000

Honorable George Nichols, III
President
National Association of Insurance Commissioners
Commissioner of Insurance
Kentucky Department of Insurance
P.O. Box 517
Frankfort, KY 40602

Honorable Commissioner Diane Koken
Chair NAIC Life Insurance & Annuities (A) Committee
Pennsylvania Insurance Department
1326 Strawberry Square, 13th Floor
Harrisburg, Pennsylvania 17120

Re: Small Value Working Group

Dear Commissioners Nichols and Koken:

This letter is to express serious concern on behalf of the National Alliance of Life Companies (NALC) regarding the name chosen for the working group appointed to consider issues in connection with small face amount life insurance policies.

The NALC represents 250 life and health insurance companies. Many of our Member companies are active marketers of small face amount life insurance policies. Our members are confident that the small policies they offer provide great value and service to consumers at a time when they need it most. We, therefore, object to the name of the new working group, "Small Value Life Insurance Working Group."

The subject of small face amount life insurance policies has been a topic of discussion inside the NAIC structure for many years. NALC representatives have participated in numerous NAIC working groups since the late 1980s. More than a decade ago, some of our Members participated with a working group that was formed specifically to consider small policies. The findings of that working group were that small face amount policies are legitimate and appropriate in many insurance markets. The output of the working group was a disclosure regulation which ultimately only one state adopted (and has since abandoned).

We previously requested that, if small amount life insurance policies are to be considered yet again by the NAIC, that the matter should be raised within normal NAIC protocols, and not by a resolution of commissioners. We applaud the leadership of the NAIC for appointing a working group that can give due consideration to all available information. We also applaud the decision to separate the matter of small face amount policies from the issues in connection with race-based rates.

However, the phrase "small value life insurance" itself is as pejorative as the term "low value life insurance." The NAIC has only one official designation recognized in regulation or statute for these policies, "Small face amount life insurance." Therefore, the NALC respectfully requests that the leadership rename this working group by removing any reference to the term "Value." We would suggest that the working group be officially named the "Small Face Amount Life Insurance Working Group."

Finally, we have not yet received information concerning the Members of the new working group. Is it possible to obtain a list of the Members of the working group in advance of the Dallas meeting?

I am available to discuss this matter with you at your convenience. Several individual representatives of our Member companies regularly attend the quarterly NAIC National meetings, and are available to meet with you or your staff in person or in your home states. We sincerely appreciate your consideration of the concerns of our Association and our Members on this very important issue.

Respectfully Submitted,

Scott J. Cipinko
Executive Director

CC: NAIC Member Commissioners
Catherine Weatherford
NAIC Executive Vice President

Desktop Databases for small Companies: How to Access Data and Easily Find Information

by James C. Berger

Editor's Note: The author would like to thank Hugh Shugart for his significant input to this article.

One of the great challenges for any insurance company actuary is to obtain company data for everything from experience studies to financial reporting. If this is hard for large companies, it can be even more difficult for small companies without the large company resources. Until recent years, unless actuaries became information system (IS) specialists, they were at the mercy of the IS people to provide this data. Some IS experiences are great, some not. But they always take significant time and effort to make sure the actuary gets what is intended.

With recent advances in desktop software and hardware, the periodic sessions with the small company IS personnel can be largely curtailed. The IS personnel can be left to do all the other company tasks they are called on to do, and the actuaries can get what they want, when they want it, and how they want it. What once was a potential bottleneck can no longer be a concern. The old challenge of "getting the numbers" is removed, and the new challenge becomes data integrity, something many actuaries didn't have time for previously.

Why should an actuary use a desktop database program? Compare mainframe databases to a hand saw. The hand saw certainly cuts wood and has performed competently for years. Then when a competitor shows off a new power saw, carpentry is revolutionized. It's fast. You don't tire quickly. But there will be a small learning curve if you don't want to be dangerous or make mistakes. This article isn't a complete owner's manual

but should serve as good advertising for that "power saw."

Though many database programs exist, this article will look at experiences using MS Access in smaller companies. While the author has used Access effectively in large companies, it was not for company-wide data analysis, rather, for example, for experience studies on one line. Capacity limits do exist for the desktop, though they are rapidly receding. If capacity becomes an issue for a smaller company, MS Access is made to upgrade to MS SQL server, which should handle data sizes and data accessing issues for several years of even strong growth.

Desktop databases are not new, and many actuaries use them regularly. However, for those actuaries who have been too busy to learn what these databases can do, this article aims at giving some of that understanding.



What you still need from IS

MANY IS DEPARTMENTS ALREADY produce a flat file (text file) of policy records (call this the "policy master file") that contains all the needed fields, e.g.,

policy number, date of issue, policy form number, issue age, riders, policy change codes, etc. This may be all the actuary needs to do financial reporting. If this file is not currently produced, a one-time effort will obtain the file, and the extract program generating it can be put "in production" to automatically generate periodic updates.

Now, by setting up a table of reserve factors for all the non-interest-sensitive products, it is possible for each non-interest-sensitive record in the policy

master file to have a reserve factor tied to it and a reserve calculated. The reserve factor table may have five fields: form number, reserve basis, issue year, duration, and reserve factor. This one table has all the non-interest-sensitive reserve factors. Perhaps it makes sense to have separate tables for PUAs or other items, but this can be worked out in accord with the structure of each company's policies.

Not only can the actuary tie in reserve factors, but it is straightforward to tie in a mortality basis, for example, the 41 CSO table if the company desires to track experience based on this table for Exhibit 8, line 10c. Similarly, other experience studies with their various mortality tables can be accomplished.

Querying, or questioning the database, by policy change codes will give all the information needed for the Exhibit of Insurance. Realistically, these numbers will need a sprinkle of judgment added, as they never seem to add up correctly. These same policy change codes give data for calculating the Analysis of Change in Reserves.

It Sounds Easy So Far

...AND IT ISN'T TOO bad...except...the constant problem of data integrity, the new challenge. Even in the largest of companies,



there is the possibility that the system didn't do everything the actuary may have wished. Perhaps the data entry didn't happen correctly, or a paid up policy is still on the old reserve basis. Glitches should be expected. These should be sought out,

routed back to the IS people to fix, sent to the data input people to help them improve their processes, and then revised on the policy master file. If these are not corrected each year, their error is added to last year's errors and becomes more than a de minimus inaccuracy.

Interest-Sensitive Policies

INTEREST-SENSITIVE POLICIES WILL offer a new challenge. They must have their reserves calculated by

policy every year according to the credited rate history and any other changes in nonguaranteed elements. Many companies already have a program that does just this. But if not, a macro in Excel or Lotus 123 can do this simply. The policy reserving logic should be well understood so the spreadsheet can do this nicely. A more complex, but elegant solution is to tap into Access's VBA (Visual Basic for Applications) capacity to do the interest-sensitive reserve calculation. While this does have initial attractiveness, readers will know from experience that elegance may not be practical and functional.

Running a spreadsheet macro won't be fast, perhaps taking over an hour for a large block (a small company's large block). On the other hand, it is transparent. With the speed of machines increasing as it is, next year the one hour will be closer to one-half hour, then one-quarter the following year. The major benefit is that the actuary *knows* what is going on in the calculation.

Now for the Queries

THE OUTPUT OF THE interest-sensitive spreadsheet or program is a table that can be dropped into Access and tied to the policy master file. By proper definition of the joins (these define relationships among tables in a relational database),

the reserves are associated with the appropriate record. Though each company will have its own unique needs, this method should allow for each policy to have a reserve associated with it. The non-interest-sensitive and interest-sensitive reserves are associated with their records at the same time in this step.



This step is also the time to add in the 41 CSO mortality rate or any other mortality rates of interest for experience studies. Experience says that this step is the query of data from another query of other data from yet another query. These earlier queries are simply getting data into

the form needed for this latest query.

For example, duration may not be in the policy master file, so a query is used to find the duration that is used in the next query for finding attained age for the mortality table association(s). Or the duration is used for finding the correct reserve factor.

Once this latest step is completed, it is suggested that instead of continuing to use a select query (a MS Access-specific term), it is time to run a make-table query (another Access-specific term) that is the "stamped" table from which all the Exhibit 8 numbers are generated. This table now has data integrity at the highest level in this process and all associate factors with each policy master record, e.g., reserve factors and mortality q_x .

It can be helpful to establish a network directory in which to place the results of the various queries. These can be quickly accessed to bring the data into spreadsheets set up specifically to produce financial reporting exhibits.

Other Uses of Desktop Databases

NOT ONLY CAN PERIODIC financials be generated quickly and easily through desktop databases, experience

studies become very efficient and can be quickly viewed by any slice and dice desired. Perhaps these views are already available in 10 binders in hard copy. A desktop database allows trees to be saved and rent for storage to be pocketed, all the while permitting new views of the data without the two-day or two-year lags caused by IS schedules and priorities.

Large tables of medical claims are summarized without difficulty, including adjustments for deductibles, coinsurance, and reinsurance. An Access cross-tab query even puts the data in a paid month-incurred month grid. By differencing the paid and incurred months to find the claim payment lag, the cross-tab query can generate the incurred month-to-payment lag table.

In a more complex application, long-term care insurance claims were compared to expected claims. The resulting actual-to-expected study was able to look at experience by policy form, sex, age, duration, elimination period, benefit period, state/region, and general agency to mention several. This application required VBA to calculate the expected claims cost by duration for each record.

While Access does not work just like Excel, it is straightforward to learn. One user had need to calculate PUAs due to a non-Y2K compliance issue. Access provided a low cost alternative to reprogramming the mainframe and the added potential benefit of handling all financial reporting requirements as discussed above. The initial PUA work was an ideal training ground for the larger project.

With the power of today's software tools, it is often only a matter of the actuary finding the right tool to increase his or her productivity beyond what was believed possible.

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Retrospective X Factor Analysis: Is Your Company Ready?

by Lloyd M. Spencer

The National Association of Insurance Commissioner's Valuation of Life Insurance Policies Model Regulation, commonly referred to as "Regulation XXX," was developed to address the valuation practices of life insurers issuing guaranteed level premium term plans and universal life contracts with secondary guarantees. In addition, the regulation introduced a new table of 19-year select mortality factors and rules for their use with most plans of individual life insurance.

Regulation XXX introduced several new valuation concepts, including the option to use customized sets of anticipated mortality assumptions in the calculation of life insurance deficiency reserves. Customization is achieved through the application of "X factors" to the 1980 CSO valuation mortality tables with new 19-year select factors, resulting in a company — or product-specific sets of anticipated mortality assumptions (or "X factor mortality" assumptions).

The use of X factor mortality assumptions obligates the appointed actuary to annually demonstrate and opine that the company's X factor mortality assumptions meet the requirements specified in Section 5B(3) of Regulation XXX. The required actuarial opinion and supporting report are to be prepared in addition to the actuarial opinion and memorandum required by the NAIC's Actuarial Opinion and Memorandum Regulation.

Prior to December 31, 2000, the Actuarial Standards Board of the American Academy of Actuaries (ASB) is expected to finalize an Actuarial Standard of Practice providing appointed actuaries with guidance in annually assessing whether anticipated mortality (i.e., X factor mortality) meets the requirements of Regulation XXX.

Also, prior to the end of the year, the Academy's Committee on Life Insurance Financial Reporting will publish a

Practice Note summarizing general actuarial practice regarding many aspects of Regulation XXX.

Even with this guidance, a number of practical issues surrounding the demonstration of X factor mortality compliance with Regulation XXX requirements will remain for your company. These practical issues will include:

- Measurement of emerging mortality experience for each X factor class;
- Application of statistical analysis to assess the continued appropriateness of X factor mortality in light of emerging experience;
- Refinement of future X factor mortality (as necessary); and
- Preparation of the X factor mortality actuarial opinion and supporting report.

Collectively, completion of these tasks comprises a process referred to as retrospective X factor analysis.

For many companies, X factor mortality assumptions were developed by someone other than the appointed actuary (perhaps a pricing actuary, consultant, or reinsurer). This lack of familiarity with X factor mortality does not absolve the appointed actuary from evaluating the adequacy of X factor mortality assumptions employed by the company. Larry Gorski, Life Actuary in the Illinois Department of Insurance, has indicated that "hand waiving" arguments justifying X factor mortality compliance with Regulation XXX will not be acceptable to insurance regulators. Is your company prepared to address the practical challenges surrounding retrospective X factor analysis?

Emerging Mortality Experience

AS STRANGE AS IT MAY seem, not all life insurers regularly perform mortality studies on their business in force. Some



companies lack the information system capabilities necessary to gather data on lives exposed and consolidate that data from a number of administrative systems. Even with reliable data, other companies lack the actuarial resources (in terms of time commitment or technical expertise) necessary to develop and analyze a study of their company's emerging mortality experience. And, this analysis must be completed at least annually at the X factor class level and for all life business where the company has elected to use the new table of 19-year select factors.

Hopefully your company has overcome many of these barriers to accurately measuring emerging mortality experience in 2000. If this is not the case, it may make sense for your company to consider outsourcing this step of the process to one of its reinsurers or a consulting actuary.

Statistical Analysis

WITH A COMPLETE PICTURE of your company's emerging mortality experience in hand, the focus shifts to demonstrating the continued appropriateness of all current sets of X factor mortality in light of emerging experience. As discussed in the ASB's Proposed Actuarial Standard of Practice on compliance with Regulation XXX (the "Proposed ASOP"), hypothesis testing is one method available to appointed actuaries for making this demonstration.

In constructing a hypothesis test regarding the appropriateness of X factor mortality, the null hypothesis would be that X factor mortality is consistent with emerging experience in each X factor class. The null hypothesis would be

rejected if statistically significant emerging mortality experience indicated actual experience was worse than that assumed for an X factor mortality class. Hypothesis is discussed in detail in Appendix 1 of the Proposed ASOP.

The proposed ASOP makes no suggestion as to choice of significance level, and ultimately the chosen significance level must satisfy your company's regulators. In the absence of explicit guidance, a 95% significance level is often mentioned as an appropriate choice.

To perform a statistical analysis of the appropriateness of X factor mortality, the aggregate distribution of claims (both dollar amount of claims and number of claims), by X factor class and for all X factor classes combined, must be determined using X factor mortality. Several methods are available to the appointed actuary to determine the aggregate distribution of claims, including Convolution Methods, the Panjer (Recursive Definition) Method, and Monte Carlo Simulations

Convolution methods arise from the principles of risk theory and are based on convolutions of the distribution of claim amounts, given a certain number of claims. While an exact distribution of aggregate claims is determined, the number of computations necessary to achieve this result is daunting.

Harry Panjer derives a recursive method for generating the aggregate distribution of claims in his article "The Aggregate Claims Distribution and Stop-Loss Reinsurance" published in the *Transactions of the Society of Actuaries*, Volume XXXII, 1980, pages 523-545. Like convolution methods, the Panjer Method also provides a complete description of the aggregate distribution of claims, but with far fewer calculations.

Monte Carlo simulations represent the most common method used by actuaries to estimate unknown distributions, such as the aggregate distribution of claims. How many simulations, or trials, are usually necessary to suitably approximate the actual aggregate distribution of claims? The appointed actuary may

decide that as few as 1,000 or as many as 10,000 or more trials may be necessary to develop an accurate approximation.

Once the aggregate distribution of claims is either calculated or approximated for each X factor class and for all X factor classes combined, the dollar amount or number of claims at the appointed actuary's chosen significance level (e.g., the 95th percentile of the distribution) can be determined. If the actual dollar amount or number of claims for a particular X factor class exceeds this amount, the X factor mortality assumption for that class is rejected.

With any method, the appointed actuary may decide that a cap on the maximum claim amount is necessary to limit distortions in the aggregate distribution of dollar amount of claims that may be produced by very large, individual claims.

Refinement of X Factor Mortality

IF THE STATISTICAL ANALYSIS leads the appointed actuary to reject the current X factor mortality assumption for certain X factor classes, then X factor mortality must be increased. How much should X factor mortality for this class increase? At a minimum, mortality should be increased to the point that the revised assumption, when substituted as the new null hypothesis, would not be rejected. If emerging mortality experience for an X factor class is dramatically higher than originally assumed when developing X factor mortality, then the appointed actuary should consider including an explicit margin for conservatism.

As discussed in Section 3.5 of the Proposed ASOP, once the demonstration of the continued appropriateness of X factor mortality assumptions has been completed for all X factor classes (individually and in aggregate), the remaining requirements of Regulation XXX, Section 5B(3) must be met (X not less than 20%, etc.).

A few years of statistical analysis may convince the appointed actuary that emerging experience is more favorable

than initially assumed when constructing X factor mortality sets. Section 5B(3)(g) of Regulation XXX permits the appointed actuary to lower X factor mortality at any valuation date, subject to the general requirements of Section 5B(3).

Actuarial Opinion and Report

ONCE THE APPOINTED ACTUARY is satisfied that the refined sets of X factor mortality meet the requirements of Regulation XXX, an actuarial opinion and supporting report must be prepared annually. Section 4 (Communications and Disclosures) of the Proposed ASOP outlines the contents of the actuarial opinion and report, as well as documentation requirements. Unlike the NAIC's Actuarial Opinion and Memorandum Regulation, however, sample wording for the opinion is not specified. Lincoln Re has prepared a draft version of an actuarial certification and report that we will provide our clients that make use of X factor mortality prepared by the Lincoln Mortality System™. I would be happy to forward these documents to interested appointed actuaries as they consider drafting their own wording for year-end 2000. Simply send an e-mail request to LSpencer@LNC.com.

The regulatory community will likely be interested in reviewing each company's X factor actuarial opinion and report, as will your reinsurers. Be prepared to distribute these documents confidentially outside your company. It is important that appointed actuaries fully document their work supporting their conclusions regarding X factor mortality, as this work will be revisited and expanded each year-end.

Lloyd M. Spencer, Jr., FSA, MAAA, is assistant vice president at Lincoln Re in Fort Wayne, IN. He can be reached at lspencer@lnc.com.

Tail Risk — A Perspective

by John O'Sullivan

As I was reflecting upon some of the sessions that were held at the most recent Valuation Actuary Symposium, it occurred to me that there is a trend toward more concern about events that are not likely to occur, but have a very adverse impact on a company when they occur and an emphasis on reflecting the unique situation of individual companies. How the industry chooses to react to these concerns will have a big impact on the industry over the next decade and especially on the demands placed upon smaller insurance companies. There are three initiatives that illustrate the trend: the revision this year of the C-3 formula for Risk Based Capital, activity underway to address liquidity concerns, and the development of a Unified Valuation System.

The framework for Risk Based Capital (RBC) has been in place for about 10 years with only limited change. This year, the process of evolution has accelerated with the revision of the C 3 formula. Although very few companies are expected to be impacted by this change (primarily larger companies with significant exposure on annuities and single premium life), the C 3 revision is important since it is recognizing that the role of RBC is moving from just identifying weakly capitalized companies to more accurately reflecting the levels of risk being undertaken by an insurance company (for example, a duration mismatch).

Under the new C 3 formula, a company would use cash flow testing on the covered products, but an upper and lower bound is placed on the amount of the new C 3 in terms of the old C 3. A standardized interest rate generator would be used by all companies, producing a set of 12 scenarios or a set of 50 scenarios. A company may use either set of scenarios. For each scenario in the set, the surplus position would be projected for each year in the testing horizon. Each shortfall would be present valued and the largest present value would be the result of the

scenario. These are then ranked starting with the worst. If the set of 12 were used, then the C 3 requirement would be the average of the second and third worst, but not less than one-half of the worst scenario. If the set of 50 were used, then different weightings would be applied to the results of each scenario to develop a composite result.

With the set of 50, the 5th and 17th would be weighted by 2%, the 6th and 16th by 4%, and so forth with the 11th receiving a weighting of 16%. Another way of looking at the weighting is that the 9th through 13th scenario would together account for a weighting of 60%.

Conceptually, asset adequacy testing supplemented the formula based reserves while this new C 3 approach is supplementing the factor based RBC. Reserves are meant to cover 80ish percent of the risk, while required capital is meant to cover the 90ish percent of the risk. As products and measurement techniques become more sophisticated, there is a realization that formula reserves and a factor driven RBC do not capture the risk level in many cases. In June, *Moody's Investors Service* wrote a paper (which can be found on their Web site) entitled "One Step in the Right Direction: The New C-3a Risk Based Capital Component."

One of the points made in the paper is that insurers should better understand the risks involved with their products "focusing on understanding adverse tail risks." Among the products mentioned in the paper were Universal Life products with a no-lapse guarantee and variable annuities with secondary guarantees.

A second initiative revolves around the liquidity risk, which has been brought to the forefront with the General American situation. Last year, shortly after the General American incident, New York released its Circular Letter 35, which asked companies operating in New York to supply information on their liquidity situation. Since then, there has been activity at the national level in addition to New York's continued interest in this topic.

The September Report of the Academy Life Liquidity Group describes three types of liquidity needs: day-to-day cash management, operational cash flow over the next

one-half to two-year period, and stress liquidity needs (which is the focus of their attention). By its very nature, a liquidity crisis should be a rare event, but can be very devastating when it occurs. It could be caused by a rating downgrade or even from a spillover from another financial institution.

The essence of the solution is for each company to analyze its own liquidity needs along with the sources of liquidity over various time frames. This information along with a Liquidity Plan would be updated periodically. Various regulatory options were discussed, and some were seen as possible options, including: reliance on corporate governance, certification of a liquidity plan, liquidity interrogatories, and certification that the stress risk was manageable on the date of the certification. An RBC approach was rejected, since a factor approach could not handle the complex nature of liquidity.

The third initiative involves the development of a Unified Valuation System. As part of this work, a "viability analysis" is being investigated. A viability analysis is described in an Academy report as "a self-analysis of an insurer's ability to identify, evaluate, and manage its risks in executing a strategic plan." The analysis revolves around a company's abilities and plans with the focus being the identification, analysis, communication, and measurement of risk.

From these three initiatives, it seems like we are moving to a framework in which the uniqueness of each company's operation is being recognized but this flexibility also means that each company is responsible for customizing the answer to its own situation. This will place additional demands on the limited resources of many companies. Perhaps meetings such as the Valuation Actuary Symposium could be used to explore the new most efficient way for smaller companies to meet these additional requirements. Any ideas?

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XYZ Addresses UL Nonforfeiture Values

by James N. Van Elsen

Minimum nonforfeiture values have been difficult to define for universal life products since they first appeared in the early 1980's. The Universal Life Insurance Model Regulation used the unamortized whole life expense allowance to determine minimum values for flexible premium universal life products. A drafting note in the regulation observes: "The drafters chose a whole life initial expense allowance for several reasons. Although highly flexible, universal life insurance is generally considered a permanent life insurance plan. Most companies encourage a premium level which will provide a

The current draft of XYZ was submitted by Frank Dino of the Florida Insurance Department. As written, it would apply to all policies issued on or after January 1, 2001. As an actuarial guideline, its adoption by the NAIC would be sufficient for it to become effective in most states.

The current proposal uses the secondary guarantee premium for determining nonforfeiture adjusted premiums. After the secondary guarantee period, premiums sufficient to produce a zero account value are used. For example, a product with a 30-year level secondary guarantee premium would use the level premium

Universal Life Insurance Model Regulation. Yet, a policyholder could choose to pay exactly the same schedule of premiums for the universal life policy as for the term policy. The universal life policy would require significant nonforfeiture values under the proposal. The term policy would not have any nonforfeiture values.

An alternative to the XYZ guideline was proposed by the Actuarial Committee of the American Council of Life Insurers (ACLI) at the September meeting of the Life & Health Actuarial Task Force (LHATF). This proposal calculates the ratio of the present value of guaranteed premiums (plus an expense allowance) to the present value of 1980 CSO mortality charges. This ratio is multiplied by the 1980 CSO mortality table to develop adjusted mortality charges. Minimum cash values are then a retrospective accumulation of actual premiums reduced by the adjusted mortality charges.

This methodology adjusts the minimum nonforfeiture values to the level of funding of the policy. All other things being equal, policies with larger premium payments will result in larger minimum nonforfeiture values. The same is not true for the current LHATF proposal.

Discussion can be expected to continue on both proposals. The difficult task will be to develop a reasonable guideline that does not require rewriting the *Standard Nonforfeiture Law* or the *Universal Life Insurance Model Regulation*.

James N. Van Elsen, FSA, MAAA, is a consulting actuary and president of Van Elsen Consulting in Colfax, IA and a member of the Smaller Insurance Company Section Council. He can be reached at van.elsen.consulting@att.net.

"Every universal life insurance policy of which the drafters are aware has a 'net level premium' that could be computed which would guarantee permanent protection."

lifetime insurance protection. Every universal life insurance policy of which the drafters are aware has a 'net level premium' that could be computed which would guarantee permanent protection. As a result, it is expected that most universal life insurance policies will be sold as permanent plans."

Obviously the drafters of this regulation did not anticipate the current "term-like" universal life insurance products. The only consideration of secondary guarantees in the regulation was in a drafting note: "it is possible that policies will have secondary guarantees. Such guarantees should be taken into consideration when computing minimum paid-up nonforfeiture benefits." Proposed actuarial guideline XYZ attempts to address the impact of these secondary guarantees on minimum nonforfeiture values.

for 30 years followed by annually increasing premiums approximately equal to the annual cost of insurance. Adjusted premiums would be calculated using a constant percentage of this schedule of premiums. At older ages, this would generally result in significant minimum nonforfeiture values. These values would be used only if greater than the cash surrender value otherwise available from the universal life contract.

The difficulty with this proposal is that it ignores the flexibility of premium payments available under the universal life policy. Term policies avoid nonforfeiture values in this situation by having large ultimate premiums that effectively eliminate any required cash values.

Universal life policies cannot have such high ultimate charges because of the nonforfeiture requirements of the

Is There A Spof In Your Future?

by Norman E. Hill

Throughout the life and health insurance industry, complaints about the product filing and forms approval process under state regulation have been increasing. In earlier years, new products were relatively infrequent. Now, however, new products often are introduced several times a year. The complexity of products is also increasing, including new versions such as:

- Multiple underwriting classes for life insurance
- Variable life and variable annuities
- Minimum death benefits on variable products
- Universal life, with or without secondary guarantees
- GICS
- Equity-indexed annuities
- Long-term care

Current problems with product filing are due in part to the inherent nature of state regulation of insurance. There are fifty-one different jurisdictions, each with its own rules. Therefore, problems have accumulated to include the following complaints:

- Lack of uniform model standards
- Lack of uniform interpretations of models
- Variable quality of state departments
- Arbitrary unwritten standards
- Inconsistent standards from state to state
- Inconsistent standards within a department, depending on the analyst

- Inconsistent standards from one company to another by the same department.
- Impossibility of uniform national products
- Extra printing costs for different policy forms, rate sheets, and advertising
- Lost sales
- For investment contracts, difficulty in competing with banks and other financial institutions.

As a result, among some segments of the industry, sentiment has been growing for federal regulation of insurance, instead of the traditional state system. This tendency started with earlier hearings conducted by Congressman Dingell. His proposal for federal preemption originated with several major insolvencies. Even though the Republican-controlled Congress has been friendlier to state regulation, the seed was planted in the industry. Also, in the area of Medicare supplement and other health insurance under HIPAA, there is already an increasing amount of federal regulation and control.

In 2000, a new bill, Gramm-Leach-Bliley, governing financial services of banks and insurance companies, increased the federal role. It mandated that states take action in the areas of consumer privacy. Also, GLB mandated national treatment for insurance agent licenses. Within a short time, an agent who is fully licensed in one state, will be able to apply automatically for national licenses in other states. A new clearing-house, NARAB, will be set up to process these nationwide licenses.

The ACLI, one of the large trade associations, simultaneously began a project to deal with the problems of product filing. Its task force prepared a

systematic grading of various aspects of state regulation. These included product filing, agent licensing, market conduct, and company admission in other states. The report of the task force that analyzed these aspects concluded that product filing was by far the weakest area of state regulation. These conclusions were approved by the ACLI and submitted to NAIC leadership in a detailed report.

NAIC Reaction

NAIC LEADERSHIP WAS REASONABLY receptive to the criticisms in the report. Undoubtedly, this was partly due to the fact that the report had mentioned federal charters as one solution to correct deficiencies in state regulation.

Commissioners met to discuss the product filing and forms approval area. Initially, many commissioners preferred to give the domestic state more preference than currently. In other words, states where companies did business would defer and automatically accept products approved by the domestic state. This approach, of course, was subject to the criticism that some insurance departments were understaffed and did not review submitted forms in rigorous fashion. For any approach, there is still the problem that many NAIC models are not widely adopted.

Later, an NAIC working group prepared a "vision" statement to deal with product filing uniformity. It contained the following points:

- The new organization will be called "CARFRA," which stands for Coordinated Advertising, Rate and Form Review Authority
- Single point of filing
- CARFRA would be voluntary, so that states would not be required to join
- State insurance department volunteers would serve as the staff of CARFRA
- New standards, to be determined, would be used for policy form approval

- Most important, states could reject forms, even when approved by CARFRA

From the Dallas NAIC meeting in September 2000, the NAIC working group issued an expanded vision statement. Starting 1/1/2001, there would be a trial run of the new CARFRA organization. Ten states would participate: New York, Pennsylvania, Michigan, Texas, Oregon, Maine, and four others to be named. Four test products would be eligible for the single point of filing. Initially, it was not specified what products, whether life, annuity, variable, disability, or long-term care. The working group stated that their hope was that the trial run would be so successful that all states would want to join.

Also, the working group agreed with the ACLI report recommendation for further research on state authority. Some states already had blanket authority to delegate policy form approval. For other states, commissioners were concerned about the lack of positive authority. So far, the organization of state legislators, NCOIL, had been made aware of the attempt to gain uniform product filing. In the past, they were very sensitive about issues of state rights and protecting individual state authority. So far, they had not voiced any objections to the project.

Some people were surprised that several consumer groups were strongly negative about a single point of filing. They claimed that this was an industry plot to sell misleading products to consumers without prior approval.

Simultaneously, with this SPOF project, another NAIC project has begun involving national treatment of insurance companies. This did not directly stem from the ACLI report, but it was based on similar concerns over lack of uniformity in state regulation. This project would involve an interstate compact allowing uniform treatment of companies in certain areas. Primarily, this was aimed at company licenses in states and, at least for the moment, did not involve single point of filing. Eventually, there was a

possibility that product filing could be made part of the compact.

Eligibility standards were initially set for insurers to participate in the national treatment project:

- Size – A minimum requirement of \$100 million annual direct premiums, or a business plan to reach \$100 million within several years
- Risk Based Capital of at least 400%, based on the annual statement definition
- Clean statutory audit opinion

In Dallas, the reaction of the ACLI and other trade associations to the proposed CARFRA trial run was guardedly positive. However, several spokesmen stressed that for CARFRA to work, all states had to join and fully delegate the policy approval function to the CARFRA staff.

What Does The Future Hold?

Trade associations will closely monitor the trial run of CARFRA. Even before CARFRA can begin, the working group will have to specify what products will be eligible for the trial run. Also, standards for approval, whether NAIC model laws or other bases, will have to be established. This portion of the CARFRA structure will have to be completed in 2000.

Some people viewed this step as genuine progress towards greater uniformity in filing. However, others thought that the working group was naive in thinking that a voluntary organization would have any hope of evolving into a uniform, nationally accepted one.

During discussions of single point of filing, some industry segments hoped for a "file and use" approach in policy and rate approval. This would replace the prior approval approach, which often is quite rigorous among the larger states. In Dallas, for example, one spokesman from the property and casualty insurance industry pointed to one large state that currently employs a file and use approach for automobile insurance and rates.

There is continuing analysis of a radical change to federal charters and federal regulation. Congressional authorization would be needed for such a change. This outcome and how it would proceed is greatly dependent on which party wins the November election.

Key questions that are a part of any proposal for federal charter include:

- Would a new federal agency be established?
- Would NAIC model and standards be carried over?
- How would federal income tax complications from federal charters be handled?

Back in the state regulatory arena, the question of standards is very important. NAIC standards for product filing, including NAIC models, are in many cases not widely adopted. There is a very sensitive question involving whether a state should follow standards that it has not yet adopted.

The question of NAIC standards in general has broader implications, such as national treatment of insurance companies. For example, in the area of codification, NAIC standards have been very controversial. Two versions of an NAIC model investment law were both excluded from codification. With codification itself, it was not adopted as a required accounting approach for each state but only for disclosure of differences between each state's accounting practices and codification.

In summary, the possibility of uniformity in product filing and rate is a critical test of state insurance regulation. At this time, the outcome is highly uncertain.

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Small Policy Purchases by Seniors

by Andy Hansen



The purpose of this presentation is to discuss the benefits of small policy purchases by seniors, describe the market and distribution for these small face amounts of life insurance, and demonstrate the dimensions of the market. The data in this analysis also illustrate the almost total lack of market conduct concerns with these products at the consumer and regulatory levels. And finally, the data will substantiate the pricing methodology and premium to death benefit ratios.

Benefits of Small Policies

Many consumers arrive in their senior years with limited assets and little or no life insurance coverage. Expenses associated with the cost of a funeral and other final expenses, such as unpaid hospital and household bills can create a significant burden to a decedent's family. These expenses can be managed efficiently and economically through the purchase of a life insurance policy. The policy can have a benefit that will assure the policyholder that his/her family will not be burdened with these specific expenses and provides for an orderly disposition of the final affairs of the insured.

Other benefits of these policies are:

Availability

The limited underwriting used to issue policies to seniors provides coverage to the broadest range of applicants. This range includes individuals who might not otherwise qualify for coverage because of age or physical condition. The varied distribution channels used to market these coverages provide consumers not otherwise served by traditional methods of distribution an opportunity to purchase coverage.

Affordability

The cost per thousand for these small policies may be more than a consumer would pay if they were buying in larger amounts. However, the costs are reasonable in relation to the coverage provided and the greater mortality risk being covered.

Consumer Acceptance

The policies are simple in their design and easy to understand. The needs that are covered by the policies are clear and strongly felt by the policyholders. Millions of policies have been purchased by seniors to pay for pre-planning and other final expenses, with virtually no discernible level of consumer dissatisfaction.

Market and Distribution

The market for these policies is comprised of consumers who wish to be able to personally pay for the cost of final arrangements and other outstanding expenses and debt at the time of death. This would normally include pre-planning the funeral, any remaining household and hospital bills and other small debts. It is the desire of those purchasing these policies that there be specified funds to pay for these final expenses so they will not be passed on to their family. They usually

consider the policy they purchase specifically for pre-planning and other final expenses to be separate from other coverages and funds they may have. The face amounts of policies purchased for pre-planning final arrangements and covering final expenses generally average between \$3,000 and \$10,000.

The age of those purchasing policies for these purposes is understandably high, and is often in the sixty-five to seventy age range. There are also individuals who postpone the planning of final arrangements, including funding considerations, until more advanced ages.

The companies selling in this market consider the span of the age range of prospective buyers to be between the ages of forty-five and eighty-five. This range is made up of approximately 40 million households.

Distribution of these products is through agent sales, funeral homes and direct marketing. There are approximately 100 companies who specify senior life products as a strategic market, and about 50 who comprise the majority of the total in-force and new policies written. There are just over 30 companies that specialize in small amounts of life insurance purchased by seniors.

Market Dimensions

The following information compares industry statistics for total ordinary and total fixed premium whole life insurance to data for fifteen representative companies who specialize in small policies that are purchased by seniors. The data shown for both is for 1998. The industry data is taken from the 1999 Life Insurance Fact Book published by the American Council of Life Insurance. The information from the representative companies is taken from the 1999 *A.M. Best Insurance Reports*.

The statistics for the industry and the 15 representative companies indicate that purchases of life insurance policies with a face amount of \$25,000 or less represent a significant portion of the total annual purchases. These statistics also show the large volume of small face amount purchases by consumers over the age of 55. Other significant indications are:

- 41% of all individual ordinary life insurance purchases are for fixed premium whole life policies. 21% of the fixed premium policy purchases are through the 15 representative companies.
- One-fourth of all individual policy purchases have a face amount of less than \$25,000. (An unweighted sample from the 1997 LIMRA Buyers Study indicates that 32.1% of all individual ordinary policy purchases are for face amounts of \$25,000 or less.)
- The 15 representative companies sold 1,024,000 new policies to individuals who are, in the main, age 55 and older. These policies have an average face amount of less than \$6,000, and are almost exclusively fixed premium whole life. This represents:
 - 9% of total industry ordinary purchases
 - 22% of total industry fixed premium whole life purchases
- The 15 representative companies have a death benefit to earned premium ratio that is 57% greater than the industry average for individual life insurance policies.

Industry

Number of companies 1,563

Policies:

- total ordinary purchases	11,522,000
- total fixed premium purchases	4,709,000
- policy purchases under \$25,000 face amount	2,880,000

Premium:

- total ordinary inforce	\$93,983,000,000
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Death benefits:

- total ordinary	\$24,397,000,000
- percent ordinary premium	26.0

Representative Companies

Number of companies	15
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Policies:

- purchases	1,024,000
- average face amount issued	\$6,492
- average face amount inforce	\$5,366

Inforce

Premium:	\$847,000,000
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Death Benefits:	\$390,432,000
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- % of premium	46.1
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Market Conduct

Given the sensitivity of the senior market, the numbers of complaints and inquiries received from policyholders of the representative companies is astoundingly low. Fifteen companies contributed data from their 1997 complaint registers, which are based on the NAIC Model Complaint regulation. These registers contain all complaints and inquiries, which include those that are both legitimate and otherwise. In 1997, the fifteen companies collectively received a total of 1,361 complaints and inquiries. That is .0027% of new policies issued in that year by the 15 companies and .0003% of total in force for these companies.

In a 1989 survey (the last available) by the NAIC Life Insurance (A) Committee of all state insurance departments regarding small policy purchases by seniors, none of the states, with the exception of Washington, expressed any particular concern regarding these policies. Nor did they indicate that they were experiencing

any measurable problem associated with these policies.

Premium to Benefit Ratios

Much of the concern regarding small face amount policies purchased by seniors is focused on the possibility that a policyholder may pay more in premiums than their beneficiaries would receive in death benefits. Many of those voicing this concern use anecdotal evidence from worst case scenarios to support their positions. Invariably, they fail to recognize the inherent characteristics of the market and the methodologies that must be used in the pricing of these policies. The following points will discuss price and structure relative to the senior market for small face amount policies.

Underwriting and Risk Pooling

Consumers in the senior market have higher attained ages and increased rates of mortality. To make coverage available to the greatest number of individuals, underwriting procedures are much less distinct in delineating standard and sub-standard risks. Using standard underwriting criteria or narrowing the risk pool range would significantly reduce the availability of coverage to senior consumers.

The use of less selective underwriting criteria results in the acceptance of a broader range of risks that a company doing business in this market will accept. The risk pools developed through sales in the senior market are much more heavily weighted with risks that are generally rated as sub-standard. Consequently, the fifteen representative companies that specialize in this market, and are cited in this analysis, have a premium to death benefit ratio that is 55% greater than the industry average.

Pricing

Some critics of the small policy market offer the opinion that no one should pay more for life insurance than will be paid out in death benefits. In point of fact, premiums of all whole life insurance

Small Policy Purchases by Seniors

continued from page 21

policies from all life insurance companies, accumulated at interest, potentially will exceed the policy death benefit at some time during the life of the policy.

Consider these figures based on the industry standard for valuation and policy comparison*:

Accumulated net premiums will exceed death benefits:

- at age 73, for a policy issued to a 35 year-old male,
- at age 78, for a policy issued to a 55 year-old male, and
- at age 84, for a policy issued to a 75 year-old male.

* 1980 CSO Mortality tables, 5% accumulation rate, 4% net premium rate.

This illustrates that the actuarially prescribed accumulated net premiums must be permitted to exceed the available death benefits at higher attained ages. If insurers could not receive the balance of the net premiums, they would have only a fraction of the funds needed to provide the anticipated benefits. Such a deficiency would eventually lead to insolvency.

Faced with artificial premium-to-benefit relationship requirements, insurers have only two rational alternatives. They can reduce the availability of coverage for those who would have the greatest need (older individuals and those in poorer health) or abandon the market entirely.

Conclusion

- Small policies purchased by seniors to pay for pre-planning and other final expenses provide a valuable service to a segment of the insurance market

that is otherwise underserved by traditional distribution methods.

- The policies provide coverage for a need that is clearly perceived by the individuals who purchase them. There is a very high level of consumer understanding and acceptance of small policies which pay for pre-planning and other final expenses.



- Over one million whole life policies with a face amount of \$25,000 or less are purchased each year by individuals who are over the age of 55. This accounts for nearly one-fourth of all whole life purchases.
- There is an almost total absence of market conduct concern at either the consumer or regulatory level for small face amount life policies purchased for pre-planning and other final expenses.
- The purchasers of these policies have much higher mortality, and therefore create risk pools that are heavily weighted with sub-standard risks. The result is a premium to death benefit ratio that is 55% greater than the industry average.

- Where free market forces are permitted to operate, insurers can provide products at prices which are actuarially sound, designed to meet specific consumer needs at a price which is consistent with the risks inherent in the market.
- The pricing methodology provides products at affordable rates which are actuarially sound and designed to meet specific consumer needs at a price which is consistent with the risks inherent in the market.

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The New Life Risk Based Capital C-3a “Formula” and How it Affects Small Companies

by Robert A. Brown

The NAIC has been concerned that the factor approach that has been used for measuring interest rate (C3a) risk was insensitive to the nature of the assets or the relative duration of assets and liabilities. It was decided to refine the formula, capitalizing on cash flow testing models in use for reserve adequacy testing. The resulting new method is effective 12/31/2000. There are two changes to the previous formula:

a) Some companies will have to do stress testing of certain products using stipulated scenarios to develop the RBC amounts for these products

and

b) Companies holding assets that could prepay at the valuation date for a lower amount than the annual statement value must reflect a new item:

Although company size doesn't enter into the RBC instructions or formula, the testing in part (a) only applies to products that were cash flow tested for reserve adequacy. So companies that have no such testing, such as most “Section 7” companies, would have no stress testing to do; the only change would be item (b), above.

For those companies that do cash flow testing, there is an exemption test. Companies “pass” the test if a) The factor-based C3a component is less than 40% of the sum of all the RBC components and b) the company's RBC ratio would be above 100%, even if the testing for annuity and single premium life products produced results 7.5 times the standard factor.

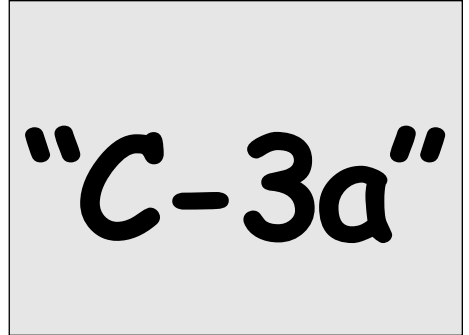
Review of the RBC filings from 1999 suggests most companies will be exempt from scenario testing as a result of these tests.

So most small companies will be

“Although company size doesn't enter into the RBC instructions or formula, the testing in Part ‘A’ only applies to products that were cash flow tested for reserve adequacy.”

50% of the excess of carrying value above the price that would be realized on current prepayment. Callable assets used in the scenario testing required by part (a) would be excluded from this calculation. Typically, this factor would apply to residential mortgage backed investments: IO's and CMO's and pass-throughs purchased at a premium.

affected by the RBC changes only with respect to the callable asset component. Although it is anticipated that the financial impact of that will be small for most companies, the process of identifying the assets subject to this calculation and determining current “call price” for them needs some attention, since this particular process has never been needed in the past.



For companies that do cash flow testing and are not exempt, cash flow tested annuity products and single premium life are stress tested using a defined set of 12 severe scenarios or 50 relatively bad scenarios (which include the 12). A weighted average of the resulting capital needs is calculated and used in place of the standard factors. The result may be higher or lower than that produced by the factor approach and the total C3a component is allowed to increase or decrease as a result, but not below half nor above double the result obtained using the factors. Those limits may be widened in the future. Companies that are exempt from the testing may not choose to do it as a way to reduce their capital requirement.

More details of the scenario testing, including the scenario generator itself, as well as the weights to be used in the weighted average and the actual instructions and worksheet, may be found at www.naic.org/products/finance/lrbc3/index.htm.

Robert A. Brown, FSA, MAAA, assistant vice president and actuary at CIGNA Retirement & Investment in Hartford, CT. He can be reached at bob.brown@cigna.com.

Small Face Amount Life Insurance Working Group Meeting Memorandum

from September 14, 2000

To: NALC Board of Directors
Small Policy Consortium
Small Policy Interested Parties

FROM: Scott J. Cipinko
executive director

DATE: September 14, 2000

RE: Small Face Amount Life
Insurance Working Group
Meeting

The NALC was the only trade association to speak at the meeting in Dallas and will likely take the lead in the discussions with the Working Group. We have been working directly with commissioners since the NAIC Resolution was first secretly circulated to the commissioners and before it even became public knowledge. In fact, the NALC was the only party that circulated the Resolution to the industry prior to its release, which occurred on the day the NAIC announced that it was signed by all 51 domestic regulators.

Therefore, we were prepared for the meeting in Dallas. We have been working with our members and the members of the Small Policy Consortium. The Consortium members met with numerous regulators over the past several weeks to discuss the NALC's concerns with the activities of the NAIC in connection with small policies. We also met with NAIC President, Kentucky Commissioner, George Nichols, III and the members of his staff on September 5, 2000, in preparation for the initial meeting of the Working Group in Dallas.

The following topics were covered in Dallas.

Home Service Background Report

The Home Service Working Group, Co-chaired by Michael Bownes (AL) and Mona Carter (KY) presented the findings of that Working Group as a background for the work done recently by the NAIC in the area of small policies. Mr. Bownes feels that there should be a limit on the amount of premiums a person may pay in excess of the face amount. He is unsure what the limits should be, but that there needs to be a cap.

Structure

Commissioner Nichols made it clear that he is leading the charge in connection with the small policy issues at the NAIC. He stated in Dallas that as a result of the NALC's letter, he has renamed the "Small Value Working Group" to the "Small Face Amount Working Group." However, he apologized that he had failed to change the language in the proposed charge to also reflect that change that he told us he would make during our meeting in Kentucky and would do so.

He advised that he assigned the Small Face Amount issues to the Life Insurance and Annuities (A) Committee for the creation of a working group in order to have the issues dealt with by those that know life insurance issues, rather than the (highly politicized) Home Service Working Group.

While no chair has been named, the Dallas meeting was chaired by Nichols and Commissioner Diane Koken (PA), the Chair of the parent, Life Insurance and Annuities (A) Committee.

An interim meeting will be held between the Dallas meeting and the Boston (December) meeting, most likely on Wednesday, October 25, 2000, either in Orlando, Florida, or Atlanta, Georgia.

The Charge to the Working Group is not set and will likely omit any reference to credit insurance, and the reference to "Suitability," which is the subject of the Suitability Working Group chaired by Rosanne Mead (IA), will be changed.

Commissioner Nichols made it clear that there are no plans to push for any product prohibitions, but some type of disclosure is a likely outcome of the present inquiry. Further, he does not want to put insurers out of business or hurt the insurers selling these products. He considers these products valuable and advised that, if it were not for these products, many in his family would have no life insurance coverage at all.

The Commissioner seeks open dialogue about how small policies are sold and marketed and would like comments from the industry as soon as possible.

Actuarial Considerations

As you may recall, we asked that any inquiry into the market consider actuarial science and solvency. In response to our request, Commissioner Nichols invited the chair of the Life and Health Actuarial Task Force (LHATF), Tom Foley (KS) to discuss the actuarial basis for smaller policies, as the Commissioner does not have a desire to set new actuarial standards or loss ratios.

Commissioner Nichols stated that he would prefer to keep the inquiries limited to life insurance policies with a face amount of \$15,000 or less. He would like the LHATF to work on an explanation concerning the pricing of the policies.

Mr. Foley and Commissioner Nichols acknowledged that these policies have value to the consumer and that the methods of distribution drive the costs of these policies up. Further, Mr. Foley stated that the cost of any policy will be higher if the face amount is lower.

The participation of Mr. Foley is significant, as his Commissioner, Kathleen Sebelius, is not a member of the Working Group. However, she is the next President of the NAIC. As the projected work of this Working Group will not end until June, and she takes office this December, Mr. Foley's participation assures that Commissioner Sebelius will be part of the work of the Working Group, or she will at least be kept apprised of its activities.

Products

The members of the Working Group all acknowledged that credit life and Preneed were not the types of products which cause concern, as they are of relatively short duration and are targeted products tailored for specific transactions.

Scope

The Commissioner stated that he wants us to know that it is not the role of the regulator to protect people from themselves. Consumers will pay more for these smaller policies and he wants them to understand that fact. He believes that the consumer should be entitled to:

Disclosure; and knowing the choices in the open marketplace. The Commissioner asked us in the private meeting about the issue of escheating policies to the states. We advised that the issue is not insurance specific and that

each state has the authority or duty under various agencies to accept property which remains unclaimed. In Dallas, he stated that the NAIC staff should simply create a chart of state authorities concerning the issue and leave the issue to the various state regulators.

He emphasized that the race issue is separate from the small face amount inquiry. In order to emphasize this point, he said that the goal is to get the race-based issues completed and off the NAIC Agenda by the end of 2000. The small policy issues should be dealt with and finished by June 2001.

The inquiry will be limited to:

- Traditional (Whole) Life
- Term Life
- Interest-Sensitive Life
- Universal Life

The sale of multiple policies will not be included in the final charge.

Outlook

The Commissioner revealed another concern about small policies that is about to be released. While doing an investigation in connection with the surveys on race-based rating, a certain unnamed company determined that it failed to pay numerous legitimate death claims.

According to Commissioner Nichols, this was done because the insureds had numerous policies under different names (IE. Nathaniel E. Jones, Nat Jones, N. Jones, Etc.).

The company did not collect Social Security numbers and did not cross-check for other policies when the insureds died. Previous market conduct examinations did not uncover this mistake. As a result, now the company has a problem which it must resolve. This may be an isolated case, but he and the

other commissioners want to know and will look into this situation.

What We Need to Do

I would like your initial thoughts on the issue and the charge, which *may* look like this, although we are not sure (Projected deletions are indicated by parentheses):

Complete a regulatory analysis of the small face amount life insurance business, in all its various distribution forms, with an emphasis in this analysis on the overriding goals of fair policyholder treatment, not only in terms of market conduct, such as appropriate disclosures, and issues of (Suitability) of the product for the customer, but also addressing the issue of fair value for the premiums paid, and any other related issues (such as sales of multiple policies and appropriate escheat handling). The results of this analysis are to be included in detailed proposals for reform, which shall be completed by June 2001, for consideration by the NAIC membership.

I have created a list of interested parties to receive documents and help formulate comments to the Working Group. The interim meeting will likely be well attended, but we hope that each of you will consider attending and will participate in the formulation of our testimony.

Thank you for your continued support.

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XXX Wreaks Havoc in Term Market

by James N. Van Elsen

The various states continue to move quickly to adopt the XXX Regulation (Valuation of Life Insurance Policies Model Regulation). At last count, 35 states plus the District of Columbia have adopted the regulation. Another 9 states appear to be moving to adopt the regulation soon. By the beginning of 2001, we could have almost uniform applicability of the reserving regulation.

While the industry's goal of uniform adoption of the regulation is so near, it is apparent that uniform interpretation of the regulation may not be attainable. Some of the "creative" interpretations of the regulation were discussed at the September meeting of the NAIC's Life & Health Actuarial Task Force (LHATF) in Dallas. The task force is considering whether an actuarial guideline is necessary to clarify the regulation. They are also considering how the regulators should comment on the proposed Actuarial Standard of Practice relative to the XXX regulation.

The following product designs have been cited as possible abuses of the regulation:

1. Universal life products with "shadow" accounts. These accounts are separate from the normal account value used to determine cash surrender values. Premiums are credited to the account in the same manner. As long as the "shadow" account has a positive balance, the policy will remain in force. Guarantees may be significantly more generous than that used for the account value. It is possible to calculate level premiums of any duration that would guarantee that the policy remain in force. How these premiums are used for XXX reserves is debatable. One interpretation results in long-term premium guarantees with reserves very similar to those carried by companies prior to XXX.
2. "Non-guaranteed" guarantees. A company may guarantee premiums on term insurance for only a short period, say five years. Premiums are projected, however, to remain level for 20 years. The company may provide another guarantee that they cannot increase the premiums unless interest rates fall below 3%. Several permutations of this are possible. Perhaps inflation has to go above 12%. Maybe the Cubs have to win

the World Series. Are these premiums considered guarantees for XXX purposes?

3. Guaranteed dividends. A company guarantees a relatively high schedule of premiums. In addition, it guarantees that dividends will be payable that reduce the "net premium" to a competitive schedule of premiums. Which schedule of premiums is used for XXX purposes?
4. Guaranteed refunds. The current schedule of premiums is not guaranteed. The company guarantees, however, that if premiums increase, a refund will be given equal to the premium in excess of the current schedule. What schedule of premiums is used for XXX purposes?
5. Re-entry. Renewal premiums are not guaranteed. Re-entry premiums are guaranteed. To qualify for re-entry, new evidence of insurability must be provided. What if this new evidence is very easy to provide? For example, maybe you answer one question that is simply: "Are you terminally ill?" Are the re-entry premiums used in the XXX reserves?
6. Property & casualty insurance. A life insurance company issues a policy with the current premiums not guaranteed. The policy is issued with a contract from an affiliated property & casualty insurer, which guarantees to pay the extra premium if the life insurance company should ever increase the premiums. What reserves are held by the property & casualty insurance company?

To address their concerns about these new designs, LHATF is considering new actuarial guidelines to interpret the XXX regulation. The initial draft was developed by Robert Potter of the North Carolina Department of Insurance. Comments have already been received from several companies about the draft. The initial draft focused on the "shadow" account product design. The later letters have attempted to close the loopholes for other creative designs. No matter what is adopted, it will be difficult to anticipate all product twists that attempt to circumvent the intent of the regulation. Some regulators believe that no actuarial guideline is necessary, that what is needed is for the regulators to enforce the regulation as it exists.

As this discussion continues, many companies are losing significant sales in the term market. Companies unwilling to experiment with some of the creative designs are losing market share to those that are willing. In addition, some companies are taking advantage of states that have not yet adopted the regulation. For example, a company domiciled in Michigan might continue to sell pre-XXX products. The company could file in Michigan, which has not yet adopted XXX, an annual statement that does not reflect XXX reserves.

Statements filed in states that have adopted XXX would reflect XXX reserves, but these are not generally made available to the public. The Michigan statement would be the one filed with the NAIC and the various rating agencies. This opportunity will diminish as the number of states which have not adopted XXX reduces.

The companies hardest hit by the shift in market share in the term market are the smaller companies. As a group of companies, they seem less willing to gamble on winning the debate with regulators on XXX reserves. They also do not have multiple company domiciles to be able to optimize the benefits of states not adopting XXX.

As the debate continues about the proper reserving for these new designs, these companies will continue to lose valuable market share.

The unitary reserving methodology was identified in the 1970's as a problem for renewable term reserves. The search for a solution continued until 1999 when XXX was adopted by the NAIC. Companies which had used the unitary reserves had their products "grandfathered." This was a necessary compromise because of the extremely large amount of business reserved using unitary reserves.

Hopefully, this new discussion of appropriate reserves will not take as long. Every day, smaller insurance companies are disappearing because they can no longer find markets to compete in. All that many of them need is a level playing field. Unless the regulators act soon, many smaller companies that rely on the term market will be irreparably harmed.

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Disclosure Changes Give Smaller Insurers a Boost

by David Pilla

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A new rule designed to make financial disclosure fairer for all investors may pose problems for larger insurers, especially those selling annuities, while it could level the playing field for smaller insurers.

The Securities and Exchange Commission recently approved a financial-disclosure rule mandating that a company must release material, market-moving information to all investors simultaneously. The rule also requires that if company officials inadvertently disclose such information, the company must publicize that information within 24 hours.

The rule was driven by SEC Chairman Arthur Levitt, who argued that market professionals held an unfair advantage over small investors because they get valuable corporate information first through selective disclosure practices.

"The rule's effect on the insurance industry depends largely on size and product offerings," said Mike Goldman, a corporate securities attorney with the Chicago firm Katten, Muchin Zavis. The larger, more sophisticated companies would tend to get the kind of advance information that securities analysts get. They would tend to be hurt by this rule.

Goldman said smaller insurers, who don't carry the same clout in the markets as the giants, may benefit from the rule change. "The smaller companies that didn't have access to the same information would be on a more equal footing," he said.

Peter Bryan, an analyst with Edward Howard & Co., a Cleveland-based investor and public relations consulting firm, said that "companies such as Prudential Insurance Company of

America have the ear of that Fidelity manager, for example. But now, those big guys might be a little reluctant to open their mouths. So while the little company was always shut out in a sense, this may level the playing field a little."

Insurers must consider the implications of the regulation from several angles, both as issuers of securities and for the largest companies as institutional investors.

Bryan said insurers that issue securities offer one unique opportunity for analysts. "One thing that insurance companies have that, say, a steel manufacturer doesn't, is this huge army of distributors. And the analysts will talk with these agents and brokers and piece together a mosaic that will give them an idea of how the company is doing."

As institutional investors, Goldman said larger insurers will view it as losing a portion of their market advantage.

"Another consideration is how much a company wraps its products such as variable annuities around mutual funds," said Goldman.

Mutual fund managers are, of course, among the most important consumers of the kind of advance information the SEC is trying to curb. So mutual fund performance may be muted, with an effect on those insurance products linked to them.

Bryan agreed. "Since the fund manager and analyst will not get the benefit of advance information they've had in the past, that could have an impact," he said.

One result may be to accelerate the use of multimedia technologies such as Webcasts to disseminate information. J. David Washburn, a corporate and securities attorney with Dallas-based Arter & Hadden, said the 24-hour rule for public dissemination of information will make Webcasts and open teleconferences much more common.

"Because of the efficiency of the Internet," he said, "we expect Webcasting of these types of events to increase dramatically."

Bryan added that the rule may even force analysts to do a better job. "The rule change could influence a case such as that of life insurer Consec Inc., which had been getting fairly positive buzz from analysts for years by growing through acquisitions until accumulated debt in part tripped the company up," Bryan said.

"The analysts had good relations with management, yes, and didn't see that. The SEC's intention, I think, is to minimize that happening. These analysts seem to be more like reporters than analysts. They don't go into the subatomic particles of companies and see how they work. This rule change may force them to do their jobs, which is to analyze."

But Washburn expects that type of scenario will reappear. "Analysts and other media will continue to decipher facts, develop theories, offer to pick the winners and losers in advance and otherwise write stories about public companies," he said. However, it should come as no surprise to anyone that some of the stories will be true, and some will be false.

David Pilla is a writer for BestWeek, August 21, © 2000 by A.M. Best Company, Inc.



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