PRODUCT DEVELOPMENT SECTION

"A KNOWLEDGE COMMUNITY FOR THE SOCIETY OF ACTUARIES"

Product Matters!

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Comments from the Chair

Planning Activities for the Section

by Elinor Friedman

I recently participated on a planning call for the Annual Society of Actuaries Meeting, to be held in Chicago next October. All the Sections had previously submitted session descriptions and the SOA staff had assigned a time slot to each session in the preliminary program. The purpose of the call was to review the program and finalize the schedule. However, just before it began, I noticed that the Product Development Section was sponsoring two sessions on the same topic in the same time slot! One session is a panel discussion and the other is a teaching session—both are about the impact of principles-based reserving on the product development actuary.

When it was my turn to speak, I noted the conflict and suggested that we move one of the sessions to another time slot. There was a moment of silence as my colleagues and I quickly glanced through the schedule for an appropriate time slot to relocate one of the sessions. Mike Bell, SOA life staff fellow, broke the silence with the conclusion I had also just reached: "There is a principles-based reserve session in every time slot!"

After the call, I reflected on all the interest and activities surrounding the principles-based reserve initiative. Both individuals and the companies they work for have invested a considerable amount of time in the American Academy of Actuaries working groups to help develop the principles-based reserve methodology, capital requirements and the governance system needed to support this framework. Moreover, SOA and Academy volunteers are working together to develop an expanded set of valuation mortality tables that will better reflect preferred underwriting practices. Companies will ultimately determine the appropriate version of these tables, based on their experience and regulatory requirements, for use in their principles-based reserve calculations.

The consequences of moving from our current framework to a principles-based framework for calculating reserves will be profound, and product development actuaries will be at the forefront of this change. They will need to be prepared to calculate and project reserves and evaluate the impact on profitability of new product designs and features under the principle-based framework.

The Product Development Section is offering a number of opportunities to learn about and discuss the impact of principles-based reserving on product pricing. These include an embedded seminar at the spring meeting, a seminar following the PD Actuary Symposium, and several sessions at the Annual Meeting.

By the end of the planning call, my colleagues and I had succeeded in finding a new time slot for the Product Development Section sponsored session on principles-based reserves. While it is not the only session on this topic being offered at that time, it will focus specifically on preparing our members for the move to a principles-based framework. ☐

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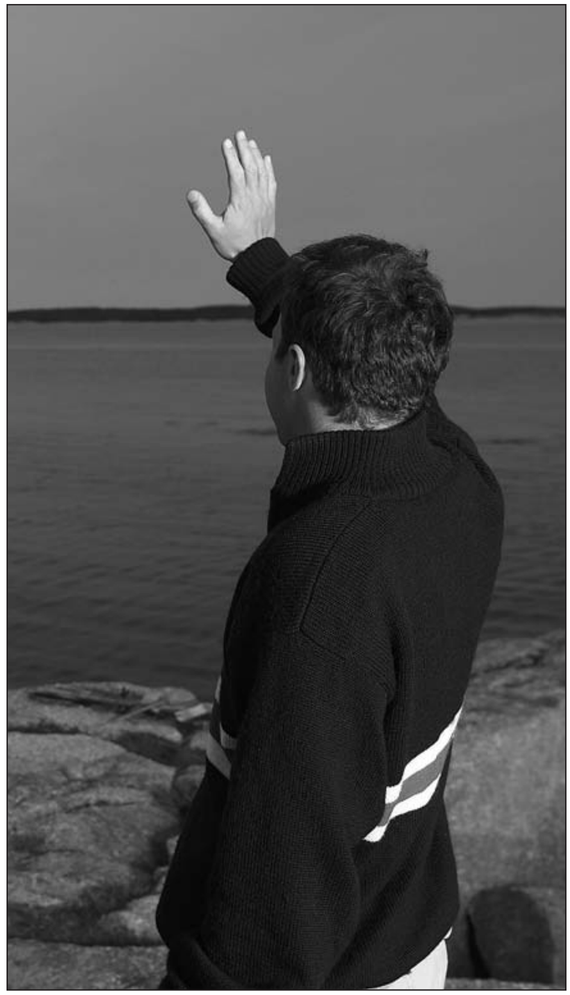
Comments from the Outgoing Editor

A Farewell to the Product Development Section

by Douglas Doll

This is my last issue as editor of *Product Matters!* I am turning the editorship over to Ken Joyce and Dominique Lebel, who are enthusiastic about continuing quarterly publication of this newsletter. You can help them by submitting articles; otherwise, they will be forced to "twist arms."

When I took over as editor in November 2002, I wrote a letter stating that I was not likely to beat Tim Pfeifer's record for most issues as the Product Development Section newsletter editor, but, without realizing it, I did. There has been a lot going on the past four years in the section and in the product development arena that I was able to get people to write about. I am grateful to all those who either volunteered articles or who responded to my own "arm twisting."



Still, after awhile, it becomes time to turn the newsletter over to someone with new ideas (and new contacts from whom they can solicit articles). To those of you who have considered writing articles but never got around to it, now is a good time to do so, as Ken and Dominique will be wanting to make a good impression with their first issues.

As a side note, as editor I was invited to participate in the Section Council conference calls. There is a lot of good work performed by the council members, much of which has a lot less visibility than the work I performed as editor. The section has been well-served by the councils that I was associated with. I know that each year the outgoing chair of the council thanks the other council members, but I'd like to add a "thank you" on behalf of the members. ☐

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Features

Comfort Food for an Actuary:

Cognitive Testing in Underwriting the Elderly[1]

by Eric D. Golus, Laura Vecchione and Thomas Ashley

There are certain occasions when the knowledge we have gained in our jobs carries over into our personal lives. For instance, developing insurance products certainly helps when it comes time to buy an insurance policy. Recently, one of the authors had the experience of giving his 91-year-old grandmother, Nanny as she is affectionately called, an Extended Delayed Word Recall (DWR) test. This article will show that DWR tests are a powerful predictor of mortality in the elderly. As the population ages and more and more life insurance is being applied for at the older ages, having a DWR test in an underwriting arsenal is like comfort food for an actuary.

Background

Underwriting the elderly is a challenge to the life insurance industry. It can be argued that the underwriting techniques used for applicants in the middle years are not an effective predictor of mortality risk in the elderly. A great deal of medical research has been undertaken over the past 10 years to develop an understanding of factors that are predictive of mortality in the elderly. It has been shown that in community dwelling elderly populations, cognitive dysfunction is a predictor of mortality.[2] We decided to study the use of the DWR test as a potential underwriting tool in an insured population because a DWR test is simple to administer, objectively scored and easily validated.

A DWR test uses a predefined and validated list of 10 words. The examiner presents each word to the subject. The subject repeats the word and then uses it in a sentence, after which the process is repeated. Following this process, the subject is administered other tests during a 5-minute period. When this five-minute period is over, the subject is asked to recall as many of the 10 words as possible. The subject does not have a time limit on the recall period and the resulting test score is the number of words the subject recalls.[3]

Mortality Study Population and Methodology

A mortality study was performed on an insured population age 70 and older where a DWR test was utilized. The mortality study population consisted of applicants underwritten for an employer-sponsored long-term care insurance (LTCI) program between March 1995 and February 2003. Companies that sell LTCI routinely test applicants at ages 70 and older using a variety of cognitive tests for evidence of cognitive dysfunction. We recognize that we used a population underwritten for LTCI, not life insurance. However, we thought this was the best surrogate population available since this population represented a group of (mostly) retired workers who share many of the characteristics we would expect in a population applying for life insurance.

The exposure period for each applicant started at the date of underwriting and continued until March 13, 2003 or death. Each applicant was accepted for LTCI (56

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1 This article is based on an article that is in press and to be published in the May 2006 issue of the Journal of Insurance Medicine, *J Insur Med* 2006;38(2).

2 Fried, LP et al. Risk Factors for 5-year Mortality in Older Adults: The Cardiovascular Health Study, *JAMA* 1998;278(8):585-592.

3 Knopman DS et al., Development and standardization of a new telephonic cognitive screening test: The Minnesota cognitive acuity screen (MCAS). *Neuropsychiatry, Neuropsychology, and Behavioral Neurology*: 2000; 13(4):286-296.

percent of the applicants), declined for medical reasons (36 percent) or declined for cognitive impairment (8 percent). The mortality study included all those who were accepted for LTCI (87 percent of mortality study population) and all those who were declined for cognitive impairment (13 percent) since both of these groups include applicants who we judged to be acceptable for life insurance. Since, in the case of those applicants who were declined for cognitive impairment, a LTCI policy was never issued we used the underwriting date as the beginning of the exposure period for the mortality study population.

Since the LTCI program would not know the vital status for applicants who were either declined for cognitive impairment or who were accepted for LTCI insurance but lapsed their policies, we used the Social Security Death Master File (SSDMF) to determine if and when an applicant had died. This file contains, among other things, the Social Security number and date of death of those people with Social Security numbers, as known to the Social Security Administration as of a given date, in this case March 13, 2003. The Social Security number for each applicant as known to the LTCI program was compared to the SSDMF. Of deaths known to the LTCI program, 94 percent of them were also included on the SSDMF. From this we might infer that our mortality study understated true mortality by 6 percent. While this is true, if we assume that mortality ratios were underestimated to the same degree, then comparisons of mortality ratios would produce a valid result.

We chose 100 percent of the 2001 Valuation Basic Table (VBT), select and ultimate, smoker distinct, sex distinct version as the expected mortality. The 2001 VBT is based on amounts of insurance, while mortality in this study was based on number of deaths. This difference in the mortality basis would also hold if any of the other popular mortality tables were used, including the 1990-1995 SOA Mortality Tables. Advantages of using the 2001 VBT include that (1) it is a smoker distinct table, (2) its observation period is relatively close to the exposure period of the mortality study and (3) it contains more complete elderly mortality data.

After 1996, underwriting standards for the LTCI program were liberalized for various impairments, such as certain cancers and coronary artery disease because of unexpectedly favorable claims experience in the program. Medical underwriting for LTCI historically has been quite different than for life insurance. Few of the applicants would have had a medical exam, blood testing, urine testing or an EKG. Nevertheless, the impressively low mortality ratios for applicants in 1995-1996 were achieved without the underwriting requirements traditionally used in life insurance. Because this population applied for a living benefit, like annuity customers, it is possible that this form of self-selection might produce better mortality than life insurance experience. It is interesting to note that the underwriting year had a major impact on mortality. The change in underwriting standards must account for the difference.

Mortality Study Results

The mortality study results showed that the group recalling 0 to 5 words (poorer scoring group) on the DWR test had a mortality ratio of 136 percent while the group recalling six to 10 words (better scoring group) had a mortality ratio of 35 percent. The mortality ratio for both groups combined was 71 percent.

To get an idea of the credibility of the mortality ratios, 95 percent confidence intervals were determined. They were (126 percent, 146 percent) and (32 percent, 39 percent) for the poorer scoring group and better scoring group, respectively. The relatively narrow range of the confidence intervals showed the results to be credible. The 95 percent confidence interval for the entire population was (67 percent, 75 percent).

Exhibit 1 on page 6 shows the mortality ratios and confidence intervals by DWR test score. (The whiskers on the mortality ratio boxes in the exhibit represent the confidence intervals.) These results are further divided by gender, underwriting age, underwriting year, smoker status and underwriting result in Exhibits 2 to 6, respectively.

Exhibit 1 also shows that the mortality ratio for the poorer scoring group was 385 percent (= 136 percent/35 percent) that of the better scoring group.

Exhibit 2 on page 6 shows that the mortality ratio for the poorer scoring group was 433 percent and 341 percent that of the better scoring group for females and males, respectively. The mortality for males was slightly

continued on page 6

The mortality study results showed that the group recalling 0 to 5 words (poorer scoring group) on the DWR test had a mortality ratio of 136 percent while the group recalling six to 10 words (better scoring group) had a mortality ratio of 35 percent.

Exhibit 1: Mortality Ratio by DWR Test Score

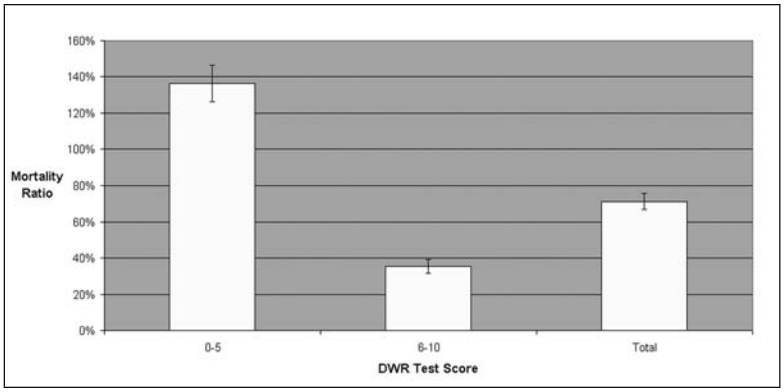


Exhibit 2: Mortality Ratios by DWR Test Score and Gender

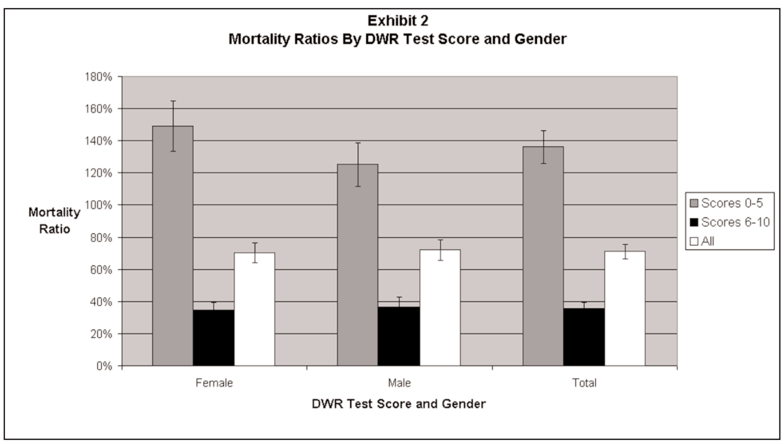
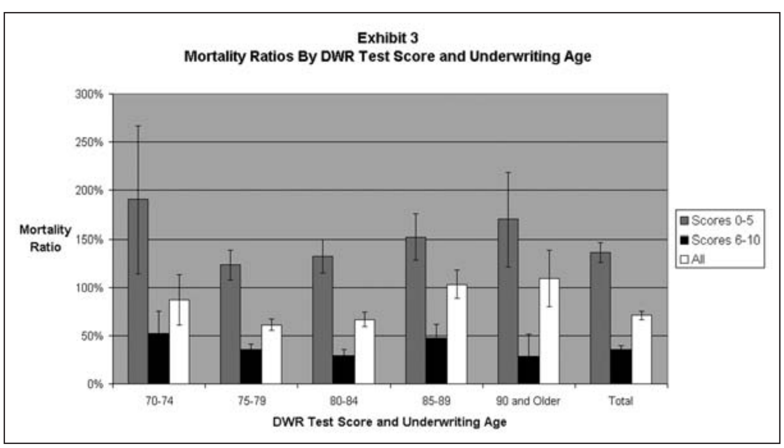


Exhibit 3: Mortality Ratios by DWR Test Score and Underwriting Age



worse than for females for both the better scoring group (ratio of the mortality ratios was 107 percent) and in total (103 percent). The mortality for females was worse than for males for the poorer scoring group (119 percent).

Exhibit 3 to the left shows that at underwriting ages 70 and older, the mortality ratio for the poorer scoring group was between 323 percent (85 to 89) and 593 percent (90 and older) that of the better scoring group.

Exhibit 4 on the next page shows that the mortality ratio for the poorer scoring group was 1261 percent and 250 percent that of the better scoring group for 1995-96 underwriting years and 1997-2003 underwriting years, respectively. The mortality for 1997-2003 underwriting years was worse than for 1995-1996 underwriting years for the following: the poorer scoring group (ratio of the mortality ratios was 181 percent), the better scoring group (911 percent) and in total (265 percent).

Exhibit 5 on the next page shows that the mortality ratio for the poorer scoring group was 387 percent and 343 percent that of the better scoring group for nonsmokers and smokers, respectively. The mortality for smokers was worse than for nonsmokers for the following: the poorer scoring group (ratio of the mortality ratios was 129 percent), the better scoring group (146 percent) and in total (144 percent).

Exhibit 6 on the next page shows that the mortality ratio for the poorer scoring group was 143 percent and 160 percent that of the better scoring group for applicants who were approved and applicants who were declined for cognitive impairment, respectively. The mortality for applicants who were declined for cognitive impairment was worse than for applicants who were approved for the following: the poorer scoring group (ratio of the mortality ratios was 574 percent), the better scoring group (513 percent) and in total (725 percent).

Conclusion

Results for any breakdown of the data that we examined yielded strikingly similar results; the poorer scoring group consistently had more unfavorable mortality outcomes. With the maximum exposure period being slightly over eight years, the mortality effect of a low DWR test score appears within this relatively short interval.

An important lesson of geriatric medicine is that morbidity and mortality outcomes in the elderly depend more on functional status than clinical diagnosis of disease. Conventional underwriting follows the clinical disease model, measuring risk on the basis of laboratory tests and medical records. To underwrite effectively, the industry needs information on cognitive function.

Medical records alone do not provide this information. Physicians typically misjudge cognitive function. They also neglect to record cognitive status in the record. In one study of office-based care, the record accurately reported only about 20 percent of cases of mild dementia and 80 percent of severe dementia. Overall, the record neglected detection of over 60 percent of dementia cases.[4] Furthermore, dementia is very common. Among adults living independently in the community, at age 85 and up, 40 percent have dementia. At age 75 and up, an additional 15 percent have mild cognitive impairment, an early form of dementia.[5]

Underwriters who depend on the medical record will issue all of those cases and underprice the mortality associated with dementia. To assess risk effectively in the elderly, the industry needs to institute universal screening of cognitive function. Objective testing like DWR gives the underwriter and actuary clinically validated data to identify excess risk.

Further studies on life insurance populations will be needed to accurately pinpoint the relationship of DWR test score to mortality. This mortality study, performed on LTCI applicants, is limited by the difficulties in comparing the underwriting of one product versus another. However, we analyzed the data from many different perspectives and there was a remarkably consistent relationship of mortality improvement at higher DWR test scores. Our mortality study supports other studies suggesting that cognitive impairment is a marker for increased mortality risk.

And as for Nanny, she recalled six out of the 10 words on the DWR Test administered to her. This real world example of something one of the authors had worked on in his job shows the comfort that is attainable with this underwriting technique. And, who better to get some comfort (food) from than a grandmother. □

Exhibit 4: Mortality Ratios by DWR Test Score and Underwriting Year

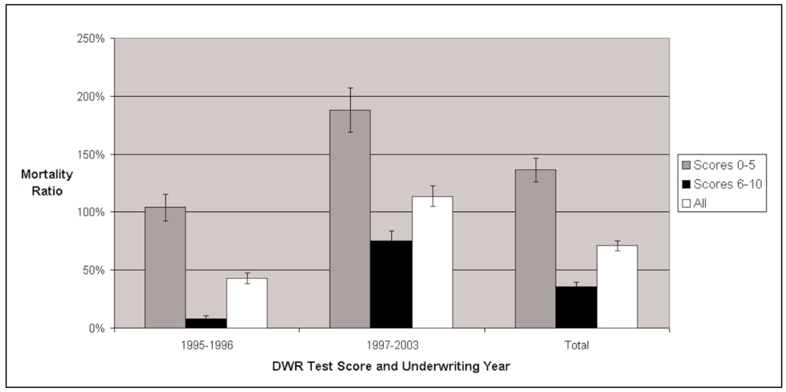


Exhibit 5: Mortality Ratios by DWR Test and Smoker Status

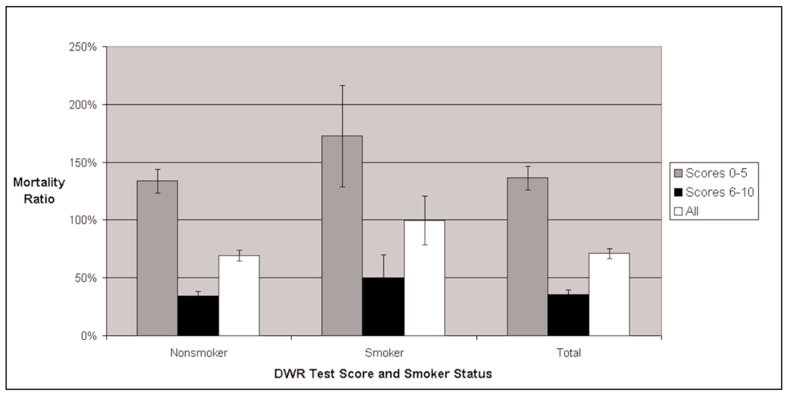
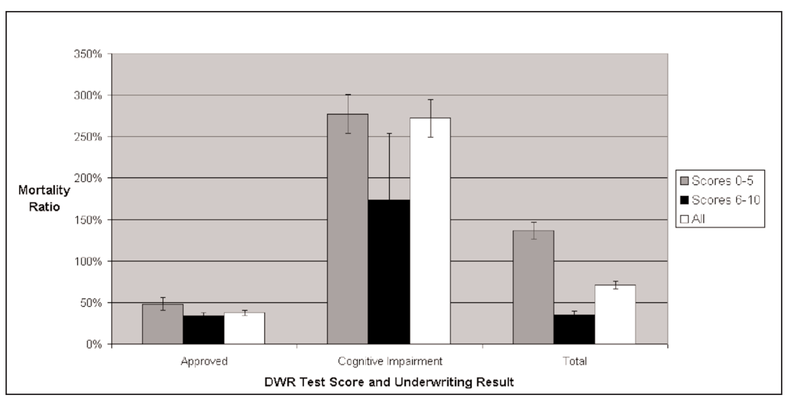


Exhibit 6: Mortality Ratios by DWR Test and Underwriting Result



4 Valcour VG, et al. Arch Intern Med 2000;160:2964-8

5 Neaton JD et al, Arch Intern Med 1992;152:56-64

Features

NAIC March 2006: Principles-Based Approaches Take Front and Center

by Donna R. Claire

The March 2006 NAIC meeting was held in Orlando. The combination of good weather and good company generally made for a relaxed meeting. Having the chair of the Life and Health Actuarial Task Force (LHATF) open the meeting by leading us in a rendition of the Mickey Mouse song set the mood for the meeting. In general, like the December meeting, most of their time was spent on principles-based initiatives. These principles-based initiatives are important to product development actuaries because the level of reserves and capital affects product pricing.

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Actuarial Guideline ABC and Model Variable Annuity Regulation:

There were two "clean-up" items following the changes to the model nonforfeiture law for annuities from a couple of years ago. LHATF adopted Actuarial Guideline "ABC", which was titled, "Projection of Guaranteed Nonforfeiture Benefits Under CARVM." This guideline explains what interest rates should be used in projecting nonforfeiture benefits when reserving under the new nonforfeiture law, which allows for the minimum nonforfeiture interest rates to be changed over the life of a contract. States may start to use these rules soon, although they are not official until the executive and plenary committees of the NAIC adopt them, which could happen at the June NAIC meeting. LHATF also adopted revisions to the Model Variable Annuity Regulation for consistency with the new nonforfeiture law. Note that the revisions specify how to show compliance with the law, and can affect some current designs. Since this is a model regulation, it will not be effective in states until the states adopt it.

VA-CARVM:

Tom Campbell gave an Academy update on this project, which is a principles-based reserve requirement for variable annuities. LHATF discussed various changes to the proposed actuarial guideline. There are three main open questions—the CTE level (65 or 75 are the main choices right now), the requirements needed to reflect revenue sharing, and some details on the standard scenario—e.g., whether a cost of the options to hedge the risk should be considered a floor. Some regulators hope that these issues can be decided in two conference calls, and VA-CARVM can be ready for adoption at the June or September LHATF meetings.

LRWG:

Dave Neve and Tom Kalmbach gave the Academy's Life Reserve Work Group presentation. They spent much of the time updating LHATF on examples performed using a 20-year term product. This report is available on the Academy's Web site. The Academy group still expects that they will have final regulations and actuarial guidelines ready

for adoption by December 2006, with a potential state rollout of the principles-based approach in 2007.

Preferred Mortality:

Larry Gorski gave the update on this joint SOA/Academy/Regulator project. One of the areas that would assist a principles-based approach is to have mortality tables that reflect the industry's current mortality classes, i.e., which have separate preferred mortality tables/factors. Over 40 companies have contributed data to an experience study. There are subgroups on such items as data validation, underwriting criteria and implementation. They expect that experience tables will be completed by fall 2006, with delivery of all items, including preferred mortality tables/factors, by April 2007. It is also anticipated that these tables could be used as interim tables if the principles-based approach were not yet adopted by all states by 2007.

ACLI Proposal For Interim Reserve Relief:

The ACLI presented a proposed interim solution to the "AG38" (the term reserves and UL shadow account actuarial guideline) problem. It involves a different mortality table than the one mentioned above, plus re-opening AG38 for some changes, such as adding lapses to the deficiency reserve piece. The NAIC is performing a review of the legality of using lapse rates in life reserves. LHATF expressed a preference for having the SOA at least peer review any mortality table used.

SVL2/PBA:

I gave an update on parts of the Academy's efforts regarding SVL2/PBA (Standard Valuation Law update/Principles-Based Approach) project. A principles-based approach means calculating reserves and capital by capturing all material risks of the products, and it would permit the use of company experience. The point is to develop reserves and capital requirements that are reasonable to cover the risk, but not too high as to stifle business. The LRWG efforts were discussed in a separate session (see write-up above), but there are several other Academy groups working on the broader effort. Shirley Shao gave an update on the peer review and governance aspects, Jim Lamson gave an update on the Annuity Reserve Work Group, and Bob DiRico updated LHATF on the basic principles developed by the Consistency Work Group of the SVL2/PBA effort. For an overview of this project, one can go to *www.actuary.org/risk.asp*. There was also a webcast on March 22 sponsored by the Academy to update all on the project.

Other News:

Frank Dino, Chief Actuary of the Florida Department of Financial Services, who has been an active member of LHATF, has retired. His last day of work was March 31, 2006.

Summary

As I predicted in the March 2006 issue of *Product Matters!*, much of the LHATF work in 2006 is being devoted to the principles-based approach. ☐

The Academy group still expects that they will have final regulations and actuarial guidelines [for principles-based reserves] ready for adoption by December 2006.

Toastmasters—How I Learned to Stop Staring at my Shoes

by David Hippen

Editor's note: The SOA Business and Communications Skills Task Force recently approved going forward with a publicity campaign for Toastmasters International.

As I finished my last actuarial exam, part of my product support duties included assisting the compliance analysts with state filings. One of the analysts told me about the Toastmasters Club that met weekly during lunch. She said she thought I would like it, and invited me to a meeting.

Although finishing the exams freed up my study time, Toastmasters wasn't first on my list of priorities. Success with exams can confer a false feeling of having done all that's needed to succeed at work, making other (i.e., non-actuarial) skills seem less important. Besides, I thought, "Who needs the fear of standing up in front of people to speak?!"

Thankfully, my compliance friend was persistent and persuasive, so I quietly slunk into the back at the next meeting. Despite my initial nervousness, it quickly became clear to me that this was a casual, comfortable and interesting place to eat my lunch. It was quite a change from the years of "swallow-a-sandwich-and-study" lunch breaks I had endured while preparing for actuarial exams.

I went back to Toastmasters the next week. By the end of the second meeting with this friendly group, it no longer felt like being with a bunch of strangers. The club treasurer disclosed that semiannual dues were very minimal, so I decided to sign up.

Upon payment of dues, Toastmasters International sent me a manual with simple guidelines for preparing speeches. It looked pretty easy—and it was! Before long, I agreed to give my first speech, called the "Icebreaker," which consisted of talking about myself for a few minutes.

Despite the simplicity of the process, I found myself working very hard to improve my speaking skills. The experience quickly began to transfer to communicating more easily at work. Stepping back, I now realize that many new actuaries are thrust into situations where other managers expect well-organized presentations in English, not actuarial jargon. Without my participation in Toastmasters, I too would have faced this awkward situation.

One early benefit of Toastmasters training was the increased ease with which I conversed with regulators on compliance issues (which serendipitously delighted my

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club sponsor, the compliance analyst). Impromptu speaking is often required of actuaries, and the subject is not always one of our choosing. Toastmasters provides members ample opportunity to improve impromptu speaking skills.

The multiple speech projects in the basic Toastmasters manual helped me focus on many different aspects of prepared speeches. Once I was comfortable with the basics, I progressed to advanced speech manuals, which permitted me to choose projects that fit my career goals as well as my job. Later, this translated to helping improve my presentations at Society of Actuaries meetings as well as company marketing, communication during a project and investment committee meetings.

Toastmasters gave me advanced management training, too—the less-known but equally important second goal of Toastmasters. There are a number of projects in the leadership track designed to grow the Toastmaster's management abilities. In addition, once comfortable with some of the speaking basics, the logical next step was to accept the responsibilities of club officer positions. I learned how to function as a leader as well as a treasurer.

Challenged to compete in club contests, I learned it was a great way to win trophies and new friends at the same time. Winning a contest is not only a great ego booster, but it also gives the winners the opportunity to go on to contests with other club winners from the surrounding area. This naturally broadens your learning, and presents new networking opportunities as well.

When I moved to new actuarial jobs in new places, Toastmasters turned out to be a quick source of new friends. Whether moving or not, I highly recommend it to anybody. My experience with four separate clubs (L.A., St. Louis, Tallahassee and Pittsburgh) has been consistent—the atmosphere is supportive, positive and progressive.

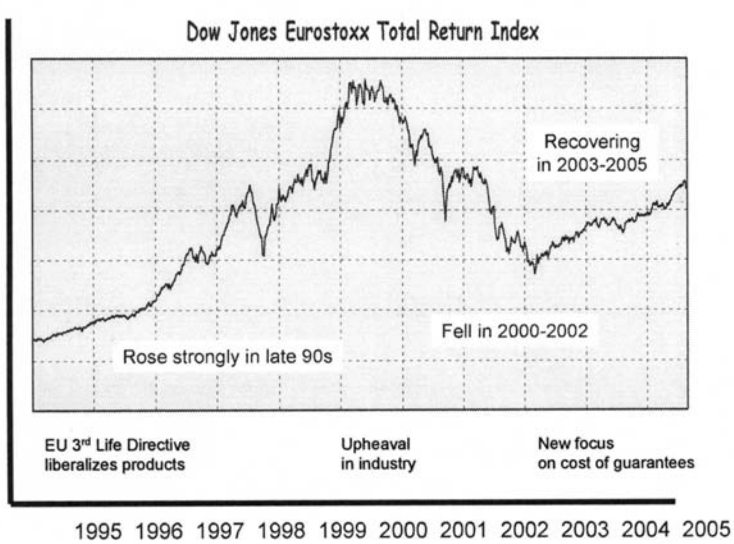
Try it—I think you'll like it! ☐

Retirement Savings Product in Europe

by Tamara Burden

Europe is in a state of financial flux. The ongoing effort to develop an integrated European economic community has led to sweeping changes in accounting regulations and pension systems. These changes will have profound implications for the competitive structure of the European life insurance market.

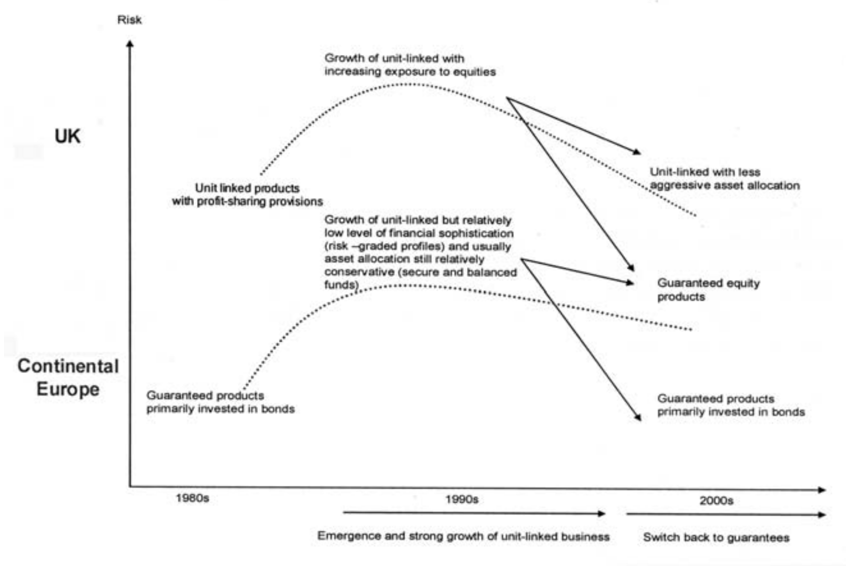
For several years, the topic of pan-European pension reform has headed the agendas of EU and World Bank meetings. In many parts of Europe the existing conventional pension schemes are failing to provide the retirement security for which they were developed (i.e., conventional pensions were originally designed for a full-time employed husband with a homemaker wife). Socio-economic changes such as two-worker families and the rise in self-employment now render these provisions obsolete. High replacement ratios—an average of 70 percent of pre-retirement income, compared to 45 percent in the US—and incentives for early retirement mean the European pension programs are the most expensive of the OECD countries. The majority of the reforms outlined or implemented revolve around defined contribution style plans, with incentives provided to workers to save for retirement on their own. This has opened the doors for insurance companies to offer individual retirement savings plans targeted to those workers trying to independently supplement employer and government sponsored pensions.



Increased political discourse and media attention have raised the awareness of the public. In most European countries, government pensions are little supplemented by private plans, and many who have been relying on social security systems to pay for their retirement now do not believe they will receive the full amount of pension promised to them. As the challenge to provide sufficient retirement funds becomes a more personal responsibility, people have begun searching for alternative retirement savings options. In several countries the insurance market has responded to this need offering **unit-linked products with guaranteed living benefits**. It's a different take on the variable annuity products that are sold in the United States. These unit-linked products support flexible recurring premium deposits during the employment years and have payouts linked to retirement, often with provisions for early election of the guarantee in the case of disability or death of a spouse.

The concept of offering minimum guarantees on equity-based savings products is very appealing in Europe. The market fall of 2000-2001 had a strong impact on the psyche of European investors. Unit-linked products had just begun to increase in popularity in the late 1990s, and for many policyholders it was their first foray into equity investments.

The untimely drop of the equity markets world-wide increased the risk-aversion of the



typical European investor. However, the low interest rate environment means that fixed-income investments are not attractive either. Unit-linked products come with a menu of professionally managed investment options with a wide spectrum of investment choices. Policyholders who don't want to expose themselves to the downside risk associated with equities can cushion their unit-linked account with one or more guarantees that protect their investment in case markets perform poorly.

Starting in 2006, providers in Germany, Italy, Spain, Belgium and the UK are offering a palette of unit-linked products with guaranteed benefit riders, each adapted to the specific needs of their retirement savings population. These products are based on the variable annuity products sold in the U.S., but emphasize recurring deposits and benefit election at retirement. Additionally, they are structured to take advantage of country-specific tax incentives for retirement savings that can have conditions for minimum investment horizon or minimum strength of guarantee. The average expected equity exposure is generally lower than the equity exposure in U.S. variable annuities, and the guarantees are stronger (and more expensive), reflecting the greater risk-averseness of European investors.

For the insurance carrier, these guarantees appear as liabilities in financial statements, and the risks associated with these liabilities can be substantial. Guarantees can expose companies to equity level risk, interest rate risk, volatility risk, and exchange rate risk. In order to avoid excessive losses these risks must be constantly monitored and actively managed. Experience shows that they can be substantially reduced using an appropriate hedging strategy.

Until recently, accounting regulations in Europe made the hedging of embedded guarantees a potentially unattractive process. Even a perfect hedge of the economic value of the liability can lead to substantial income statement volatility if the accounting standards do not allow companies to reflect the pure economic value of the liability on the balance sheet. However, in addition to reforming the retirement system, Europe is simultaneously revising its methods of financial accountability. Companies are beginning to be required to report assets and liabilities at fair-market value that have for years been reported at book value or following best-estimate actuarial models. Although this adjustment will be a struggle for business currently on the books, the change to a fair-value accounting basis provides companies greater incentives to understand and manage risk.

Changes in pension legislation have opened the doors for insurance companies to take a leading role in revitalizing the European retirement savings market. Flexible, transparent, equity-based investment products with valuable guarantees are already beginning to transform the marketplace. Simultaneously, financial reporting standards in Europe are fundamentally changing in ways that provide companies greater incentives to understand and manage risks. This provides both a challenge and an opportunity for companies to differentiate themselves in the market and improve their competitive standing with new products that showcase their risk management capabilities. ☐

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Marketing and Distribution Section Seeking Product Development Experts for Two Initiatives

by Rob Stone

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As part of its recent change in focus, the Marketing and Distribution (MAD) Section has undertaken two initiatives which require specialized assistance. The first of these is to identify individuals with expertise and/or a common interest in various areas related to **marketing and distribution**. The topics under consideration are widely varied—bank distribution of annuities, teleunderwriting, outsourcing, data mining, to name a few—but all address particular aspects of bringing a product to the market. The section isn't interested in defining the list of topics completely, as it is hoped willing professionals will come forward with pertinent topics not yet considered. All that is asked from these volunteers is a willingness to spend five-10 minutes on the phone discussing the emerging issues in their area of expertise. The goals of this initiative are to keep abreast of issues by allowing knowledgeable people to point the direction for discussion in a particular field, and to create informal networking groups of individuals with similar interests and expertise.

The second initiative addresses the **broad product development process** that surrounds actual product design and pricing. The Marketing and Distribution Section is planning to conduct a survey of industry professionals who are responsible for overseeing all the steps necessary to bring a product to market. We want to discuss topics like how (or whether) underwriting is folded into the product development process, strategies companies use to decrease time to market, frustrations that continually crop up during the implementation phase, how different companies manage systems and leverage technology, how innovative product ideas are generated, who makes the go/no go decision on what to price and what to ultimately sell, and many other similar issues. Any topic or issue that is pertinent to bringing a product to market (aside from the design and pricing) is of interest. It is expected that these interviews will provide a rich set of topics, issues and insights that will both provide and guide content for future newsletters, seminars and research. The section hopes to complete a small number of initial interviews/surveys this summer with completion of the project by fall.

The section would be glad to have volunteer experts for either of these initiatives. Potential partners should contact MAD Section council member Rob Stone at *rob.stone@milliman.com* or chair Van Beach at *van.beach@towersperrin.com*. ☐

6th Annual Product Development Actuary Symposium

The following are four reasons to attend the 6th Annual Product Development Actuary Symposium on June 26 and 27, 2006:

1. The sessions promise to be current, intriguing and cover a wide variety of topics including current issues with reinsurance, variable annuities, UL secondary guarantees, SPIAs, principles-based reserves, regulatory and tax updates for life insurance and annuities, indexed product update and an update on the secondary life insurance market.

2. An opportunity to discuss issues with colleagues who may be facing the same issues as you are and to expand your network of actuaries with whom you can call for advice.

3. To make the symposium the best that it can be, four sections of the SOA are helping plan it: the Product Development Section, the Marketing and Distribution Section, the Reinsurance Section and The Actuary of the Future Section.

4. The Las Vegas location promises to bring an exciting atmosphere to the meeting.

Hope to see you there! ☐

Post-Symposium Seminar: Principles-Based Valuation and its Impact on the Product Development Actuary

As you make your plans for the 2006 Product Development Symposium in Las Vegas, be sure to include an extra day to attend a post-symposium seminar. Our section is sponsoring a seminar on principles-based valuation. For about as long as state regulation of the insurance industry has existed, actuaries have calculated benefit reserves on a formulaic basis. Recently, many new products with complex features have made a formulaic approach more difficult. There is also a growing realization that products with minor differences in benefit design can have vastly different "true" (as opposed to formulaic) capital requirements. Actuaries will soon have the responsibility for calculating reserves and capital for many products using a "principles-based" approach. What impact will these approaches have on a company's product development actuaries? Indeed, how can a product be priced, in order to account for a plethora of possible future required capital levels?

The presenters will address:

- The latest in principles-based requirements, and how actuaries are planning to cope with them

- Common pricing approaches for products already calculating RBC using a C3, Phase II approach

- Our panel experts' views on approaches that are likely to be used when new reserve requirements arrive

- Panel experts' views on product designs that might help minimize required capital under the new guidelines

- Reserve/capital approximations and other shortcuts that may be helpful to product development actuaries

The seminar takes place on the afternoon of June 27, and the morning of June 28, ending at noon. ☐

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