

Product Matters!

Published in Schaumburg, Ill. by the Society of Actuaries

December 2005 • Issue No. 63

Comments from the Chair

Everything Old **IS** New Again (and the Passion of the Product Development Actuary)

by Abraham S. Gootzeit

I've recently observed some milestone events in my life—my wife and I celebrated our 25 year wedding anniversary, our son graduated from college and got his first job and our daughter is a high school senior, contemplating colleges for next year. Each new event brings great energy, emotion and passion, as I marvel at the circle of life.

The life insurance industry and actuarial profession have also been marking milestone events and trends:

- Products have become increasingly customer-focused as product development actuaries forge ahead, causing regulators and financial professionals to catch up.
- Some insurers (and their employees) have adopted strongly held positions partially based on professional principles and partially based on self-serving issues.
- Reinsurers have increased their rates and have strengthened contract provisions.
- Companies struggle to differentiate themselves as they confront ever-more sophisticated marketing organizations.



- Certain products and sales practices have faced increased regulatory scrutiny.

Our industry and profession have faced these issues (and more) over the past year or two, but we've also faced these issues before, most of them multiple times. Product development actuaries generally have been leading-edge thinkers—analyzing the situations, generating ideas to address them, creating workable solutions and cajoling and persuading our employers to allow us to

continued on page 3

Contents

Published by the Individual Life Insurance
and Annuity Product Development Section
of the Society of Actuaries
475 N. Martingale Road, Suite 600
Schaumburg, Ill. 60173-2226

Phone: 847-706-3500 • Fax: 847-706-3599
Web: www.soa.org

This newsletter is free to section members. A
subscription is \$20.00 for nonmembers. Current-
year issues are available from the Communications
Department. Back issues of section newsletters
have been placed in the SOA library and on the
SOA Web site: (www.soa.org). Photocopies of back
issues may be requested for a nominal fee.

2005-2006 SECTION LEADERSHIP

Elinor Friedman, Chairperson
Jeffrey A. Beckley, Vice-Chairperson
R. Dale Hall, Secretary/Treasurer
Mary Ann Broesch, Council Member
Christine E. Dugan, Council Member
Michael L. Kaster, Council Member
Douglas L. Robbins, Council Member
Kenton L. Scheiwe, Council Member
Nancy Westfall Winings, Council Member

Douglas C. Doll, Newsletter Editor
Towers Perrin
One Alliance Center
3500 Lenox Road, Suite 900
Atlanta, GA. 30326-4238
PHONE: (404) 365-1628
FAX: (404) 365-1663
E-MAIL: doug.doll@towersperrin.com

Society Staff

Joe Adduci, DTP Coordinator
PHONE: (847) 706-3548
E-MAIL: jadduci@soa.org

Clay Baznik, Director of Publications
E-MAIL: cbaznik@soa.org

Kara Clark, Staff Partner
E-MAIL: kclark@soa.org

Jeremy Webber, Project Support Specialist
E-MAIL: jwebber@soa.org

Facts and opinions contained herein are the sole
responsibility of the persons expressing them and
should not be attributed to the Society of Actuaries,
its committees, the Individual Life Insurance and
Annuity Product Development Section or the
employers of the authors. We will promptly correct
errors brought to our attention.

Copyright © 2005 Society of Actuaries.
All rights reserved.
Printed in the United States of America.

- 1 Comments from the Chair
Everything Old **IS** New Again
(and the Product Development Actuary)
- Abraham S. Gootzeit
- 4 NAIC Fall '05: The Push Toward
Principle-Based
- Donna R. Claire
- 6 Genetics, Genetic Testing and Underwriting
- Thomas Ashley, M.D.
- 9 Lapse Experience Under Lapse-Supported
Products
- Dominique LeBel
- 13 Nontraditional Guarantees on Life and
Annuity Products
- Victoria L. Pickering and John P. Glynn

proceed. We do it with great energy, emotion and passion. We learn the lessons from similar past situations, and use our talent to create anew.

I marvel at this circle of professional life as well.

I am proud to have served on the Product Development Section Council the past three years. Your elected representatives have performed admirably in delivering our core research and continuing education activities. We sponsored a recently completed research report: *Analysis of Product Guarantees* and have contracted to begin the next project: *Substandard Annuities*. Thanks to friends of the Council Noel Abkemeir and Susan Kimball for chairing the respective Project Oversight Groups. Keith Dall organized our very successful (and fifth annual) *Product Development Actuary Symposium*. This was preceded by the *Profit Measures Seminar* capably organized by Doug Robbins. Mary Broesch and Nancy Winings did outstanding work in organizing the section sessions for the SOA spring and annual meetings, respectively (including valuable multi-session embedded seminars).

Mike Kaster organized a recent section survey to identify ways in which the section council can improve in the future. Kelly Levy and Mary Broesch have coordinated a webcast addressing various underwriting issues. Kudos to Doug Doll for another outstanding year as our newsletter editor. Jeff Beckley is the current chair of the Committee on Life Insurance Research (CLIR), Keith Dall is our liaison to the Committee on Life Insurance Company Expenses (CLICE) Emerging Issues Committee, and Mary Broesch is responsible for experience study oversight.

Thanks to: Mary Bahna-Nolan (past section council chair) for being our liaison to the SOA Board of Governors, to Kelly Levy for serving the section council as secretary/treasurer, and to Elinor Friedman for all her help and assistance in her role as vice chair.

Thanks to outgoing section council members Keith Dall and Kelly Levy—you've served with energy and passion (true product development actuaries!). And good luck to Elinor, this year's chair, and her tremendous group of hard-working volunteers.

Yes, it's been a busy and successful year! I am grateful to each and every one of our volunteers!

And to those of you who have read down to this point of the article—I encourage you to get involved in section activities. Bring your energy, emotion and passion and help us expand the knowledge and role of the product development actuary! □



Abraham S. Gootzeit, FSA, MAAA, is an independent actuary in St. Louis, Mo. He can be reached at abe.gootzeit@gmail.com.

NAIC Fall '05: The Push Toward Principle-Based

by Donna R. Claire



As most people know, the September 2005 NAIC meeting, scheduled for New Orleans, had to be canceled. After a brief hiccup to adjust for not meeting, the work is proceeding apace. The Life and Health Actuarial Task Force (LHATF) has been meeting in a series of conference calls. During most of these calls, the words “principle-based” (as opposed to formula-based) reserves and capital come up frequently.

This article summarizes my take on the recent developments at the NAIC.

C-3 Phase 2 – Risk-Based Capital

Risk-based capital’s C-3 Phase 2, which can be viewed as a principle-based requirement for capital for variable annuities, was discussed on an Executive/Plenary Committee conference call, and it is expected to be in place for year-end 2005.

In terms of the reaction I’ve been hearing from companies who are implementing it—it’s a lot of work! One area many are commenting on is the “standard scenario.” It is not as straightforward as just running a

single test; there are decision points, and several assumptions need to be examined.

The report on the C-3 Phase 2 RBC requirements, and a practice note on implementing it, can be found on the American Academy of Actuaries Web site, www.actuary.org.

And, for all those waiting with bated breath—yes, there is a C-3 Phase 3 group that just started work. It is working on what the risk-based capital requirements will be for universal and other life insurance when a principle-based reserve requirement is implemented, since the amount of conservatism in reserves will impact the level of conservatism required in the capital factors.

Reserves for Variable Annuities

There is a proposed actuarial guideline that would require reserving to be done on a consistent basis with the RBC C-3 Phase 2 with certain changes to reflect that it is dealing with reserves, not capital. Tom Campbell chairs the American Academy of Actuaries (AAA) Variable Annuity Reserve Working group. The AAA group had produced a report and a proposed guideline. LHATF has reviewed the issues, and has asked Tom’s group for some more analysis.

The proposed new guideline will certainly not be in place for year-end 2005. The current guideline on variable annuities with guaranteed living benefits was due to sunset on Jan. 1, 2006. On a conference call, LHATF voted to extend the sunset date for the current Actuarial Guideline 39 by two years.

Update to Actuarial Guideline 38

At the time of this writing, the proposed revisions to Actuarial Guideline 38 on term and other insurance reserves were expected to be adopted via an executive/plenary Conference call. The guideline makes it very clear that reserves must be established for prefunding of a secondary guarantee in a universal life product. It also includes a

compromise suggested by an industry group: having the guideline sunset in April of 2007. The thought is that, by that time, the principle-based reserve methodology would be ready.

Preferred Mortality

Many companies have complained that the current mortality table is too conservative for business issued using preferred underwriting, and this is causing a problem for term insurance. In June, LHATF voted to work on developing a preferred mortality table or tables. In addition to potentially providing an interim solution to the reserving issue on preferred risks, this will support the work on the principle-based reserving, because it will give companies more information on industry-preferred mortality.

This is a very active current project. Larry Gorski heads the steering committee on this. The steering committee consists of representatives for the SOA, AAA, regulators and industry groups. There are a number of sub-teams actively working. This includes the Underwriting Criteria, Data Validation and Implementation Teams. A call for data has gone out, and a number of companies are providing data. The goal is to have new preferred mortality tables ready to go by April of 2007.

LRWG (formerly ULWG)

The biggest current project of the life area of the AAA is the work of the Life Reserves Working Group, chaired by Dave Neve and Tom Kalmbach. This group used to be called the Universal Life Working Group, but recently changed its name to reflect that traditional life insurance was also added to the scope.

This has been a very active group, with 10 subgroups: assets, policyholder behavior, reinsurance, methodology, VUL, mortality, expense, modeling, tax and whole life.

The goal of this group is to have a document ready for exposure by LHATF at their December meeting. The overall framework is principle-based reserving. The thought is that reserves would be based, at least in part, on company experience.

Members of LRWG have gone to individual states and incorporated feedback from the regulators into their work. Reports from this group are available on the AAA's Web

site, www.actuary.org. This is an exciting project, and could affect most life insurance companies in the relatively near future.

SVL II - Possible Revisions to Reserving:

In a project related to the LRWG, there is an Academy group, headed by Dave Sandberg, working on revising the Standard Valuation Law to be more principle-based versus formula-based. This can be viewed as a steering committee. This group is looking at such things as when, and what type of peer review would be needed of the actuary's work.

There are several regulators who are working on the revisions needed to the Standard Valuation Law to accommodate a principle-based reserving and capital adequacy system. The AAA is providing assistance in this area also.

Update to the Standard Nonforfeiture Law

To go along with changes in the reserving, there is also an AAA group that is exploring updating the nonforfeiture laws to accommodate more flexible, multi-benefit products. There are at least some regulators who feel that, if the Standard Valuation Law is to be changed, changes to the Nonforfeiture Law to also allow flexibility should be made at the same time.

GRET Table

On a conference call, LHATF adopted the new Generally Recognized Expense Table to be used by companies using industry, as opposed to company, expenses for life insurance sales illustrations in 2006. This report is available from the SOA. The factors have some large differences from the factors currently being used, so for a company that is using the GRET factors, this new report should be examined.

Summary

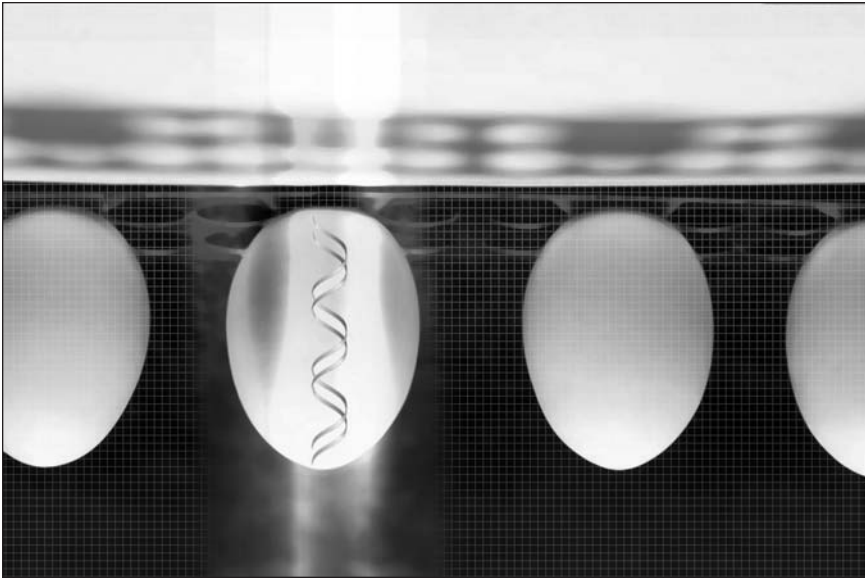
Even without a fall face-to-face meeting, LHATF remains active. There are many projects, most of these being supported by the AAA and/or the SOA. The push is to develop regulations that will result in products that consumers want, with reasonable reserve and capital requirements. □



Donna R. Claire, FSA, MAAA, is president of Claire Thinking, Inc. in Fort Salonga, N.Y. She can be reached at clairethinking@cs.com.

Genetics, Genetic Testing and Underwriting

by Thomas Ashley, M.D.



Editor's note: This article is reprinted with permission from Insurance Issues, a publication of Gen Re LifeHealth.

A paper published recently in *Health Affairs*, coauthored by Robert Pokorski, MD, vice president of Worldwide Research and Development for Gen Re LifeHealth, examined the consumer behavior of people who have a family history of Alzheimer's disease (AD) and tested positive for a gene linked to AD, called APOE4.¹ Participants in this study increased their purchase of LTC insurance, and did not change their life or DI coverage.

Anti-selection of this sort is a serious concern for insurers. While this research revealed an impact only on LTC insurance, we believe all lines will eventually be affected by genetic testing and the resulting anti-selection it can generate. Because of this, Gen Re LifeHealth wants to help our clients stay informed on this topic.

Genetics is an ever more significant aspect of medicine, and frequently the object of political regulation of life and health insurance underwriting. This report reviews important aspects of biology, summarizes the current regulatory status and concludes with Gen Re LifeHealth's opinion regarding underwriting practices.

Definitions

Predictive

The APOE4 study illustrates the predictive category of genetic information. The test subject has no clinical manifestations of the related disease, in this case AD. A positive test result confers increased risk that disease will develop at some time in the future. Another genetic test in this category is BRCA. Nongenetic information can also be predictive, such as cholesterol, BMI and blood pressure. These examples point out the difficult distinction between a disease and a risk of a disease. Is high cholesterol a disease, or is it a risk for the disease of CAD? Is BRCA1 a disease, or a risk for breast cancer?

Diagnostic

When a test is used to identify the cause or confirm the presence of a disease that shows clinical signs or symptoms, it is a diagnostic test. The same test can be either predictive or diagnostic. At present, the sole licensed use of the APOE4 test is to confirm AD as the cause in a patient with dementia, which is a diagnostic use. The *Health Affairs* paper describes a predictive use of the test for APOE4.

¹ "Genetic Testing For Alzheimer's Disease And Its Impact On Insurance Purchasing Behavior" Zick et al. *Health Affairs* 2005; 24: 483-490 (<http://content.healthaffairs.org/cgi/content/abstract/24/2/483>).

Exceptionalism

This represents a claim that some part of a greater whole is different from the rest, and special. For example, a recurring idea in American history is a form of exceptionalism: that America is different from all other countries and has a special role to play in the world. Genetic exceptionalism holds that genetic information is different from other medical information. It requires special consideration, including privileged treatment of genetic records. A growing scientific consensus maintains that it is neither appropriate nor feasible to segregate genetic information from other biological or medical knowledge. It is widely expected that genetics will become the core of medical knowledge and practice, so any distinction is meaningless and exceptionalism is untenable.

Politics and the Law

Application of genetic information in underwriting is often misunderstood. Referrals to our medical department have expressed both a reluctance to act on genetic information for fear of litigation and a conviction that laws prohibit such action. The former is unrealistic, and the latter is plain false.

ACLI and its Risk Classification Issues Committee are deeply involved in the politics of genetics and insurance regulation. Over the past 10 years, nearly every state has enacted regulation of the use of genetic information. In every case, ACLI has lobbied successfully to protect the most important principle of underwriting, our freedom to consider anything that relates to mortality risk and is known by the applicant.

Most states have outlawed discrimination in employment and health insurance based on predictive genetic information. Once disease is detectable, genetic information is either permitted (diagnostic use), or it becomes unnecessary in the assessment of the disease status. A few states have extended the same prohibition on predictive genetic information to DI or LTC, or both. Every statute that regulates the use of genetic information exempts life insurance, provided that the underwriting action adheres to sound actuarial principles and reflects actual or reasonably anticipated

experience. That qualification applies to every underwriting action, so it does not add any burden.

Two states have regulated use of genetic data in life insurance—Vermont and Massachusetts. Both prohibit the insurance company from requiring or initiating a genetic test as a condition for insurance. The restriction is inconsequential, as this would be a poor underwriting strategy. If, however, genetic testing became commonplace and outside the medical record (such as mail-order screening), potential anti-selection would motivate insurance testing. Both states provide for reconsideration of the restrictions should a test become widely used in clinical medicine.

With 50 state legislatures and Congress constantly at work, the picture is complicated and can change frequently. To keep up, here are two resources.

National Human Genome Research Institute

(Policy and Legislation Database)

<http://www.genome.gov/PolicyEthics/LegDatabase/pubsearch.cfm>

“This database contains Federal and State laws/statutes; Federal legislative materials; and Federal administrative and executive materials, including regulations, institutional policies, and executive orders. The database currently focuses on the following subject areas: privacy of genetic information/confidentiality; informed consent; insurance and employment discrimination; genetic testing and counseling; and commercialization and patenting.” The database supports searches by jurisdiction, by type of regulatory action (law/statute, administrative) and by topic. It appears to contain the most comprehensive and current information.

American Council of Life Insurers

The ACLI has written a survey entitled “Life Insurance Law Survey: Underwriting Limitations Based on Genetic Tests and Information” which includes a listing, by state, of laws and regulations relating to

Referrals to our medical department have expressed both a reluctance to act on genetic information for fear of litigation and a conviction that laws prohibit such action. The former is unrealistic, and the latter is plain false.

continued on page 8

underwriting and genetic testing. Members of the ACLI can find the survey at <http://www.acli.com/ACLI/Compliance/Law%20Surveys/LS05-LILS06>, or by typing the phrase “Underwriting Limitations Based on Genetic Tests” into the advanced search feature on the ACLI Web site.

Conclusion

To summarize the state of underwriting, we can consider these four questions:

- Can we ask?
- Can we act?
- Will we act?
- What can we do to manage the risk of anti-selection?

Clearly, in life insurance we can ask about genetic information and we can act on genetic information, no matter how we define it, in all U.S. jurisdictions. The next question is “Will we act?” Yes, and in certain circumstances we have acted. Much genetic information is diagnostic, or else never exists without clinical disease. Examples are sickle cell anemia and cystic fibrosis.

Predictive genetic information is important to risk assessment for BRCA, APKD and Huntington’s disease. APOE4 mortality risk is smaller and more delayed, but is relevant in some cases.

Dr. Pokorski’s article demonstrates that family history and genetic test results change behavior regarding the purchase of LTC. While the impact on life insurance is smaller, the industry can act to mitigate the risk.

One thing we can address immediately is the way we inquire about family history. A typical family history question states, “Is there any history of death before age 60 from heart disease, stroke or cancer among your parents, siblings or children?” A few companies add hereditary disease to the list, or ask for age at diagnosis of disease instead of death. To counteract adverse selection related to APOE4, it is necessary to ask specifically about Alzheimer’s disease. The question should refer to diagnosis rather than death, and should not limit the age of occurrence. Inherited risk does not terminate

at any age, for Alzheimer’s or other conditions. Positive answers require a follow up question to ascertain the age at the time of each diagnosis.

When APOE4 or other tests become common, we will also need to ask about them separately. Our preference is to ask about each test, rather than about “genetic tests” as a category. Regulations vary wildly on the definition of genetic tests. All of the definitions are complicated. A dishonest applicant could successfully defend an omission. If we ask about specific tests that concern us, claims administration will be much more effective.

Framing the questions around specific diseases or tests makes regulatory filing more difficult. Each new concern requires rewording and refileing. While the time has arrived to revise the family history information, APOE4 is still rare and can wait. Perhaps there will be other tests to mention by then, such as BRCA.

The science is evolving, and the level of risk depends on the context, so Gen Re LifeHealth has not issued formal guidelines in SOURCE—Life, or any of our other underwriting manuals, on all genetic conditions. Please refer facultatively any concerns about genetic information underwriting. That will help us develop our knowledge, and improve underwriting decisions for all of us. □



Thomas Ashley, MD, is vice president and chief medical director with GenRe LifeHealth. He can be reached at tashley@genre.com.

Lapse Experience Under Lapse-Supported Products

by Dominique LeBel

Companies in the United States have been struggling to develop best-estimate lapse assumptions for lapse-supported products, such as universal life with no-lapse guarantees and return of premium term, given the lack of available experience for these products. The financial implications of over-estimating ultimate lapse rates can be significant.

At the same time, rating agencies have expressed concern about the lapse rates assumed in pricing lapse-supported products. For example, in its August 2005 report “2005 Credit Issues and Trends for U.S. Life and Health Insurance,” Moody’s stated that “Moody’s believes that the price-competitive fight occurring in the no-lapse UL market is one of the more serious long-term credit issues that the life insurance industry currently faces” in part due to the persistency assumptions used in pricing.

This article provides a review of the available lapse experience for lapse-supported products. The results of the following three studies are presented:

- 1) “Lapse Experience Under Lapse-Supported Policies,” Canadian Institute of Actuaries, October 1999. <http://www.actuaries.ca/publications/1999/9954e.pdf>
- 2) “Lapse Experience Under Universal Life Level Cost of Insurance Policies,” Canadian Institute of Actuaries, June 2003. <http://www.actuaries.ca/publications/2003/203052e.pdf>
- 3) “Long-Term Care Insurance Persistency Experience,” LIMRA International and Society of Actuaries, 2004. <http://www.soa.org/ccm/content/areas-of-practice/health/experience-studies/long-term-care-insurance-persistency-experience/>



The 1999 study focused on term to 100 products and excluded universal life level cost of insurance products and will be referred to as the term to 100 study in this article.

Universal Life Level Cost of Insurance Products sold in Canada:

Similar to U.S. universal life with no-lapse guarantee products in that this product is frequently sold for the lowest price that will keep the policy in force until the policyholder’s death. Cost of insurance charges are level and guaranteed.

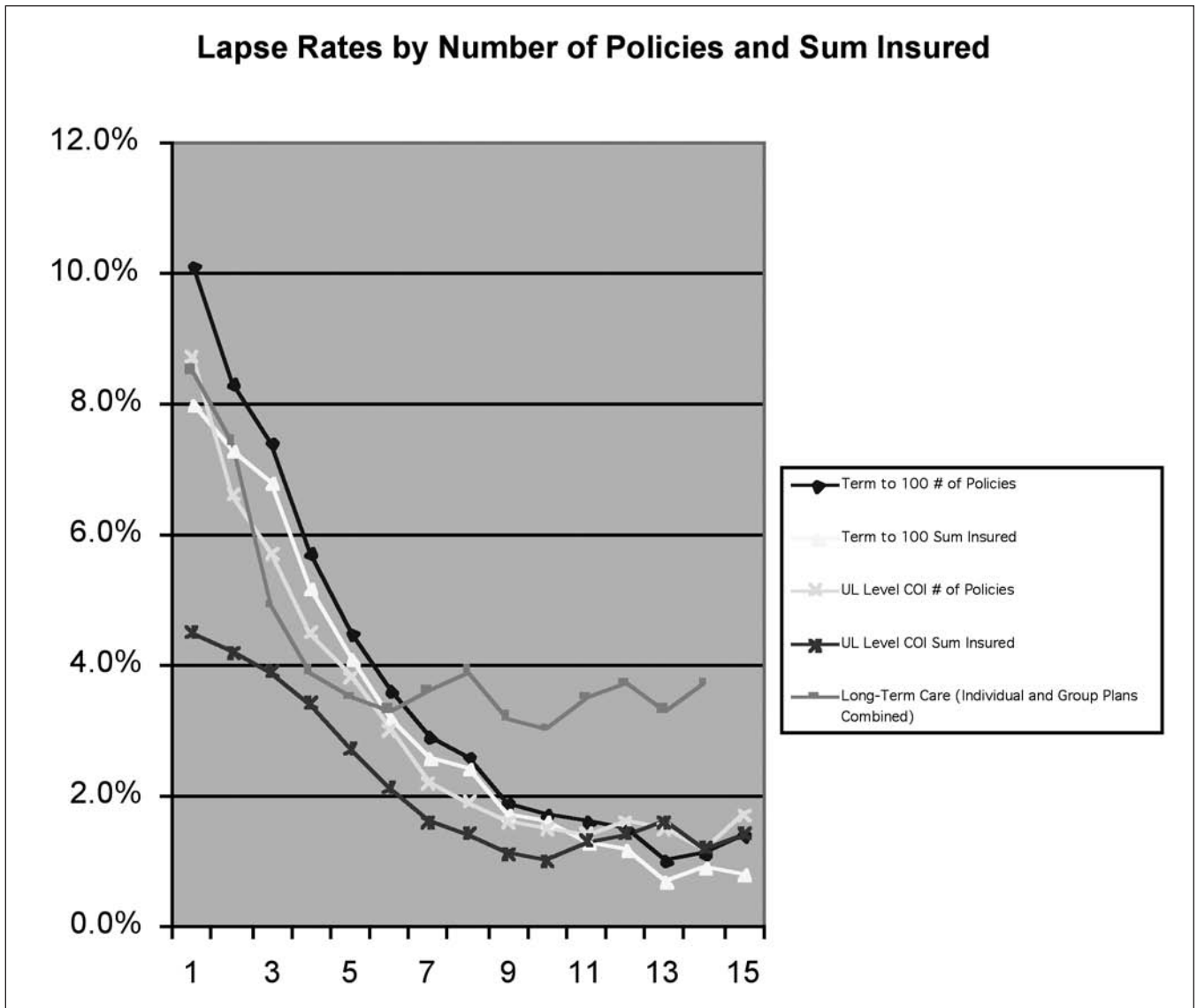
Term to 100 Products sold in Canada:

Guaranteed level premium whole life products without cash values.

continued on page 10

Lapse rates by number of policies and sum insured are presented in Chart 1 below. Ultimate lapse rates range from 1 to 2 percent for the Canadian studies and from 3 to 4 percent for the long-term case study.

Chart 1

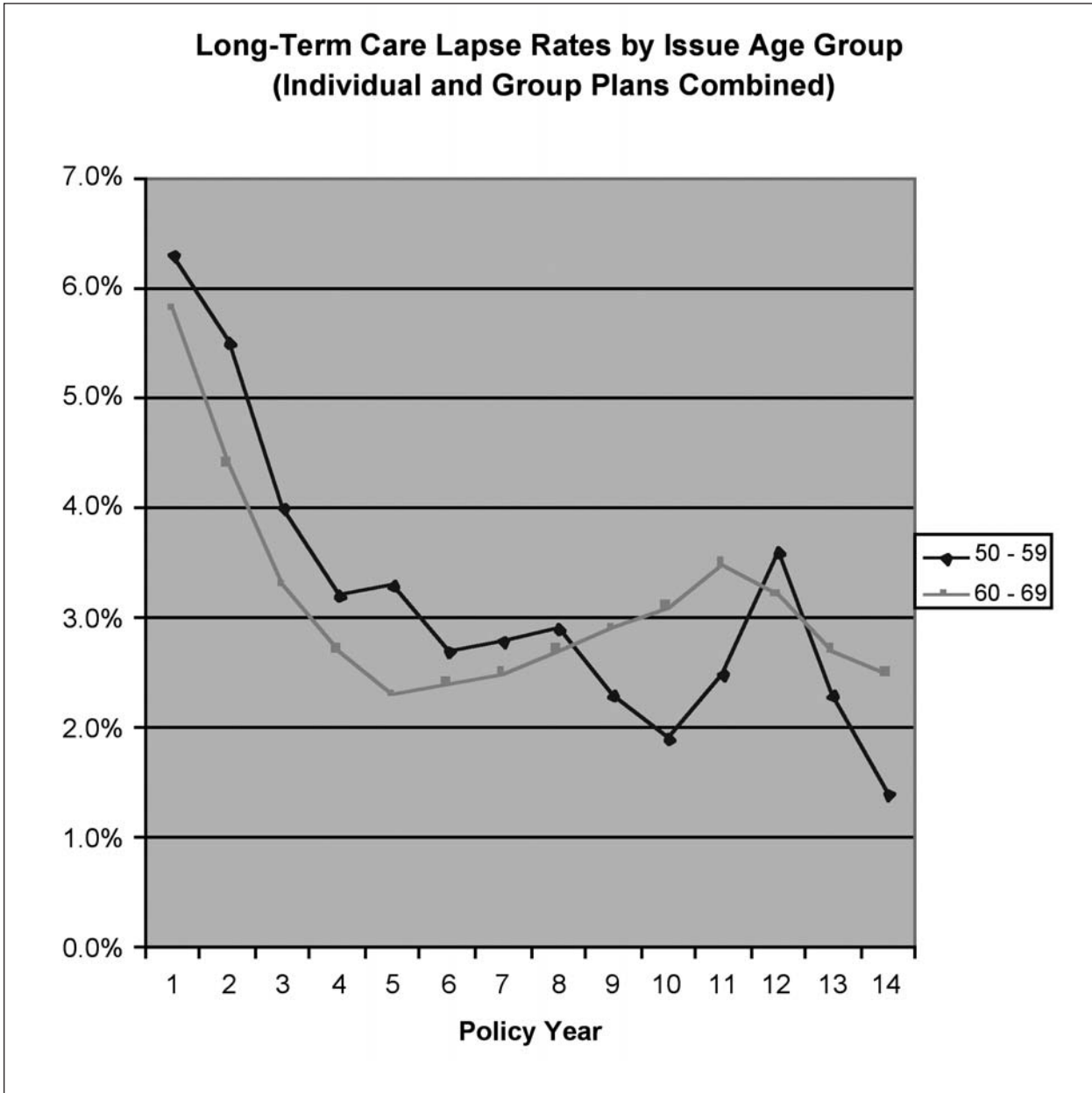


Lapse Experience Under Lapse-Supported Products

Long-term care practitioners generally do not use the results of the above long-term care lapse study for all issue ages combined (shown in Chart 1) to set ultimate lapse assumptions. Instead a more granular review leads to results more similar to the

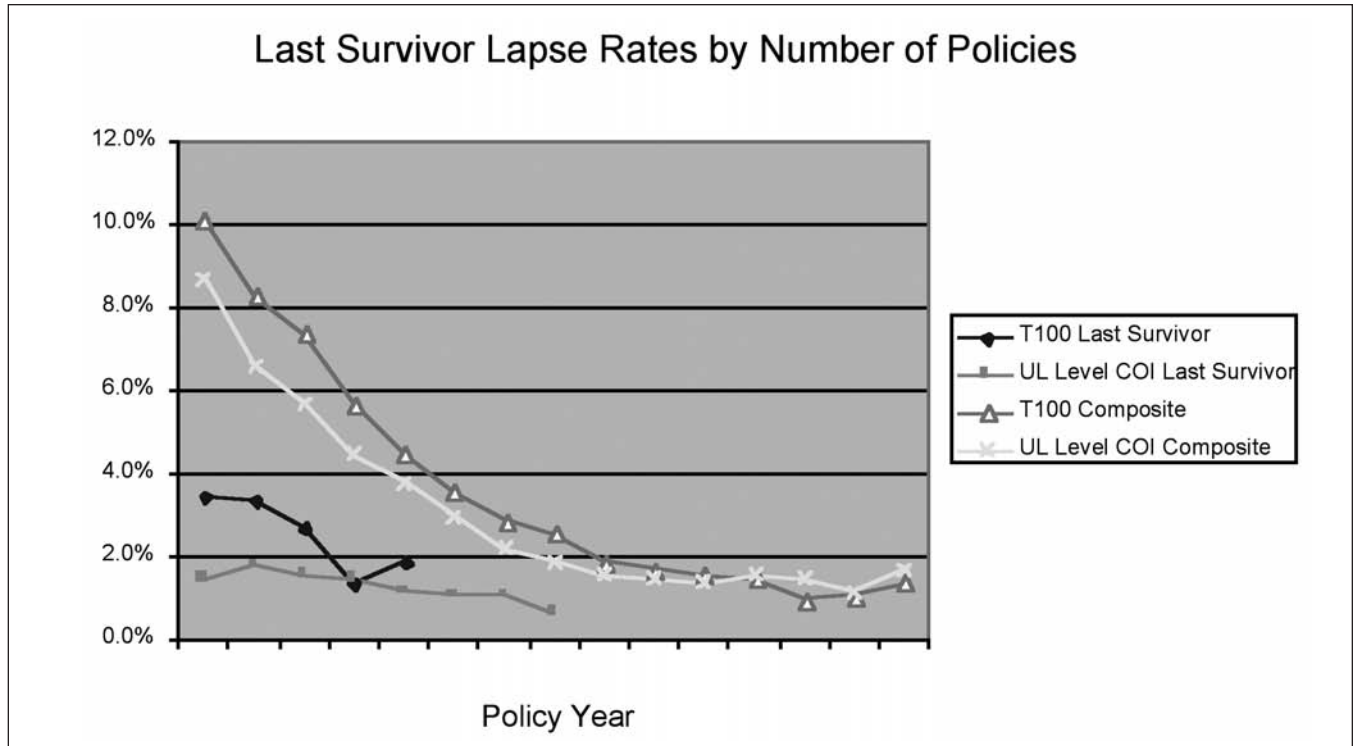
study for issue age groups 50 to 59 and 60 to 69, where ultimate lapse rates are in the range of 1.5 percent to 2.5 percent, which are expected to be more indicative of future experience. The results for these two age groups are shown in Chart 2 below.

Chart 2



continued on page 12

Chart 3



Last survivor (joint second-to-die) lapse rates appear to be significantly lower than composite lapse rates in the Canadian studies as shown in Chart 3 above, possibly reflecting a more educated sale.

The results of these studies indicate that the Canadian and U.S. long-term care markets are not unsophisticated. Rather these markets understand the value of the options in lapse-supported products and the significant internal rates of return that are foregone upon lapse. It would seem reasonable to assume that the U.S. secondary guarantee UL and return of premium term markets also are (or will be) sophisticated and to therefore use the lapse study results as a reference point to set lapse rates. Adjustments could then be made for product, distribution and market differences such as the presence of cash values, commission patterns and the growth of the secondary settlement market.

Although it is difficult to ignore the level of ultimate lapse rates, it should be noted that lapse rates may not be statistically credible in later durations. In particular, care is

required in interpreting the lapse rates in Charts 2 and 3 where the number of policies exposed for these segments is lower.

The three studies provide additional information such as scope, methodology, limitations, contributing companies and additional results broken down along multiple criteria. The reader is encouraged to read each study.

The Canadian Institute of Actuaries is currently collecting lapse data and will be releasing new term to 100 and universal life level COI lapse study results in 2006. The new study will have a larger exposure base and will include later policy durations.

Until lapse studies are available for lapse-supported products, such as universal life with no-lapse guarantees and return of premium term, the appropriate level of the ultimate lapse assumption to be used for pricing, cash flow testing, embedded value and GAAP reporting will continue to be debated, but actuaries should be aware of the available experience, since the financial impact of overestimating ultimate lapse rates can be significant. □



Dominique Lebel, FSA, FCIA, is a consultant with Towers Perrin in Weatogue, Conn. He can be reached at Dominique.Lebel@towersperrin.com.

Nontraditional Guarantees on Life and Annuity Products

by Victoria L. Pickering and John P. Glynn

Editor's note: The paper "Nontraditional Guarantees on Life And Annuity Products" is the result of research sponsored by the Product Development Section. We have printed a portion of the introduction and the table of contents to tempt you to obtain the entire research paper from the SOA's Web site. You may find the paper in the life research area: <http://www.soa.org/ccm/content/?categoryID=328002>.

Introduction

"Nontraditional" guarantees refer to guarantees that are in addition to traditional mortality, expense and interest guarantees. Examples of such types of guarantees are death and living benefits on variable annuity contracts, and no-lapse guarantees on universal life or variable universal life products.

Many companies have greatly expanded their offerings of nontraditional guarantees over the past few years. While the resulting blocks of business are very large, most of these guarantees have not been in force for long enough periods to produce a solid basis for assumptions or projections of long-term results.

An insurance company offering such nontraditional guarantees faces a complex situation to analyze and manage, both when deciding to issue the guarantee and later in the management of the in-force block. Many decisions must be analyzed both at the product level and in a larger corporate, competitive and regulatory context. Third-party individuals or organizations dealing with insurers who offer nontraditional guarantees must often do similar analyses.

The purpose of this paper is to offer practitioners an overview of the various issues concerning the pricing of these guarantees, the many other issues which need to be analyzed and addressed in the determination of risks and the management of the block of



business, and the results of a company survey of practices. This paper is based on the working knowledge of the authors, a broad compilation of literature and the company survey results. At the end of most sections of the paper, we have provided a list of resources which we have selected as some of the best sources available for those practitioners interested in further researching the subject matter.

As part of the research for this paper, we conducted a survey of company practices for issues related to nontraditional guarantees. Participation in the survey was voluntary. The survey was distributed to major companies selling individual life and annuity products with nontraditional guarantees and to the members of the Society of Actuaries' Product Development Section for distribution at their companies.

This paper is organized into three sections. Section 1 describes many types of nontraditional guarantees and briefly lists some of the associated risks. Section 2

continued on page 14

discusses the risks and risk-control strategies. Practitioners familiar with product designs may want to jump directly to Section 2. Section 3 reviews the limited information on company experience to date.

Appendices are also included in the paper. Appendix 1 is an overview of the regulations relevant to products with non-traditional guarantees. Appendix 2 contains the company survey results and Appendix 3 is a copy of the survey.

TABLE OF CONTENTS

SECTION 1: NONTRADITIONAL GUARANTEED BENEFITS AND ASSOCIATED RISKS	.4
A. Annuities	.4
B. Universal Life insurance	.4
C. Term Life insurance	.4
D. Other products and types of guarantees	.4
SECTION 2: RISKS AND CONTROL STRATEGIES	.4
A. Risks and financial issues	.4
1. Risks of nontraditional guarantees	.4
2. Pricing and measurement of risk	.4
3. Corporate issues and strategies	.4
B. Competitive and market issues	.4
1. Distribution	.4
2. Market share and critical mass	.4
3. Competitive environment	.4
4. Commoditization	.4
5. Patents	.4
6. Exchange activity	.4
7. Secondary markets	.4
C. Corporate issues	.4
1. Ratings, publicity, reputation	.4
2. Operational risks	.4
3. Third-party arrangements	.4
4. Management of existing blocks of business	.4
D. Regulatory and legal issues	.4
1. Compliance	.4
2. Reserves, accounting and other regulations	.4
3. Tax	.4
4. Market conduct issues and other litigation risks	.4

TABLE OF CONTENTS

(continued)

E. Designing benefits and charges4

1. Determination of benefit provisions4

2. Relation between expense and revenue basis4

3. Allocation of charges and labeling of charges4

4. Offering a menu of choices4

5. More complicated structures4

6. Private placements4

7. Semi-guarantees4

8. Disclosure of the guarantee4

F. Policyowner actions4

SECTION 3: COMPANY EXPERIENCE4

CONCLUSION4

APPENDIX 1: REGULATIONS4

**APPENDIX 2: COMPANY RESPONSES TO SURVEY OF
NONTRADITIONAL GUARANTEES**4

**APPENDIX 3: SURVEY OF NONTRADITIONAL
GUARANTEES**4

Victoria L. Pickering, FSA, MAAA, is a principal and partner with Carstens Glyn & Pickering in Bethesda, Md. She can be reached at 301.320.8559.

John P. Glynn, FSA, MAAA, is a partner with Carstens Glyn & Pickering in Bethesda, Md. He can be reached at glynnj@comcast.net or 240.426.0189.



SOCIETY OF ACTUARIES

475 N. Martingale Road • Suite 600

Schaumburg, IL 60173