PRODUCT DEVELOPMENT SECTION

"A KNOWLEDGE COMMUNITY FOR THE SOCIETY OF ACTUARIES"

Product Matters!

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Chairperson's Corner: Team of Rivals

by Dale Hall

One of the great benefits I've come to enjoy through living in Central Illinois is the opportunity to learn more about Abraham Lincoln. The more I read and learn about Lincoln's life, the more impressed I become about his communication and leadership skills. I recently had a chance to hear more about Lincoln straight from biographer Doris Kearns Goodwin, who locally helped Illinois State University celebrate its 150th anniversary by giving a keynote address on the research for her best-selling book, "Team of Rivals: The Political Genius of Abraham Lincoln." It's a great story about how Lincoln brought together many of his fiercest competitors within his political party to be part of his cabinet during his presidency. Look for the Spielberg-directed film version of the story due out sometime in 2009. What's the "plot synopsis"? When you bring together a group of bright people from diverse backgrounds, all of whom have a common desire to create a better world around them, it's amazing what you can accomplish.

While I wouldn't necessarily characterize the Product Development Section Council as "rivals," it's very encouraging to see how all of them are committed to making great things happen through Product Development section activities in order to create useful resources for section members. We have a terrific group of council members and key volunteers from all sorts of backgrounds and points of view who are busy planning activities for 2008. We certainly have many people to thank as well for a successful 2007, especially outgoing Section Chair Jeff Beckley and section council members Mike Kaster and Doug Robbins. Through the first few section council meetings it's already been helpful to leverage off the experiences of incoming section council members John Currier, Tom Phillips and Sue Sell. Sue will be filling the role of Secretary/Treasurer for the PD Section, and Rob Stone will be taking on the role of Section Vice Chair. Our other returning council members, Cathy Biersbach, James Christou, Christine Dugan and Steve Largent, continue to bring great ideas to the table to make the section a success.

The year ahead is already taking shape, and as we presented during the PD section breakfast during the annual meeting, we are very committed to making section members the benefactors of outstanding opportunities for Product Development education, research and networking during 2008. The current section balance sheet still continues to show a strong surplus which we'll continue to put increasingly towards programs for our section members. With Continuing Professional Development requirements on the horizon for many of the worldwide actuarial organizations, SOA Product Development actuaries can rest easy knowing that a wide variety of programs will be available to them at very reasonable costs.

continued on page 3

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Contents

Plans are already underway for our "signature event" of the year, the 8th Annual Product Development Actuary Symposium, May 5-6, in Tampa, Florida. We have some outstanding speakers and sessions created and a variety of networking events planned. Of course, the wonderful sunshine of a "Spring Break in Florida" should also help make for a terrific symposium. A post-symposium seminar is in the works again this year. We are also gearing up plans for sessions during the Life Spring Meeting, June 16-18, in Quebec City. This will be another opportunity to catch up on product development topics in a city full of history, architecture and activity.

Our Section Council continues to have great partnerships with other sections, the SOA Board of Directors, and with the SOA staff. We have worked very well with the SOA Board to ensure that there are open lines of communication for us to give input on issues they are discussing, as well as coordinating with the Board and SOA staff on how to most efficiently carry out research and education needs for the future. We continue to look for more ways to get additional section members involved in our activities. As always, feel free to e-mail me with any ideas or questions you may have or any comments on how we can better serve the section.

We're looking forward to another great year for the Product Development section—one that "rivals" many of the successful years we've had in the past. Keep your eyes open for more information as the year moves along. ☐

Product Development Section Election Results

by Kenneth E. Joyce and Dominique Lebel

It's that time of year again to share with you the new members elected to the Product Development Section Council. Before doing so, we want to say good-bye to the retiring members who have willingly volunteered their time over the last year to help in the success of this section. Please join us in saying thanks and good-bye to retiring members Jeff Beckley (outgoing Chair), Mike Kaster and Doug Robbins.

Looking forward, the new members joining the Product Development Section Council are John Currier, Tom Phillips and Sue Sell. The remainder of this article tells you more about each of your new council members. Please don't hesitate to get to know them.

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John Currier is a senior vice president at Aviva, located in Des Moines, IA. John has more than 17 years of experience in the insurance industry. He has held management positions in product development with Aviva, ING and Conseco. Additionally, he worked as a consulting actuary for eight years. These roles have provided experience in management, product development, reporting, modeling, audit, and distribution. John's product experience covers life and annuity products including term life, fixed annuities, fixed indexed annuities, variable life insurance, secondary guarantee UL, traditional fixed UL, indexed UL and offshore business (life and annuity). He is currently responsible for product development and management of traditional fixed, fixed indexed, immediate, and structured settlement annuities.

Sue Sell is a Consulting Actuary in the Chicago office of Milliman, Inc. She has extensive experience in the annuity industry, recently focusing on competitive and market intelligence. Prior to joining Milliman, her work at a large stock life insurance company included annuity product development, pricing, administration and systems. Sue has authored a number of articles in industry trade publications and has been a frequent speaker at insurance industry meetings. She served on the I-340 exam committee and the RMD Working Group of the SOA.

Tom Phillips works in the Individual Life Actuarial Department of Principal Life Insurance Company where he currently leads the area in charge of managing the in-force products and developing mortality and other experience. He has over 25 years experience pricing and maintaining life insurance products of all types. He has worked with term, participating traditional and adjustable life, and universal life, both in a mutual life and stock life company environment. He also has extensive experience with individual life insurance actuarial standards of practice, working on the Life Committee of the Actuarial Standards Board, where he chaired the Task Forces that wrote the current Actuarial Standards of Practice No. 1 and No. 15, on nonguaranteed elements and dividends on life insurance policies and annuity contracts. □

Life Insurance Product Development Study Group has KICKOFF MEETING

Looking for additional ways to improve your company's product development process? Trying to learn more about how to have product ideas move from the drawing board to the market more efficiently? Then you'll be pleased to hear about a new initiative sponsored by LIMRA, LOMA and the SOA called the Life Insurance Product Development Study Group. The idea for the study group originated from an SOA research study which ultimately led to a LIMRA report on "Individual Life Product Development Process: The Need for Speed."

Product development actuaries, project managers, and policy form development staff from nearly 30 different life insurance companies met November 12-13 in Schaumburg, Illinois, to kick off this new group. Topics during the initial discussion included how companies collect and develop product ideas, how to efficiently test and implement a product, as well as what makes for a successful product launch. Actuaries discussed what makes for successful partnerships with project management and technology staff, and how evolving policy filing methods like the Interstate Compact will affect the speed to market. A variety of "hot topics" were also discussed to round out the meeting.

Future meetings of the study group will likely occur a couple times per year, either at a hosting company site or in conjunction with an industry meeting. Since this study group is jointly sponsored by LOMA and LIMRA, it is comprised of insurance company representatives. But, there may be opportunities for vendors and consultants to be brought in for educational presentations on specialized topics. To learn more about the November meeting or to hear about upcoming meetings of the Life Insurance Product Development Study Group, contact Mike Boot at the Society of Actuaries at *mboot@soa.org.*

Summary of Winter 2007 NAIC Meeting

by Donna R. Claire

The Life and Health Actuarial Task Force of the NAIC is devoting just about all its time to the Principles-Based Approach (PBA) project. At the December NAIC meeting the Life and Health Actuarial Task Force (LHATF) had a special three-day meeting, devoted to the PBA project.

Standard Valuation Law

LHATF had exposed a version of the revisions to the Standard Valuation Law at an earlier meeting. At this meeting, they reviewed all the proposed changes to the valuation law and comments they had received on the document. These changes were all designed to allow a principles-based reserving system. One major change from the current system is that the details regarding the reserving rules would be in a valuation manual. This manual, similar to the current Accounting Practices and Procedures Manual, would promote uniformity of rules. It would have a procedure for updating rules. LHATF expects to have a conference call in late December to look at the final document then release it for exposure.

One substantial change made from the last exposure is that the concept of a required independent actuarial review was eliminated. The independent actuarial peer review had opposition from both ends: the ACLI had requested that the regulators be forced to pay attention to it, since it was an expense to the company to have this review done, and a number of companies with simpler products did not believe the cost/benefit was there in all cases. Some regulators were uncomfortable with a peer reviewer that was hired by, and reported to, the company as opposed to a regulator. There would still be reviews done, but ideas as to how this would be done range from a centralized review office sponsored by the NAIC to having the review as part of the state examination of a company to having states hire an independent peer reviewer as necessary.

The first goal is to have the revisions to the law finished by the March NAIC meeting, so that it can be passed to the parent committees and potentially be adopted by the NAIC at the June 2008 meeting. If this is achieved, then the second goal of having something to give to the state legislators for 2009 for potential enactment on 1/1/2010 is possible.

Valuation Manual

The valuation manual is an extensive document, and is meant to be a living document, with changes made to bring in new products and update rules. LHATF divided the work of reviewing the manual into six subgroups:

- Life reserving: chaired by Pete Weber of Ohio

- Experience reporting: chaired by Fred Andersen of New York

- Reinsurance: chaired by Sheldon Summers of California

- Health: chaired by Julia Philips of Minnesota

- AOMR updates and Report formats: chaired by Leslie Jones of South Carolina

- Procedural issues: chaired by Mike Boerner of Texas

All these groups have been having conference calls, and all did some updating at the Winter meeting. None of the groups is totally finished, so they will continue to have conference calls. The goal is to have a version of the manual available by mid-year 2008. Work will continue on the manual past that time—e.g., annuities will be added to the manual at some point.

There was some discussion as to the role of ASoPs and how much should be prescribed by regulators as opposed to having guidance given by the Profession in the ASoPs. The Actuarial Standards Board has developed a draft of a possible ASoP on PBA. It will likely be discussed by LHATF in a January conference call.

PBR (EX) Committee

There is a Commissioner level group which is monitoring and shepherding the PBA process through the NAIC. They have developed general principles and are making sure all the effected groups at the NAIC are engaged in the process. This includes capital, blanks, and statutory accounting procedures groups. This group developed the overall timeline of when each group would need to finish the work in order for the 1/1/2010 date for implementation to work. Bottom line, the PBA project is proceeding apace.

Other Issues

LHATF briefly mentioned other projects they are working on. The interim solution for VAs with Guaranteed Living Benefits has been passed. This gives a simple mechanism for releasing accumulated fees of 2.5 percent a quarter. It has a sunset date of 1/1/2009.

The pre-need issue, where the 2001 table is inadequate for these benefits, but seems to be required unless there is a law change, is being worked on. Carol Salomone is chairing an Academy Work Group to look into this.

The Group Term Waiver of Premium regulation is out for exposure and will likely be discussed on a conference call in January of 2008.

Summary

A PBA is the right answer—in the past two decades, LHATF has had to develop band-aids to cover products that were not contemplated when the U.S. reserve system was set up in the 1940s. The band-aids could not take into account differences in companies, so reserves were too high for some products and companies and too low for others. A PBA will, within some constraints, allow companies to reflect their true risk.

The regulators have stepped up to the plate and are running with the PBA project. The Academy is providing technical support, but the lead on this project has certainly shifted to the NAIC (as it should). I expect much more discussion and further decisions on PBA at interim conference calls and at the next NAIC meeting in March in Orlando. ☐

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Why are Actuaries Going MaD?

by Steve Konnath, Chair of the Marketing & Distribution Section Council

Or maybe I should rephrase that title to ask why should you join the Marketing & Distribution Section? Well, I'm glad you asked. Let me explain the purpose of the section and how it benefits you.

First, we changed our section name a couple of years ago to better reflect the subject areas that we intend to serve. We were the Non-traditional Marketing Section and our past focus had a lot to do with direct marketing, non-traditional products like credit insurance, etc.

As we learned more about what our membership wanted us to focus on, we agreed that we should look at all forms of marketing and distribution. We are also considering that all of a company's internal processes used to bring products to market should be part of our focus. This includes subjects like product management and implementation, speed to market and new electronic delivery methods.

I know, you're probably saying to yourself, Holy Oceans, Batman! Aren't you trying to cover too much? Again, I'm glad you asked that question. The answer is "No." While we've expanded the possible subject areas, we recently surveyed members and non-members of our section and asked them what specific subject areas, within that ocean of possibilities, we should focus on. Here's what the survey said: The top four subject areas that people want to see more information about are:

1) Product Management
2) Banks and other non-traditional distribution
3) Speed-to-market business processes
4) Web and e-mail marketing/sales

In addition to the traditional subject areas we've brought to you, we will increase the amount of content and educational opportunities with the above subject areas. We're going to increase the use of webinars and other methods to bring these topics to you. Although the details are not yet decided by the section council, it is likely that webinars will be free to section members, but there will be fees for non-members.

So, why should you join the Marketing and Distribution Section?

1) You will become a better actuary by knowing more about the complete picture of what it takes to price a product, including marketing the product, managing the product implementation and better understanding the distribution channels. You and your company will benefit from this.
2) It will give you many "free" opportunities for education and professional development.
3) You'll get all of the other standard section benefits such as timely newsletters, networking opportunities, sponsored sessions at meetings, etc.

Please consider joining the Marketing and Distribution Section as you renew your membership with the SOA. If you've already done that and you didn't sign up for our section, you can still join us by contacting the SOA offices and asking them to add you to our section and to bill you for the very small fee of $20. Thank you for your consideration! □

Steve Konnath, FSA, MAAA, is a vice president and market segment manager with Physicians Mutual Insurance Co. in Omaha, NE. He can be contacted at steven.konnath@physiciansmutual.com.

PD Section Plans *Quebec City* Offerings

The 2008 Life Spring Meeting will take place in Quebec City June 16-18. The PD Section council has created a slate of sessions providing broad coverage of products and product development topics. Several of the sessions will compare and contrast U.S. and Canadian viewpoints on topics of interest.

Highlighting the list of PD section offerings are sessions on the Canadian experience with lapse supported products and the effect of principle-based reserving approaches on product development, including Canadian approaches to the issue.

Other offered sessions include non-reinsurance capital solutions, a point/counterpoint discussion on mortality improvement, product successes in Canada and the U.S. markets, and stochastic pricing.

Product-specific topics will center on annuity policyholder behavior, protection products, long-term care combination products, and an overview of the market for payout solutions (including VA living benefits).

The section council is excited about the programming for Quebec City. We look forward to seeing you there!

PD Section to Co-Sponsor 8th Annual Product Development Symposium

It's hard to believe there have been this many, but 2008 will see the 8th Product Development Symposium (PDS), co-sponsored by the product development section with the tax, marketing and distribution, and reinsurance sections.

The meeting will take place May 5-6 at the Marriott Tampa Waterside Hotel and Marina in Tampa, Florida. The planning committee has constructed a strong program, including a general session focusing on how demography and economics might intertwine to shape the future of the insurance industry.

Concurrent sessions at the PDS will include sessions on pricing products that are capital markets friendly, key trends that drive pricing results, risk-neutral pricing, current trends in underwriting, and a host of updates on various market segments.

A post-symposium session on illustration actuary topics, sponsored by the product development section, will take place the afternoon of May 6 and the morning of May 7.

Preceding the PDS will be the 3rd annual PDS Golf Outing, teeing off early on the afternoon of May 4. (Please contact Rob Stone at *rob.stone@milliman.com* if you wish to play.) Golfers of all skill levels are welcome to play.

So grab a little sun and plan on joining your fellow product development actuaries in Tampa! The complete agenda is now listed on the SOA Web site *www.soa.org*.

UL Benchmarking Survey

by Sue Sell

Universal Life (UL) insurance continues to play a significant role in the life insurance market. According to LIMRA, International, Inc., year-to-date UL annualized premium accounted for about 40 percent of U.S. individual life insurance sales as of Sept. 30, 2007. There is a high level of interest in this market as it continues to grow. Milliman, Inc. recently conducted a comprehensive survey of leading UL insurers to discover current dynamics of the UL market. The scope of the survey included UL with secondary guarantees (ULSG), cash accumulation UL, current assumption UL, and indexed UL.

The definition of the product categories is as follows:

ULSG—A UL product that is designed for the death benefit guarantee market with long-term no lapse guarantees.

Cash Accumulation UL—A UL product that is designed to focus on cash accumulation.

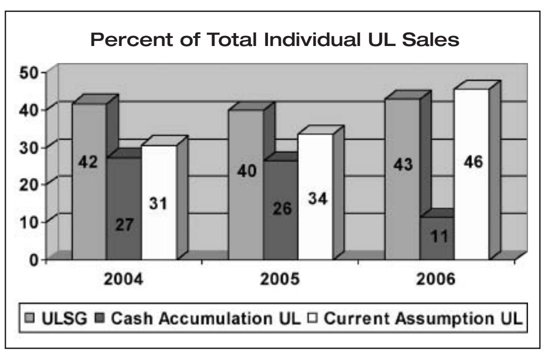
Current Assumption UL—A UL product designed to provide low-cost death benefits without death benefit guarantees. Products in the category are sometimes referred to as "dollar-solve" or "term alternative" products.

Indexed UL—A UL product where the interest credited to the cash value is tied to the performance of an index, such as the S&P 500.

Eighteen carriers participated in the survey. Since just seven carriers responded to the indexed UL part of the survey, with only four of the seven reporting sales information, the comments that follow will primarily address ULSG, cash accumulation UL, and current assumption UL results.

Sales

Sales reported by survey participants represented about one-third of UL industry sales. For purposes of the survey, sales were defined as the sum of recurring premiums plus 10 percent of single premiums. The following graph illustrates the UL product mix as reported by survey participants from 2004 through 2006.



ULSG sales have remained fairly level during this period. The change in the mix of cash accumulation and current assumption sales in 2006 was driven primarily by the sales of two large carriers.

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continued on page 12

Overall, the median policy size for total UL business ranged from $310,482 in 2004 to $470,477 in 2006. The table below shows that the median policy size for current assumption UL is the highest in all reported calendar years.

Calendar Year	Median of Average Policy Sizes ($ thousands)			
	Overall	ULSG	Cash Accumulation UL	Current Assumption UL
2004	$310.5	$322.2	$244.7	$395.6
2005	345.3	311.3	246.6	365.0
2006	470.5	268.3	235.3	630.7

The following chart shows the distribution of UL sales by channel. The brokerage channel had the largest percent of sales for all UL product types. (Note that a different number of companies are included in the various cells and that one participant provided only overall UL sales by distribution channel and another provided only ULSG sales by distribution channel).

Distribution Channel	Overall	ULSG	Cash Accumulation UL	Current Assumption UL
PPGA	16%	19%	34%	22%
Brokerage	57%	52%	37%	44%
Career Agent	25%	27%	29%	33%
Stockbrokers	2%	2%	< 1%	< 1%
Financial Institutions	< 1%	< 1%	< 1%	< 1%

ULSG sales had the highest average issue age (66), followed by current assumption UL (65) and cash accumulation UL (58). The gender mix by product type is shown in the table below:

Product Type	Male	Female
Total Individual UL	61.5%	38.5%
ULSG	56.3%	43.7%
Cash Accumulation	69.0%	31.0%
Current Assumption	63.8%	36.2%

Profit Measures

The primary profit measure assumed in pricing by the majority of survey participants is a statutory ROI/IRR on an after-tax and after-cost of capital basis. The median target ROI/IRR for cash accumulation UL was the highest at 12.00 percent, followed by current assumption UL at 11.90 percent and then by cash accumulation UL at 11.65 percent.

Actual results relative to profit goals were reported by survey participants. Results for all product types were very favorable:

- 67 percent of ULSG and cash accumulation UL participants reported they are meeting their goals.
- 75 percent of current assumption UL participants reported they are meeting pricing goals.
- One ULSG participant, four cash accumulation participants and one current assumption UL participant reported their actual results exceeded their profit goals.

Target Surplus

The majority of survey participants reported target surplus on an NAIC risk-based capital (RBC) basis. The overall target NAIC RBC percentage ranged from 200- to 300-percent for all markets. The following table shows the median components of RBC by UL product type:

Product Type	Median Component of Target RBC			
	Overall Target NAIC RBC%	% of NAR	% of Reserves	% of Premium
ULSG	250%	0.12%	2.78%	5.00%
Cash Accumulation	250%	0.20%	2.65%	5.00%
Current Assumption	250%	0.08%	3.54%	5.00%

Reserves

When asked about their outlook regarding principle-based reserves (PBR), participants' responses were nearly evenly split among an immaterial, positive and negative impact. Most respondents to the survey expect that PBR will be in place in 2010 at the earliest. Nearly 53 percent of participants have not performed modeling of PBR-type reserves on existing UL products. An overwhelming majority of survey participants have not developed new designs for consideration under PBR.

Eight of 17 survey participants are moving toward preferred mortality splits and lapses in reserves (the interim solution). Four participants reported they will not be reflecting such factors for various reasons, including its cost, insignificant impact, added complication, etc.

Risk Management

All survey participants use external reinsurance on a yearly renewable term (YRT) basis. Of those responding, nearly 93 percent of participants reported that their external reinsurance is on an onshore basis. Six participants reported the use of internal reinsurance with nearly an even split between those using onshore and offshore reinsurance. Few participants have accessed the capital markets for support or structured capital solutions that allow them to hold AXXX-type reserves as tax reserves.

Retention limits reported by survey participants ranged from $350,000 up to $25 million. The median limit reported is $10 million. Eight of the 18 participants reduce their retention limits at older ages.

Underwriting

Table shaving programs are becoming less common as evidenced by responses to the UL survey. Seven of the 18 participants currently are offering such a program, with at least one carrier intending to discontinue the program and another noting it will not offer its table-shaving program in its current form. Two participants reported they have made modifications to their table-shaving programs within the last two years. The table-shaving program is offered up to age 70 by five of the seven participants, to age 80 by one participant, and to all ages by another participant.

New underwriting developments are being used by 10 survey participants, especially at the older ages. The following table summarizes the number of survey participants using various underwriting process:

Underwriting Process	Number of Participants Using
Tele-underwriting or telephonic screening	8
Cognitive impairment testing	9
Activities of Daily Living (ADL) measures	10
Additional question on the application	6

The majority of survey participants (11) have not created any unique preferred risk parameters for the older ages.

2001 CSO Mortality Issues

Nearly all participants assess cost of insurance (COI) charges beyond age 100 on plans that utilize the 2001 CSO Mortality Table. Survey participants were asked to rank in order of significance various areas of change with respect to 2001 CSO product designs. The following table summarizes the rankings and shows that the most significant area of change reported by survey participants is lower guideline premium limits.

Item	Ranked #1	Ranked in the Top 2	Ranked in the Top 3
Lower guideline premium limits	9	15	17
Enhanced primary guarantees	3	7	11
Higher CVAT requirements (higher death benefits relative to cash values)	2	7	11
Other	2	4	4
Allowed use of interim tables	1	1	8

Compensation

Survey participants reported total compensation across all levels of producers, with the exception of brokerage general agent (BGA) bonuses. Compensation structures among survey participants are quite varied. In many cases, commissions do not vary by product type. Median commissions,

continued on page 14

as well as the range of commissions, were similar between ULSG and cash accumulation UL products. Current assumption UL products had slightly higher first year commissions up to target. Following is a summary of the primary components of compensation by product type:

Component	Median		
	ULSG	Cash Accumulation	Current Assumption
Typical first-year commission – up to target	90%	90%	94%
Typical first-year commission – excess	3.00%	3.00%	3.00%
Typical renewal commission	3.00%	3.25%	3.00%

Pricing

A portfolio crediting strategy is assumed in pricing ULSG products by the majority of participants (11 out of 18). Earned rates assumed in pricing ULSG products ranged from 5.75- to 6.50-percent, with an average earned rate of about 6.17 percent.

Survey participants reported that ultimate lapse rates assumed in pricing range from 0- to 7-percent (UL business with and without secondary guarantees). The median ultimate lapse rate reported by participants is 1 percent. If a ULSG secondary guarantee is in the money, the most frequent response for the ultimate lapse rate assumption is 0 percent. The level of ultimate lapse rates reported when the secondary guarantee is not in the money ranged from 0- to 6-percent. Nearly all survey participants test sensitivities with respect to lapse rates in the tail on ULSG products.

The majority of survey participants reported that the slope of their pricing mortality assumption is more similar to the Valuation Basic Table than the 1975-1980 Select & Ultimate Table. Mortality improvement is assumed in pricing UL products by the majority of participants and is reflected explicitly in almost all cases. The majority of participants apply mortality improvement for 10 to 20 years. Mortality improvement factors for males ranged from 0.25- to 1.40-percent and for females from 0.25- to 0.60-percent. The use of mortality improvement reported by survey participants is higher than what has been seen in previous surveys conducted by the Society of Actuaries' regarding the use of mortality improvement by direct writers.

Conclusion

The UL market is a dynamic and ever-changing market. UL insurers must be creative in dealing with the many issues and challenges they face. In many cases, procedures and assumptions are developed based on limited experience and guidance. The UL survey provides carriers with a benchmark for those issues where experience and guidance are not available.

A summary of the Universal Life / Indexed Universal Life Issues report may be found at *http://www.milliman.com/expertise/life-financial/publications/rr*. ☐