



Product Matters!

ISSUE 75 | OCTOBER 2009

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That was Then ... This is Now

By Elaine Tumicki and Karen Terry

Over the last few decades, U.S. individual life insurance new premiums had some ups and downs, but in general, the story was positive. From 1976 to 2007, annualized new premium grew on average 4.6 percent per year. Different products did well at different times. Universal life did well after it was introduced in the early 1980s and again through most of the current decade; whole life experienced a resurgence in the late 1980s; VUL owned the late 1990s; and term had steady growth throughout. *That was then.*

To say the financial products landscape has changed over the last 12 months is a gross understatement. Individual life insurance has not been immune from the effects of the challenges in the broader financial marketplace. While individual insurance products have emerged from other recessions relatively unscathed, this is clearly unlike any other recession. Consider the following:

- New premium declined 14 percent in the 4th quarter of 2008 compared to the prior year quarter. That was the steepest quarterly decline (at least up to that point) since 1951.
- Universal life—the hottest product this decade—saw sales drop by nearly a quarter in the 4th quarter.
- Declines were widespread—two-thirds of participants in LIMRA's quarterly Individual Life Sales Survey reported declines, nearly half by double digits.

And that was just the beginning. First quarter 2009 set new records for declines. Annualized new premium dropped 26 percent, the biggest quarterly decline since 1943, during World

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Articles Needed for the Next Issue of *Product Matters!*

While all articles are welcome, we would especially like to receive articles on topics that would be of interest to Product Development Section members based outside of the United States.

Please e-mail your articles to Ken Joyce or Dom Lebel by Nov. 15, 2009.

Chairperson's Corner

Is It Really All In The Math?

By Robert Stone

It's probably fair to say that many actuaries are in the profession because somewhere along the academic path they proved themselves accomplished in mathematics, or they liked mathematics, or both. Or maybe they grew up in an era when a certain national magazine routinely touted actuarial science as one of the top professions? Regardless, mathematics for actuaries is a passion and a core competency, which successful completion of the actuarial exams alone demonstrates over and over.

Traits that are inherent in mathematical ability include problem-solving, appreciation for logic, and an ability to engage in abstract thinking. Again, these are tremendous gifts, leading directly to excellence in computer programming, robust spreadsheet analyses and creation of custom tools for as-needed calculations.

With all these positives, is there a time when mathematics can be a negative?

This is mostly a rhetorical question, not necessarily one to be answered here. But it does raise a few thoughts that are worth pursuing for a moment.

Actuaries have a unique ability to solve problems, which can lead to amazing product advances. Universal life, indexed annuities, and living benefit guarantees provide examples of past product innovations that have expanded insurance offerings and addressed safety and security concerns of customers.

The same ability, however, can be used to create solutions that are not as positive. It happens when product development becomes strictly a math problem, looking too narrowly at the question of how to make a certain set of mechanics work under a certain set of profit constraints.

Finding answers to such questions can be a great challenge, of course. It may be that reaching a positive outcome may be a greater challenge still. Any downside that lurks inside a mathematical solution can often take several unanticipated forms.

Sometimes the downside is tame and easily foreseen—perhaps a little more distribution risk than a prior product generation.

Other times the negatives may be more hidden, taking the form of low emerging earnings in later durations that were not immediately apparent in a front-loaded internal rate of return.

Still others could take the form of more embedded risk than before, either not easily seen in a base deterministic run or masked unintentionally by new charges or assumptions.

Rarely are such things done with the intention of harm. Actuaries are merely solving the problems as set before them.

Fortunately, actuaries are also accustomed to showing a range of profit targets, which provide multiple views of their results. Deterministic and stochastic scenario testing of results also provides additional insight and color around profit results.



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More important still is acknowledging that the business of life insurance is complicated. Companies take risks and make conscious business decisions every day leading to results that drift into gray areas instead of the distinctly differentiated black and white we would all prefer to deal with, and that the logical world of math may seem to promise us.

Even with the proper context, it is worth keeping in mind that the ability to work the math is only one part of truly solving the problem. A healthy dose of “Does this make sense?” when looking at the answer to the math problem goes a long way toward turning that answer into a solution.

Companies will continue to run into business needs that require the skills of their product actuaries: competing with another company’s rates, adding a new feature to an existing product, increasing customer value at the same price, and more.

It adds up to a conundrum that actuaries are quite able to take on.

Price-oriented protection products like guaranteed level term and universal life with secondary guarantees may undergo changes. With fewer cost-effective means to reduce the surplus strain associated with reserve levels of the most competitive products, it is likely that premium levels will increase and/or guarantee periods will become shorter. This process has already started at the time this article is being written.

It’s hard to put a finger on the effect damaged public trust will have on insurance product. Will it affect which companies get sales? Will certain products be more or less desirable? Does the perceived need for life insurance coverage mean this business is less affected by trust issues than annuities, which often compete with deposit products outside the insurance industry? Does heightened media coverage lead to calls for more regulation? New regulation could clearly change product—ask indexed annuity marketers about the SEC and 151a.

And what do ratings changes mean for the insurance market? For example, single-premium immediate annuities (SPIAs) have enjoyed steady growth over the last several years as marketing fervor and consumer need have increased together. Will a future public view a SPIA purchase as less of a price-driven commodity and more of a long-term contract that requires financial stability in the providing company? If so, it seems likely that a similar thought process would enter the mind of life insurance buyers, especially those looking at permanent insurance.

Maybe this is all overstated. Many of the issues addressed above have always been a part of the insurance industry dynamic. It doesn’t take much of a change in emphasis, however, for the balance of an existing dynamic to switch a market’s focus from price to long-term carrier viability.

For companies perceived to be on the wrong side of any viability determination, that’s far from a joking matter. □

War II. Variable life products fared the worst, dropping an astounding 61 percent compared with the first quarter of 2008. Universal life did a little better, dropping **only** one-third compared to last year. *This is now.*

Term and whole life did much better than their universal counterparts, declining by single digits in the first quarter. Term and whole life each accounted for 28 percent of new premium in the first quarter, the highest share for whole life since 1999 and a record for term.

These trends do not show signs of significant change yet. Second quarter sales show some improvement, but not much—annualized premium for all products still recorded declines compared to the same quarter last year. VUL still fared the worst and term the best.

The good news is that consumers do not appear to be abandoning their existing life insurance policies as they evaluate their financial situations. LIMRA has been tracking consumer opinions regarding the economy frequently over the past year, including whether they've taken any actions as a result of the economy. While the most recent study, conducted in July 2009, showed improvements over surveys conducted earlier in the crisis, still, two-thirds of consumers have a somewhat or very unfavorable opinion of the economy. An increasing number of consumers are taking action with regard to their finances—one-third in July 2009 compared to one-in-six in October 2008. Consumers who do take action are worried about the safety of their money and want to act before the situation deteriorates. But what are these actions? Often nothing more than checking account balances or changing asset allocations. Few are taking action with life insurance.

Another piece of good news comes from our Canadian neighbors, where the individual life market is holding up much better. This, in part, reflects the state of the Canadian economy, which has lagged the United States in both the timing and severity of its decline. Sales in the fourth quarter of last year were flat, rather than down and in the first quarter premium declined by a minimal

“The lesson of this downturn is diversity.”

1 percent—not the record decline seen in the United States. Product performance in Canada is similar in that universal life sales are performing more poorly than term and whole life.

Outlook for Individual Life Products

Overall, it is very likely that 2009 will end with a decline in individual life insurance sales. Sales held up in the second quarter as well, down just 2 percent. LIMRA is currently forecasting a double-digit decline in sales for 2009. Sales should start to bounce back in 2010, and then show modest increases in 2011 and 2012. However, given the recent sharp declines, full recovery will take a while. Even sales in 2012 will not likely reach the record sales of 2007.

As has been true historically, it is likely sales by product type will vary more than overall sales. Part of what has driven universal life sales this decade is the growth of products with long-term no-lapse guarantees. In this uncertain world, guarantees will likely be appealing to consumers, if the price is right. Although still down substantially over last year, death benefit guarantee UL has fared better than other forms of UL.

Variable life products never truly recovered from the last significant downturn in 2001-2003, dropping from a peak of 36 percent of new premium in 2000 to 16 percent in 2003 and staying at roughly 15 percent of new premium through 2007. The variable product share of new premium is now in the single digits and is not likely to gain much ground in the near future. In fact, VUL is the only product that is forecasted to decline each year through 2012 based on LIMRA's model.

Term and whole life seem to be a little more recession proof than UL and VUL. LIMRA predicts term sales will end 2009 roughly equal to 2008. Since term insurance tends

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to be cheaper than other insurance products, it is a more affordable option for consumers who feel they really need insurance but are concerned about spending in the current environment. One advantage for whole life is that the top carriers selling the product are mutual companies, which have been less affected by Wall Street's woes. And these companies have a captive audience—affiliated agents selling primarily those companies' products. Despite these advantages, whole life is projected to decline slightly.

There also have been, and will be, changes to company product portfolios as a result of the economic downturn. Term prices are rising for the first time in years due to capital pressures. Carriers are also rethinking their products with guarantees. Several have discontinued their ROP term products and have discontinued, or considered discontinuing their secondary guarantee UL products. Guarantees are popular with producers and consumers however, so it is unlikely that these products will disappear entirely. In fact, even as some companies reel from the impact of their variable annuity guarantee products, a recent article in the *Wall Street Journal* touts the benefits of those guarantees and portrays the loss of them in the variable annuity

market as a lost opportunity for consumers.¹ Perhaps seeing how those guarantees protected the nest eggs of annuity owners will make guarantees on VUL products more attractive in the future.

The lesson of this downturn is diversity. Historically, different products have done better at different times and that's still true today. While UL and especially VUL are struggling, term and whole life are holding their own. Product development takes time and carriers who focus the majority of their efforts on the hot product of the day will lag behind those that consistently review their portfolio and already have competitive products on the shelf to offer. We saw this in the beginning of this decade after the stock market decline when carriers who had put all of their eggs in the variable basket fell behind those with established UL products to offer. Despite the dramatic change in the environment over the last year, the lesson still applies: It's important to maintain a robust product portfolio to be able to offer competitive products no matter what the environment. □

¹ "Long Derided, This Investment Now Looks Wise," Leslie Scism, *The Wall Street Journal*, July 24, 2009

SOA Continuing Professional Development (CPD):

Have Questions? We Have Answers!

Do you have questions about the SOA's CPD Requirement? Want to make sure you are meeting the Basic Requirement or one of the Alternative Compliance provisions?

Visit www.soa.org/cpd to read about how to meet the Requirement's provisions, attest compliance and review the Frequently Asked Questions (FAQs).

Some highlights...

- The SOA CPD Requirement became effective on Jan. 1, 2009.
- Member input has helped to create a Frequently Asked Questions (FAQs).
- Now is the time to start earning and tracking your credits.
- Most SOA members will easily meet the Requirement with Alternative Compliance provisions.
- Members must report compliance with the SOA CPD Requirement as of Dec. 31, 2010.

Monetizing Tax Refunds

By Roy H. Reynolds

In today's market of tight liquidity, some companies are cashing in now on tax refunds that may be due in the future. Tax refund insurance can be used to turn a future tax refund into a valuable source of immediate cash. Some examples are: (a) a large, corporate refund can take up to a year, (b) preparing a refund request, waiting for the IRS to process it, and receiving the check takes time. In the meantime, a company may suffer from a lack of liquidity that puts it into default with its lenders or restricts its working capital. Certain law firms and investment banks, and structured finance companies can syndicate such refunds and sell them to investors for cash. Commercial banks, investment bankers and money managers can make bridge loans, using the insured tax refund as collateral.

In order to borrow against a potential tax refund, a company must be able to provide secure collateral. To remove the uncertainty associated with a tax refund that has just been claimed or is about to be claimed, the insured can obtain an insurance policy from a highly rated insurance carrier. The policy pays if the insured fails to receive a refund of a specified amount by a certain date. The policy provides very limited exclusions, so that the lender can be sure that the collateral is solid. Terms and conditions can be negotiated to satisfy the lender.

Lenders are willing to loan against an insured tax refund, says a source from a major bank. To facilitate the loan, the borrower must assign the IRS refund to the lender and designate the lender as the loss payee under the policy. The loan can be structured with current interest payments, or issued at a discount. The loan requires certain actions to be taken by the borrower, or the lender will have the right to step in. For example, if the borrower fails to file the refund request to make a claim on the insurance, the lender has the right to take those actions on the borrower's behalf.

Case Study

Company A is a small, New York-based, information technology firm, whose customers are primarily in the financial services industry. Company B is a Florida-based mortgage lender and Company A's largest customer. Company A provided and billed approximately \$5 mil-

lion worth of network engineering services to Company B. Subsequently, Company B disclosed heavy losses and declared bankruptcy. Company A uses the accrual basis of accounting, so it had already included the \$5 million of services in its 2006 revenues. Because of the financial status of Company B, Company A concludes that it will have to write off most of that revenue as a bad debt. Company A files an amended return for the 2006 tax year, claiming a tax refund based on reduced net income attributable to the bad debt.

Company A itself is suffering from a lack of liquidity and risks violating its loan covenants. It approaches its bankers, but is unable to obtain an additional unsecured loan. Company A negotiates with its bank to provide a loan against the tax refund. However, the bank requires that Company A insure the tax refund with a highly rated insurance carrier, to provide secure collateral for the additional loan. Company A obtains the tax refund insurance, gets its loan, diversifies its customer base, and weathers the liquidity crisis.

Conclusion

In the words of Nemo Perera, managing partner, Risk Capital Partners, "Tax refund insurance is particularly suited to middle market companies that need capital and lack sufficient credit to borrow the necessary funds. Because of the secure collateral, the cost of funds is lower than it would be without the insurance." □



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Summary of June 2009 NAIC/LHATF Meeting

By Donna R. Claire



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The June 2009 NAIC meeting was held in Minneapolis (which has wonderful lemon ricotta pancakes at Hell's Kitchen). First and foremost—**The SVL2 changes passed the NAIC's Life and Health Actuarial Task Force!** (It has since also passed the PBR (EX) Task Force and the Solvency Committee of the NAIC.) Having said that, there is still work to be done, particularly on the Valuation Manual.

A summary of the issues discussed:

LHATF—Larry Bruning, chair of LHATF, started off the Life and Health Actuarial Task Force (LHATF) reviewing where we've been and where we are going with PBA. He pointed out that we are changing a system that has been in force for about 150 years. As he stated, "What a wonderful time to be an actuary. We are making progress toward the ultimate goal of modernizing the regulatory framework."

SVL2—Before passing SVL2, LHATF looked at a few amendments. One important item was that LHATF agreed that the SVL and Valuation Manual should be presented to legislatures as a package (but LHATF did not amend the law to specifically say this).

Net Premium Approach—John Bruins gave a brief presentation regarding a net premium approach to PBA reserving, which the ACLI states is needed for federal income tax deductibility of reserves. The ACLI is in the process of developing an approach and expects to have information to present to LHATF in the fall.

Mortality—Mary Bahna-Nolan and I gave an update on the SOA/AAA mortality topics. We presented the pros and cons of going to a 2008 CSO mortality table versus some change to the interim solutions versus waiting for something like the 2012 CSO. LHATF voted not to go forward with the 2008 CSO; the SOA/AAA POG will continue work on refining margins to be used for PBA. There was also a discussion on guaranteed issue and simplified issue—LHATF voted to have the SOA/AAA do work on developing a mortality table for this business. In the meantime, LHATF will work on sending out a note to states saying that the 1980 CSO is a reasonable mortality basis for simplified issue/guaranteed issue business. LHATF also voted to give the SOA/AAA an assignment regarding Individual Annuity mortality: (1) to determine whether a new table is needed; (2) to see if projection factors should be built in; and (3) to see if the table should be striated in some fashion, considering that there was obvious

mortality differences between small payout annuities and large payout annuities.

Default Costs on Existing Fixed Income Investments—Gary Falde and Alan Routhenstein gave an update on a possible method for LHATF to come up with default costs under PBR. A lot of work has been done, but work is still needed on this to get results that look reasonable to all parties.

Economic Scenarios—Nancy Bennett’s Academy group gave a presentation from the Academy’s Economic Scenarios Implementation Work Group. The Economic Scenario group has released a new generator, and a paper discussing this and calibration criteria. The goal of the group is to have the same calibration criteria so that companies can use the same generators (interest and equity) for both reserves and capital.

PBA Training for Regulators—The regulators discussed having a PBA training session for regulators. This would educate regulators on what PBA is, and what the regulatory examiners should concentrate on. Mike Boerner will head the effort to get this seminar set up.

Valuation Manual—Much of the LHATF meeting was spent reviewing the work of the LHATF subgroups working on various sections of the Valuation Manual:

a. **VM-00, 01, Process and Coordination**—Mike Boerner heads the LHATF team on this part of the Manual (as well as heading the Academy team on the Valuation Manual in general). Bob DiRico heads an Academy subgroup on Consistency that is assisting with making sure there is one place (VM-01) for definitions used by various sections of the Valuation Manual. There is some additional tweaking of wording expected. In addition, there is an Academy project, headed by Alice Fontaine, to develop a pros and cons document on various scope alternatives (e.g., should PBA apply immediately to all life products, only to term and UL with secondary guarantees, should

there be phase-ins?). This will be discussed on a conference call.

- b. **VM-20**—As mentioned above, presentations on this subject include those from Gary Falde and Alan Routhenstein on a potential methodology that LHATF could use to set default rates and effectively limit the asset rates assumed in modeling for reserves. John Bruins gave an ACLI presentation on a net premium approach for life reserves. Pete Weber heads the VM-20 effort for LHATF. Additional amendments were discussed at this meeting. The latest VM-20 was then exposed for comments.
- c. **VM-20, Reinsurance**—Sheldon Summers heads the LHATF subgroup on reinsurance, as well as heading the Academy group on the same subject. Several amendments were discussed at LHATF, particularly on how to handle reserves gross and net of reinsurance.
- d. **VM-21**—This section would bring in the Variable Annuity CARVM Actuarial Guideline, which goes into effect at year-end 2009. The guideline is obviously already written, so this would be a matter of making sure it is in the right format. Mike Boerner is in charge of making this happen.
- e. **VM-25, 26**—These are the health sections. Julia Phillips heads this group. At this time, there are no changes expected to the health reserving requirements. These sections codify the current plans, and are basically complete. There are a couple of comments received on this, which will be discussed on a conference call.
- f. **VM-30, 31**—Katie Campbell heads this effort on PBR Reporting and Review. New versions of VM-30 and VM-31 were exposed in the last quarter. A few amendments were discussed at this meeting.

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g. VM-50, 51—Fred Andersen is heading this effort on PBR Experience Reporting. Frank Horn reported for him and stated that New York is getting close to issuing an RFP for reporting mortality experience. Having this reporting was a condition of using the current interim preferred mortality tables on the 2001 CSO.

In summary, the Valuation Manual is close to being able to be passed on to the parent committees of LHATF. Perhaps the biggest outstanding item would be the changes needed if LHATF wishes to reflect a net premium approach to life reserving; this needs the ACLI to finalize their net premium methodology.

Standard Nonforfeiture Law—Work continues on modernizing the Standard Nonforfeiture Law. John MacBain is heading this effort, and expects a more detailed report in December.

International Issues—Kris DeFrain of the NAIC gave an update on the international arena regarding valuation issues. The point is to both study the international initiatives to see whether there are items the United States should adopt as well as sharing information to influence

international standards. Bottom line, although PBA and international standards may have some differences, both systems have a base which measures all relevant risks on assets and liabilities. One possible major difference is that, at this time, statutory U.S. accounting is mostly book value based, while the international area is generally on a market consistent basis.

Other Issues discussed at LHATF:

- 1. GLIBs**—Jim Lamson and Mike Ward gave an update on the work of the Academy's Annuity Reserve Work Group of answering how a new benefit—deferred annuities with guaranteed living income benefits that allow cash surrender before and during the payout phase—would be valued under Actuarial Guideline 33. The Academy group developed pros and cons of various interpretations of this benefit in terms of whether it should be interpreted as a Type A (higher) versus Type C (lower) valuation interest rate. LHATF determined that the correct answer was Interpretation 4 of the Academy's report. That is, bifurcate the benefit into two parts: the first part covers the benefits that exist during the time the cash values exist; the second part covers the payout benefits after the cash values no longer exist. The reserve for all the benefits in the first part would be discounted with Type C rates. The reserves for the payments in second part (which is an n-year deferred life annuity) are valued with Type A rates. Type A rates are used immediately (i.e., not just with the valuation dates after the cash values of the first part are gone). Note: This is a bandage approach, and is the type of issue PBA could handle better.
- 2. GRET**—The SOA is starting work on this year's Generally Recognized Expense Table that companies can use for life illustrations.

Capital and Surplus Relief—LHATF has been charged with fast-tracking the Capital and Surplus Relief items that were proposed last year due to the economic turmoil, but ultimately not enacted last winter because the industry did not prove that there was a



dire emergency. The three proposals LHATF is concentrating on are known as proposals 1a (the proposal to allow the 2001 Preferred tables to be used for all 2001 CSO business, even if issued prior to 1/1/2007); 1c (which clarified that the preferred smoker/non-smoker tables can be used in determining segments); and 2 (which allows X factors for deficiency reserves to go below 20 percent, and permits the X factors to decrease by duration). LHATF did a survey of how many companies expected to use the proposed relief. Of the 19 companies that responded to the survey: (a) for the proposals under 1, six companies said they would use the relief, 13 said they would not; (b) for proposal 2 it was nine no, 10 yes. Note that the total capital of the companies that responded had dropped from \$46 billion at year-end 2007 to approximately \$36 billion at year-end 2008. The year-end 2008 number reflects capital infusions. LHATF voted to adopt these proposals and passed them onto the next committee. They have since been passed by the A Committee.

Accident and Health Working Group (a subgroup of LHATF): There will be a long-term care survey sent to major writers regarding nonforfeiture and other issues. The Academy's Health group is working with the regulators on the Medicare Supplement Refund formula. The Medicare Supplement Compliance Manual has been adopted by the Accident and Health Working Group and is being passed on to the parent committee. There are changes to the Health Actuarial Opinion wording for 2009, so actuaries should pay attention to this—e.g., that the Board, not senior management, must appoint the actuary. Brad Spenny of the Academy PBR LTC work group mentioned that work is continuing on long-term care in a PBA environment. A new subgroup was formed under the A&H Working group separately looking at administrative expenses when insurers go for rate increases. Jack Luff of the SOA mentioned that the SOA is looking for companies to volunteer to participate in a cancer claim study to update the 1985 Cancer study.

Life Risk-Based Capital Working Group: Philip Barlow ran the RBC meeting from 5 p.m. to 6 p.m.

“... the total capital of the companies that responded had dropped from \$46 billion at year-end 2007 to approximately \$36 billion at year-end 2008. The year-end 2008 number reflects capital infusions.”

on Friday June 13. The group discussed some comments received on the RBC C-3 Phase III report. This would apply a principle-based approach to life insurance capital, including in-force. Due to the number of comment letters received, a conference call was held to discuss the letters. Due to concerns about the companies being prepared to implement C-3 Phase III in a timely manner, the group decided to delay implementation to 2010. There will be an Academy seminar the day before the 2009 Valuation Actuary Symposium on capital issues, focusing in on the RBC C-3 Phase III implementation.

The ACLI change on the treatment of derivatives was exposed for comment and will be discussed on a conference call. Another issue discussed was the derivative risk mitigation proposal, which will be discussed in detail on a conference call. The ACLI discussed the mortgage experience adjustment factor, where work is continuing.

Summary

In summary, PBA has made significant progress over the past couple of years. There is still work to be done, but the day is drawing nearer when PBA will be a reality. ■

Annuity/LTCI Combinations: **More to Come**

By Carl A. Friedrich and Susan J. Saip



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The Pension Protection Act of 2006 (PPA) opened the door for combination products featuring long-term care riders on non-qualified annuity products by addressing the tax treatment of such plans. The PPA specifies that, effective Jan. 1, 2010, qualified long-term care insurance (LTCI) benefits paid out of these plans are generally paid as tax-free benefits. The law also allows for 1035 exchanges into combination plans. This is noteworthy in light of the hundreds of billions of dollars deposited in existing non-qualified annuities issued after Dec. 31, 1996, for which these rules apply.

We have seen about 10 annuity/LTCI combinations introduced into the market, and current product development activity in the works suggest that there are more to come; perhaps doubling the number within the next year. This article provides an overview of industry perspectives, product designs, tax issues and survey findings regarding such products.

Industry perspectives on the target market for annuity/LTCI combination plans vary by company. The 50-to-80 age group seems to be the prime group to target because the maximum issue age for LTCI coverage is usually age 80, which is due to affordability and underwriting concerns. Most individuals below the age of 50 lack the immediate interest or assets to purchase this coverage. Size of the account value is another factor, as most combination annuities define monthly benefits as a percentage of the account value at the time of original claim. Consideration must be given for those levels that would not produce meaningful benefits for LTCI under the combination plan design.

The benefit payout structure is typically defined as an accelerated benefit (AB), whereby LTCI benefit payments are accompanied by concurrent reductions from the annuity account value without assessing surrender charges. This is usually combined with some form of an independent benefit that is not supported by account value reductions. Charges are typically level percentages (expressed in basis points) of the account value. Three different benefit structures are described below.

Tail design: Benefits are paid first as accelerated benefits until the maximum accelerated benefit (LTCI benefit limit, usually the account value) has been exhausted, followed by a benefit extension (BE) provision that continues independent LTCI payments at the same monthly level for a specified period of time so long as LTCI requirements are met.

Coinsurance design: Accelerated and independent benefits are paid concurrently in fixed proportions until the LTCI benefit limit is exhausted.

Pool design: Benefit payments are based on a maximum LTCI pool amount defined at issue (e.g., 300 percent of the account value at issue). The excess of the maximum LTCI pool amount over the account value defines a net amount at risk. Charges under this design may be set as a rate assessed per dollar of net amount at risk. Benefit payments reduce the remaining maximum LTCI pool and account value on a dollar-for-dollar basis until the account value is depleted. At that time all remaining monthly benefits are independent benefits and are payable so long as LTCI benefit triggers are met and the maximum LTCI pool has not yet been paid out in full.

Under the Long-term Care Insurance Model Regulation, companies that offer LTCI insurance are required to offer contract holders the option to purchase inflation protection providing for benefit increases of at least 5 percent compounded per year. Inflation protection on an annuity/LTCI combination product is typically provided either by allowing the contract holder to pay additional amounts at contract anniversaries that are sufficient to increase the monthly benefit by 5 percent per year, or by assessing a charge for the inflation protection benefit directly. The inflation benefit is expensive and the need for inflation protection varies depending on the design structure. Those designs that tie LTCI benefit amounts to account values inherently provide a form of inflation protection.



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The PPA provides for favorable treatment of tax-qualified LTCI riders attached to non-qualified annuities for tax years beginning after Dec. 31, 2009. A key provision is that LTCI payouts, even if accompanied by some reduction in account values, are tax-free LTCI benefits. One key factor to consider when designing the annuity/LTCI benefit structure is that for favorable tax treatment to apply, the contract must be an insurance contract, and this in turn implies that a meaningful amount at risk exists for the insurance company. However, it is not clear when a meaningful amount at risk exists. On May 9, 2009, the IRS issued a private letter ruling that included the view that the coinsurance design presented in that case did reflect a meaningful amount at risk. For the tail design, it is somewhat less clear that there is a meaningful amount at risk during the AB period than is true for the coinsurance design.



The PPA clearly states that the charges deducted from the account value to pay for the qualified rider are considered to be non-taxable distributions from the annuity contract; however, such deductions also reduce the cost basis in the contract. The PPA does not directly address the effect that the payment of LTCI benefits has on the contract's cost basis. Since the PPA states that the portion of the contract providing LTCI coverage is a separate contract, some companies have taken the position that it would seem inconsistent to treat benefit payments from one contract (LTCI contract) to reduce the cost basis in the first contract (the annuity). This argument is further supported by the observation that the charge for the rider serves as a reduction to the basis in the annuity. Subjecting the annuity basis to further reduction related to LTCI benefit payments would appear to be an inconsistency that in essence would create double taxation. The private letter ruling discussed above, however, included a different view on this subject. Subsequent to that ruling there have been discussions of this topic within the industry, and in one recent forum an IRS representative appeared to express some openness for further consideration of this question.

A recent survey of producers was conducted by Milliman, Inc. to obtain their perspectives about annuity/LTCI combination products. The producer group included top annuity/LTCI combination producers, significant LTCI producers and large annuity producers in the market. For producers who have not yet sold an annuity/LTCI combination product, nearly all expressed an interest in selling the product. These producers reported that the need for more information and a lack of education and knowledge were the key barriers to selling annuity/LTCI combination plans.

When asked to rank the importance of simplified underwriting versus the cost of coverage, producer responses varied widely. A number of LTCI producers reported that their clients are more interested in affordability and that underwriting is not an issue for them. Simplified underwriting is important to some producers, noting that "no one likes to get turned down."

When presented with the tail design, coinsurance design, and pool design, the tail design had the greatest

CONTINUED ON **PAGE 14**

appeal among producers. It was described as the least costly option, the simplest to explain, and appealing since the benefit increases as the account value grows. Another factor contributing to the appeal of the tail design is that the client may feel that he/she has more control with this design. However, a number of producers pointed out advantageous features of the other two designs.

Many producers in the survey believe that tax advantages of annuity/LTCI combination products are not the reason why clients buy the product and this is just an added bonus. A number of producers noted that the need for the inflation provision depends on the product design and that it may not be necessary with some structures. Age, health, financial situation, and family situation must also be considered when determining the need for inflation protection.

Compensation on annuity/LTCI combination products is viewed as fair by a significant number of the survey participants. However, if a producer hasn't done much of this business, the insurer will need to incent the agent to look at it. If an agent must learn the product, learn how to position it, and learn how to sell it, they must be compensated for it at levels above typical first-year annuity compensation.

The survey participants reported that the clients targeted for the annuity/LTCI combination market are primarily in the following groups:

- Clients who are concerned about LTCI, but don't want to buy a stand-alone LTCI policy.
- Clients who can't qualify for or can't afford a stand-alone LTCI policy.
- Higher-net-worth clients who plan to self insure.

Some producers believe the minimum premium requirement for annuity/LTCI combination products may define the target market since many of the current structures have requirements of \$50,000 or more. A number of producers believe that the use of annuity/

LTCI combination products is a more cost effective way to self insure and to leverage assets for higher-net-worth clients. According to producers who participated in the survey, the most common reasons why potential clients do not purchase annuity/LTCI combination products are because of the perceived lack of need for LTCI coverage and because of the high cost.

Survey participants selected annuity producers, LTCI producers and financial planners as distribution outlets that would likely be the most successful in the annuity/LTCI combination markets. The survey participants provided the following comments:

- There is some thought that in order for annuity producers to sell this product the design needs to be simple since they are not familiar with selling LTCI.
- For LTCI producers, the combination product may be a natural fit because these producers know the LTCI need.
- Some producers think the compensation on the combination product will entice LTCI producers to sell the product.
- Many producers believe this product was designed for financial planners. Financial planners look at a client's financial position from a holistic point of view and this product will provide another option/solution.
- Other producers believe the product design is too complicated, financial planners don't understand the need for LTCI, and they already have too much on their plate.

The future of combination annuity/LTCI products will inevitably involve the evolution of more product variations. Innovation is also expected regarding new structures for these plans to meet the test of insurance and thus achieve optimal tax positioning for the product as well as to meet the needs of the consumer. □

Recap of the Modern Pricing Methodologies Seminar

By Doug Robbins



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Following the Product Development Symposium, the Product Development Section sponsored a seminar on Modern Pricing Methodologies. Attendees gleaned information on a variety of topics, providing them with knowledge that will help them assess product risks and profitability in our current, strained economic environment.

The first session defined the profit measures most commonly used by companies in pricing life insurance and annuity products. Time was spent on the strengths and weaknesses of each, and how they might apply to different product lines. Some new perspectives on pricing, including market consistent embedded value (MCEV), were explained during this session.

This was immediately followed by a discussion of the results of the Tillinghast Pricing Methodology Survey. This survey covers the most popular profit measures for various companies within various product lines. It also summarizes, in aggregate of course, some of the targets companies are apt to use for the different measures, again by product.

The following session covered MCEV from a different presenter's point of view, as well as balance sheet implications of many new regulations and pronouncements. Attention was focused here on how those

balance sheet items should be considered by pricing and product development actuaries. Significant time was spent on the interplay between pricing, hedging and principles-based reserve/asset requirements. Information was presented on the level of traction hedge programs are given in RBC testing, which was quite illuminating.

The first day concluded with a session on pricing indexed products, which was very helpful to actuaries practicing in that area, and then a networking reception in the evening.

On the seminar's second day, case studies were presented, to help illustrate the techniques and concepts presented on day one. Products covered included:

- Universal Life with Secondary Guarantees;
- Return of Premium ("ROP") Term; and
- Variable Annuities with Living Benefits.

All of the case studies were very helpful in expanding attendees' understanding of Modern Pricing Methods, as discussed in the seminar.

The link to on-line versions of sessions presented at the seminar is: <http://www.soa.org/meetings-and-events/handouts/2009-la-modern-meth.aspx>. □

9th Annual PD Symposium Hits L.A.

By Rob Stone



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More than 160 actuaries gathered at the Hyatt Regency Century Plaza for the 9th Annual PD Symposium June 29-30, 2009. Sponsoring sections included Product Development, Marketing and Distribution, Tax, and Reinsurance. The planning committee, chaired by Kevin Howard, put together a dynamic program of sessions with Hollywood-themed titles. The festivities were kicked off with the 5th Annual PD Symposium golf outing on Sunday afternoon.

The opening general session of the meeting featured Ed Spehar of Merrill Lynch sharing his insights on what is in store for the insurance industry in light of the economic environment of 2008 and early 2009. A group lunch session that same day provided some cross-industry insights into product development, as presented by Ajit Prabhu of Deloitte Consulting, LLP. Participants were also provided a networking reception to round out the first day of the meeting.

As in the past, the breakout sessions of the symposium focused on 75 minute offerings, each presented twice. Six total breakout session periods were provided over the day-and-a-half meeting. Overall the feedback from evaluations was very favorable, with most attendees appreciating the solid content and opportunity to get a

significant number of professional development credits in a short period of time.

Breakout session topics ranged from regulatory updates for life and annuity, illustration actuary issues, underwriting, pricing issues pertaining to profit measures and proper reflection of risk, and product updates for term, variable annuities, income annuities, deferred annuities, and permanent life products. The vast majority of feedback for the breakout sessions was also positive; the planning committee will review all evaluations to see where improvements can be made.

The Product Development Section also sponsored a post-symposium seminar on Modern Pricing Methodologies. This session, stretching over halves of two days, was attended by more than 60 actuaries. Many thanks to Doug Robbins for coordinating this seminar.

2009 Symposium committee members included: Kevin Howard, Christine Dugan, Andy Ferris, Elinor Friedman, Rob Stone, Nancy Kenneally, Audrey Chervansky, Chuck Ritzke, and Vincent Tsang. A successful meeting could not have been planned and executed without these volunteers. □

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- social insurance.

What's New In Research?

By Ronora Stryker



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The issues affecting today's product development actuary are numerous and fill the pages of each issue of *Product Matters*. They are also fueling the need for the latest information, insights and tools to help product development actuaries address these issues and adapt to the changes they create. In the last year-and-a-half alone, the Product Development Section has responded to member needs by initiating or cosponsoring eight research projects covering a multitude of topics.

Several of the projects underway focus on mortality improvement and the growing retiree market. One study being cosponsored with the Committee on Life Insurance Research, examines the implications of public perceptions on post-retirement risks to life insurance product development and marketing strategies. This is expected to be completed this fall.

Partnering with the Actuary of the Future Section, another study is a two-phase initiative exploring financial advice issues related to the middle-to-lower income market segments. In Phase I of the project, the primary objective is to examine why it appears that appropriate financial advice is generally not available to these segments of the American public. For Phase II, the goal is to use what is learned from Phase I and

explore alternative ways for providing such advice. Since this project is in the early stages, no timetable for completion has been set.

A recently completed project supported by the Section focuses on longevity risk. Authored by the Ernst & Young team of Thomas Crawford, Richard de Haan and Chad Runchey, the research paper summarizes results of a literature review and addresses topics including the emergence and quantification of longevity risk; current and future risk management techniques; and products currently in the market that are exposed to longevity risk. To view the report in its entirety, see the SOA Web page: <http://www.soa.org/research/life/research-long-risk-quant.aspx>

Other research projects fall into the broad topic area of new pricing and underwriting methodologies and studies to assist in assumption setting. Just underway with the Marketing and Distribution Section is phase one of a two-phase study exploring mortality risk selection using an electronic personal history interview (drill-down application) coupled with e-data (MIB, Rx, MVR). In the first phase, a company survey will be performed to determine practices of life insurers utilizing these electronic underwriting tools as well as the type and amount of data that would be available

“In the last year-and-a-half alone, the Product Development Section has responded to member needs by initiating or cosponsoring eight research projects. ...”

for further study. The results of Phase I will be used to investigate the feasibility of Phase II, which studies how mortality risk selection outcomes utilizing these electronic underwriting tools compare qualitatively to that using more traditional underwriting methods.

In addition to the company survey of electronic underwriting practices, research is advancing examining mortality and lapse experience in the post-level period of individual level premium term life insurance products. A company survey of lapse and mortality assumptions is coming to a close which will be followed by a request for data needed to perform the experience study. Results are targeted to be released by the end of the year.

The last project within this topic area delves into stochastic pricing of embedded options found in life insurance and annuity products. The report by a Milliman research team of Tim Hill, Dale Visser and Ricky Trachtman, investigates the challenges associated with determining a fair value assessment for embedded options in two product types, universal life insurance with secondary guarantees and variable annuities, and incorporates the process into product pricing. This report can be found at: <http://www.soa.org/research/life/research-stochastic-pricing.aspx>.

The remaining projects are in partnership with the Financial Reporting Section and relate to the principle-based approach (PBA) for statutory minimum reserves and RBC that is currently under development by the NAIC. The first project examines the proposed principle-based reserving and capital approach on U.S. life insurance products. Not only will the research look at a comparison of reserves and C3 capital amounts under PBA versus current formulaic standards, it will also

address the modeling challenges encountered in implementing the methodology. The project is progressing nicely with a summary of the research findings expected to be available on the SOA's Web site in September.

Under the proposed PBA framework, individual company experience will be used to determine the proper level of reserves and capital. The application of credibility theory will likely be required in order for actuaries to determine and evaluate the appropriateness of assumptions such as mortality and lapse levels for a company's block of business. The last PBA project involves conducting a company survey of U.S. life insurers on how they are currently using credibility theory as well as a statistical analysis of some of these approaches. Look for results to be available in the fall of this year.

The Section's research activity does not stop with the above projects. Planning is underway to support several additional projects this year. Research projects being considered include, but are not limited to, a call for papers on predictive modeling for life insurers as well as a project examining the cost of implementing PBA.


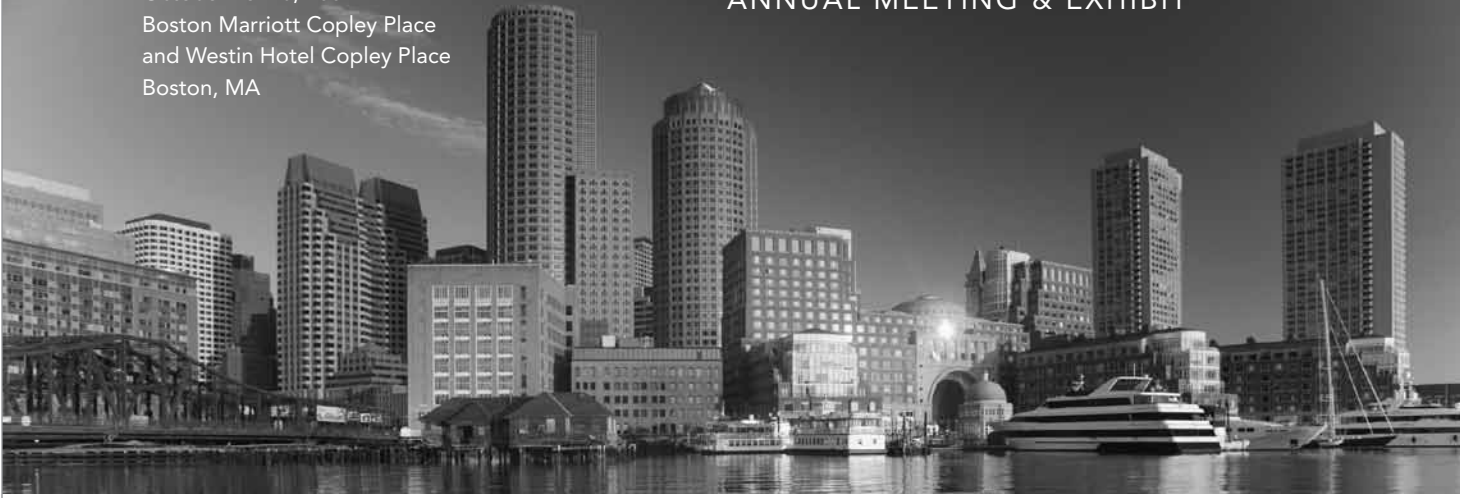
If you would like more information about any of the projects discussed or are interested in getting involved in Section sponsored research or have an idea for a research project that would benefit Product Development Section members, please contact Ronora Stryker, SOA Research Actuary, at rstryker@soa.org. □



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Session 14 - Panel Discussion PRODUCT DEVELOPMENT IN THE CURRENT ECONOMIC ENVIRONMENT

The economic environment has altered pricing and product development of life and annuity products in the past year. What has changed for the pricing actuary and what should the pricing actuary consider in pricing products in 2009 and beyond?

Session 83 - Panel Discussion LIFE AND ANNUITY PRODUCT DEVELOPMENT TRENDS AND ISSUES

Annuity and life insurance experts will discuss key product development issues and trends that occurred during the prior year. Presenters will cover fixed, variable and indexed products.

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