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Catastrophe Risk Management Options for the Smaller Insurance Company

By David Rains and James Eggert

Every life insurer is exposed to catastrophe risk. The largest carriers, of course, tend to have the capital on hand to absorb substantial losses and can rely on economies of scale to make reinsurance more affordable. Smaller life insurers, on the other hand, do not always have the same risk management tools available at a proportionate cost. Thus, they may feel forced to retain risks which, if realized, could imperil solvency. Fortunately, there are products on the market that make cover attainable for smaller life insurers.

Catastrophe risk poses a unique challenge for smaller life insurers. By virtue of a smaller portfolio of insureds, the probability of high losses from a given catastrophe is less than that for a larger carrier with broad market penetration. However, in specific markets or affinity groups, the relative probability of a catastrophic loss could be even greater for a small insurer that is very effective in that niche. Smaller average face amounts may create a smaller loss in absolute terms—though quite significant in relative terms, considered against a smaller balance sheet and available surplus. The threat is real.

Traditional reinsurance can be effective for mitigation, though in many cases, cedents see this as reinsuring too much profit and expense margin along with the risk. Yet, without coverage, one event could severely impair an insurer's balance sheet, so some protection is necessary. Smaller insurers have more options than they may realize. Several products are at their disposal, which can help them protect their capital without impairing profitability unnecessarily.

Variations on basic life catastrophe cover—which involve a minimum of three lives in a single event—do exist for smaller carriers. The coverage pays if losses exceed a particular attachment point, and recovery is governed by a specified limit and Maximum Any One Life (MAOL) amount, as well as a limited timeframe within which the losses occur (i.e., "hours clauses"). Pricing is generally quoted as a "rate on line" (ROL) and is a percentage of the specified limit. A "3 million XS 1 million" treaty, for example, attaches at a catastrophe loss of USD1 million and has a limit of USD3 million. At an ROL of 3 percent, it would cost USD90,000 (i.e., 0.03 X USD3 million).

Life catastrophe cover is available from markets in Bermuda and London and can provide coverage for deaths from natural disasters, accidents and terrorism. Terrorism may include nuclear, biologi-

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Chairperson's Corner

Sanity in an Insane World

By Christopher H. Hause

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Risk.

Leverage.

Vertical Integration.

Sophisticated Financial Arrangements.

Do you remember when these were not dirty words? It was not that long ago. But just like anything that is good, excess can be devastating. You may have heard a while back about a woman who died of drinking too much water, which is the essence of life.

Our financial system has failed. I do not mean to say that it is bankrupt, but it has strayed from its mission, and in doing so has betrayed the public trust and lost credibility.

One of the reasons for the existence of a financial system is to help provide financial security to our clients and the public in general. In our zeal to compete with the high-risk, HIGH REWARD sectors of the financial industry, we appear to have indiscriminately shifted risk to our policyholders and clients.

I remember learning as a young actuarial student the concept that insurance is "reverse gambling." That is to say, insuring is not gambling, but failing to insure against loss is gambling. Protecting against the loss by paying a small premium and shifting (or pooling) the risk is generally the safe and prudent course of action.

The insurance industry has always been correct to emphasize its unique guarantees. But, what of the situation where an important element of the risk (premium adequacy vis-à-vis an adequate investment return) is shifted to the policy owner? Does the client really understand the effect on policy values of changes in account performance?

Every time we ask employees to allocate their 401(k) among available funds, we are asking them to be their own investment advisors. And, the same thing is true when we ask policyholders to allocate (or rebalance) their subaccounts, or ask them to choose between fixed and variable products.

On the other hand, small companies by their nature and by necessity are simple and focused. Generally speaking, they have a limited market that is served by appropriate products (even tailor-made ones) that maximize the security part of financial security.

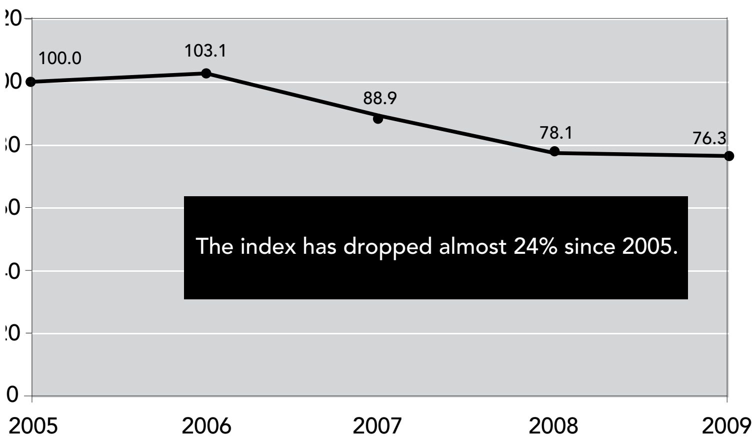
We are not too big to fail. We do not double down on our success by vertical integration. We do not take immeasurably disastrous risks, but we stay focused on our clients and their needs. We manage our risks, and we stick to what we are good at.

That is our role and that is how we bring sanity to an insane world.

cal, and chemical (NBC) protection for a surcharge. Pricing for life catastrophe reinsurance spiked following the terror attacks of Sept. 11, 2001.

Though prices have come down considerably, the cost is not likely to return to prior levels.

Guy Carpenter Life Catastrophe ROL Index



Depending on the key risks identified, limited catastrophe products may be more affordable options. A common example would be coverage for catastrophes affecting specific buildings—useful if your primary catastrophe exposure is highly concentrated in the home office, a key agency or a large client. Another would be common carrier coverage, preferred where benefits may be multiples of base coverage and the key risks are multiple deaths from airplane accidents.

Accidental death carve-out (ADCO) reinsurance manages exposure to all accidental death volatility. The coverage is, essentially, a fixed-for-floating mortality swap: the cedent pays the expected accidental death claims plus a risk margin to the reinsurer and the reinsurer reimburses the cedent for actual accidental death claims—including death claims due to accident for any type of underlying policy. By definition, this form of cover includes catastrophe losses for all causes (including NBC terror), and unlimited recovery treaties are widely available (though some reinsurers will impose limits). This approach, which is offered for single- and multi-year periods, can make catastrophe cover more valuable by smoothing accidental death claim volatility by including recoveries in high loss, non-catastrophe years.

Given that cost is among the principal concerns of smaller life carriers in regards to managing the risk of a remote event (that they have likely never experienced), a certain degree of coverage flexibility is necessary. With ADCO, cedents can include deductibles of up to 100 percent of expected claims. In conjunction with the possibility of multi-year cover and the fact that claims may not be capped, smaller life insurers have the ability to structure their protection in a way that balances cost, the need for catastrophe cover, and the added benefit of reducing volatility.

In addition to indemnity contracts with reinsurers, smaller life cedents can also join risk-sharing pools. Special Pooled Risk Administrators (SPRA), managed by Swiss Re, operates risk pools for both individual and group life policies. Though complex formulas define deductibles and shares, the operation of the pool is relatively straightforward. After deductibles, claims are shared in proportion with each company's participation percentage. If a company's proportion of the loss is greater than their participation percentage, they receive benefits.

For ordinary life, SPRA includes 15 participants representing 30 companies, but this is shrinking. Ten years ago, it had 100 participants, and five years ago, it dropped to 50. Despite the low cost up front, lack of annual limit on claims, and full terrorism cover (including NBC), the total cost to the cedent can include assessments (and, just as there is no limit on the annual number of claims, there is no limit on the annual number of assessments). Thus, every member is a potential payer or reinsurer, as well as a beneficiary or cedent, depending on its share of a loss relative to other members of the SPRA pool.

The Shared Adverse Fluctuation Experience (SAFE) pool is another pooled risk resource for life insurers. Similar to SPRA, it provides a low-cost, low-risk alternative to reinsurance, but focused on companies that do not have large insurance concentrations in major metropolitan areas. The deductible applied is the lesser of three times a carrier's retention or 12 times its average policy size. The pool is small, with 13 life insurance companies (seven corporate groups) and approximately USD89 billion of net retained life risk. Limits are approxi-

"In addition to indemnity contracts with reinsurers, smaller life cedents can also join risk-sharing pools."

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mately USD18 million, and four deaths are required to qualify an event as a catastrophe, as opposed to the usual threshold of three.

The decision to secure life catastrophe coverage should be driven by exposure and risk management strategy—reflecting cost as an important consideration but not the sole driver.

A smaller life insurer has an obligation, just as larger firms do, to first understand its exposure and then make any risk transfer decisions based on risk tolerance thresholds and financial objectives. Retaining risks outside of defined tolerance thresholds is no longer the only option. The products exist to facilitate informed, cost-effective risk and capital management decision-making that is aligned with the intricacies of a portfolio's specific risks, no matter the size.

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Comparison Matrix

	Catastrophe Cover	ADCO	Risk Pools
Cost Structure	ROL – a percentage of the maximum benefit amount	Expected losses under the contract plus a margin	• Entry and annual service fees • Loss assessments
Includes NBC	Optional	Yes	Yes
Options	• Single site cover • Common carrier	• Deductible • Contract term	None
Advantages	• Rates have improved dramatically • Costs are fixed	• Responds to high annual claims even without a specific event	• Very low entry costs
Disadvantages	• Reinstatement premium post loss	• Higher cost than catastrophe cover	• Total cost unknown until event happens • May have assessment without a catastrophe loss

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More Regulation, More Uncertainty

By Norman E. Hill

For those not able to attend the Spring 2009 National Association of Insurance Commissioners (NAIC) meeting or the Spring 2009 National Council of Insurance Legislators (NCOIL) meeting, this article summarizes current regulatory activity, both state and federal.

Optional Federal Charter (OFC) Related Items

Terri Vaughan, the new CEO of the NAIC, is headquartered in Washington, D.C. Her title is more prestigious than merely executive director or even president. She is to serve as the NAIC's (and presumably, the insurance industry's) prime spokesperson to Congress, FASB, SEC and international insurance and accounting regulators. The NAIC seems to be hoping that, if a federal takeover occurs, this organization will be federally designated as some type of central regulator.

In early March, she already testified to Congress, primarily on a new buzzword, Systemic Risk. It seems that the definition of this term is trending to, "Risk in one company that can affect a great number of companies." Vaughan's testimony relayed, among other things, that the insurance industry is less subject to systemic risk than other industries. Her background includes industry, regulatory and academic experience, and while she is an excellent speaker, it remains to be seen how effective she can be.

In a broad sense, the NAIC may be exploring further expansion of its role. We know there is widespread dissatisfaction with the main rating agencies, S&P and Moody's, so the NAIC may be considering setting up its own rating agency as competition, something broader than the Securities Valuation Office (SVO) role.

At the most recent NCOIL meeting, a panel discussed the state of the Optional Federal Charter and a possible federal takeover of the states' role. The panel generally agreed that, with the current makeup of Congress, state regulation, as we know it, is not doomed, but faces an uphill fight.

Congressman Barney Frank has recently proposed establishment of a new federal systemic regulator. This term ties in with the abovementioned systemic risk. It remains to be seen whether this new position would extend to insurers, as well as to banks. The even broader question is what the regulator's responsibilities and powers would be with regard to dealing with this ill-defined term.

In addition, the entire insurance industry is suffering from the financial condition and recent activities of AIG. As widely publicized, AIG received massive federal bailout money, due to greatly depressed market values of its CDS portfolio (Credit Default Swaps are guarantees on the financial performance of other corporate bonds). A non-insurance internationally based unit of AIG had sold these swaps on a massive basis, even though the argument could be made that at least some of these CDSs are really insurance. Although evidence is lacking of any massive defaults from these CDSs, their market and carrying values are apparently still depressed. An even greater backlash has occurred from AIG's bonus payments. These were partly made to key executives, but even greater amounts, for whatever reasons, have been made to other financial institutions. Despite the non-insurance nature of these CDSs, all too many articles have appeared which attack the financial soundness of the entire U.S. insurance industry.

ACLI's Proposed 2008 Surplus Relief Portions on Current Business

Late in 2008, when the NAIC refused to adopt these proposals on a national basis, it promised that they would be considered on a more thorough, well-researched basis during 2009.

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These tasks were allocated to committees last December, as follows:

- Reserves for term and universal life with secondary guarantees (UL2G)—to Life and Actuarial Task Force (LHATF).
- Variable annuity risk based capital—to Life Risk Based Capital (RBC) Working Group.
- Mortgage Experience Adjustment Factor (MEAF)—same.
- Deferred federal income tax asset (DTA)—to Statutory Accounting Principles Working Group.

LHATF agreed to forward again copies of its December reserve reports to the Capital & Surplus Relief Working Group. Some members complained about doing additional work, when a thorough study had already been made. LHATF's report had been favorable on term life, primarily to liberalize use of XXX factors without a 20 percent minimum ratio. However, it had been unfavorable on UL2G and a proposed extended use of lapse rates.

The other three topics will be studied in detail by the above assigned groups. The Life RBC Working Group will study a survey of reports submitted under current C3 Phase 2 requirements, with an emphasis on thoroughness of company documentation. Any liberalization of MEAF will depend on a study of industry experience that reflects the current economic turmoil. DTAs will be studied during 2009, with an emphasis on recoverability of assets at current levels.

Scope Proposals for Principle-Based Reserves (PBR)

Two approaches that effectively limit the PBR scope have been proposed, one by the American Council of Life Insurers (ACLI), and one by the Texas Department, working through the American Academic of Actuaries (the Academy). The ACLI discussed its net premium reserve proposal. When introduced last December, it seemed quite positive. This approach was designed primarily from concerns about federal income tax and whether gross premium reserves (GPRs) under PBR would endanger the status of tax reserves computed under the current Code.

In summary, net premium reserves would work as follows:

> These reserves would be computed for all products subject to PBR, based on prescribed assumptions of mortality, lapse and CRVM-type expense allowances. All products would be subject to two tests, the Stochastic Exclusion Test (SET) to measure volatility and a new net premium versus gross premium test to measure adequacy. Products that pass both tests, presumably traditional products, would use net premium reserves with a seriatim cash value floor. Products that passed SET, but not net versus gross, would use deterministic GPRs. Net premium reserves would serve as a floor, presumably an aggregate one. Products that did not pass SET, regardless of net versus gross, would use stochastic processing for reserves (GPR plus any excess of stochastic over GPR). For these products as well, net premium reserves would serve as a floor.

One problem is that, in March, the ACLI did not provide any further details about net premium reserve workings. Items not specified included the size of expense allowance, mortality table prescribed margins, interest rate formula and prescribed lapses. With this type of delay, one risk is that the proposal could be subverted so that the net premium reserve becomes just another reserve floor across all products. Possibly, one reason for the lack of guidance on details of the net premium reserve workings could be due to trying to fit net premium term reserves to be close to deterministic GPRs. Since, for this product, net premium reserves would serve as a floor, there would be an advantage from a close fit.

The second proposal stemmed from the Academy's Valuation Manual team, chaired by Mike Boerner of the Texas Department. He has formed a subgroup (of which the author is a member) to propose ways to limit the scope and effective dates of PBR. One of our several approaches, which seems to have some support, is to limit PBR to competitive term and UL2G. An earlier complete exemption for preneed life was removed, possibly due to lack of uniform preneed definitions across all states.

On the positive side, no conceptual LHATF objections were raised in March, when these proposals were made by our subgroup. One member did question why this proposal was made, in light of the ACLI's net premium reserve proposal. Also, in a later meeting of the Commissioners Working Group on PBR, the LHATF chairman did say that he thought any exemptions or limited scope for any products would be only temporary. No action on scope was taken at this meeting.

Other PBR-Related Developments

One problem could affect small companies and others as well. Now, LHATF ignored an earlier promise that it would not press for adoption of a new Standard Valuation Law (SVL) until the Valuation Manual (VM) was done or nearly done. Instead, LHATF hopes to adopt a new stripped down SVL by conference call in about 30 days, before the June meeting.

Risks from an incomplete VM after an NAIC-adopted SVL include:

1. Subverting the net premium reserve proposal so that, for traditional plans, it would only be a reserve floor, not THE reserve.
2. Avoiding additional testing on the 4 percent threshold for the SET—Preliminary tests indicate that some non-par permanent plans need a higher threshold or comfort with varying other assumptions besides interest.
3. For non-variable annuities and long-term care, where no VM work has been completed as yet, requiring complete stochastic processing for reserves.
4. Unfavorable resolution of items that now seem trending towards favorable.

New York did not push for a completely prescribed interest rate assumption. Their argument had been that no company should be allowed to hold lower PBR reserves due to allocating riskier assets to those reserves. Instead, LHATF listened to an American Academy proposal for prescribed asset default rates. These would tie in with using an asset portfolio rate reserve assumption (from investment grade assets) less these default rates. The proposal includes a very complex formula for computing defaults, with the goal of keeping default assumptions fairly high. The downside is that required use of such complex default rates would result in interest assumptions close to current prescribed statutory interest anyway. The Academy's report and proposal will be studied further.

It looks like the 2008 Basic Table will not be adjusted by margins into a valuation table. This means that companies will not have to incur the expense of new statutory factors quite yet. The Society of Actuaries (SOA) said that a new mortality table would be likely by 2012. If the ACLI's net premium reserve concept holds up and SVL became effective on an optimistic timetable, the year 2012 would be a likely time new net premium statutory factors would be needed anyway.

For experience reporting, I repeated again to LHATF an exemption proposal made by some small companies. I do not believe there will be a blanket exemption for companies under $75 million premiums. However, based on the fallback included in the proposal, most smaller companies would have to report only summarized mortality experience. Documentation of these results would be required anyway for the SET 4 percent calculations. This issue, too, is still unresolved.

"There was agreement that the ceding company should definitely compute net of reinsurance PBR reserves."

Two issues in reinsurance are still unresolved. First, current VM20 wording for life reinsurance requires complete risk transfer for a treaty to be accredited. However, on some UL2G products, after cash values go to zero and minimum premiums kick in, reinsurance coverage only starts under those conditions. Arguments have been made that such coverage should be considered valid reinsurance. Second, there has been considerable discussion over whether reinsurance calculations should be made on a net basis, for the credit portion only or for the gross portion. Admittedly, the ceding company may not possess sufficient information to calculate meaningful reserve numbers for the gross portion. The assuming company's asset portion might result in different interest assumptions. It might pool mortality experience so as to use different assumptions from the ceding company's assumptions.

There was agreement that the ceding company should definitely compute net of reinsurance PBR reserves. Also, it should compute reserves for the reserve credit it takes. However, New York recently proposed that two credits should be computed, one with the ceding company's assumptions, and one that, somehow would use the assuming company's assumptions. The greater of the two would be the reserve credit. New York's argument for this test was that, for unauthorized reinsurance arrangements, the greater of the two was needed to compare against collateral. This issue is still unresolved.

Another unresolved issue is margins themselves. Should margins be employed assumption by assumption or in the aggregate? In any event, should some overall margin be tested to ensure reasonable results?

One addition to the new SVL was made. A separate Corporate Governance Working Group added a paragraph that basically would require companies using PBR to have Board of Director controls in place over reserve calculations and processes.

PBR Summary—LHATF and Commissioners PBR Working Group

As indicated above, LHATF did not discuss with the more senior working group its earlier promise made about presenting SVL and VM as a package. The working group chairman seemed to be pushing as hard as anyone was for rapid adoption of the stripped down SVL. He talked about making more presentations to NCOIL about a new SVL.

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There will probably be a 30-day exposure period for the new governance addition to SVL. Any phone adoption of the new SVL before the June NAIC meeting would be very difficult.

Life Risk Based Capital (RBC)

No change took place in the approach discussed in December. For traditional products, testing for a maximum 4 percent SET would allow continuation of current RBC factors. These SETs must be tested on all in force. There is also the possible use of the alternative amount, although that is not precisely defined. Through some use of traditional calculations (again, not precisely defined), companies may be able to show that current statutory reserves plus capital are covered with a 90 percent confidence rate.

If neither of these steps is feasible, then full stochastic processing of special RBC reserves for all issues is required. This would be an onerous burden for small and many larger companies. The current RBC proposal will have one more 60-day exposure period before the working group moves to have its parent adopt new procedures for year-end 2009.

GAAP and International Accounting (IFRS)

Predictions have been made that current U.S. GAAP will be replaced in the foreseeable future by international accounting. This would extend to reserves as well as invested assets.

Earlier proposals for reserves had talked about a form of exit value calculations. This seemed to connote a type of fire sale approach that has plagued many bank assets recently. Now, there may be a change towards a value closer to current U.S. standards. Reserve net premiums would not generate anomalies such as gains or losses at issue, and apparently would cover acquisition expenses.

One unresolved issue was an earlier proposal that the size of reserve liabilities would vary with the credit standing of the insurer. In other words, a company with a lower rating would hold LOWER reserves than would a more highly rated company.

Summary

In a Nov. 11, 2008 letter, the ACLI stated that it would oppose adoption of a new SVL unless it was substantially satisfied with the status of VM. Currently, there are several important unresolved issues about VM content.

Congressional hearings over the next few months could determine the future of state regulation and status of the NAIC. The status of international accounting is probably not on such a fast track. It has its own set of unresolved issues and possibly onerous calculation requirements.

Overall, there is a great deal of uncertainty facing the life industry, which calls for close and ongoing attention.

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Combination Annuities—A Market to Get Into?

By Cary Lakenbach

Just like the month of June in the renowned musical, "Carousel," combination annuities are "bustin' out all over." The impending effective date (Jan. 1, 2010) of the Pension Protection Act has insurers actively researching and/or developing such products for introduction next year.

Whether companies choose to enter this business or not, the dramatically large size of the potential market suggests that companies ought to research at least the appropriateness of the offering for their business. This article provides a road map of the issues a company will need to address to enter the combination long-term care (LTC) market. Following is a list of key issues:

1. Government Tax Policy
    - The impact of the Pension Protection Act
2. Markets and Customer Need
    - The case for long-term care generally, and for annuity combinations specifically
3. Distribution
    - What issues must be addressed to get transactionally oriented distribution to embrace this new business?
4. Insurers
    - What are the product implications of this business, with respect to risk and business management?
5. Product
    - What are the components of a successful product design?
6. Financial Environment
    - What might be the implications of the recent volatile financial environment on product, and on the prospects for the offering generally?
    - Implications for smaller insurers

Government Tax Policy

Just as HIPAA, which became effective in 1997, enabled standalone long-term care and combination life and long-term care products to be sold on a tax-favored basis, the Pension Protection ACT (PPA) similarly enables combination annuity and LTC contracts to be sold with similar tax benefits.

Actuarial Strategies, Inc. and others have previously written extensively on the tax treatment of combination annuities, so the following is a high-level summary of tax considerations (where all comments refer to tax treatment beginning in 2010, the effective date of PPA):

1. **Income Tax Free Benefits:** Benefits received under Qualified Long-Term Care Insurance (QLTCI) riders to annuities are received income tax free.
2. **QLTCI Requirements:** To be considered QLTCI LTC riders must meet the appropriate requirements of Section 7702B of the Internal Revenue Code (IRC).
3. **Nonqualified Retirement Annuities Only:** QLTCI riders may only be written in nontax qualified retirement annuities.
4. **Construction of Combination Annuities:** Combination annuities invariably include account value as part of the LTC benefit, although there must be some additional LTC risk coverage as well. Policies need not return account value and the additional LTC risk coverage at the same time. (As we do with clients, one must caution that the author is not a tax attorney, and neither he nor his firm provides tax advice.) In other words, one can design products that return account value first, as sort of an extended elimination period, and then pay out the pure risk amount.

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5. **Favorable Treatment of Gain:** Thus, when annuity gain is paid as part of an LTC benefit, the gain escapes income taxation. That is one of the key advantages of combination annuity products.
   a. What this says is that a tax-deferred annuity essentially becomes a tax-free annuity when the account values are paid out as qualified long-term care benefits.
6. **Treatment of Exchanges:** The PPA provides that one can make IRC Section 1035 exchanges from existing annuity contracts (written 1/1/97 and later) to combination annuity contracts.
   a. Because existing contracts can have significant gain locked up within them, the favorable treatment of gain within combination annuities makes them extremely attractive as an exchange vehicle.
   b. This has implications for companies in two different ways. A company must be extremely cognizant of the potential for dislocation of its in force. And, conversely, a company should be aware of the potential to attract existing annuity business with an attractive combination offering.
7. **Charges:** Charges to pay for QLTCI are not taxable, ever.
8. **Dac Tax:** The DAC tax rate for combination annuities is 7.70 percent, the same as for standalone LTC coverage. Note that nonqualified retirement annuities have a DAC tax rate of 1.75 percent.

Markets

That there is a need for long-term care services is incontrovertible. By 2010, the number of Americans 55 and over will be over 55 million, and by 2020, the number will be over 71 million. These Americans are living longer and incurring more claims, which of course are claims of infirmity and old age. The cost of claims is going up too. In 2007, the national average cost of a semi-private room was approximately $6,000 per month with enormous geographical variations, especially in urban regions of the country. Yet, if the number of Americans needing long-term care is so great, why aren't the sales of standalone LTC more robust? That they are not robust is clear.

Sales have fallen from the 2002 level of 725,000 policies to just fewer than 300,000 for the last two years (2006 and 2007). These sales barely begin to address the potential market demographic and customer need. Several reasons have been postulated by industry observers for the relatively poor and declining sales volume. These include:

1. Poor publicity on existing standalone business.
2. Rate increases on existing policy holders.
3. Relatively high prices of existing standalone products: A typical standalone policy with a 4-year benefit period at age 65 for $200 a day (without inflation) can cost $2,500 or more.
4. Major resistance on the part of many to the use it or lose it phenomenon. (If a buyer owns the LTC and dies without incurring LTC expenses, the total premiums will have been "lost").
5. Limited distribution: Today the LTC policy is sold largely through specialists. Huge numbers of distributors do not participate.
6. Underwriting is difficult and takes a long time.

Hence, the need is great, but existing solutions have not been terribly successful. Are there solutions that achieve the goal of covering the LTC need, and which overcome these objections? We do not know the answer for sure, and we won't until we are into next year, but the combination annuity story is a compelling one.

What makes it so appealing?

1. **Much Lower Cost:** The cost is significantly less than a standalone providing a similar benefit stream, primarily because the combination product owner will be using his own money as a copay, so to speak. There are other compelling reasons.
2. **No More "Use It Or Lose It"**: If the owner does not become chronically ill, he gets to keep his annuity dollars. A properly designed annuity ought to be able to provide for living benefits without jeopardizing LTC benefit levels, so that some values can be used to provide income. Remaining values can be passed along as a death benefit. In other words, no more "use it or lose it," which is bound to appeal to investment-oriented advisors.
3. **Gains Avoid Tax:** As noted, annuity gains will avoid tax. This is especially valuable if gains exist due to exchanges.
4. **Simplified Issue and Underwriting Process:** A simplified yet still rigorous underwriting can be designed that is both protective and enables the transaction-oriented annuity producer to sell this product.

Distribution

The real opportunity, as viewed by most observers known to the author, exists with annuity producers. Most annuity producers are transaction-oriented, so that maintaining the transactional nature of the sale is viewed as essential. The key to achieving this objective is the contract issue and underwriting process. Market research carried out by the author's firm in partnership with a major market research firm strongly suggests that producers from various distribution segments, including wirehouse and regional broker dealers, are comfortable with simplified underwriting if the underwriting process meets certain criteria, such as limited time until decision and minimal producer involvement in the underwriting process.

Also very important is how the sale can be positioned in a manner that is consistent with the overall business of the producer. Educating the producer on the type of customer that would be suitable for the LTC combination annuity is viewed as very positive. Because annuity producers are not so familiar with LTC products and related considerations, proper training and attractive tools are essential. If the insurer is larger, training wholesalers to educate their advisors properly is essential. Smaller insurers may want to sponsor schools, develop training disks and sponsor training webinars.

Market feedback to date suggests that illustrations that illuminate the design, and which are accompanied by attractive professional looking written material, will be viewed very favorably.

Insurer Considerations

Okay, how many insurers are in the LTC business? Not too many. That means most of you are not in the LTC business. Whether you are or not, you still need to understand what is involved in getting into the combination annuity business:

1. **Do You Want To Dance?** A key question to ask is, why get into the LTC business? Most executives view the opportunity to expand annuity sales as the key reason for market entry. For their companies, two major considerations are the minimization of risk and the limited involvement in LTC claims management.
2. **Minimization of Risk By Product Design:** For many, product design alone may address this objective. Many potential designs limit LTC risk inherently by delaying the payout of the pure risk elements until account values are paid out. Of course, the fact that the policyholder has relatively sizable amounts of account value at play is inherently limiting as well. (Not all designs may work from a tax perspective, however. While the tax code doesn't specify rules for the minimum amount of risk that a product needs to have, a number of prominent legal and actuarial advisors believe there are limitations that must be met. That topic is, however, outside the scope of this article.).
3. **Minimization of Risk By Reinsurance:** Several reinsurers are actively soliciting combination business. Therefore, it is possible to further limit a company's LTC risk exposure. Some degree of participation by direct writers, at least 20 percent, is essential. In light of market conditions, reinsurance will be easier to procure for nonvariable offerings.
4. **Claims Management:** Companies generally do not want to build their own LTC claims units. There is a great deal of overhead involved in building expertise unlikely to be used in any great measure for several years. It is much better to rent it by working with knowledgeable Third Party Administrators (TPAs) active in the LTC marketplace. There are several good ones.
5. **Other Considerations:** We have already addressed some of these previously. To summarize,
   a. Sound, protective underwriting that is sensitive to the culture of the annuity distributor is essential.
   b. Solid execution—this involves sales training and top-quality marketing materials, among other factors.
   c. Planning for in force challenges and opportunities.

"Educating the producer on the type of customer that would be suitable for the LTC combination annuity is viewed as very positive."

Product

In our world, product means more than the precise product-specific components. One must get product to the consumer, through the distributor, and whatever it takes to accomplish this objective may be considered "product." Here are some of the key combination annuity considerations:

1. **Defining Product Based On Need:** Today's combination annuity products, most of which are nonPPA compliant, do not directly determine the LTC product parameters based on the consumer's assessment of their LTC need. Yes, there is an outcome (e.g., the product provides $200 per day for a minimum period), but that is not necessarily great if the buyer needed $300 per day. It is better to start with the need, the way a prospect would be likely to look at the situation, and build the product up that way. This may lead to different designs, or at least to illustration systems that translate

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current designs into the structure most likely to be useful to a prospect.
2. **Provide Product Flexibility:** This is a tough one, because while training is essential, as noted, the reality is that most annuity distributors will not have much experience with LTC concepts, and too much flexibility may result in confusion and consequently, lack of sales. An answer to this dilemma lies in the illustration tool. How much deposit, how much desired benefit (and for how long), desire to take some income within specified parameters, and desire to leave money for heirs, will be the key parameters.
3. **Limit Early Claims:** A waiting period, two years for example, specifies that no claims will be payable within the specified period from issue. This complements the simplified underwriting. (Waiting period is to be distinguished from elimination period, which specifies how long an individual must be disabled before the company will start paying benefits.)
4. **Indemnity Or Expense Reimbursement:** These terms have to do with whether the daily or monthly benefit is a function of actual claims or not. Indemnity is simpler and easier to administer, but potentially more costly. Further, the tax rules limit the maximum tax-free payment under indemnity contracts. The limit, which varies year to year as a function of living indices, is $280 per day in 2009. For expense reimbursement contracts, all legitimate benefit payments are tax free.
5. **Simplified Issue and Underwriting:** While this topic has already been dealt with elsewhere, some additional comments are in order. Simplified does not necessarily mean a few (e.g., four) yes/no questions with accept/reject underwriting. It could, but rather it refers to a spectrum of noninvasive underwriting, and so it might also be more robust, and include elements such as tele-underwriting follow-ups and cognitive screens.

Financial Environment

We are not in any financial environment that most of us have previously been exposed to, and what company strategies and plans were in place as recently as a year ago have been in many instances dramatically altered.

Interestingly enough, some of these changes play favorably for the smaller insurers of this country. Not having delved into variable annuities, not having purchased asset-backed securities (hopefully), many insurers found their fixed annuity business growing rapidly at the expense of variable business, and in fact, noninsurance held assets such as individual securities and mutual funds.

Not surprisingly then, major combination annuity activity is therefore taking place in fixed annuity companies and business segments, and many larger companies are deemphasizing variable business and focusing on fixed. By reputation, smaller companies may have a competitive advantage currently, and many are capitalizing on it.

We have reviewed and discussed a variety of issues that need to be addressed by a company considering entry into the combination annuity business. The issues any specific insurer needs to address will no doubt not be precisely the same as these, but a well-prepared company will much more likely be a successful company.

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AG CCC Causes Rethink on ROP Term

By George Hrischenko

Since the writing of this article, the NAIC adopted the proposed actuarial guideline AG CCC and it is now referred to as AG XLV.

Like so many aspects of the life insurance business, manufacturing return of premium (ROP) term just became more complicated. Actuarial Guideline CCC (AG CCC) is already effective for new policy forms and starting in 2010 affects all contracts. The guideline treats ROP by rider the same as ROP as an integrated benefit and provides guidance for the calculation of cash values (CVs). These changes, among others, will impact the design, pricing, ROP pattern and administration of ROP products going forward.

The popularity of ROP has always been offset by the additional challenges associated with this product. Several of these risks have increased in 2009, including emerging lapse experience and reserve strain driven by current economic conditions. With the introduction of AG CCC added to the mix, insurers participating in the ROP segment have a lot on their minds.

AG CCC in Brief

AG CCC applies to any life insurance policy with an endowment benefit that is less than the face amount during a point prior to the expiration of guaranteed coverage. While it applies to other product types, AG CCC has a pronounced effect on ROP term.

Under AG CCC, ROP riders and base policies will be treated in exactly the same manner. Currently, most ROP carriers sell riders. In the past, carriers could value the riders independently of the base policy, using the cash benefit only when calculating reserves. Under AG CCC, all companies have to recognize the endowment. As a result, riders may disappear, which could reduce reinsurance opportunities for direct writers.

Also, the calculation of CVs is standardized under the AG CCC interpretation of the Standard Non-Forfeiture Law (SNFL). Currently, there is considerable variation in how SNFL is interpreted by state of domicile that goes away under the new guideline. The percentage method schedules used by many companies will have to be brought into compliance with SNFL, which may have some impact on lapse.

All of these changes will mean increased design time—not only once to comply with AG CCC but perhaps several times—in order to remain compliant. Currently, ROP is a simple, straightforward program, but under AG CCC it will morph to look like a much more complicated CV whole life product.

Administrative Challenges

Under AG CCC, many CV calculations are required to support each policy and duration. If the policy is altered in any way (e.g., waiver of premium, child rider added or dropped, premium adjustment), these must be recalculated. Many term companies' administrative systems need to be updated in order to handle the formulaic calculations required under the new guideline.

If that were not enough, the new filing requirements under AG CCC are significantly more detailed than previous ones (e.g., demonstrating four different CV calculations, intermittent death benefits, present value of endowment). The costs of new systems and additional reporting may be excessive for some companies.

Lapse Rates Continue to Decline …

Many ROP writers currently offer a percentage schedule of partial refunds for CVs, a benefit that is easy for producers to sell and direct writers to administer. The pattern of percentage refunds has an impact on lapse. Life insurers have long anticipated a point at which the increase in CV exceeds the annual premium paid, known as the crossover point. At this point the

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policy begins to "fund" itself and, it is assumed, the lapse rate will drop significantly as a result.

AG CCC's impact on the calculation of cash values may affect lapse. Increased interest by the secondary market in ROP has already raised concern that lapse rates may decline to very low levels ahead of the traditional crossover point. Many insurers priced an ultimate lapse of two to three percent or more into their products. The growing consensus is that a 0.5-1 percent ultimate lapse level is more plausible (indeed, the Canadian Institute of Actuaries suggests using zero percent in *Valuation Technique Paper #1*), and companies are adjusting their premiums to reflect the emerging lapse experience.

… While Reserves Constrain Growth

Like other long-term guarantees, ROP is highly sensitive to changes in interest rates not only because of uncertainty about forward rates but because ROP has larger reserve requirements than regular term. Under XXX Section 6D "Unusual Pattern of Guaranteed Cash Surrender Values," ROP products have a longer, steeper 'hump' in reserves than for base term, the peak being roughly two times higher than non-ROP on a statutory basis under current treatment.

Because companies must recognize the endowment under AG CCC, there is the possibility of additional reserves. Under GAAP, ROP peak reserves can be as much as three times that for comparable traditional term products because the endowment is already recognized. Under AG CCC, this endowment will be recognized not only for calculation of CVs and GAAP accounting but also for statutory reserve requirements.

Recent asset devaluations have already limited the ability of companies to internally finance these relatively expensive ROP reserves. Carriers are scrambling to raise financing or obtain reinsurance to cover their in force, but cost of capital is still very high and many reinsurers are constrained in their own capacity as well. Companies will have to consider the possibility of additional reserving burdens under AG CCC.

Summary

ROP, while attractive to consumers and producers, may be losing its luster in the eyes of manufacturers. At least one company is greatly increasing its ROP rates. Another major carrier is dropping its ROP offering entirely. Emerging lapse experience has come in lower than many insurers priced for, and ROP requires significant capital—a dear commodity in the current financial environment.

This article was published previously in *The Messenger* and is reprinted with permission.

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Call for Papers–Living to 100 Symposium IV

The Society of Actuaries will present its fourth triennial international Living to 100 Symposium in January 2011 in Orlando, FL. We encourage anyone interested in preparing a paper for the symposium to get an early start on pursuing the research and analyses. We are seeking high quality papers that will advance knowledge in the important area of longevity and its consequences. To learn more, visit *www.soa.org,* click on Research, Research Projects and Calls for Papers and Data Requests.

Adventures in 2008 Cash Flow Testing

By Don Walker and Sharon Giffen

Cash flow testing for year-end 2008 was proof that we do indeed live in interesting times. This article provides some insights into the creativity employed to ensure the sound survival of small companies that have limited means but are brave enough to do the right thing. Our heroes are the intrepid appointed actuaries of those small companies.

It all started in September 2008. Actuaries gathered at the Valuation Actuary Symposium in Washington, D.C. You remember September, right? The Fed had already slashed overnight rates; Bear Stearns had been forced to sell itself; Freddie and Fannie had declared massive losses; Lehman Brothers had declared bankruptcy; the Fed had just taken over AIG with the first $85 billion in bailout; in other words, the financial world was crashing all around us. The Symposium Program Committee added a last-minute session to discuss it all, and it was one of the best-attended sessions in the two days. The wise people on the panels were saying, "You'd better modify your assumptions to take all of this into account!" The tension was palpable among those responsible for ensuring the adequacy of their companies' solvency.

The heroes went back to their offices and took stock. With limited resources, cash flow testing for reserve adequacy is often based on 3rd quarter results in order to allow sufficient time to complete all the work and report final year-end financial results to the Board of Directors in late February. In 2008, how many were asked to deliver results early–even in December–to prepare management and boards adequately for the outcomes that were expected to be other than normal? What does that mean? Less time, a need to develop assumptions to take into account an economic situation that was changing daily, results that would undoubtedly be other than "normal" and a need to develop action plans to address those results—nothing the brave appointed actuaries couldn't handle!

The first order of business was to decide how to develop assumptions for yields on the fixed income portfolio. Meetings were established with internal and/or external portfolio managers. It was easy enough to get the yield curve very low and current spreads very high. But, what should be done with default assumptions? What did all of this mean for the future?

Thinking about this, the low yield curve was reflecting the intense demand for U.S. treasuries—the flight to quality. The savvy folks in the market recognized this, however, and were adding a flat amount to bring the yield curve back up, resulting in extraordinarily high spreads. Beyond that, though, some bonds were still trading well off their spreads—reflecting that the rating agencies were not as quick as the market to downgrade quality opinions.

Given that many cash flow testing models use specific bond ratings to predict defaults, and that those ratings might well be inappropriate for the times, historical default assumptions were very likely to be inappropriate as well. Hence, it was necessary to invent another way to develop defaults.

Several approaches were employed—sometimes more than one by a single actuary. Most would take the approach that all assets currently in default should be removed and replaced, if necessary, from another portfolio, to ensure an appropriate starting asset position. Next, distressed securities could be identified in a couple of ways. One could start with the current market values, calculate the yield of each bond, and then compare that market yield to the spread based on the bond's published rating. If the difference was greater than a tolerance suggested by the investment professional, it would be considered a distressed security. Another approach was to compare market value to book value, and wherever the ratio was out of line with the rating, (another guideline provided by the investment professional), that asset was considered dis-

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tressed. Either way, assets were grouped by shared risk characteristics, and default assumptions needed to be developed for each of them. For non-distressed assets, historical default rates or better were sensible, given that the distressed assets had been removed. The question remains, however, what do you do with distressed assets?

There were several "free" tidbits of information—rating agencies were speaking at actuarial clubs, and there is free historical default experience, year by year, class by class, available from rating agencies' Web sites. One particular forecast was for 4 percent defaults for investment grade bonds and 10 percent for junk bonds in 2009. Further, public data included a set of prices for credit default swaps on some rated securities. Historical information showed the increases in default rates over past recessions.

So, armed with data and expert opinion, an assumption set was built. For distressed assets, the estimate of 10 percent defaults could be used. For the investment grade assets, assume the portfolio is dominated by "BAA" bonds, and the 4 percent estimate might seem to apply. Then, did one consider the concept of conservation of total defaults (some assets had been removed as distressed and assigned the 10 percent rate)? In addition, did anyone consider that, in these times, even non-distressed assets could become distressed at the same as historical rates? One could also consider the prices of the credit default swaps, or look to historical recessionary period data for the entire portfolio—and consider how much worse 2009 might be. What multiple should be applied? Should it be doubled? Or tripled?

"So, having established expected returns on existing portfolios, and a picture of reinvestment returns for the future, our heroes bravely pushed the button to look at results."

Finally, some judgment was also necessary about how long the downturn would last. This was relevant to whether or not the increased spread and default assumptions should be runoff over a period of time, or maintained forever. Various approaches were possible. Some assumed the higher spreads and defaults forever; others ran them off over two to five years. Of course, it was not necessary to run spreads and defaults off at the same pace—it was possible to develop a net assumption to reflect a specific expected (conservative) future economic outlook.

So, having established expected returns on existing portfolios, and a picture of reinvestment returns for the future, our heroes bravely pushed the button to look at results. In a normal cycle, most business segments start out as profitable, and then some deteriorate as the reinvestment rates take effect. However, 2008 was anything but normal. Many books of business took an immediate hit (because of defaults) and then recovered to some degree, before resuming a normal pattern of results. For the fortunate folks with natural internal hedges between permanent life products (universal life and par whole life) and deferred annuities, the total portfolio might still have been okay, but results were down significantly from prior years for everyone.

Company specific results varied:

1. One or more product segments failed on down scenarios.
2. The whole company failed the down scenarios.
3. One or more product segments failed all scenarios.
4. The whole company failed all scenarios.

At this point, our heroes' focus turned from heralding the problem to solving it. Depending upon which product line(s) failed, ideas were generated.

If the participating whole lifeline was not passing, the actuary considered the future dividends. Were they properly reflecting future dividend action that would be taken? If the segment failed the down scenarios, and modeled dividends were not dynamic, there was an explanation, and further work could be done to demonstrate a passing test. If the segment failed in the level scenario, it was an indication that the dividends were not currently supportable. This may have required more immediate action to reduce dividends, which would also be necessary if the product is subject to illustration regulations.

If the problems existed in deferred annuities, and if the crediting mechanism was working, the issue was likely that gross investment yields were just too low to support the minimum guaranteed interest rate. In this case, absent natural hedges with other product lines, there was a need for broader action.

If there were failures of the total company in the "down" scenarios, this was also a signal for action to remediate. Now, all this testing was happening during the 4th quarter—as bailouts were being discussed and undertaken, and the stock markets continued to fall. There was little hope that year-end results would be better.

In many companies, there were unprecedented conversations between the actuary and CFO about the likelihood that there would be additional actuarial reserves as a result of asset/liability analysis. Reactions depended upon how much education had been provided in prior years about the trends and sensitivities of the business to low interest rates. It was time to discuss the alternatives—setting up a CFT reserve, doing a permanent reserve strengthening for specific blocks as necessary, making a voluntary contribution to the Asset Valuation Reserve (to cover the assumed increased defaults) and/or getting commitment from management to do a dividend scale decrease or universal life cost of insurance rate increase.

An analysis of the alternatives and some additional sensitivity runs uncovered these points:

1. A CFT reserve would run through income; reserve strengthening would not.
2. A CFT reserve could be released in future years, if appropriate.
3. A CFT reserve could be more effective, dollar for dollar, than formal reserve strengthening. Due to the unusual situation with defaults, the projections were showing an immediate book loss that was later recovered. A CFT reserve could cover that book loss (which is not a cash outflow) and then be available to pay projected future cash flow shortfalls. A reserve strengthening would be less effective because the immediate book shortfall would be exacerbated by the larger formula reserves in the projections.
4. Dividend/COI cuts/increases would be able to cover shortfalls in participating/universal life segments, but these actions, in isolation, would be extreme if the shortfall existed in the level scenario.

Armed with the best information available, the total action was mapped out for each of the companies. CFT reserves were increased in many companies, often by 1 to 2 percent of surplus. Management commitment to reduced dividend scales was obtained—even though the implementation of the cut may be in the future. Even so, marketing needed to take action on illustrations immediately, to ensure proper disclosure to the customer. Many memoranda also noted further actions that could and would be taken should interest rates stay down for an extended period.

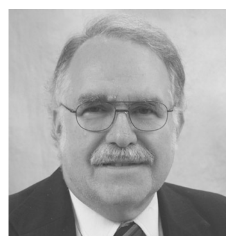
Brave actuaries took this message to senior management teams and Boards of Directors. While the message was not welcome, generally the necessity of it was recognized and accepted.

To summarize:

1. Spreads were much wider than historical. They would not be expected to persist at those levels. Grading them back to recent or historical experience over two to five years would be appropriate.
2. Defaults were expected to be MUCH higher, at least for a while. One could downgrade the worst assets and assign them to a class with significantly higher defaults. In addition, one could increase the defaults on ALL asset classes, grading back to recent experience over a FIVE-year period.
3. The result of these assumptions was something akin to a “J” recession (with rapid decline, and slow recovery, especially of existing assets).
4. DOWN scenarios were particularly problematic, and required strategies to alleviate them; actions that would need to be acceptable to management and the Board. This included a DECREASE to illustrated dividends, even though the decision to decrease them may not take effect until 2010.
5. CFT reserves were increased by many companies—often 1 to 2 percent of surplus.

That was an INTERESTING year-end!

Note: This article is intended for information and educational purposes only. The facts and opinions expressed herein reflect information collected by the authors and are not those of any one insurance organization, specifically, not those of the Farm Bureau Life Insurance Company of Michigan or The Independent Order of Foresters in Toronto, Canada.



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