

LONG-TERM CARE

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Long Term Care Insurance Reserves and Reinsurance

by Philip J. Barackman

Financial reserves are to Long Term Care Insurance (LTCI) what underground reserves are to oil companies. Future earnings depend on those reserves. However, theoretically, insurance reserves only affect the timing of profits and losses rather than comprising the basic resource. But practically speaking, insurance reserves play a larger role. In the real world, statutory surplus strain is an issue, and GAAP profitability is judged on financial results produced over

quarterly reporting periods, not decades. Decisions are made based on those results. Too conservative, and the business is prematurely judged to be unprofitable. Too liberal, and rosy profits that emerge in early years may belie large losses later on. Are the results real or is there just some problem with the reserves? Perception is reality at times, and for LTCI, reserves have a significant impact on perceptions of the business. Therefore, it is important to understand how reinsurance



affects LTCI reserves, and can help address the related issues.

LTCI Reserves

Before delving into reinsurance, let's first review some basic facts about LTCI reserves.

For LTCI, reserves become large in relation to premium. If a constant amount of new LTCI business were written each year, reserves would eventually grow to about seven times the annual inforce premium.

Although most LTCI insurers have immature books of business, and currently have less than half that level of reserve, the future is not ambiguous on this point. Increasing amounts of new business only delay the growth of reserve in relation to premium. Cease writing, and that growth accelerates dramatically. Today much attention

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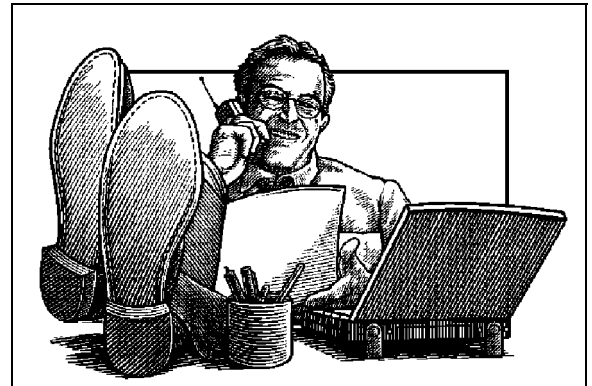
Editor's Note*by Bruce A. Stahl*

This is the first issue of the newsletter that Bart Munson has not edited. He sacrificially assumed the role of editor when there was confusion at the onset of the Long-Term Care Insurance Section, relinquishing his position on the Council to allow another individual on it. We are happy he did so, as he set the stage for providing informative articles and for identifying important issues facing us. He continues to be active on professional committees, task forces, and work groups, and we look forward to his sound and wise input for years to come. For this issue, Bart has provided an update on the pricing certification in the model regulation. In the last newsletter, he identified the inconsistency, if not obscurity, of the phrase "moderately adverse experience." Identifying its proper interpretation is a weighty concern.

As we continue the course that Bart began, we plan to provide four newsletters per year, each one generally focusing on its own theme:

Summer:
Financial topics;

Autumn:
Marketing and Product
Development topics;

**Winter:**

Regulatory and Professional
topics; and

Spring:

Experience Analysis and Pricing
topics.

This summer's issue therefore has articles on solvency, reinsurance, and mergers and acquisitions. The latter article expands upon the article in the recent Health Section newsletter on that subject, orienting us toward specific issues associated with valuing blocks of LTCI. The first two articles are also relevant to us right now, either directly or indirectly, and they each provide a perspective that I found somewhat surprising, considering their sources. I hope you enjoy all three articles as much as I did.

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Chairperson's Corner

by *Loida R. Abraham*



*Loida
Abraham*

Now is an exciting time to be a part of the Society of Actuaries' Long-Term Care Insurance Section. The Section is planning a number of activities that not only promote education for actuaries and non-actuaries on LTC but also encourage continued explorations of the unknown and the uncertain. There is a bonding that tends to take place within the LTC insurance industry knowing that we all share in some type of unique experience; one that involves creation and empowerment. From marketers who design new products to regulators who develop new laws to investment strategists who find new ways of looking at investing, the list can go on and on. The ground-breaking work being done today is becoming the standard for tomorrow.

Medical research and advancements, as well as technology, will have an impact on future creations. The stake gets larger with the increase in the aging population and as the

working population reduces in proportion.

This phenomenon is not local—it is global. Already we're hearing that in some countries, long term care needs are reaching crisis proportions. The SOA Spring meeting in Dallas featured a session on "Caring for the Frail Elderly." Robyn Stone, one of the speakers, talked about how 250,000 home health care aides are being trained right now in Japan, to help meet the demand for services.

One of the new activities that the Section is planning is a Call to Papers on LTC and I expect that this will bring out of the woodwork more new ideas or research that may not have been widely known previously.

In addition, the Section will now be opening its membership to non-SOA members. This will encourage cross-fertilization and really help broaden the horizons of the actuaries that are involved. Because of all the wonderful ideas that are being generated, there is an ongoing need for membership involvement to enable bringing some of these ideas to fruition.

I would like to encourage members to become more involved in Section activities. We will soon be sending blast e-mails to members soliciting volunteers to help with two

specific projects: (1) being the Web-site liaison for the Section, or (2) being part of the Committee that works on the Call to Papers. If any of you are interested in either of these projects, please send me an e-mail at labraham@jhancock.com.

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Long Term Care Insurance Reserves and Reinsurance *continued from page 1*

is given to product development and marketing—basically getting into and growing the business. Less attention is sometimes given to valuation and monitoring experience—managing the financial side of the business. As LTCI reserves continue to grow, issues related to valuation and the financial impact of reserves will become more evident and pressing on those involved with its management.

Let's briefly review the accounting rules under which LTCI reserves are reported—statutory, GAAP, and Federal income tax. In some cases, requirements will vary by the year of policy issue, but for brevity those details are omitted here.

Statutory

Statutory accounting is solvency oriented. Statutory reserve assumptions are state regulated, and that regulation calls for more conservative assumptions than are typically used for pricing or GAAP valuation.

pricing interest rates are generally in the 6-7% range, even higher rates have been assumed.

For policy years 1-4, the lapse rates assumed for active life reserves are not permitted to exceed the lesser of 8% and 80% of the lapse rates used in pricing. For policy years 5+, the lapse assumption is not to exceed the lesser of 4% and 100% of pricing. That 4% may no longer be conservative!

The required valuation mortality table is the 1983 GAM Table without projection. This assumption may also no longer be conservative, if the mortality improvement during the last 20 years continues in the future. Mortality is not a very sensitive assumption for most health insurance pricing, and the use of "stale" general population tables implies that this has sometimes been assumed to be true for LTCI. The greater impact of mortality for LTCI pricing can be shown by testing various mortality assumptions

conservatism. It may be difficult to argue that LTCI pricing morbidity is sufficiently conservative for statutory reserves unless an explicit margin has been documented in the pricing memorandum, which is not frequently observed.

The one-year preliminary term method is the minimum reserve standard for LTCI, according to the NAIC Model, unlike other health insurance for which the two-year method is permitted.

Bottom line, statutory reserve margins can be very significant. For an LTCI policy with automatic compound inflation, issued at age 70, statutory assumptions can add 25% to the same active life reserve based on pricing assumptions. For issue age 50, that impact can be 50%, or even more if the 4% ultimate lapse limitation comes into play or a "stale" general population mortality has been used in the pricing. Although some industry experience now suggests that a 4% ultimate lapse assumption is perhaps now even liberal rather than conservative, a significant amount of in force business has been priced with even higher ultimate lapse rates. Unlike inadequate underwriting, which tends to become apparent in the early experience; mispriced persistency is a more insidious problem for future profitability and valuation. The cumulative effect of too many insureds remaining in force and attaining older ages needs more than a few years to fully emerge.

GAAP

GAAP accounting (FASB 60) is oriented to matching the timing of costs (benefits and expenses) with revenue, while making a provision in the reserve assumptions for adverse deviation. GAAP is generally considered to call for a less stringent level of conservatism than statutory accounting. Typically, GAAP assumptions are based directly on pricing assumptions

This can result in a greater reserve needed than funds available from the LTCI product itself, thus creating a strain on the insurer's statutory surplus.

For example, the NAIC Health Insurance Reserves Model Regulation specifies a maximum valuation interest rate of 4.5% for current issues. However, current

for younger issue ages with automatic compound inflation.

No particular morbidity table is currently specified for LTCI valuation. However, the NAIC Model Regulation states that the morbidity assumption is to be established by a qualified actuary and acceptable to the commissioner. Common practice is to use pricing morbidity with some margin (0-10%) for "additional"

"Bottom line, statutory reserve margins can be very significant. For an LTCI policy with automatic compound inflation, issued at age 70, statutory assumptions can add 25% to the same active life reserve based on pricing assumptions."

with some adjustment such as a 50-100 bp reduction in the interest rate assumption, and perhaps a 0-5% increase in the morbidity assumption. Because of the high degree of pre-funding of future benefits under LTCI, even modest margins for adverse deviation can significantly defer profit. Explaining financial results to senior management can be merely a challenge, or a worst nightmare, depending on the degree of GAAP reserve margins and if they expect early financial results to mirror the pricing profit objective.

Whereas statutory accounting allows for an implicit deferral of first year expense by use of the 1-year preliminary term method, GAAP accounting requires an explicit deferral and amortization of eligible acquisition costs. Therefore, the net level premium method is appropriate for the GAAP active life benefit reserve.

Tax

Two major adjustments are needed to statutory reserves to meet tax requirements: 1) use of the interest rate assumption specified by the IRS, which is 6.00% for 2001 issues; and 2) use of the two-year preliminary term method for policies that do not meet the tax-qualification criteria of the HIPAA legislation. These effects, along with the DAC Tax adjustment to taxable income, accelerate payment of Federal income tax, and adversely affect cash flow and after-tax profit.

Types of Reserves

LTCI generates three basic types of reserve: unearned premium reserve, contract (active life) reserves, and claim (disabled life) reserves.

Unearned premium reserve is a function of premium payment mode and due date in relation to the valuation date; and is typically less than

half of total annualized premiums in force.

The purpose of active life reserve is in effect to match the expected premium revenue (reflecting payment pattern and period) with how the benefit costs are expected to emerge over the life of the policy. For LTCI, the benefit costs increase significantly by attained age (utilization increases with age), by duration (as underwriting selection wears off), and due to plan design features, such as automatic compound inflation adjustment to benefits.

Claim reserves are basically the present value of future benefit amounts not yet due on claims that were incurred prior to the valuation date (whether already or not yet reported). (Benefits payments that are due prior to the valuation date are technically liabilities rather than reserves.) Therefore, the date on which a claim is considered to be incurred is a key variable for valuation and claims administration. This merits closer attention.

For medical insurance the date-of-incurrence is generally defined as the date of service for which a benefit is paid. For LTCI, claims tend to be on going and comprised of a series of care services and/or a period of disability.

Therefore, a single date-of-incurrence is associated with a period starting with the satisfaction of the benefit trigger, confinement in a care facility, and/or episode of home care. Because these events are not necessarily strictly continuous, clear definitions need to be maintained regarding what constitutes the end of an LTCI claim (after which benefits paid for future care services will be assigned to a new date-of-incurrence.)

It is important that date-of-incurrence be consistently defined in the claim cost assumptions used for pricing and valuation, in the policy wording of benefits, and in the actual administration of the claims. Sometimes these functional silos do

not recognize how the local definition either affects or is affected by those definitions used elsewhere.

For example, let's say that administration treats an episode of home care followed closely by facility confinement as one claim. But at the same time, let's say these are implicitly assumed to be separate claims for valuation purposes, in that the claim reserve held during the home care episode does not assume any transfer to a facility as part of the same claim. Such inconsistencies can lead to apparent or real claim reserve inadequacy, misleading experience analysis, etc., depending on the details.

Reinsurance

Statutory Reserve Credit

In general, the impact of reinsurance on reserves comes about because of a reduction in the ceding insurer's reserve liability. The NAIC Life and Health Reinsurance Agreements Model Regulation gives certain conditions governing whether the ceding insurer is permitted to take reinsurance reserve credit for purposes of statutory reporting. Although this regulation was implemented to put an end to surplus relief deals that transferred little risk, it applies to all reinsurance, except assumption, YRT, and certain nonproportional forms of reinsurance. These conditions include (paraphrased):

1. Renewal expense allowances must be sufficient to cover anticipated actual renewal expenses, unless a liability is established for the present value of any shortfall.
2. The ceding insurer cannot be deprived of surplus or assets at the reinsurer's option or a defined event, except that termination of the agreement for

Long Term Care Insurance Reserves and Reinsurance *continued from page 5*

- nonpayment of reinsurance premium is not considered such an event.
3. The ceding insurer cannot be required to reimburse reinsurer for negative experience. However, the offset of current and prior years' experience refunds, and reimbursement of losses upon voluntary termination of the reinsurance agreement by ceding insurer, are both permitted.
 4. There can be no scheduled termination of the agreement or obligation of the ceding insurer to recapture all or part of the reinsurance ceded.
 5. The ceding insurer cannot be obligated to pay reinsurer amounts other than from income realized from the reinsured policies. That reinsurance premiums can not exceed direct premiums is given as an example.
 6. Reinsurance agreement must transfer the significant risks, which for LTCI are specified to be:
 - Morbidity
 - Lapse (generally the risk is failure to recoup surplus, for LTCI it's that too few will lapse!)
 - Credit Quality (default of invested asset)
 - Reinvestment (at lower than expected returns, if interest rates fall)
 7. If the underlying reserve assets are not transferred to the reinsurer, then a trust or escrow account is not required for LTCI, unlike for some other business. However, if the ceding insurer holds those assets, then the formula for the reserve interest adjustment must reflect the ceding insurer's investment earnings, including realized and unrealized capital gains and losses.
 8. Reinsurance settlements must be made at least quarterly and payments due from reinsurer must be made within 90 days of the settlement date.
 9. The ceding insurer cannot be required to make representations or warranties unrelated to the business reinsured.
 10. The ceding insurer cannot be required to make representations or warranties about the future performance of the business being reinsured.
 11. Reinsurance agreement cannot be for the principal purpose of producing surplus relief for the ceding insurer while not transferring all of the significant risks inherent in the business reinsured.
- Surplus Strain Solution**
- It is a common misconception that surplus strain is simply a function of first year commissions and expenses. Although this is often a factor, for LTCI three additional factors are 1) tax reserve method mismatch (if present), 2) the tax reserve interest assumption, and 3) the aforementioned conservatism of statutory reserve assumptions. It is important that LTCI insurers

perform statutory projections not just over two or three year planning horizons, but also for 10 years or more to better understand the surplus needed to adequately support both new and inforce business.

It is clear that reinsurance that is principally for strengthening surplus but does not transfer significant risk (old style "surplus relief") does not permit the ceding insurer to take reserve credit. Typically, such deals were done for relatively small "fees," but using the predictable future profits of mature stable blocks of in force business, e.g., permanent life insurance, as "collateral" for repayment of a temporary boost in surplus. Few, if any, reinsurers currently consider LTC to be sufficiently predictable to assume significant risk without a commensurate risk premium. However, quota share reinsurance can be an effective way of dealing with the problem of statutory surplus strain.

Quota Share Reinsurance

Under quota share reinsurance or simple coinsurance, the reinsurer assumes a fixed percentage of the risk and receives the same percentage of the direct gross premium. Assuming that the reinsurer is appropriately authorized, the ceding insurer is able to take a reserve credit equal to that same percentage. Typically, the reinsurer pays the ceding insurer allowances for commissions and expenses that approximate those assumed in the underlying pricing less the anticipated expenses of the reinsurer. Under this arrangement, it is clear that all of the aforementioned significant risks have been transferred. The degree of reserve credit is simply a function of the quota share percentage. Periodic



"Reinsurance can reduce the level of reserves and surplus strain, but careful attention must be paid to the permissibility of taking reserve credit."

analysis of the ceding insurer's current surplus and the projected impact of new business under various scenarios can help to determine the appropriate quota share percentage for new business.

Modified Coinsurance

Under modified coinsurance arrangements the assets underlying the reinsurer's contract reserves are held by the ceding company. As previously mentioned, the interest crediting formula must pass investment-related risks for reserve credit to be permitted. Under such arrangements, the reinsurer assumes additional credit risk and investment management risk from the ceding insurer, which may require additional risk premium and the use of a trust account to hold the assets.

Non-Proportional Reinsurance

There is no end to the complexity of reinsurance in moving away from the simple quota share approach. Generally, non-proportional reinsurance is used where the ceding insurer wishes to reinsure only certain portions of its risk, e.g., benefits paid after the first 3 years of a claim. Instead of the reinsurance applying to the first dollar of a claim, as in

quota share, excess reinsurance may just cover a fixed percentage of the remaining benefits, once a claim has exceeded some dollar amount or duration of time. In some cases, the premium for non-proportional reinsurance is expressed as a function of the direct premium, and in others cases, independently of the direct premium. For the latter, the appropriate reserve credit, if any, may not be a simple function of the direct reserve, but may require a separate reserve calculation.

Reinsurance and Tax Effects

Keeping in mind that most, if not all, reinsurance will have some effect on the ceding insurer's Federal income tax, such arrangements that appear to have no other purpose may be disallowed by the IRS for purposes of tax accounting. Reinsurance transactions directly between affiliated companies can have a valid business purpose. However, such arrangements may fall under more scrutiny, if the combined organization has not reduced its risk, but garnered a tax benefit.

Offshore

In theory, reinsuring business to another regulatory environment that has lower reserve standards may facilitate some relief for statutory surplus (either directly by the ceding insurer or indirectly by the domestic reinsurer). In practice, this often introduces one or more additional parties that expect to make a profit, that may perceive LTCI to be too uncertain to assume risk for a small expected profit or limited upside, credit risk may become an issue for one or more of the parties, and going offshore may introduce additional cost elements such as excise tax. Furthermore, if the objective is to improve GAAP results, which is frequently the case, then the ultimate holder of the

risk may question whether the existing level of GAAP reserve is really more than sufficient. This is not to say that complex offshore arrangements never occur or produce value, but by no means are they an easy fix for improving LTCI financial results.

Two Heads Are Better Than One

Last but not least, in working with a reinsurer, the LTCI insurer will in effect have additional actuaries and underwriters looking at the business, seeking to understand it, and providing valuable insights and suggestions on how it can be managed more profitably.

Conclusion

LTCI places demands on both valuation know how and statutory surplus, because of its large reserves and the conservative assumptions required for statutory reporting. GAAP reporting also requires very precise valuation and striking a fine balance between making a provision for adverse deviation and a reasonable emergence of earnings that does not lead to misperceptions of the business and misinformed management decisions. Reinsurance can reduce the level of reserves and surplus strain, but careful attention must be paid to the permissibility of taking reserve credit. Keeping reinsurance simple may be the best approach for addressing reserve issues. However, reinsurers almost never tire of thinking about and exploring complex new deal structures, so that advice may be taken with a grain of salt!

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Actuarial Certification

by Bartley L. Munson

In response to concerns expressed since the latter half of last year, and brought to a head by the article "Actuarial Certification: A Reason for Pondering" in the prior issue (April 2001, No.4) of this newsletter, the American Academy of Actuaries (AAA) has formed a Work Group to address the matter of actuarial certification and rate stability for long-term care insurance (LTCI) pricing.

The Work Group is to consider, as documents relevant to this review: the new NAIC LTCI Model Regulation; Actuarial Standards Board's Actuarial Standard of Practice (ASOP) #18; the LTCI Guidance Manual under current development by the NAIC; the possibility of a new Practice Note on LTCI for the actuarial profession; and any other sources that will be helpful.

The Work Group is under the auspices of the AAA Task Force on Long Term Care. It is chaired by Eric Stallard, Chair of the AAA LTC Task Force, and consists of nine other actuaries.

It held its first meeting, by conference call, May 21 and its second on June 27. It plans bi-weekly conference calls thereafter, with face-to-face discussion(s) as needed, until this important task is completed.

The Work Group gave oral reports on its formation to three different sessions of the NAIC at its meeting in New Orleans June 8-12. The NAIC stated it was mindful of some need for clarification, help, and guidance when they adopted the Model Regulation changes and some of its wording and requirements. They also stated they are happy the AAA has determined to

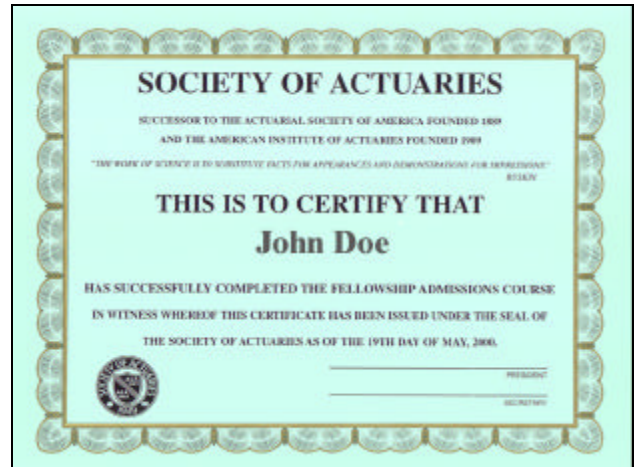
do so. The NAIC is glad to provide any helpful guidance they can on that effort. At the NAIC's request, the Work Group promised to give quarterly updates of its work to the NAIC. It intends to have a report of substantial progress by the September NAIC meeting.

It is difficult to know the pattern of work for this task, let alone the time and form of its conclusions. We do know that it is a challenging task—to advise our profession in light of the new LTCI Model Regulation. We also know that the end date is unclear; but it's realized that time is of the essence, for the LTCI Model Reg is being adopted, in one form or another, in many states as our work is progressing.

If members of our profession have thoughts, questions, or suggestions to contribute, please share them with the AAA Work Group, through the Academy office. We will be glad to take them into consideration.

We will provide a status report in each of the succeeding issues of this Newsletter.

As an aside, there were three letters received as a result of the article calling for this assignment, in the prior Newsletter. (Though few in number, so far, it is regrettably true that there are almost never any responses to invitations for such in our Newsletters.) These three, quoted below, with permission and in their entirety, come from varying sources and are of



varying length. They give some flavor to our work and to what we hope will be additional input.

Letters to the editor, in the order received:

Tony Grippa, FCAS, MAAA wrote: "I was glad to see your article about LTCI rate stability. It is a good article."

Excerpts of a letter from David J. (Joeff) Williams, FSA, MAAA: I am a consulting actuary and have been involved with several of our clients in the development and valuation of LTCI products. I agree with many of the points you raised in your article in the April 2001 Newsletter.

I recently attended the NAIC seminar on "Long-Term Care Rate Adequacy Actuarial Issues" in Atlanta. Several key comments came out of that meeting that I would like to share that may be of interest. The attendees at the meeting were predominately from state insurance departments.

1. Some of the attendees expressed concerns about the ability of the states to review initial filings for reasonableness. One participant asked the panel if industry morbidity data is available on which to make a reasonable estimate of future claim costs under "moderately adverse experience". The panel admitted that sound actuarial data for Long-Term Care morbidity experience is not readily available. This raised the issue of how then is an actuary to sign the certification required in the model language.

How can we be expected to sign a certification of premium adequacy over the life of the contract if a) industry morbidity experience is limited at best (probably out-of-date given the rapid changes in benefit triggers and definitions), c) the LTCI product is in its infancy within the insurance product cycle and c) there are continuing developments in the care and treatment of the applicants for this type of coverage.

2. The suitability of the LTCI product to the current market is an issue. The target market for LTCI has been 65 to 80 year olds. The 1984-93 Intercompany Experience Study shows over 63% of issues were over age 65. This issue of market suitability was raised at the NAIC meeting.

Should not this product be marketed to the 40-55 year old market with an emphasis on retirement planning? This allows the company time to establish appropriate reserves and the insured is left with a reasonable premium. Has the industry been missing the real market for this product?

I liken this issue of suitability to an employer establishing a

defined benefit plan on a group of 63 year olds. Most employers would not be prepared to establish the liability necessary to pay the future benefits.

Recent studies have shown that the average LTCI issue age is coming down, so maybe the target market is changing.

3. The future competitive market environment for LTCI must be considered. Loida Abraham in her editorial in the April 2001 newsletter mentioned that the market penetration rate is low. Does this mean there is adequate competition in this marketplace? Will the consumer have options from which to choose when buying a LTCI product in the future? Will smaller and medium size companies be able to afford to enter the LTCI product environment? These are additional questions I have regarding the future of LTCI.

Steve Sperka, FSA, MAAA, wrote:

I want to thank you for raising awareness and debate on an issue that I feel is very important to our industry and profession.

I agree that the LTCI actuary should pause and carefully consider the requirements of the actuarial certification. To certify to rates under the new model regulation, the actuary must build in margins for moderately adverse experience that are not required under ASOP (Actuarial Standard of Practice) #18. The LTCI actuary may have to reconsider the assumptions used in setting premium rates.

For example, what is a reasonable margin for utilization rates, considering the possible changes in future utilization that may result due to societal changes, medical advances and changes in the provider network?

Is it appropriate to project future improvements in morbidity experience when determining premium rates?

Is it appropriate to anticipate investment earnings that are representative of the recent economic conditions as opposed to long-term historical averages?

Appropriate answers to these questions may be different when looked at in the context of the requirements of the model regulation as compared to ASOP #18.

I welcome further discussion and guidance about the definition of moderately adverse experience. However, I share your concern that finding a clear and acceptable definition of moderately adverse experience may not be possible.

Ultimately, it may be up to the actuaries of each company to define moderately adverse experience for themselves, while documenting their logic.

Lastly, while the new model may create a dilemma for some LTCI actuaries, I feel the model is an important first step toward bringing greater stability and consumer protection to the industry. Rate increases and the bad press associated with them may damage the credibility of the entire industry. Even if the model manages to curb only the most abusive bait and switch tactics (if, in fact, that's really what they were), it will have accomplished a worthwhile objective.

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Editor's Note: Facts and opinions contained in this paper are the work of the author and should not be attributed to Milliman USA, the Society of Actuaries, its committees or the LTC Section.

Over the past couple of years, we have been involved with a number of major blocks of Long Term Care (LTC) business that have been the subject of actuarial appraisals. The blocks have ranged in size from a couple hundred policies (less than \$1 million of premium) to hundreds of thousands of policies (\$200+ million of premium). As these opportunities appear, an actuary can refer to a number of sources to guide him or her through the generic appraisal process. One source is ASOP #19, Actuarial Appraisals. Another source is an article recently published in the April 2001 Edition of the Health Section Newsletter, The Actuary and Health Insurance Mergers and Acquisitions by James T. O'Connor. This article provides a good roadmap to appraisals for health blocks of business.

So what is different about an LTC appraisal? And what issues should the actuary be focused on when appraising a block of LTC business?

Deciding to sell any block of insurance requires some planning and strategizing. Some of the questions that need to be addressed are:

Observations on LTC Mergers and Acquisitions

by James G. Stoltzfus

- What type of transaction works best for the parties involved?
- What company(ies) is a good fit for the business?
- What is the purpose of selling/reinsuring the block?
- What is the minimum price needed so as not to sustain a loss on a GAAP or statutory basis?
- What is the vision for the block?
- How will the sale affect expense margins on the remaining business?
- Will the company's distribution system need continued access to LTC products after the sale?

Answers to these questions are important to the planning process. Once this process has taken place, a decision can then be made to proceed with the actuarial appraisal.

The process for performing an appraisal on an LTC block is similar to that for appraisals of other types of products. LTC, however, is a long-tailed product. So there are some nuances and additional analyses needed with LTC appraisals compared to other health appraisals.

Some of the most critical analyses are described below.

- **Claims (A/E) Analyses** - Unlike most other health insurance products, when an LTC claim is incurred, the claim is expected to

run off over a long period of time, usually two or more years.

Therefore, in addition to thorough analysis of the claim incidence, an analysis of the claim runoff is also critical to the appraisal.

The typical appraisal uses company pricing claim costs as the underlying morbidity basis. Most companies have pricing claim costs by product, benefit period, elimination period, issue age, gender, and duration. Some companies break claim costs down further by type of benefit (nursing home, home health care, . . .), inflation option, and marital status.

These are then adjusted by actual to expected ratios (A/Es). At a minimum, A/Es should vary by product, benefit period, elimination period, issue age, gender, and duration. A/Es should be split into the following two components if the data is available: (1) the incidence rates of claims and (2) the continuation or termination of claims. Actual results are obtained from historical and current open claim files while expected should be calculated using the assumed morbidity. Studies should be broken down to provide as many categories or characteristics of coverage as possible, yet should not be so detailed as to detract from the credibility of the information.

Some critical breakdowns in addition to product, benefit period, elimination period, issue age, and duration are:

1. **Pricing Eras** - reflecting product and underwriting differences and revisions over time.
2. **Type of Benefit** - nursing home, home health care, waiver of premium, etc.
3. **Inflation Level** - whether the product contains inflationary increases and the type of increase.
4. **Gender and Marital Status** - marital status is definitely a factor that results in lower incidence and claim continuance while the insured is married.

Each one of these breakdowns can have a significant impact on morbidity.

- **Persistency Analysis** - This type of analysis is important for all appraisals, but is especially critical for LTC. The impact of a +/- 1% difference in lapse rates can have a large impact on the value of business, possibly as much as 20-30% of the value of the block.

Many older products and some more recent products have been priced based on lapse and termination experience from the 1980s. Termination experience today is a lot lower than the levels indicated by experience from the 1980s. Ultimate voluntary lapse rates (after 4-5 years) for a block can easily be running between 1-2%. The lapse rates also may vary quite significantly by issue age. In addition, experience studies imply a select and ultimate mortality table should be used. That is, mortality should be graded into some ultimate table, most likely the 1983 GAM mortality table, over a period of 3-8 years, which varies by issue age.

One possible implication is that many older products have been profitable in the past, but are moving into a period of lower future profitability due to the larger number of insureds at higher claim levels than originally priced for.

These are both critical analyses that should be performed when valuing a block of business. Other analyses are critical to the appraisal process but discussed in other literature.

There are several other crucial issues which must be considered with LTC. In many cases, answers to these issues are not clear.

- **Claims** - The projection of claims is usually the most critical issue when reviewing an appraisal. As mentioned earlier, the typical approach to projecting claims is to apply A/Es to expected claim costs by product, issue age, duration, benefit period and elimination period. Some of the key considerations are as follows.

If experience is worse than expected, should the appropriate action be to assume a rate

Will the trend of higher A/Es continue forever, or will the ratios track back towards expected levels in the future? Similarly, if low A/Es are being observed and the block is relatively young, is this due to a "miss" in the pricing assumptions on the selection factors, with the end result that ultimate claim costs will be attained, or will the favorable experience continue forever? The answer may be able to be determined from the pattern shown in the A/E analysis and the credibility of the data. Some judgment is involved. A company with over ten years of credible data should have a clearer picture on this compared to a company that is relatively "young" in the market.

How do the company's claim costs compare to the reviewing company's claim costs or to industry levels?

These questions only touch on some of the issues related to reviewing projected claims. The most helpful tools are a detailed A/E analysis and claim cost comparison. But other tools and

"...with the new NAIC rate stabilization measures, a rate increase may be detrimental to the company's business plan."

increase? Perhaps this is appropriate on older plans if the loss ratios are higher than assumed in pricing. However, with the new NAIC rate stabilization measures, a rate increase may be detrimental to the company's business plan.

review methods are helpful and should be used to provide a reasonable comfort level with the projection.

- **Policyholder Persistency** - Because persistency experience has been emerging at higher levels (lower terminations) than originally included in many

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pricings, it is important to gain a high degree of comfort with the assumptions for future terminations. Some companies are tracking mortality versus voluntary terminations on their systems. As mentioned earlier, the mortality component of terminations is much lower than 100% of assumed mortality tables in early durations, suggesting select and ultimate mortality. But, lapses and other terminations are emerging lower as well.

The most important tools to review are company termination studies and industry termination studies. It is important to recognize the impact on lapses of conversion programs, either formal or informal, and of rate increases. Both of these tend to shock the lapses for a period of time and distort the analysis if the study is for a short period of time, i.e. one to two years.

- **Claim Reserves** - The claim reserve runoff is typically another critical area for review. Claim reserves consist of IBNR, LAEs and the present value of claims incurred but not paid yet. How are the reserves calculated? Do they include interest discounting? How are the claim termination A/Es compared to those assumed in pricing? Do the payment streams recognize the specific policy benefit payable to the insured? Do the reserves account for waiver of premium if applicable on the policy? How do the reserves handle the possibility of a claimant moving from one type of care to another on an integrated plan?

- **Sales Force/ Distribution Method**

Another issue that arises is the review of agent commissions and the sales force. Will the insurer's distribution system be used? How will that benefit the company acquiring the business? Are there agent loyalty and retention issues which need to be factored in?



Are commissions advanced to the agent? Is there a chargeback provision which is applicable? If you expect the agents to leave, are commissions vested? Are commissions paid on premiums waived?

- **Underwriting** - The level of underwriting is always an issue.

Underwriting protocols vary dramatically by company and by when the policy was issued. For existing business, this issue is captured in the A/E analysis for the most part. However, to the extent new business is being considered, the actuary needs a high comfort level with the underwriting and applications being used in order to project new business reasonably.

Also, the new LTCI Model Regulation requires review of the company's underwriting practices as part of the rating process. This should be considered, at a minimum, for any new business analysis.

- **Claims Administration** - Claims administration should

always be reviewed as well. This area is key to understanding claims reserves and how claims are processed. It is important to understand to what level claims, both initial and ongoing, are being investigated and validated. Since levels of care often change, it is critical to the claim reserve to recognize these changes along with other benefits to which the insured is due.

The new LTCI Model Regulation also requires review of administrative and claim practices as part of the rating process. This should be considered, at a minimum, for any new business analysis.

- **Statutory Valuation**

Assumptions - Statutory valuation methods are generally not an issue. Older products are typically reserved on a two-year preliminary term (PT) basis for statutory accounting. Products issued since 1990 are typically reserved on a one-year PT.

Most of the issues and questions arise with regard to assumptions. Statutory valuation assumptions

typically vary by company. The variations are generally (1) the use of pricing claim costs (including selection), (2) the level of loads included in the morbidity, (3) the level of voluntary lapses, and (4) benefits being reserved.

- **Tax Valuation Assumptions** - Tax valuation methods, similar to statutory, are by themselves not an issue. Methods are spelled out in the tax code and companies follow these. However, tax valuation methods can have a large impact on future expected after tax profits for LTC business. This is particularly true when products are reserved on a one-year PT basis for statutory accounting and a two-year PT basis for tax accounting. On more recently issued business, tax valuation interest rates have been approaching statutory valuation interest rates. On tax-qualified issues (which is a large portion of many companies' recent blocks), the reserve methods are the same between statutory and tax, so that the impact is reduced some.
- **Taxation** - This is an issue for all appraisals. Some of the issues to consider are DAC tax, deductibility of the ceding commission, and type of transaction. A number of other issues can arise and should be reviewed carefully with tax counsel.
- **NAIC Model Regulation** - This has not been an issue yet but could arise. Some of the points were mentioned earlier. As part

of the rate stabilization provisions, if inadequate initial rates were filed, consideration should be given to the rate increase limits, guaranteed conversion options to other products, and

"...tax valuation methods can have a large impact on future expected after tax profits for LTC business. This is particularly true when products are reserved on a one-year PT basis for statutory accounting and a two-year PT basis for accounting."

rate increase notification requirements. In addition, if a company has had a history of inadequate initial premiums, potential state actions should be considered. It should be noted that the Model Regulation provides assuming companies a two-year "window" in which to get all necessary rate increases filed and approved without needing to disclose the rate increase on the assuming company's own Personal Worksheet. Therefore, the effect and timing of any needed rate increases on the assumed business must be carefully evaluated.

- **Reinsurance** - Usually reinsurance treatment is fairly straight forward. Issues can arise in assumption reinsurance if the

terms of the existing arrangement(s) need to be revised.

- **Appraisal Discount Rates** - This is a critical assumption and an important consideration in all actuarial appraisals. Discount rates will vary by type of business and should reflect the buyer's and seller's views on the risk involved and return desired.

As you can see, many issues can and do exist in performing an LTC appraisal. Some will be dependent on the specific transaction, some are LTC specific, while others should be routinely considered. As stated in Mr. O'Connor's article, appraisals demand a "high level of expertise and dedication to meet the demands of buyers and sellers and simultaneously comply with actuarial standards of practice." The key is to understand all of the issues, specific to LTC and general appraisals, and gain a high level of comfort with the analysis.

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Insolvency Due to Long Term Care

by Gary L. Corliss

Insolvency, Bankruptcy, Failure, Financial distress, Financial impairment. None of these terms sound pleasant. Their exact definitions may have subtle differences. All of them con- note an unhappy occasion.

Long term care insurance has arrived. There have been several insolvencies of smaller insurers who have focused their marketing primarily on long term care coverage. Our third party administrator has been called upon by state Guaranty Associations in some of these instances to administer the existing policies and manage current plus future claimants. The process requires that the business in force is assumed by a financially sound organization and becomes that new company's responsibility and liability.

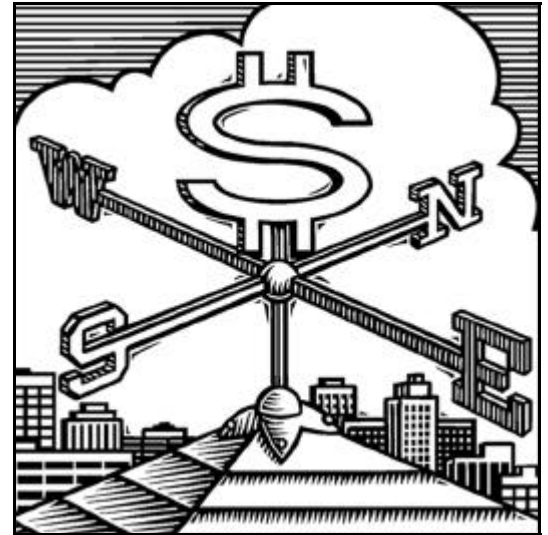
Based on our involvement in assuming business as a result of insolvencies, we have determined that there have been certain common characteristics of insolvent LTC insurers. Let me explain.

First, I would like to dismiss the common notion that insolvencies are often caused by external factors to the insurer (e.g. investment yields) or the industry (e.g. unreasonable competition). We have found no evidence in our experience that indicates that external factors

caused the failure of LTC insurers. It appears quite the contrary; the failure developed primarily due to internal considerations.

When any insurance organization fails, and the reason can not be charged to external causes, it is tempting to suggest that there was inadequate pricing. In one sense that may be so. Clearly, if the premium is sufficient to handle all benefits and expenses, then insolvency should not occur. However, premiums may be deficient because something or several somethings have gone awry. Our experience indicates that failures in three functional activities are usually precedent to company failure: Underwriting, Contract Language, and Claim Processing.

1. Underwriting, performed with less sophistication than quality competitors of the time, appears to be the primary organizational deficit that eventually leads to a company's demise. If this activity is performed poorly, no premium rate has a chance to be adequate.
2. Contract Language specificity is so important. The policy language determines whether the claim department is provided



support in determining whether a claimant is properly entitled to benefit under the policy. With inadequate language, the claim department could be required to pay benefits even when an insured was not in a condition to collect according to the pricing expectations.

3. Claim Processing is of third importance, but very close to number two above. The claim area must assure that contract eligibility for benefits has been met and that benefits are paid in accord with the benefits purchased. It should be simple to process the claims by reading the contract. We have observed that it was not so for several failing insurers!

Certainly proper premium development is essential to a successful product and a successful company. Proper premium development requires that the pricing actuary fully understand all the administrative processes of the insurer for which he is pricing and the impact that those processes have for premium development. The NAIC Rate Stability Model language is properly putting pressure on actuaries developing premiums to know how insurer functions are being conducted and to consider the functional methodologies in pricing. Further, just as the actuary should check out "actual to expected" pricing assumptions over the life of a portfolio of LTC insureds, the actuary should verify periodically that the "actual" processing of the business is following the "expected" approach built into developing the program.

When prudent pricing is bonded with responsible functional processing, insolvencies should be minimal to non-existent.

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