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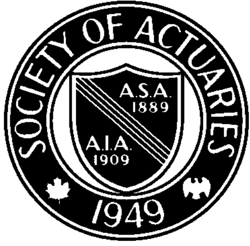

LONG-TERM CARE

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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.

In This Issue

	Page		Page
Long Term Care Insurance Reserves and Reinsurance *by Philip J. Barackman*	1	Observations on LTC Mergers and Acquisitions *by James G. Stoltzfus*	10
Editor's Note *by Bruce A. Stahl*	2	Insolvency Due to Long Term Care Insurance *by Gary L. Corliss*	14
Chairperson's Corner *by Loida R. Abraham*	3	2001 Meeting Editors Wanted	15
Actuarial Certification *by Bartley L. Munson*	8		

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

(continued on page 4)

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. 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 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 for younger issue ages with automatic compound inflation.

> *"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."*

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" 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

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-incurral 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-incurral 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-incurral.)

It is important that date-of-incurral 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

(continued on page 6)

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 redictable 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

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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 profitability.

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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