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Designing and Pricing LTCI Combination Products

by Carl L. Friedrich

The insurance industry is increasingly offering combination long-term care insurance (LTCI) products that offer various advantages over stand-alone LTCI designs, and that may allow the industry to access a broader range of the population. An April 2004 Milliman Research Report authored by Carl Friedrich summarizes the key considerations in designing such products, various forms that may be utilized and a range of issues that must be addressed to assure the ability to successfully construct, price and market this business. What follows is a section from that report.

Pricing, Reserving and Company Taxation Considerations

Pricing of LTCI riders requires a range of assumptions including persistency, interest rates, mortality, morbidity incidence and severity, expenses, capital requirements and taxes. De minimus benefits are often crudely sized, and if below a certain threshold, a modest charge or no charge is utilized. These should be examined by age, as seemingly modest benefits can be expensive at older ages. More comprehensive benefits require more scrutiny.

Sensitivity testing for changes in incidence, severity, interest rates and persistency should be performed. Stochastic pricing has been utilized by at least one Milliman client on an LTCI rider, modeling across various scenarios with different incidence levels, severity levels, selection of benefit utilization levels (some clients choose not to trigger these benefits even though they qualify) and age mix. They then determined a charge structure that was intended to cover the costs in a targeted percentile.

Note that to understand the true cost of accelerated benefit, one needs to identify mortality rates separately for those insureds who have triggered LTCI benefits versus the mortality for those in the residual pool. It is also common to assume less anti-selection at the time of sale for clients purchasing LTCI acceleration features versus those purchasing stand-alone LTCI coverage. This appears to be borne out by early experiences of those in the combination LTCI market.

There are a number of issues and considerations in the pricing of LTCI accelerated death benefit riders to universal life plans:

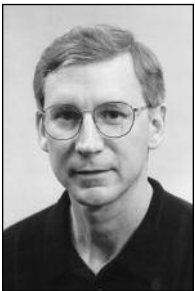


UNDERSTANDING THE BENEFIT STRUCTURE: Are LTCI acceleration payments based on the original specified amount, or the death benefit at the time of acceleration? If other riders are offered, such as inflation protection or an extension of benefits, is the basis the same? If payments are based on the current death benefit, this can become an implicit future purchase option for insurance benefits, since even if increases in the death benefit cause increases in the long-term care insurance acceleration charges, no reserve has been built up for the additional benefit, and it is unlikely that the long-term care insurance charges by age match the steepness of the expected payments. In addition, a decision must be made as to the pattern of cost of insurance charges. These may be level issue age charges (like traditional long-term care insurance), or attained age charges in some form (either separate charges or a load on underlying life cost of insurance charges). For benefits that will be considered pure long-term care insurance, level premiums will likely be required, at least for attained ages 65 and over.

MORTALITY: For the most part, aggregate assumed mortality for a policy without an acceleration provision already includes deaths among insureds who have entered a nursing home.

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However, the assumed difference in mortality rates between nondisabled insureds and disabled insureds that make up this aggregate amount is a key driver of the ultimate value of the acceleration. The assumption is that mortality is high among people who utilize acceleration benefits and it will lead to a low modeled cost for accelerating death benefits. In addition, modeling complications arise from the fact that not all acceleration claims will end in death, meaning a subset of these insureds with reduced death benefits go back into the “healthy” population, affecting future expected death benefit payments. Finally, this effect also means that a traditional claim cost modeling approach that may be used for long-term care insurance policies cannot easily be used to accurately reflect the net effect of death benefit acceleration. In order to capture the mortality difference, a first-principles approach of assumed incidence and termination rates must be used.

GUARANTEED MINIMUM BENEFITS: If a combination policy offers any kind of guaranteed minimum death benefit regardless of long-term care utilization—for example, guaranteeing a death benefit of 20 percent of the initial amount even if the entire original death benefit has been accelerated for long-term care payments—even more detailed modeling is required, as the cohort of insureds who enter the corridor of being affected by the guaranteed minimum death benefit must in that case be tracked.

ADDITIONAL RESERVES: The pricing actuary must know how these benefits should be reserved. For pure acceleration benefits, the tendency is not to hold explicit additional active life reserves, since in most cases no additional level charge involving pre-funding is being made for this benefit. An independent extension of benefits rider, however, generally demands a level charge structure and separate long-term care insurance reserves using LTCI minimum standards. There may also be an optional rider that applies inflation protection benefits to the acceleration payments. If so, the pricing model must be able to handle these multiple reserve bases within a single policy.

CLAIM RESERVES: Once an insured is receiving acceleration benefits, a disabled life reserve should be held, calculated in a manner typical for long-term care insurance claims. However, offsetting this reserve is the expected value of the reduction of future death benefits due to the

anticipated acceleration payments. As noted earlier, the assumed mortality difference between healthy and disabled insureds will be a key driver of the assumed offset. It can be difficult to accurately model this expected effect on claim reserves of the value of future death benefit offsets from claim payments.

COMPANY TAXATION ISSUES: How will accelerated benefit LTCI rider reserves be treated in terms of qualifying for life insurance reserves used in insurance company tax laws (i.e., Section 807(c))? To the extent that a typical increasing charge structure exists, reserves would generally be small in amount, perhaps equaling one-half month’s worth of charges, and would be treated as Section 807(c)(2) unearned premiums. No official guidance has been issued on this topic.

In the case of “independent” LTCI riders, with a level premium structure, there would be a reserve of some significance. Assuming that this reserve is computed based on interest, morbidity and mortality rates, it would be a life insurance reserve under Section 807(c)(1) as well as Section 816(b). The IRS so held in a 1989 published revenue ruling, and said that it would treat company-constructed tables as the “recognized” tables referred to in Section 816(b). HIPAA amended Section 807(d) to allow such reserves to be computed using a one-year preliminary term method.

It would appear that acceleration benefit charges assessed against the cash value of a UL contract would not attract a premium tax or the federal DAC tax. The gross contract premiums, when received, are subject to life insurance premium taxes and to the 7.7 percent DAC. If separately identified premiums are collected for an LTCI rider, they could be subjected to different premium tax treatment, but this is not clear. It would appear that the DAC tax treatment would be the same whether the premium was separately identified or not.

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