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**INTRODUCTION**

Developing a rate, or pricing, for any type of insurance product begins with estimating the insurer’s cost for claims in the given rating period. The claims costs the insurer is liable for are a function of the benefit design of the particular policy. Administrative expenses for various categories are added to the estimated claims cost for the given benefit design to arrive at the final rate charged to the policyholder. Long-term care insurance (LTCI) pricing requires estimating the number of policyholders who will need long-term care (LTC) for many years, even decades, into the future; how long the claimants will receive care; how many of the policyholders will continue paying premiums to keep policies in force; what interest rate the insurer expects to receive from assets backing the product; and administrative costs. This article gives an overview of the basic elements needed for the pricing of LTCI rates.

**PRICING ASSUMPTIONS**

Estimating claims costs for LTCI coverage requires developing assumptions for several components that contribute to the expected number of and amount of claims to be paid on behalf of policyholders. Insurers must determine assumptions to be used for expected claims costs, mortality, voluntary policy termination and expected investment income on assets to arrive at an appropriate estimate of how much will be paid out in benefits over the lifetime of each policy. Administrative costs, while not as complicated as claims costs, must be carefully considered to ensure sufficient levels to adequately service policies.

**Claims Costs Assumptions**

Expected claims costs comprise elements of incidence, continuance, investment income, mortality and voluntary policy termination. Each of these elements is described below.

Incidence refers to the expected number of policyholders eligible to receive benefits from the policy. Benefit eligibility is determined by the insured’s inability to perform a contractually-defined number of activities of daily living (ADL) or the presence of cognitive impairment. The six basic ADLs are eating, bathing, continence, dressing, toileting and transferring (moving in or out of a bed, chair or wheelchair). Benefit eligibility due to cognitive impairment is as defined in the contract. In addition to the triggers for benefit eligibility listed above, the setting in which the policyholder receives care must be considered.

There are different expected incidences for care received in a nursing home, assisted living facility or home health care setting, and they can also vary by cause of the need for LTC. Incidence can vary by benefit design parameters such as elimination period, daily benefit amount and benefit period. Expected incidence can also vary by the attained age of the policyholder, and incidence generally increases with increasing attained age.

Continuance refers to the probability a policyholder will continue to require LTC services and be eligible to receive LTCI benefits. These probabilities are used by the insurer to project how long a policyholder will receive daily benefits, which is then used to calculate the total cost of care for each expected claim. Continuance can vary by benefit design parameters such as elimination period, daily/weekly/monthly benefit maximum, and maximum benefit limit. Continuance also can vary by care setting, attained age and reason (type of illness, injury, disability, etc.) for the policyholder needing LTC.

Insurers use industry-wide experience, their own company experience data or a combination of these to estimate incidence and continuance for pricing.

The interest rate an insurer expects to receive from the assets backing its LTC products is important for pricing due to the long-term nature of coverage. Rates are priced assuming claims occur many years in the future, and the time value of money is accounted for when projecting these costs. Expected claims costs are discounted for interest back to the time period for which the premium is collected. The portion of the rate used to prefund the expected future claims costs is held in reserve and is invested in various financial instruments.

The interest rate used in pricing reflects the insurer’s anticipated rate of return on the block of assets used for pre-funding. Greater interest rates yield lower discounted claims costs, which results in a lower required rate charged to the policyholder. The interest rates used in pricing are generally higher than statutorily prescribed interest rates for reserves. Lower statutory interest rates reflect the need for conservatism to ensure insurer solvency.

Mortality is an important consideration in pricing. Since LTC rates are priced based on the expected claims for the entire block of policyholders, insurers must account for policyholder deaths, which will reduce exposure to possible

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claims. Insurers use standard mortality tables, such as the 1994 Group Annuity Mortality Table, their own company mortality experience or a combination of both in their making mortality assumptions.

Voluntary policy terminations, or policyholder lapses, must be accounted for in pricing for the same reasons as mortality. Insurers generally use their own company experience in developing their assumptions for voluntary policy terminations.

**Benefit Design**
Insurers must reflect how policy benefit designs affect their liabilities when pricing LTCI rates. Many different benefit design features are offered by different insurers, but most LTCI policies include elimination periods, daily/weekly/monthly benefit maximums, maximum benefit limits and the option to purchase inflation protection.

- An elimination period is the length of time the policyholder must receive care before the LTCI policy will pay benefits. Elimination periods for different care settings may differ.
- The daily/weekly/monthly benefit maximum is the maximum amount payable per given time period to the policyholder. The maximum daily/weekly/monthly amount payable can vary with the setting where care is received. When claims costs are estimated, insurers take into account the probability the benefit actually paid is less than the maximum daily/weekly/monthly benefit. The estimates of lower-than-maximum payments are referred to as benefit utilization or salvage.
- Maximum benefit limits restrict the total amount paid to the policyholder over the life of the LTCI policy. The maximum benefit can be expressed in number of years or as a dollar amount.
- Inflation protection is designed to increase the policyholder’s daily/weekly/monthly benefit maximum to account for anticipated higher care costs in the future. A maximum benefit amount currently sufficient for the policyholder’s needs may not meet these needs in the future as facility or home health care costs increase. Inflation protection increases maximum benefit amounts annually by a fixed percentage, and the annual increase is calculated on either a simple or compound basis. For example, if the fixed percentage is 3%, the increase to the maximum benefit after five years calculated on a simple basis would be 15% (.03 + .03 + .03 + .03 + .03). Calculating the increase after five years on a compound basis results in an increase of 16% \((1.03)^5 - 1\).

**Administrative Expenses**
LTCI administrative expense structures and categorization vary by insurer, but most administrative costs fit into one of six categories: underwriting, claims adjudication and processing, sales, premium taxes, overhead, and profit.

- LTCI policy underwriting ranges from simple to complex. Group or employer-sponsored policies often are underwritten, and the decision whether to offer a policy is made, using a health information form with only a short list of questions. Underwriting for individual policies generally gathers information from medical records, attending physicians and interviews with the proposed insured to determine whether a policy will be issued.
- LTCI policy claims adjudication and processing activities are fairly intensive, so these expenses tend to be greater than costs for similar activities associated with most other health insurance products. Determining if a policyholder is eligible for benefit payments requires the review of documentation from the claimant’s physician and care providers. Also, once initial eligibility has been determined, additional information may need to be reviewed to determine if the claimant continues to be eligible for benefits.
- Sales expenses need to be accounted for in the LTCI rate. These expenses include advertising and producer commissions. Producer commissions are generally greater for LTCI policies than those for most other health insurance products due to the relative complexity of explaining policy features to prospective policyholders and servicing existing policies.
- Premium taxes must be paid to applicable states and are included in the rate charged to the policyholder. Premium taxes are assessed as a percent of paid premium, and the percentage varies by state.
- Overhead costs are an element of total administrative expenses. The insurer must account for its costs for employee salaries, benefits, offices and all other operational costs for the insurer.
- The profits an insurer expects to receive after the payment of all other administrative expenses and claims is included in rate pricing. Expected profits may not be realized in the event that claims costs are greater than priced for.
A minimum loss ratio (ratio of claims to premium) may be required by state laws and regulations. If this is the case, the portion of the priced rate allocated to administrative expenses can be no greater than 1 – minimum loss ratio.

**ADDITIONAL RESOURCES**


**ABOUT THE AUTHOR**

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