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## Reflecting On Rates— Examining The Outlook Of Today's LTCI Pricing

Today's long term care insurance (LTCI) industry has transformed. Pricing is now more conservative because interest rates are at historical lows, lapse rates have been effectively de-risked, and both mortality and morbidity reflect more conservative best estimates. There is significant sales opportunity, as an increasing number of baby boomers reach the primary selling ages for LTCI, due to the limited penetration of this potential market. Yet there is still significant reluctance for insurers to offer LTCI when they have seen peer carriers exit due to underperformance of their legacy products. Furthermore, agents have seen rate increases on the prior generation of products, and due to that experience, mistakenly expect rate increases to occur on current products. The industry is tasked with demonstrating beyond any reasonable doubt that LTCI new business sold today is not only safe and profitable for insurers but, more important, that it is price stable for agents to sell and their clients to buy.

A recent study of new business pricing by The Society of Actuaries (SOA) provides the best evidence yet that there is significant and mostly unrecognized safety in current industry pricing.

### SOA LTC Section Pricing Project

The SOA Pricing Project looked to quantify the effects of today's more conservative

pricing. The study asked the following questions: For stand-alone LTCI, how stable are premiums on new blocks given assumptions currently in use today? What was the probability of a rate increase for policies issued in 2000, 2007, and 2014, using only the data that was available in each of those time periods? If a rate increase did prove necessary, what magnitude would likely be necessary? And, finally, what is the remaining downside exposure of each of the assumptions in use today?

Six of the largest insurers selling LTCI now as well as in 2000 and 2007 participated in the study. Each company provided the SOA researchers with its actual pricing data for December 2000, December 2007, and June 2014. The SOA then combined the data from these six insurers to arrive at the average LTCI product.

### Description of the Methodology

LTCI products must meet state specific minimum requirements before being approved for rate increases. In today's regulatory environment, lapse, mortality, and morbidity are considered to be justifications for rate increases because they directly impact the total claim dollars paid out. Interest rates are typically not used as justification because the insurer bears both the opportunity and risk should

investments turn out to be better or worse than expected.

The SOA Pricing Study simulated possible variations in lapse, mortality, and morbidity for each of 2000, 2007, and 2014 pricing periods. For each simulation, the resulting profit was examined. If the simulation resulted in profits that were negative, then the scenario justified a rate increase.

The researchers also calculated the extra premium that would be required in the rate increase scenario in order to bring the scenario back to breakeven.

**Pricing Study Results**

The chart shows the results from all simulations. Given the more conservative assumptions for pricing in 2014,

only 10 percent of scenarios require a rate increase compared with 40 percent of scenarios in 2000. Given what is known today, rate increases are much less likely. Furthermore, there is much more data available today to validate the assumptions, with 16 times more policy data in 2014 compared to 2000 and 70 times as much claims data for claims at advanced ages (over 80) of policyholders utilizing their benefits the most.

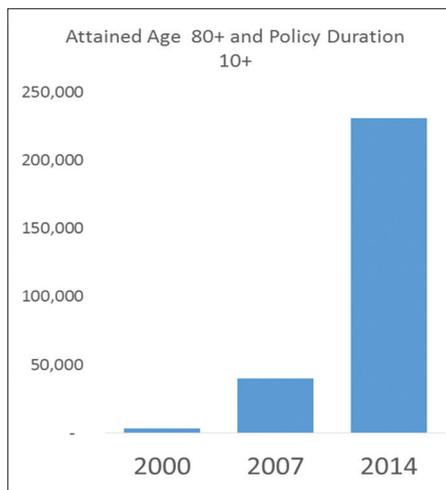
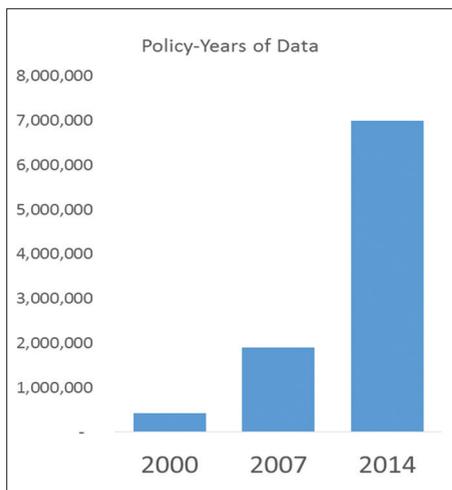
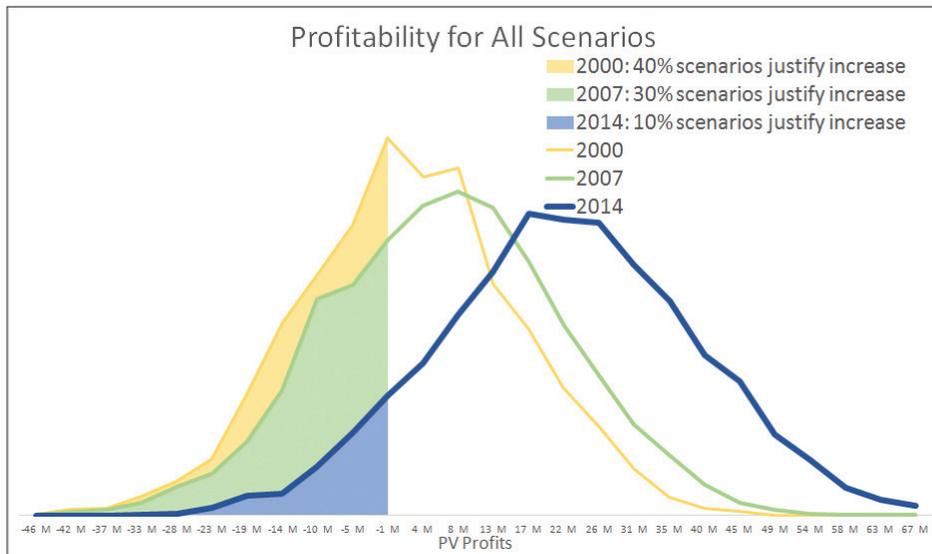
Finally, if a rate increase is needed, policyholder disruption is minimized. Of the 40 percent of scenarios needing a rate increase in 2000, the average increase was 34 percent. Of the 10 percent of scenarios needing a rate increase in 2014, the average increase was only 10 percent.

**Pricing Assumptions**

The study further examines the underlying assumptions to better understand the reason for the dramatic change in outlook. Key assumptions for LTCI product performance include voluntary lapse, mortality, claim cost per person (otherwise known as morbidity), and interest rates. Lapse and mortality impact how many total individuals will be around at advanced ages to utilize benefits. As people age, morbidity comprises the likelihood of a claim and the severity of the claim both in terms of how long the claim lasts and dollars per day that are paid out. Interest rates play a role in determining how many dollars will be available to pay claims once the premiums collected are invested over a long time horizon. A review of the variability of each of these assumptions demonstrates the stability of product prices.

**The Consequences of Fewer Voluntary Lapses**

Voluntary lapses occur when individuals stop paying the premiums on their policy. In the 1980s and 1990s, insurers assumed that individuals would lapse at moderate rates that were derived from health insurance policies. The SOA study demonstrated that after the first few years of owning the policy, LTCI insurers used an average lapse rate of 2.8 percent in pricing new products in 2000. However, by 2014, insurers were



Issue Year	Chances of a Rate Increase	Average Projected Increase
2000	40%	34%
2007	30%	18%
2014	10%	10%

using far lower expected lapse rates--down to 0.7 percent. This turned out to be one of the biggest contributors to the underpricing of legacy products. When fewer policies lapse than expected, more policyholders remain to utilize benefits. The difference in 2.8 percent compared to 0.7 percent per year, over a 30 year time horizon, results in twice as many people remaining in the pool to be eligible to receive benefits. The good news is that the absolute limit is zero percent lapse, or everyone paying premiums for life, which in practice will not occur. *Therefore, there is now virtually no voluntary lapse risk remaining for new business pricing.*

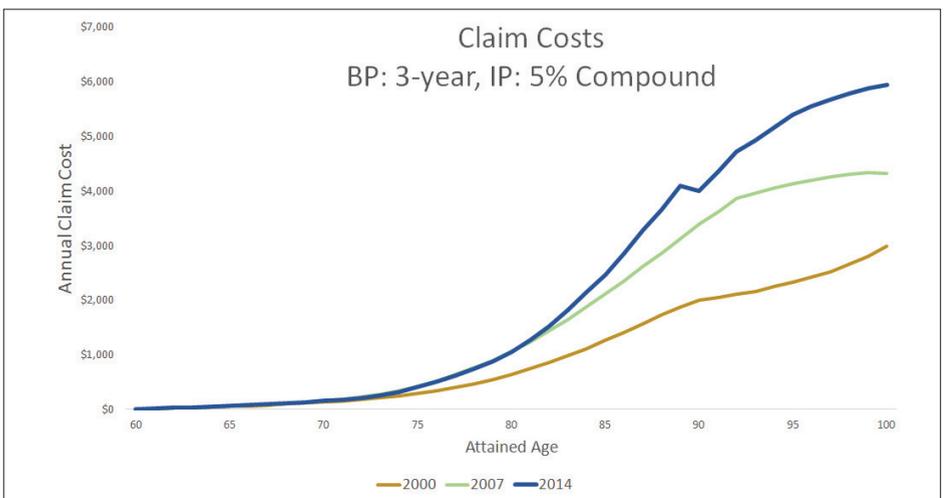
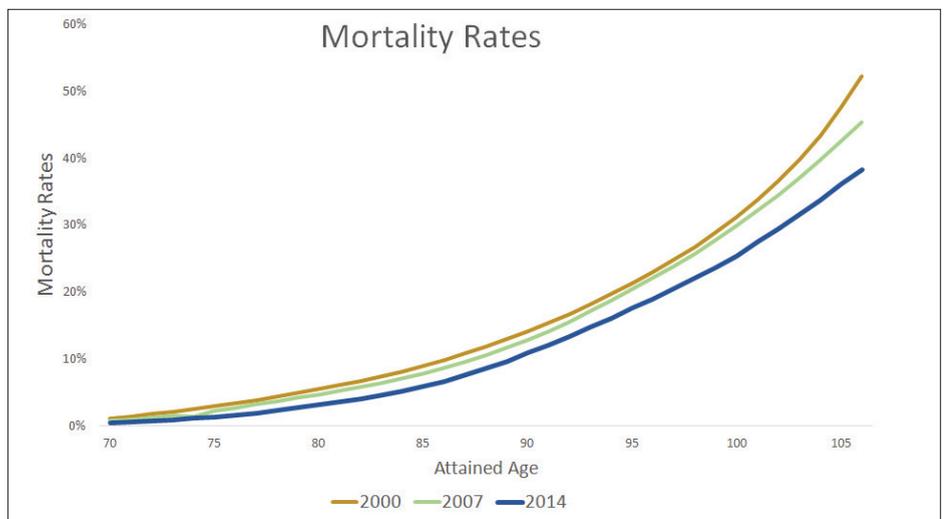
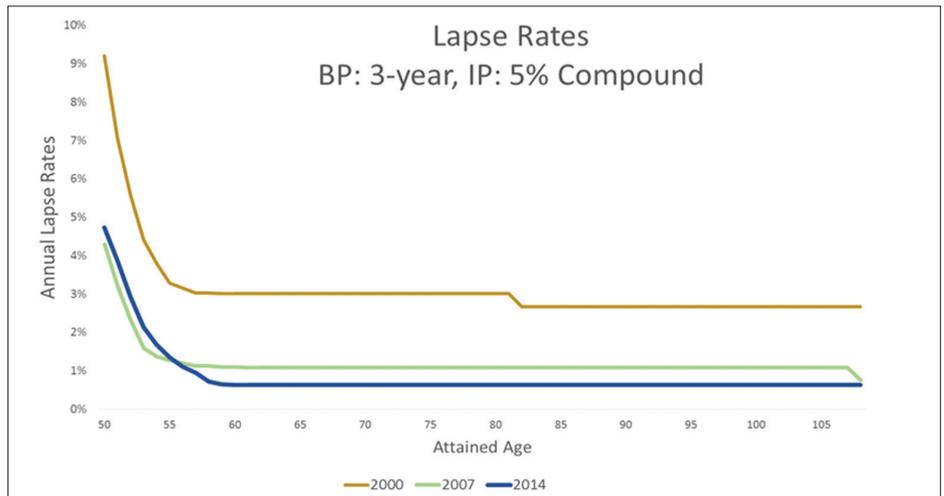
**The Consequences of Lower Mortality**

Mortality is the term used to explain the number of deaths in a given period. Much like low lapses, lower than expected mortality had an adverse impact on the pricing of legacy products. People have been living longer primarily due to advances in medicine. As a result, legacy product pricing did not account for greater utilization of claims by people at older ages. Today's product pricing better accounts for policyholders' longevity.

**The Dynamics of Claim Cost Per Person (Morbidity)**

Morbidity is the average cost per claim multiplied by the likelihood of the claim at a given age. For example, if at age 80 the average claim costs \$100,000, and there is a three percent chance of a claim, then the claim cost per person at that age is \$3,000. Assumed average cost per claim used in pricing has increased significantly in 2014 pricing, particularly at older ages, as people have been living longer on claim. However, the likelihood of a claim at a given age has been trending downward as medical advances have improved health and delayed the onset of claims. From 2000 to 2014, the morbidity assumption used in pricing has increased roughly 25 percent in total. Insurers with better underwriting have experienced better morbidity results in the form of lower overall number of claims.

This experience has led to the mainstream adoption of more rigorous under-



writing, with medical records, prescription drug checks, cognitive screens, and MIB all being used more frequently. Standards have also tightened for achieving the best premium rate class.

**How is Future Mortality and Morbidity Improvement Considered?**

There is evidence that mortality and morbidity improvement is occurring together within the population. There is less data on insured lives available, as it is difficult to separate the effect of improvement from changes in underwriting protocols. It is clear that mortality and morbidity improvement occur together because they are driven by the same underlying health dynamics. The effect of simultaneous mortality and morbidity improvement is an overall reduction in claim costs. This manifests itself in a delay in onset of claim, which allows insurers to collect more premium to invest to accumulate greater assets. Most companies currently assume no morbidity or mortality improvement

to be more conservative in pricing. Since more than half of LTCI claim costs are driven by Alzheimer’s or related dementias, claim costs would be significantly lower than priced should a breakthrough occur in treatment or prevention of this disease.

**The Impact of Low Interest Rates on Pricing**

Investment income is directly related to the level of interest rates and is a key pricing factor because premiums are invested for 30-50 years until claims are paid. Although today’s pricing uses current low interest rates, interest rates ten years and beyond are what matter most for profitability. This is because most premiums are received, invested, and reinvested not once the policy is issued, but during the next several decades before claims are paid out. The low interest rate environment will likely see some volatility over the next several decades. Even if low interest rates persist, downside risk is limited by the floor on the bond rates demanded by investors to

compensate them from credit and inflation risks. The rates used in pricing products in 2000 were 1.8 percent higher than the rates in products priced in 2014.

**Reflecting on the SOA Pricing Study**

It is notable that, since 2007, *all* of the major LTCI assumptions used in pricing have become more conservative. Lapse rates have been virtually de-risked, interest rates are at historical lows, while mortality and morbidity reflect more conservative best estimates with deliberate additional margins where there is less experience. Is LTCI new business sold today safe for insurers to offer and stable for consumers to purchase? The Pricing Study demonstrates that the new product is safer than in any previous product generation. Carriers now price products based on significantly more conservative assumptions. Premiums on products sold today are double what they were on the same benefits from just a few years ago. At the same time, the product is still affordable since consumers have opted for shorter benefit periods and lower inflation increases as evidenced by the average premium per sale remaining essentially the same. Many insurers offering products in the retirement markets who are overlooking the favorable conditions for LTCI today are missing out on a prime opportunity. 🌐

Year	Average Industry Investment Income Assumptions
2000	6.4% all years
2007	5.9% all years
2014	4.6% all years