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The AAA Practice Note in Practice – Part One

by James M. Robinson

Introduction

The soon to be released AAA practice note provides guidance to actuaries preparing LTCI rate filings under the 2000 LTCI Model Regulation certification requirements. Four examples demonstrate the five-step procedure suggested in the practice note. In this article, I present a more detailed case study for consideration at a session of the upcoming SOA spring meeting in Vancouver in June. This case study focuses on the initial rate filing for a revision to an insurer's LTCI product. While rate increases on inforce policies is also a worthy subject, time and space constraints require that we limit the scope of this particular discussion. A follow-up article (Part 2) will be provided following the meeting to summarize the discussion. You are invited to send your thoughts on the case study in advance of the meeting or in lieu of the meeting. (*Provide contact information – e-mail, fax, mailing address.*)

Moderately Adverse Experience

Section 10.B(2) of the 2000 LTCI Model Regulation requires that the actuary must provide:

"…an actuarial certification consisting of at least the following:…(a) statement that the initial premium rate schedule is sufficient to cover anticipated costs under moderately adverse experience and that the premium rate schedule is reasonably expected to be sustainable over the life of

the form with no future premium increases anticipated;…"

The AAA practice note outlines five steps that actuaries may follow to comply with the requirements of this certification.

1. Review product and management strategy of the company.
2. Set Initial Assumptions and Premiums.
3. Test the Margin for "Moderately Adverse Experience"
4. Review the Company and the Agreement.
5. Produce Documentation.

Four examples are employed to illustrate key aspects of each of these steps. While these examples provide useful initial guidance, they are necessarily abbreviated, especially regarding their treatment of such difficult issues as:

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- How does the actuary properly model the decision making process that management will actually follow in the event that adverse experience develops on the block? How binding are any statements made by today's management (relative to its propensity to increase inforce premiums) on the decisions to be made several years hence by future management teams?

- How is the reasonableness of a moderately adverse experience scenario determined? Is there an objective standard for such a characterization? Is the "moderate" qualifier determined by the likelihood of the scenario unfolding or does it relate to some measure of the severity of the adverse deviation without regard to its frequency?

The following hypothetical case study is intended to provide a reasonably realistic framework for a discussion of the issues facing pricing actuaries under the new certification requirements.

Case Study

With the assistance of Consulting Actuary, Connie Sultan, EverStay Insurance Company entered the LTCI market in 1998 with a qualified, comprehensive, individually underwritten product providing coverage for nursing home, assisted living and home care services subject to the usual daily and policy maximums. Unisex premium rates were filed with spousal and preferred risk discounts available to qualifying applicants. Connie prepared and signed the actuarial memorandum.

Initial pricing assumptions were typical at the time of filing in 1998.

- Sex-distinct claim costs based upon a blend of the 1985 NNHS and the 1982, 1984, 1989 and 1994 NLTCS, with some adjustments to the general population experience to reflect induced demand in an insured setting. It was assumed that 60 percent of issues would be to females.

- Simple selection factors starting at 50 percent at issue and grading to 100 percent over five policy years.

- Mortality rates equal to 83 GAM. The morbidity selection factors also apply to mortality rates.

- Voluntary lapse rates graded from 15 percent in the first policy year down to an ultimate annual lapse rate of four percent, with a modest provision in the claim costs for anti-selective lapsation.

- Interest rates graded from eight percent in the first policy year down to six percent per annum after ten years.

- Commission rates of 60 percent in the first year, 10 percent in the next nine years, and three percent thereafter.

- Other expense assumptions:
  - o Ten percent of first-year premium and 2.5 percent of renewal premiums.
  - o Five percent of incurred claims.
  - o Underwriting and issue expenses varying by issue age, averaging $250 per policy issued.
  - o $25 per policy in all years, inflated three percent per annum after issue.

- Federal income tax rate of 35 percent.

- Risk based capital equal to two percent of assets plus 15 percent of premium plus four percent of claim reserves.

- Statutory active life reserve assumptions:
  - o Pricing morbidity and selection factors.
  - o Pricing mortality.
  - o Lapse rates allowable under the old NAIC model valuation law, i.e. such that aggregate policy termination rates are equal to the lesser of 80 percent of pricing assumptions or eight percent, but no less than zero.
  - o Interest rates equal to 4.5 percent per annum.
  - o One year preliminary term expense allowance.

- Federal income tax active life reserve assumptions equal to statutory assumptions, except voluntary lapse rates equal to zero and interest rate equal to 6.6 percent per annum. Calculated FIT reserve factors are not allowed to exceed the statutory reserve factors.

- Aggregate profit objective equal to 12 percent after-tax return on invested statutory surplus (ROI) using target surplus of 200 percent of RBC. Minimum profit of six percent ROI on any single pricing cell, i.e. any policy configuration/issue age combination. Actual cell-specific ROI set iteratively to satisfy the aggregate and cell minimum requirements, while producing a competitive premium rate structure. The resulting pattern of ROI's by pricing cell resulted in anticipated subsidization of the middle issue ages at the expense of the early and later issue ages, and the subsidization of cells with inflation protection at the expense of cells with no inflation protection.

- Aggregate ROI projections based upon explicit sales assumptions by pricing cell, with an average issue age of 67.

- Preferred risk discount set at 20 percent, assuming that 40 percent of issues would qualify. Spousal discount set at 10 percent, assuming that all married issues (a percentage tabulated by issue age) would qualify. Explicit adjustments to claim costs for preferred risk or marital status were not employed. Rather, the necessary average discounted premium was computed in the prior pricing steps and undis counted premiums were obtained in the final pricing step to produce the average discounted rates under the preferred/spousal discount issue distribution assumptions.

Experience Through 2002

- Sales were slow in the first two years, but have accelerated rapidly in the last three years.

- The average issue age to date is 61. The average age at issue in 2002 is 57.

- While the percent of issues to females is close to 60 percent at issue age 70, the percent is approximately 50 percent at issue age 50.

- The percent of issues with inflation protection is greater than anticipated at the younger issue ages.

- The percent of issues qualifying for the spousal discount is close to original pricing assumptions. The percent qualifying for the preferred discount is nearly 65 percent, significantly greater than the 40 percent originally anticipated.

- Lapse rates by policy year have been 16 percent in the first year, seven percent in the second year, five percent in year three, and two percent in subsequent policy years. Mortality has been low and reasonably close to 83 GAM.

- Actual claim incidence to date is 71 percent of expected, based upon the original pricing assumptions.

- Claim continuance to date is greater than expected, based upon claim reserve development analyses. The small number of claims prevent the calculation of credible claim termination rates.

- Earned interest rates have fallen from eight percent to five percent over the five year period.

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Sales were slow in the first two years, but have accelerated rapidly in the last three years.

- With the general decline in interest rates, EverStay management has reduced its aggregate pricing objective to a 10 percent after-tax ROI. The pricing cell minimum ROI is now five percent.

- Expenses are close to original expectations, after adjustment for the actual distribution of sales by issue age.

Other LTCI Developments

- New issue premium rates for key competitors have recently increased, apparently due to similar drops in lapse and interest rates. No key competitor has yet filed for inforce premium rate increases.

- The 1999 NLTCS is available in beta form. Initial results indicate a continuation of the decline in elderly disability rates.

- Two new rounds of SOA Intercompany LTCI studies are available, one released in February 2000 and the second released in September 2002.

- Work continues on RBC and valuation standards for LTCI.

- Several of the states in which EverStay markets LTCI have adopted the 2000 NAIC LTCI Model Regulation requiring actuarial certification of premium rates for future sales and inclusion of contingent nonforfeiture benefits.

- ASOP 18 "Long-Term Care Insurance" was updated in 1999, reducing its educational emphasis and providing more specific guidance on assumption setting, establishing premium rates and managing LTCI business.

- The NAIC adopted the "Guidance Manual for Rating Aspects of the LTCI Model Regulation" to assist regulators in implementing the 2000 LTCI Model Regulations.

- The AAA released a health practice note in January 2003 to provide guidance to actuaries in interpreting and complying with the 2000 NAIC LTCI Model Regulation.

Steps Taken To Date

- Connie Sultan has been re-engaged by EverStay to file a new generation of LTCI to replace the old product for future sales. Only modest benefit changes are anticipated with the new product. The emphasis for Connie is repricing the product to take advantage of current information relating to future experience.

- Connie has reviewed EverStay's LTCI experience to date relative to the original pricing assumptions. She has also studied the new intercompany and general population data available from the 2000 and 2002 SOA LTCI reports and the 1999 NLTCS. She is familiar with the 2000 NAIC LTCI Model Regulation and the related guidance manual and practice note, but has not yet filed rates under the new regulations for any other client insurers.

- Connie has established initial assumption revisions as follows:
  - o Both EverStay and SOA intercompany experience provide some evidence claim incidence rates are lower than expected

under the original policy pricing assumptions. Nevertheless, due to the small volume of EverStay claims and the highly select nature of the EverStay and the intercompany experience, Connie has decided to make no significant adjustments to the original ultimate claim costs nor to the selection factors. The percentage of issues to females is graded from 50 percent at issue age 50 to 60 percent at issue age 70.

- o Based upon the intercompany mortality experience, Connie revises the mortality assumption downward to 75 percent of 83 GAM.

- o Ultimate lapse rate assumptions are reduced from four percent to two percent per annum based upon the modest EverStay experience in the 4th and fifth policy years.

- o The interest rate assumption is set at five percent for all policy years.

- o No changes are made to the expense assumptions, except that per-policy values are inflated five years at three percent per annum.

- o Statutory and FIT active life reserve assumptions are revised in accordance with the changes in pricing assumptions. The statutory interest rate is reduced to four percent and the FIT interest rate is reduced to five percent.

- o The new NAIC model valuation law is used to determine the statutory ALR lapse rate assumption. That is, the voluntary lapse rates are set to the lesser of 80 percent of the pricing voluntary lapse rates or eight percent (four percent after five years).

- o Sales distribution assumptions are updated to reflect EverStay's issue profile in the last two years.

- Connie has computed an initial set of new premium rates using the revised set of pricing assumptions and the new profit objectives (i.e., 10 percent aggregate ROI and 5 percent minimum ROI).

- The premium rate increases suggested by the initial re-pricing are quite large. While the new rates are competitive with recently revised rates of some key competitors, there are a number of insurers who have not revised their rates to date.

- The initial gross premiums are well below the renewal statutory net premiums (including a provision for renewal expenses).

- No provision for moderate adverse deviation in experience assumptions has been made.

Issues To Be Resolved (Discussed)

- What approaches might Connie consider in defining a provision for moderately adverse experience?

- Is it feasible to quantify the likelihood of certain experience deviations?

- Is it necessary to quantify the likelihood of certain experience deviations?

- Is "moderately adverse" intended to be an indication of the likelihood of the deviation? If so, what frequency is considered moderate?

- Alternatively, does "moderately adverse" relate only to the propensity of management to seek a rate increase if such a deviation should unfold in the future? If so, how can this propensity be reasonably ascertained by Connie as a consulting actuary?

- How should the provision be documented?

I hope that this article will stimulate discussion of these and other issues, ultimately leading to useful guidance for pricing actuaries and suggestions for appropriate refinements in the regulatory structure. ♿

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