American Academy *of* Actuaries

Health Practice Council Practice Note

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American Academy *of* Actuaries

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Long-Term Care Insurance Compliance with the NAIC LTCI Model Regulation Relating to Rate Stability

Developed by the Long-Term Care Work Group of the American Academy of Actuaries

This practice note was prepared by a work group organized by the Committee on State Health Issues of the American Academy of Actuaries. The work group was asked to:

> Review the responsibilities placed on the actuary in light of the National Association of Insurance Commissioners (NAIC) *Long-Term Care Insurance (LTCI) Model Regulation* adopted August 17, 2000 (2000 Model Regulation);
>
> Recommend to the Academy Board, with reasons, what actions, if any, the Academy should take to enable actuaries to appropriately and responsibly discharge their duties; and
>
> Draft any recommended materials, such as appropriate LTCI study or practice notes, or suggested alterations in *Actuarial Standard of Practice No. 18: Long-Term Care Insurance* (ASOP No. 18), or other material that the Academy may request. This practice note refers to the January 1999 version of ASOP No. 18.

The purpose of this practice note is to provide guidance to the LTCI pricing actuary when pricing LTCI policies under the rate stability provisions of the 2000 Model Regulation by providing examples of some reasonable approaches that could be taken in performing this work. However, no representation of completeness is made; other approaches may also be reasonable and may be in or gain common use.

This practice note has not been promulgated by the Actuarial Standards Board nor by any other authoritative body of the American Academy of Actuaries. The information in this practice note is not binding on any actuary and is not a definitive statement as to what constitutes generally accepted practice in this area. Moreover, this practice note is based upon the 2000 Model Regulation. To the extent that the legal requirements of a particular state differ from the 2000 Model Regulation, practices described in this practice note may not be appropriate for actuarial practice in that state.

Comments are welcome as to the appropriateness of the practice note, desirability of updates, substantive disagreements, etc. Comments should be sent to Joanna Ossinger, the Academy's state health policy analyst, at ossinger@actuary.org or American Academy of Actuaries, 1100 17th St. NW, 7th floor, Washington, DC 20036.

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I. Introduction

The Long-Term Care Insurance (LTCI) Model Regulation adopted August 17, 2000 (2000 Model Regulation) by the National Association of Insurance Commissioners (NAIC) contains several provisions that were designed to promote stable LTCI premiums. The regulation places new responsibilities on the actuary, for whom there is currently little specific written guidance other than Actuarial Standard of Practice No. 18, Long Term Care Insurance (ASOP No. 18), and extremely little experience under the 2000 Model Regulation to look to for guidance.

This practice note may provide non-binding guidance to the LTCI pricing actuary when completing an actuarial certification related to pricing LTCI policy forms under the rate stability provisions of the 2000 Model Regulation (Sections 10 and 20). However, actuaries retain sole discretion to determine whether and how to take into consideration the guidance offered in this practice note.

Q&A:

Is the 2000 Model Regulation applicable to the practicing LTCI pricing actuary?

No model regulation is directly applicable until adopted by a state, and then only after its effective date. That adoption of the 2000 Model Regulation is occurring in some states. This practice note assumes adoption of the 2000 Model Regulation and its wording in its entirety. When pricing or repricing is not subject to Sections 10 and 20 of the 2000 Model Regulation, but is subject to laws or regulations specifying minimum loss ratios or related rating requirements (such as Section 19 of the 2000 Model Regulation), the practice note may not be applicable.

How does this practice note relate to Actuarial Standards of Practice?

ASOP No. 18 was adopted by the Actuarial Standards Board (ASB) in January 1999, effective on or after June 1, 1999. It binds actuaries practicing in the United States who are "…involved in designing, pricing, funding, or evaluating liabilities for…long-term care (LTC) benefits." The actuary should continue to consult pertinent ASOPs for guidance relating to the pricing of LTCI plans, especially ASOP No. 18, which provides guidance for pricing LTCI. In addition, some paragraphs particularly relevant to this practice note are quoted herein from ASOP No. 18, for the actuary's convenience.

How is a LTCI pricing actuary to use the NAIC's LTCI Guidance Manual?

The NAIC has completed the "NAIC Guidance Manual for Rating Aspects of the Long-Term Care Insurance Model Regulation." The Guidance Manual is intended to provide additional information and interpretation of the 2000 Model Regulation to regulators. While it is not a legally binding document, the Purpose section of the Guidance Manual states that "it is anticipated that insurers will review this material in order that they make the filing process as expeditious as possible." Actuaries may refer to the Guidance Manual as appropriate in preparing the actuarial certification.

II. Overview of the Requirements on the Pricing Actuary

Initial Premiums

The 2000 Model Regulation presents a significant departure from the traditional rate regulations associated with LTCI. Most significant is the departure from loss ratio requirements applied to the insurer's form and certified by the actuary at the time of initial filing. In place of loss ratio requirements, the actuary will now be required to provide a written certification that several conditions have been met. For example, Section 10.B.(2) requires:

"An actuarial certification consisting of at least the following: (a) 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…"

Premium Increase on Inforce Business

Another significant departure of the 2000 Model Regulation from traditional LTCI rate regulation is in the requirements that the actuary must satisfy at the time of a request for a premium increase on inforce business subject to Section 20 of the 2000 Model Regulation. The requirements are different for business sold under the original Model Regulation (single lifetime loss ratio requirement) and the "new" 2000 Model Regulation. These new requirements include an actuarial certification (and a supporting actuarial memorandum) stating that the revised premiums are sufficient under "moderately adverse conditions" and no further inforce premium increases are anticipated. In addition to the certification, the actuary is subject to several other requirements, including:

- A requirement to justify the inforce premium increase through projections of claims and premiums.

- Disclosure of the original assumptions that were not met and cause the rate increase request as well as other disclosures.

- Certifying that the new premium schedule meets a loss ratio requirement on the original as well as the increase in premium.

The remainder of this practice note describes steps an actuary may choose to take when pricing LTCI products under the requirements of Sections 10 and 20 of the 2000 Model Regulation.

III. A Process for Pricing Initial Premium Rates

One of the most significant requirements of the 2000 Model Regulation is the actuarial certification specified as part of the initial filing requirements in Section 10.B.(2). The actuarial certification includes at least the following:

"(a) 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;

(b) A statement that the policy design and coverage provided have been reviewed and taken into consideration;

(c) A statement that the underwriting and claims adjudication processes have been reviewed and taken into consideration;

(d) A complete description of the basis for contract reserves anticipated to be held under the form, to include:

(i) Sufficient detail or sample calculations provided so as to have a complete depiction of the reserve amounts to be held;
(ii) A statement that assumptions used for reserves contain reasonable margins for adverse experience;
(iii) A statement that the net valuation premium for renewal years does not increase (except for attained-age rating where permitted); and
(iv) A statement that the difference between the gross premium and the net valuation premium for renewal years is sufficient to cover expected renewal expenses; or if such a statement cannot be made, a complete description of the situations where this does not occur;

(e) (i) A statement that the premium rate schedule is not less than the premium rate schedule for existing similar policy forms also available from the insurer, except for reasonable differences attributable to benefits; or

(ii) A comparison of the premium schedules for similar policy forms that are currently available from the insurer with an explanation of the differences."

There are several steps an actuary may choose to take when preparing initial premium rates that require the actuarial certification. These steps are described below.

1. Review Product and Management Strategy of the Company

Before setting assumptions or premium rates, the actuary may want to review the company's past experience in LTCI, if any, as well as its proposed product. This review typically would include discussions with company management. The purpose of this review is to give the actuary the necessary background for setting pricing assumptions if the actuary does not already have such background.

Section 10.B.(2)(a) of the 2000 Model Regulation requires "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." In making this statement, the actuary is bound by the specific requirements of the 2000 Model Regulation and all relevant ASOPs.

However, the actuary is not restricted just to consideration of factors like morbidity, persistency, and interest. Section 10.B.(2)(a) allows considerable discretion in setting the specific assumptions for projected experience corresponding to sustainable premium rate schedules. In exercising this discretion, the actuary is required by the model regulation to set the initial premium rate schedule so that (a) the sustainable rates correspond to all projected adverse experience up to the moderate level; and (b) the premium rate scale does not have to cover projected adverse experience beyond the moderate level.

Some portions of the adverse experience may be covered from sources not directly resulting from the policy form for which the actuary is preparing the actuarial certification. For example, the company may be willing to accept a lower profit level in the event of adverse experience, base any request for a rate increase on the experience of the form in more than just each state (i.e., offsetting poor results in some states with good results in other states) or even pool the experience of several policy forms. If the actuary is intending to use any of these sources in setting the sustainable premium level, the position of the company's product line management becomes critical so it can be documented as a source of margins for adverse experience (see step 5 below).

In setting the assumptions for sustainable premiums:

- The actuary may wish to review the company's product line management strategy. This may include a review of the line's overall profit expectations, as well as any significant deviations in profit expectations for each product series/generation, plan design option, issue age, and/or other relevant sub-divisions of the line. It also may include a review of the processes and procedures the company has in place to enable it to react to and address emerging experience trends, whether positive or adverse.

- The actuary may wish to review the company's attitude toward inforce premium increases to assess the conditions under which it would seek a rate increase. Is its objective to set initial rates sufficiently high that the possibility of inforce premium increases is remote? Is it generally unwilling to request premium increases even if poor experience emerges? Is it willing to accept lower profit margins in order to avoid inforce premium increases, or will it want premium increases in the event that profit margins erode due to poor experience? Is it looking at profit margins for each policy form, or for the LTCI product line in total?

- The actuary may wish to consider the company's marketing methods. For example, the actuary may wish to review the impact on morbidity, lapse, and expense assumptions of the company's marketing and sales approaches with respect to the use of individual vs. group sales, captive vs. independent agents, agent training and practices, and direct marketing to potential applicants.

- The actuary may wish to consider the mix of business. For example, demographic data for actual sales vs. targeted sales may be reviewed, especially to the extent that the target market is being changed (i.e., if the target market moves to people in their 60s from people in their 70s, the actuary may wish to consider how the change in distribution mix will impact overall profitability). Similarly, where unisex rates are being used, the actuary may wish to review the gender mix of sales and remaining inforce business.

- The actuary may wish to review the company's experience and expertise with LTCI. What expertise does it have in different areas of administration? What are appropriate margins for deviation in assumptions, considering the company's level of experience and expertise?

Listed below are specific requirements of the 2000 Model Regulation:

Section 10.B.(2)(b) of the 2000 Model Regulation requires "a statement that the policy design and coverage provided have been reviewed and taken into consideration." In conducting this review, the actuary may wish to consider issues such as the following:

- How does the proposed product design compare with the company's existing LTCI forms?
- What assumptions will be affected by any product changes?
- What has been the company's experience on other LTCI policy forms?
- What is the company's persistency/lapse experience and investment yield history?

Section 10.B.(2)(c) of the 2000 Model Regulation requires "a statement that the underwriting and claims adjudication processes have been reviewed and taken into consideration." In conducting this review, the actuary may wish to consider the two processes separately.

- With respect to the proposed underwriting processes, the actuary may wish to consider issues such as the following: How do these underwriting processes compare with processes used on other policy forms? What has been the company's experience on other policy forms with these underwriting processes? Have there been changes in underwriting processes or is this a company new to LTCI? (If so, a review of the experience of the underwriting staff's capability may be appropriate.)

- If the proposed underwriting processes are not followed (such as when the underwriters are new to LTCI underwriting), there may be serious impacts on the long-term morbidity of the product line. Some believe that relatively loose or moderate underwriting results in claim frequencies that continue to trend above those of relatively tight underwriting, even after the expected select period would otherwise be over.

- With respect to the proposed claims adjudication processes, the actuary may wish to consider issues such as the following: How do these processes compare with processes used on other LTCI policy forms? What has been the company's experience on other policy forms with these claim adjudication processes? What will be the impact of case management strategies, if such strategies are used?

2. Set Initial Assumptions and Premiums

Many actuaries consider setting pricing assumptions only after reviewing the necessary product and management information. Under Section 10.B.(2)(a) of the 2000 Model Regulation, assumptions need to be set to satisfy the requirement "that the initial premium rate schedule is sufficient to cover anticipated costs under moderately adverse experience." Therefore, the actuary may decide to build margins into the pricing assumptions. This can be done in at least the following ways:

a) Use "best estimates" for each assumption and add an explicit overall margin to satisfy the "moderately adverse experience" requirement;

b) Add sufficient margins to specific pricing assumptions so these margins in total would satisfy the "moderately adverse experience" requirement; or

c) Otherwise establish appropriate margins.

Premiums may then be calculated from these assumptions, including the margins for "moderately adverse experience."

Regardless of the method selected, the actuary typically indicates whether the pricing assumptions represent best estimates or whether they include margins for "moderately adverse experience." The actuary is usually well-advised to document the pricing assumptions selected. The documentation usually includes an explanation of why the actuary considered the assumptions to be appropriate. The actuary may find it prudent to advise the company on the importance of monitoring those assumptions through a feedback mechanism if possible.

More substantial and detailed analysis of each pricing assumption would generally be appropriate in situations where the actuary includes future improvements (beyond currently observed levels) for one or more key assumptions. One such assumption question surrounds how to set the level of morbidity in future years relative to the level experienced by the company. An example of the level of inquiry that the actuary may consider for all assumptions is illustrated by the following considerations for morbidity:

> An actuary is pricing a comprehensive long-term care insurance product. In setting the morbidity assumption, the actuary is considering including a projection of anticipated future morbidity improvement as the best-estimate assumption. In this example, this assumption is based on published articles appearing in the peer-reviewed scientific literature that have demonstrated morbidity improvement historically in the general population.
>
> The actuary also considers the impact of other relevant factors beyond the morbidity improvement in setting this assumption. These factors include:
>
> - The underlying source of the morbidity improvement and the effect that the underlying source may have on other assumptions, e.g. mortality.
> - The actuary's assumption that anticipated future improvements will be due to reduced claim frequency, and the belief that they could be partially offset by related improvements in longevity and/or changes in claim continuance patterns.
> - Increased used of alternate plans of care.
> - The potential for increased future utilization and claim continuance, and increased volatility of both, at the highest ages.
>
> The actuary documents the assumptions and general sources of data in sufficient detail that another qualified actuary could review the reasonableness of the actuary's assumptions and methods.
>
> In determining the margin for moderately adverse experience the actuary considers the effect of not realizing the morbidity improvement assumed as well as the impact of adverse experience related to the other factors listed above.

If the source of all margins is not from the form being priced, the actuary is usually prudent to verify that the margins for "moderately adverse experience" built into the premiums are consistent with the company's product line management philosophy when determining these initial premium rates. If the product line management strategy is to accept lower profit results in the event of adverse experience, the pricing margins added to cover "moderately adverse experience" may be smaller than those needed for a company that anticipates increasing premiums in such an instance.

3. Test the Margin for "Moderately Adverse Experience"

Once premium rates are determined, the actuary typically tests the margin built into pricing for "moderately adverse experience." This is done to determine the degree to which the actual experience of significant pricing assumptions could vary from their expected levels, before an inforce premium increase may be needed or requested. The margins are stated relative to the actuary's best estimate assumptions, which may be different from the company's requested pricing assumptions or the proposed reserving assumptions.

To test the adequacy of margins, the actuary may first determine the key variables for testing based on how sensitive the pricing results are to changes in these assumptions. The specific variables to test may vary from company to company based on experience and product design; however, some of the key variables that the actuary may wish to consider typically are: morbidity levels (frequency and continuance); persistency levels (mortality and voluntary lapse); and investment returns. Assuming that margins are not equivalent at all ages, elimination periods, benefit lengths and riders, the impact of actual sales and demographic distributions different from those anticipated may also be important.

ASOP No. 18, Section 3.5 requires the actuary: "to perform sensitivity testing of reasonable variations in assumptions." As part of this analysis, the actuary may wish to determine how much variation could be experienced in key pricing variables before an inforce premium increase would be requested. These variations may be identified based not only on the variation of one specific assumption but also may be based on variations in multiple assumptions. Consideration of the company product line management strategy when determining these variations may be advisable, as discussed earlier.

When considering ways in which to test for "moderately adverse experience," some actuaries might consider using a variety of discrete or continuous volatility measures based on actual experience or assumed probability and/or joint probability distribution functions. Some might also consider using Monte Carlo simulation.

Other actuaries may determine the measures for each assumption that would be considered moderately adverse. The largest of the set of premiums necessary to cover each of these assumptions would then be considered the minimum premium for that set of assumptions. Subsequent tests of adverse experience of multiple factors could then be completed.

Once the variations are determined, the actuary may consider these margins in light of the requirement that premium rates be sufficient under "moderately adverse experience." If the actuary feels the margins are not sufficient to make this certification, then premiums, the product design, and/or intended administration of the business (e.g., underwriting or claim administration) may need to be revised, until the actuary is comfortable making the required actuarial certification.

4. Company Review and Agreement

Once premium levels are determined that satisfy the requirements necessary for making the actuarial certification, the actuary usually would review the pricing work with an appropriate level of company management. This review typically would include a review of all of the actuary's assumptions relating to product design, underwriting, and claims adjudication, as well as the strategy for management of the product line. The actuary may want to point out how these assumptions impact premium levels, including the pricing effect of several tests showing how the premium rates and future profitability objectives would be affected in the event actual experience differs from expectations. The actuary may also want to describe the level of "moderately adverse experience" used in making the actuarial certification.

The pricing actuary may also review the work with the valuation actuary to assure compliance with the aspects of the certification that deal with reserve levels and to communicate all best-estimate assumptions as well as margins for "moderately adverse experience" to the valuation actuary, who may request this information in order to establish reserves.

For guidance on valuation issues for LTCI, the actuary may find it helpful to refer to Health Practice Note 1995-9.

Consistent with ASOP No. 18, Section 3.7, the actuary should consider recommending that the company review experience on an on-going basis in order to identify areas where experience emerges differently from what was assumed in initial pricing.

5. Documentation

The actuary should appropriately document the work done in support of the initial pricing and actuarial certification. Indeed, ASOP No. 18, Section 4.1 states:

> "Because an LTC insurance plan is expected to remain in force over a very lengthy period of time, all assumptions are subject to review and update on a regular basis. Therefore, the actuary should document the assumptions, processes used, and the general sources of the data in sufficient detail such that another actuary could use the documentation where appropriate."

Some actuaries will provide this documentation to the company with a recommendation that it be retained for the life of the policy form. Others may retain the documentation within the actuary's employer. In some instances, it may be preferable for both the company and the actuary's employer to keep copies of the documentation. The documentation provided in support of the initial pricing and actuarial certification may also be needed in the event that a future rate increase is necessary. In the event a company purchases a block of LTCI business priced under the 2000 Model Regulation, regulators may expect the purchasing company to be familiar with the actuarial support for the premium rates.

Specific documentation could include, for example:

- An actuarial memorandum documenting assumptions used in setting the initial premium levels.

- A description of the reserve basis used, along with an analysis of net valuation premiums and a comparison of gross to net valuation premiums in support of the certification made relating to reserves. In those situations where the actuary cannot make the statement required in the first part of Section 10.B.(2)(d)(iv) of the 2000 Model Regulation, the actuary may want to include a description of the adjustments to the reserving assumptions necessary to modify the net valuation premiums for testing purposes (e.g., an increase in the interest rate from 4% to 7% for issue ages under 60).

- A comparison of gross premiums of the plan being filed to gross premiums on other policy forms, if any, the company offers. When the actuary has done an analysis in relation to the requirements of Section 10.B.(2)(e)(ii) of the 2000 Model Regulation the actuary might include a description of differences in assumptions appropriate to this form or other forms.

- An actuarial certification used for the initial filing.

- Documentation of the sensitivity analysis performed on the "moderately adverse experience" certification, along with other assumptions made about this analysis not contained in the actuarial memorandum. This documentation typically would include the actuary's assumptions about the product line management's strategy for rate increases if any portion of the margin for adverse experience is assumed to be covered by sources other than the form itself. The actuary may wish to include a reliance statement from the individual responsible for product line management regarding the assumptions relating to the company's premium increase strategy when necessary in the actuary's judgment.

- A description of the assumptions made with respect to underwriting and claims adjudication. The actuary may wish to include a reliance statement from individuals responsible for these areas, when necessary, in the actuary's judgment.

Q&A:

How is "moderately adverse experience" defined?

The 2000 Model Regulation does not define "moderately adverse experience," nor is that exact phrase defined in any ASOP. The regulation puts the responsibility of determining and certifying to the adequacy of premiums under "moderately adverse experience" on the pricing actuary.

The specified amount of margin for "moderately adverse experience" usually will vary by assumption(s) and by company, based on many possible factors, including, for example:

- The actuary's interpretation of "moderately adverse experience."

- The actuary's confidence in the underlying assumptions.

- The sensitivity of pricing results to variations in the assumptions.

- The actuary's judgment of the effect of combinations of various assumptions, their degree, and the likelihood of being adverse.

- The company's tolerance of adverse financial results before considering an increase of inforce premiums.

Is there a distinction between the phrases "premium rate schedule is sufficient to cover anticipated costs under moderately adverse experience" and "premium rate schedule is reasonably expected to be sustainable over the life of the form with no future premium increases anticipated" that the actuary is required to certify to in the actuarial certification?

Some pricing actuaries view these two phrases as essentially the same. If rates are sufficient to cover anticipated costs under "moderately adverse experience," (testing for deviations in both individual assumptions and multiple assumptions), these actuaries believe that the rates can reasonably be expected to be sustainable over the life of the form with no future premium increases anticipated.

Other actuaries feel that the "reasonably expected to be sustainable" phrase clarifies the intent of the "moderately adverse experience" phrase. These actuaries point out that an actuary pricing according to only the "moderately adverse experience" standard could be considering only deviations in individual pricing assumptions when determining whether premium rates are sufficient to cover "moderately adverse experience." These actuaries feel that the intent of the phrase "reasonably sustainable over the life of the form with no future premium increases anticipated" is to consider the possible effects of deviations in more than one assumption being compounded to the extent that margins for all assumptions are insufficient to make the statement regarding reasonable sustainability of the premium rate schedule.

The 2000 Model Regulation requires the individual pricing actuary's certification to include both phrases when pricing rates.

To what extent does the 2000 Model Regulation require the actuary to review the underwriting and claims adjudication processes? Is it appropriate for the actuary to rely on other professionals?

The regulation requires the actuary to review the underwriting and claims adjudication processes used by the company and further requires the actuary to consider these processes in developing the actuarial certification. The actuary may rely on appropriate individuals to review the described underwriting and claims adjudication processes. The actuary then selects pricing assumptions that are consistent with the processes as described. An outline of the type of documentation the actuary might provide is included in the examples provided in Section IV.

Are there any loss ratio considerations?

While there are no loss ratio requirements at the time of initial filing, the actuary may consider the potential impact of the loss ratio requirements that would be applied in the event of a premium increase on inforce business subject to Section 20 of the 2000 Model Regulation. Under Section 20, if such an increase is required, the initial premium will be subjected to a 58% loss ratio.

Section V of this practice note addresses the specific implications for loss ratios on premium increases for inforce business.

How might the actuary address very conservative reserves that do not meet the 2000 Model Regulation's criteria for comparison of gross and net premiums?

Some companies may decide to establish conservative reserves, e.g., with a 0% voluntary lapse assumption, such that the comparison required by the 2000 Model Regulation is not directly passed. The 2000 Model Regulation (further amplified in the Guidance Manual) allows the actuary to adjust any or all of the reserve assumptions to reduce the difference between the reserve assumption(s) and the pricing assumption(s) that include the margin until the comparison is met. Under this approach, the actuary then usually documents the changes along with the reserve assumptions. Regulators may then review the adjusted assumptions as a surrogate for pricing with margins. In the event that the difference produces an assumption that appears too aggressive to the regulator, the actuary may be called upon to supply the detailed work behind the actuarial certification.

If the actuary uses adjusted assumptions (modifications to the reserve assumptions described in the actuarial certification), do these become the assumptions for contract reserves?

Typically these adjusted assumptions are usually only used for purposes of completing the statement in the actuarial certification required by Section 10.B.(2)(d)(iv) of the 2000 Model Regulation.

IV. Example of Initial Pricing Process

Four examples have been created to illustrate possible methodologies. Without the ability to fully reference the actual practice of actuaries involved in the filing of new policy forms, this practice note provides examples intended for illustrative purposes only. They are not intended to be guidelines or examples of the actual margins used by practicing actuaries.

Example A

> NOTE: The numerical values in the examples provided below are intended for illustrative purposes only and are not intended to be used as guidelines or examples of the actual margins used, or likely to be used, by practicing actuaries.

An actuary has begun a pricing exercise for a company that is revising its current LTCI policy form, producing a new one that will fall under the requirements of the 2000 Model Regulation. The actuary is responsible for preparing the actuarial certification.

Review of Product and Management Strategy of the Company

The actuary reviews the proposed product design and compares it to the company's existing form. The actuary notes benefit enhancements and changes in contract language. The actuary also reviews the company's actual-to-expected claim ratios and persistency levels on its existing business.

The actuary reviews the company's proposed underwriting processes so the pricing assumptions will be consistent with these practices. The actuary also reviews these assumptions with the director of underwriting to verify whether the intended pricing assumptions are consistent with the underwriting director's plans. The actuary has similar discussions with the directors of marketing and claims adjudication.

The company's profit objective is an N% return on investment (ROI) measure. The actuary discusses with management the issue of inforce premium increases. Management is unwilling to accept less than the N% ROI in the event that poor experience emerges. Therefore, the actuary decides to build a margin for "moderately adverse experience" on top of the current profit objectives, such that if moderately adverse experience actually occurs, an N% ROI would still be realized. (Had management been willing to accept a lower profit objective in the event of adverse experience, the actuary believes that a portion of the margin for "moderately adverse experience" could have come from the profit margin.)

Setting Initial Assumptions

The actuary then sets the initial premium rates based on the actuary's best estimate of future experience. The actuary's best estimate assumptions do not contain any explicit margins for deviation. The actuary then considers a provision for "moderately adverse experience." The actuary determines that, in this case, persistency levels, investment returns, and morbidity levels are the variables that are most critical with respect to premium stability, based on sensitivity tests.

The actuary decides that, in order to cover "moderately adverse experience," premiums must contain enough margins such that, if any of the key variables identified experience a moderately adverse deviation, minimum profit objectives could continue to be achieved without the need for a premium increase.

The actuary then determines what a "moderately adverse experience" level would be for each of the key pricing variables. Based on the best estimate assumptions, the actuary determines that the following, each viewed separately, would be moderately adverse events:

- Claim costs one-third higher than best estimates.
- One-half of best-estimated lapse rates.
- Best estimate mortality rates improved based on projection scale C of the 1983 IAM mortality table.
- Investment returns 250 basis points below best estimate levels.

Testing the Margin for "Moderately Adverse Experience"

The actuary then determines the amount of margin that is needed to cover each of the "moderately adverse experience" conditions listed. The actuary considers deviations in individual pricing assumptions as well as deviations in multiple experience factors that represent "moderately adverse experience". Based on this testing, the actuary determines the overall premium margin sufficient to cover each of these scenarios.

Company Review and Agreement

Once the preliminary pricing analysis is complete, the actuary reviews the pricing assumptions with management. The actuary also reviews assumptions relating to product design, underwriting, and claims adjudication and how they were factored into the pricing assumptions.

The actuary then discusses with management the circumstances under which an inforce premium increase could be justifiable based on the provisions for "moderately adverse experience" that were assumed in pricing. The actuary explains the financial implications for the policy form if adverse experience occurs that is not in excess of the "moderately adverse experience" identified in initial pricing.

Documentation

Once management reviews the final pricing, the actuary prepares the appropriate documentation of the pricing work. The documentation includes a specific description of the sensitivity analysis performed and identifies the moderately adverse level at which an inforce premium increase might be justified. In this case the actuary documents the four moderately adverse conditions tested. See examples listed above.

The actuary also documents the assumptions regarding underwriting and claims adjudication anticipated experience. Based on review of the product design, the actuary documents the following:

- For claim costs, the actuary assumes that full underwriting is performed on all applicants, which includes a complete application and phone history interview. In addition, a face-to-face assessment is assumed for all applicants over age 70. The actuary also assumes that underwriting decisions will be made by individuals with appropriate training. These assumptions are consistent with the current underwriting practices of the company as described by management.
- For claims adjudication, the actuary assumes that a case manager will be involved in all claims. That manager will verify that all claimants meet eligibility requirements and that care is consistent with the plan of care. The actuary also assumes that the case manager will monitor each claimant on at least a quarterly basis. These assumptions are consistent with the current claims adjudication practices of the company as described by management.

The actuary advises the company to maintain this documentation with the policy form for the reasonable life of that form, in part because it may be needed if an inforce premium increase is requested.

Example B

> NOTE: The numerical values in the examples provided below are intended for illustrative purposes only and are not intended to be used as guidelines or examples of the actual margins used, or likely to be used, by practicing actuaries.

An actuary is pricing a new product series for a company that is replacing its current LTCI policy form. The new series will fall under the requirements of the 2000 Model Regulation. The actuary is responsible for preparing the actuarial certification.

Review of Product and Management Strategy of the Company

The actuary reviews the proposed product design and compares it to the company's existing form. The actuary notes benefit enhancements and changes in contract language. The actuary also reviews the company's actual to expected claim ratios and persistency levels on its existing business.

The actuary reviews the company's proposed underwriting processes so that the pricing assumptions will be consistent with these practices. The actuary also reviews these assumptions with the director of underwriting so that the intended pricing assumptions will be consistent with the underwriting director's plans. The actuary has similar discussions with the directors of marketing and claims adjudication.

The company's profit objective is an N% return on equity (ROE) measure. The actuary discusses with management the issue of inforce premium increases. Management is willing to look at the company's entire portfolio of LTCI products and will accept less than the N% ROE in the event that poor experience emerges. The company believes that rate increases are to be the last way to resolve such problems and will use past positive results, favorable experience with other products (to the extent allowed by laws and regulations relating to those products), and modifications of rates and assumptions for new business to avoid results that would not produce at least a Y% of premium return. The actuary notes that there are significant limits on the use of future new business as a source of margin for adverse experience. The actuary determines that a margin for "moderately adverse experience" can include the current profit objectives and that several possible variations probably would not apply to the entire line of business.

Setting Initial Assumptions

The actuary determines a set of best estimate assumptions of future experience. The actuary's best estimate assumptions do not contain any explicit margins for deviation. The actuary compares these to the assumptions used for current policies and notes the extent of margins in each assumption. Since the company is not changing many of these assumptions, the actuary has these margins plus a portion of the projected profits to cover "moderately adverse experience."

The actuary then considers a provision for "moderately adverse experience." The actuary determines that persistency levels, expense allowances, and investment return margins within the assumptions are already sufficient. The actuary focuses on morbidity levels, which are likely to apply to all the inforce policies and reduce the company's ability to avoid rate increases. The actuary tests increasing the morbidity level under several scenarios:

- A 20% increase in claim costs:
- A 33% increase in initial claim costs (the years subject to underwriting).
- A 10% increase in claim costs at the end of five years, followed by a 1% per year additional increase in claim costs thereafter.

Testing the Margin for "Moderately Adverse Experience"

The actuary determines that a margin of 5% of all premiums will likely be sufficient (after allowing for use of other margins and a portion of the profit) to cover moderately adverse morbidity. Since the profit margin is already above 5%, the actuary determines that the premium scale is satisfactory.

Company Review and Agreement

Once the preliminary pricing analysis is complete, the actuary reviews all pricing assumptions with management. The actuary also reviews all assumptions relating to product design, underwriting, and claims adjudication, and how they were factored into the pricing assumptions.

The actuary then discusses with management the circumstances under which an inforce premium increase could be justifiable on these policy forms based on the provisions for "moderately adverse experience" that were assumed in pricing. The actuary explains the financial implications for the line of business and the impact on these policy forms if adverse experience occurs that is not in excess of the "moderately adverse experience" identified in initial pricing.

Documentation

Once management reviews the final pricing, the actuary prepares the appropriate documentation of the pricing work. The documentation describes the sensitivity analysis performed and identifies the manner in which the company proposes to deal with "moderately adverse experience." The actuary notes the margins within various assumptions and the portion of the profit margins that the company states it is willing to forego. In this case, the actuary documents the moderately adverse conditions that were tested:

- Several negative deviations in morbidity levels.
- Margins of 25% in the lapse assumptions versus company experience.
- Margins of 100 basis points in investment assumptions versus company experience.

The actuary also documents the assumptions regarding underwriting and claims adjudication anticipated experience. Based on review of the product design, the actuary documents the following:

- For claim costs, the actuary assumes that full underwriting is performed on all applicants, which includes a complete application and a phone history interview for all applicants. In addition, a face-to-face assessment is assumed for all applicants over age 65. It is assumed that underwriting decisions will be made by individuals with appropriate training. These assumptions are consistent with the current underwriting practices of the company as described by management.
- For claims adjudication, the actuary has assumed that a case manager will be involved in all claims and that the case manager will verify that all claimants meet eligibility requirements and that care is consistent with the plan of care. It is also assumed that the case manager will monitor each claimant on at least a quarterly basis. These assumptions are consistent with the current claims adjudication practices of the company as described by management.

The actuary advises the company to maintain this documentation with the policy form for the reasonable life of that form, in part because it may be needed if an inforce premium increase is requested.

Example C

NOTE: The numerical values in the examples provided below are intended for illustrative purposes only and are not intended to be used as guidelines or examples of the actual margins used, or likely to be used, by practicing actuaries.

An actuary has begun a pricing exercise for a company that is seeking to increase its market share with lower premiums. The company plans to use new underwriting approaches to justify the lower rates. The new policy form will fall under the requirements of the 2000 Model Regulation. The actuary is responsible for preparing the actuarial certification.

Review of Product and Management Strategy of the Company

The actuary reviews the proposed product design and compares it to the company's existing form. The actuary notes benefit enhancements and changes in contract language. The actuary also reviews the company's actual to expected claim ratios and persistency levels on its existing business.

The actuary reviews the company's proposed underwriting processes. The actuary reviews these assumptions with the director of underwriting to determine their likely impact. The actuary asks the director to review recent approvals and disapprovals. The two note the need for additional information not currently received, but needed in order to make the new underwriting processes effective. The actuary confirms that the marketing areas are committed to obtaining and providing the company with this information.

The actuary has discussions with the director of claims adjudication. While there are no plans to change the company's adjudication processes, the director is planning to incorporate the information from recent applications in the adjudication of early claims.

The company's profit objective is N% of premium. The actuary discusses with management the issue of inforce premium increases. Management is willing to accept half the N% of premium profit in the event that poor experience emerges. Since the profit target is common for all the company's LTCI policies, management expects to pool the experience of all forms before asking for a premium increase. However, because of the unique underwriting processes of the new policy form, management believes that adverse experience in early morbidity should be assigned to the new form only. Therefore, the actuary decides to assign different margins for "moderately adverse experience" to the morbidity results and all other assumptions.

Setting Initial Assumptions

The actuary then sets the initial premiums based on the actuary's best estimate of future experience. The actuary's best estimate assumptions do not contain any explicit margins for deviation. The actuary then considers a provision for "moderately adverse experience." The actuary determines that persistency levels, investment results, and the combination of acquisition expenses and morbidity/mortality levels are the variables that are most critical with respect to premium stability, based on sensitivity tests.

The actuary decides that in order to cover "moderately adverse experience" relating to assumptions other than morbidity, premiums must contain enough margins that profit objectives would not be reduced by more than 50% and the existing premium scale could be maintained even if adverse experience were to develop with:

- Lapse rates 2% lower than the best estimate (which was 1% lower than current company experience on other LTCI forms).

- Overall investment returns of the line of business decreasing to 300 basis points below assumptions and remaining at that level for five years at various times in the future.

Because of the interplay of the other three key variables, the actuary constructs a number of scenarios with consistent combinations of strict underwriting and the resulting higher acquisition expenses (more cost per application and higher disapproval rates), improved mortality, and reduced early morbidity costs. The company believes that strict underwriting will also aid in controlling ultimate claim costs. The actuary tests for adverse assumptions that include:

- 50% higher claim costs in the first five years than the best estimate.

- Up to 20% higher claim costs in the first 10 years with improved mortality and reductions of as much as 5% from the company's existing ultimate claim costs after 20 years.

- Disapproval rates of between 20% and 30% with loss of between 50% and 75% of the rejected business from higher premium products.

Testing the Margin for "Moderately Adverse Experience"

The actuary then determines the level of margin that is needed to limit the profit reduction for scenarios relating to each of the "moderately adverse experience" conditions listed. The actuary considers deviations in individual pricing assumptions as well as deviations in multiple experience factors that represent "moderately adverse experience." The actuary also tests the impact of the stricter underwriting on the additional premiums required for the other risk groupings. Based on this testing, the actuary determines the overall margin sufficient to cover 90% of all the scenarios tested. The actuary believes this meets the requirement to cover "moderately adverse experience" because the various scenarios included a wide range of possibilities.

Company Review and Approval

Once the preliminary pricing analysis is complete, the actuary reviews the pricing assumptions with management. The actuary also reviews assumptions relating to product design, underwriting, and claims adjudication and how they were factored into the pricing assumptions.

The actuary then discusses with management the circumstances under which an inforce premium increase could be justifiable based on the provisions for "moderately adverse experience" that were assumed in pricing. The actuary notes the different assumptions relating to adverse morbidity and all other key pricing determinants. The actuary explains the financial implications for the policy form if adverse experience occurs that is not in excess of the "moderately adverse experience" identified in initial pricing.

Documentation

Once management reviews the final pricing, the actuary prepares the appropriate documentation of the pricing work. The documentation describes the sensitivity analysis performed and identifies the moderately adverse level at which an inforce premium increase would be justified. In this case, the actuary documents the range of scenarios tested and the opinion that premium margins adequate to cover 90% of these scenarios meets the provision for "moderately adverse experience."

The actuary also documents the assumptions regarding underwriting and claims adjudication anticipated experience. Based on review of the product design, the actuary documents the following:

- For claim costs, the actuary assumes that extensive underwriting is performed on all applicants, which includes a complete application, a physical or physician statement, and a phone history interview on all applicants. In addition, a face-to-face assessment is assumed for all applicants over age 70. It is further assumed that underwriting decisions will be made by individuals with appropriate training. The company anticipates an underwriting decline rate of approximately 15%.

- For claims adjudication, the actuary has assumed that a case manager will be involved in all claims and the manager will verify that all claimants meet eligibility requirements and that care is consistent with the plan of care. It is further assumed that the case manager will monitor each claimant on at least a quarterly basis. These assumptions are consistent with the current claims adjudication practices of the company as described by management.

The actuary advises the company to maintain this documentation with the policy form for the reasonable life of that form, in part because it may be needed if an inforce premium increase is requested.

Example D

NOTE: The numerical values in the examples provided below are intended for illustrative purposes only and are not intended to be used as guidelines or examples of the actual margins used, or likely to be used, by practicing actuaries.

The actuary has begun a pricing exercise for a company that is replacing its current product series. The new series falls under the requirements of the 2000 Model Regulation. The actuary is responsible for preparing the actuarial certification.

Review of Product and Management Strategy of the Company

The actuary reviews the proposed product design and compares it to the company's existing forms. The new product includes several benefit enhancements compared to the company's current forms. The actuary also reviews the company's experience on its existing forms. The actuary notes that for existing forms, actual to expected morbidity ratios indicate favorable experience, but the actuary also notes that the company has experienced substantially higher persistency on its existing forms than the company expected when those forms were priced.

The company intends to continue its current underwriting practices. These include strict underwriting with the ordering of medical records on all applicants and obtaining functional and cognitive assessments for all applicants at ages 70 and over. The company also maintains comprehensive written standards of exactly what risks are acceptable, which risks are to be postponed and which are to be offered preferred or substandard rates. The company circulates a shortened version of the comprehensive standards as a field underwriting guide to its agents. The actuary visits the underwriting department and reviews a sample of files and interviews some of the underwriting staff. The review shows that the company is in fact obtaining the tools and selecting risks according to the documented standards. The actuary also reviews the published field underwriting guides of the company's benchmark competitors and determines that the company's underwriting standards are at least as strict as any of its benchmark competitors.

The actuary visits the claims department and reviews the processes and procedures that the company uses to adjudicate claims and interviews some of the claims staff. The company's practice is to obtain in-person face-to-face functional assessments on all insureds seeking to claim benefits. The actuary reviews a sample of claim files and the accompanying functional assessments and determines that the company is adjudicating claims in accordance with the benefit triggers in the applicable policy provisions. The actuary also determines that the expenses being paid by the claims department are consistent with the definitions of services covered under the applicable contracts.

The actuary discusses the performance of the current product with management. The effect of the adverse (higher than anticipated) persistency has more than offset the effect of the favorable morbidity, and the company's current view is that without rate increases, emerging profits will be less than half of those which would have emerged according to the original best estimate pricing expectations. The company has never filed for a rate increase on any of its products and does not intend at this time to file for a rate increase on the current product, in spite of the fact that profits are lower than original expectations and that the adverse persistency combined with the favorable morbidity results in a current view of lifetime loss ratio which would justify a rate increase if the company chose to file for one. In spite of the company's history of viewing rate increases as a tool of last resort in managing the business, the company wants to maintain its freedom to raise rates in the event it determines that rate increases are necessary.

For the new product, the company's target profit objective is to achieve an after tax internal rate of return of X%, but in no event will it tolerate a rate of return of less than Y%.

Setting Initial Assumptions

The actuary adjusts historical expected claim costs in accordance with the emerging favorable actual to expected morbidity ratios, and according to the anticipated effect of the enhanced benefits in the new product. Based on the company's historical experience and strict underwriting standards, the actuary believes these claim costs to have a high degree of credibility of representing the result that could be expected under the new form under the current state of the long term care delivery system.

The actuary establishes best estimate mortality, lapse, and expense assumptions in accordance with the company's recent experience and best estimate investment income assumptions consistent with the company's investment strategy and assumed view of future interest rates and cash flows under the new product.

The actuary then substantially loads the best estimate morbidity costs and leaves all other pricing assumptions at best estimate levels. Using these assumptions, including the loaded morbidity assumptions, the actuary calculates a set of premium rates consistent with the company's Y% minimum rate of return. The loss ratio associated with the unloaded claim costs is 60%. The actuary verifies that under the best estimate assumptions, the X% target rate of return is met.

Test the Margin for "Moderately Adverse Experience"

The actuary recognizes that a certification that this rate set will be adequate under "moderately adverse experience" will be required. The actuary believes that in the event of adverse experience, rate increases would not be granted unless the actuary could demonstrate that the provision for moderately adverse experience consistent with that assurance in the initial rate certification had been exceeded. Therefore, the actuary determines that the provision for moderately adverse deviation to be provided for in the initial rate filing must be less than the worst outcome tolerable to the company.

The actuary believes that in light of the company's history of rate stability, the credibility of the best estimate assumptions and sensitivity testing, a provision equivalent to a 5% morbidity loading would be an appropriate margin for moderately adverse experience under the certification. This is equivalent to the proposition that since the company expects a loss ratio of 60% based on the rate set and best estimate assumptions, it is willing to demonstrate that a 63% loss ratio on the initial rate set will be exceeded before rate increases will be requested. The company recognizes that in the event rate increases are requested, it has committed to meeting a minimum loss ratio of 63% on the initial rate schedule and 85% on any rate increase premium.

As a part of the work underlying the pricing, the actuary tests a variety of adverse sets of assumptions in accordance with Actuarial Standard of Practice No. 18. Some of the adverse scenarios tested represent materially worse experience than that consistent with the moderately adverse provision in the actuarial certification. The actuary determines that under all of the adverse assumption sets tested, the company would be able to manage the business in such a way that the company's minimum profit objectives of Y% would be maintained. Some of the adverse scenarios involved the need for rate increases. In these scenarios, the actuary assumes that not only would the 63% loss ratio on the initial rate set be exceeded, but that in a rate increase environment, it would not be possible to manage the business in such a way that a combined loss ratio as low as 63% on the initial rates and 85% on any rate increase premium could be met.

Company Review and Agreement

The actuary reviews the work with company management. The actuary informs them that with the proposed rate set, under the best estimate assumptions an X% return expectation would be exceeded and that a Z% loss ratio could be tolerated before its minimum profit objective of Y% would be in jeopardy. The actuary also informs management that if severely adverse experience were to develop it would be unlikely that

(a) the business could be managed to achieve the company's minimum profit expectation if the company had to demonstrate that a Z% loss ratio would be achieved; but that

(b) there would be a high likelihood of achieving a Z% loss ratio or less over the lifetime of the business if the company were to manage rates consistent with a regulatory expectation that a minimum loss ratio of 63% would be achieved on the initial rate set.

The actuary explains that the provision for moderately adverse experience to be demonstrated to regulators before rate increases would be sought must be consistent with the 63% loss ratio and not the higher Z% loss ratio, where Z% is the highest loss ratio consistent with the lowest profitability tolerable to the company.

Documentation

The actuary documents the work performed in support of the rates for the new product, including the sensitivity tests, in accordance with Actuarial Standard of Practice No. 18.

The actuary and the company agree that it would be unwise for the actuary to certify to regulators that rates would be adequate under moderately adverse experience without some mutual understanding between the regulators and the company of the meaning of that certification. Therefore, as a part of the filing with regulators, the actuary provides information regarding the best estimate assumptions. The actuary explains to the regulators as a part of the original rate filing that according to these best estimate assumptions the form would have a loss ratio of 60%, but that the company was willing to tolerate moderately adverse deviations from the best estimate assumption set, which in the aggregate would result in a loss ratio on the initial rate set of 63%. (This could be equivalent to a 5% adverse deviation in morbidity with all other best estimate assumptions realized, a less adverse deviation in morbidity combined with small adverse deviations in other assumptions, or even a worse than 5% adverse deviation in morbidity with partially offsetting positive deviations in other assumptions.)

V. A Process for Pricing Potential Premium Rate Increases for Inforce Policies

The 2000 Model Regulation places new requirements on the pricing actuary in the event an inforce premium increase is requested. These requirements include a new actuarial certification, loss ratio requirements on the premium (separately for the initial premium and the premium increase), and additional disclosures. All of the requirements for inforce premium increases are contained in Section 20 of the 2000 Model Regulation. This practice note describes one possible approach to meeting the requirements of Section 20. Other approaches may also be appropriate.

There are several steps an actuary may choose to take when determining increases in inforce premiums that are subject to Section 20 of the 2000 Model Regulation. These steps are described below. Note that these steps assume the policy being considered for increasing inforce premiums was priced under the requirements of Section 10 of the 2000 Model Regulation:

1. Review Original Filing Material

Section 20.B.(3)(c) of the 2000 Model Regulation requires the actuary to review original material and become familiar with the initial actuarial certification and related documentation. In the event the actuary is pricing a second or later rate increase, the use of the term "original filing" throughout this section refers to the previous filing material. Specific items to look at may include:

- What were the original pricing assumptions?
- What were the assumptions regarding underwriting and claims adjudication?
- What was the product line management strategy with respect to profitability in the event of adverse experience?
- What were the "moderately adverse experience" conditions identified at the time of the initial filing?

In addition, consistent with the requirements of Section 20.B.(3)(a) of the 2000 Model Regulation, the actuary should review the pricing assumptions of the company's other LTCI forms currently available for sale. Deviations in the assumptions used for any rate increase from those used for these other forms are required by the 2000 Model Regulation to be disclosed within the actuarial memorandum's projections.

2. Review Experience to Identify Sources of Adverse Experience

Once the actuary is familiar with the assumptions used for the initial pricing, the actuary typically analyzes the experience to date to determine the sources of adverse experience. For example, if the need for an inforce premium increase is being driven by higher than anticipated claim experience, the actuary might look into the underlying source of these deviations.

Some examples of sources of adverse experience could be:

- Longer lengths of claim benefit periods resulting from higher than anticipated numbers of cognitive claims, due to inadequate underwriting.
- Higher costs of services than anticipated because anticipated savings resulting from case management were not realized.

- Higher than expected claim payments due to lower than anticipated voluntary lapse rates.

Consistent with Section 3.2.1 of ASOP No. 18, the actuary should consider the degree of credibility of the actual experience when determining whether or not an inforce premium increase is necessary. When non-credible actual experience differs from the expected results, the actuary may wish to compare expected results with other sources of current experience, appropriately adjusted.

Consistent with the requirements of Section 20.B.(3)(c) of the 2000 Model Regulation, when analyzing the company's experience and determining the sources of adverse experience, the actuary should consider whether the adverse experience is being caused by company-specific sources (e.g., inadequate underwriting, poor claims management, unexpected sales mix of business) or by industry-wide experience (e.g., longer average lengths of claim due to improvements in longevity and medical technology, higher than anticipated costs due to higher than expected increases in long-term care services). Finally, the actuary usually considers whether the adverse experience can be expected to continue, intensify, or decrease in the future.

3. Determine If Rate Increase Is an "Exceptional Increase"

Once the source of the adverse experience is determined, the actuary typically determines whether or not the need for an inforce premium increase meets the definition of an exceptional increase. Exceptional increases are defined and their handling explained in Section 4.A.(1) of the 2000 Model Regulation as:

> "Exceptional increase" means only those increases filed by an insurer as exceptional for which the commissioner determines the need for the premium rate increase is justified:
>
> (a) Due to changes in laws or regulations applicable to long-term care coverage in this state; or
>
> (b) Due to increased and unexpected utilization that affects the majority of insurers of similar products.

As with any pricing analysis under the 2000 Model Regulation, the actuary may consider documenting any development that may be exceptional for use at a later date.

4. Compare Original Risk Margins and Adverse Experience

Once the actuary has analyzed the experience and determined the source or sources of adverse experience, the actuary may then compare the experience to the "moderately adverse experience" defined at the time of initial pricing to see if the actual experience exceeds the original assumptions including margins for "moderately adverse experience." When comparing actual experience to moderately adverse experience, the actuary may also consider, for example:

- Has adverse experience in one assumption been offset by better than anticipated experience in other assumptions?

- Has the product line management strategy documented at the time of initial pricing been appropriately reflected in the comparison?

If the actual experience is not in excess of the "moderately adverse experience" defined at issue, regulators may be unwilling to approve an increase in inforce premiums.

Section 20.B.(3)(c) of the 2000 Model Regulation requires: "Disclosure of the analysis performed to determine why a rate adjustment is necessary, which pricing assumptions were not realized and why, and what other actions taken by the company have been relied upon by the actuary. . ." Some actuaries may interpret this section to include a comparison showing how actual experience has exceeded the "moderately adverse experience" certified at the time of the initial filings. The actuary may consider advising the company about the appropriateness of developing and preserving such documentation.

5. Calculate New Premium Schedule

Once the actuary has determined that an inforce premium increase is needed based on actual experience and margins for adverse experience, the actuary may calculate the new premium schedule. As part of the new premium rate schedule filing, the actuary will be required to provide a new actuarial certification. Specifically, Section 20.B.(2) of the 2000 Model Regulation requires:

> "Certification by a qualified actuary that:
>
> (a) If the requested premium rate schedule increase is implemented and the underlying assumptions, which reflect moderately adverse conditions, are realized, no further premium rate schedule increases are anticipated;
>
> (b) The premium rate filing is in compliance with the provisions of this section. . ."
> (i.e., Section 20).

Appendix 2 of the Guidance Manual provides the following sample actuarial certification relating to paragraph (a) above:

> "In my opinion the revised premium rate schedule(s) [is/are] sufficient to cover anticipated costs under moderately adverse experience and the premium rate schedule(s) [is/are] reasonably expected to be sustainable over the life of the [form/forms] with no future premium increases anticipated."

The Guidance Manual wording is virtually identical to the wording in Section 10.B.(2)(a) of the 2000 Model Regulation. The terms "moderately adverse conditions" and "moderately adverse experience" appear to be synonymous, although neither is defined.

Consistent with Section 20.B.(3)(d) of the 2000 Model Regulation, in calculating the increased premium, the actuary should first review any changes that are being made to the product. In particular, the actuary typically takes into account any known changes in policy design, underwriting, or claims adjudication that have been made that may impact future experience. The actuary may also consider any known material changes in the product line management strategy being implemented as part of the premium increase.

Once the necessary product and management information has been reviewed, the actuary sets revised assumptions. In addition to the issues considered in Section III of this practice note for determining initial premium rates, the actuary may also wish to consider, for example:

- The impact of shock lapses and anti-selection that may result from the inforce premium increase.

- The impact of any known material changes in policy design, underwriting, claims adjudication, or management strategy.

- The cost of any benefits resulting from the contingent benefit upon lapse benefit, if applicable.

- The impact of the loss ratio requirements that are applied to the premium rate schedule.

- Changes needed in the reserve basis to re-establish appropriate margins.

Similar to the initial premium rate schedule, the 2000 Model Regulation requires revised premium rates to be sufficient under "moderately adverse conditions." Therefore, the actuary may build in margins to the revised premium rates by a process similar to that done at the time of initial pricing.

Once the revised premium rate schedule is set, the actuary typically performs appropriate tests to assure that the rate schedule is in compliance with the 2000 Model Regulation. Consistent with the requirements of Sections 20.B.(2) and 20.B.(3), these tests include:

- Testing the margin for "moderately adverse experience." This testing is similar to that done at the time of initial pricing. In light of the actual experience, the actuary may reconsider the level of margin necessary to certify adequacy under "moderately adverse experience." In addition, the actuary may reconsider the specific variables that need to be tested.

- Testing the premium rate schedule for compliance with the premium limit requirement. Unless the inforce premium increase meets the requirements of an exceptional increase, the premium increase limit standard that claims must meet is 58% on the initial premium and 85% on the increase portion. For exceptional rate increases, the standard to be met is 70% on the increase portion of the premium. For exceptional increases, there is no premium limit requirement on the initial premium rate level. (Consult Section 20.C of the 2000 Model Regulation for specific calculation rules relating to the premium limits.)

The actuary typically identifies the likely results and the margins for "moderately adverse experience" separately. The assumptions, including margins for "moderately adverse experience", are to be used in determining compliance with the premium limit requirements (58% / 85% or 70% per above) while the specifics for the values to be used in projections for monitoring over the three years are not defined in the 2000 Model Regulation.

The Guidance Manual includes an example that compares (1) actual results plus projected margins with (2) projected results, including margins for "moderately adverse experience," as a way to provide better results for ongoing review and for evaluation of updated projections.

The actuary may also be requested to:

- Test the renewal premium schedule to determine if it is greater than new business premium rate schedules, except for differences attributable to benefits.

- Determine if, as a result of the increase in the premium rate schedule, a majority of policyholders are eligible for the contingent benefit upon lapse.

6. Conduct Company Review and Agreement

Similar to the review done at the time of initial pricing, the actuary generally reviews the pricing work with company management. This work typically includes discussion of the sources of adverse experience and any changes made to the assumptions relating to product line management or "margins for adverse experience." It also typically refers to, and discusses, prior as well as current company and management intentions about future possible premium increases.

7. Produce Documentation

Upon completion of the pricing and the actuarial certification, ASOP No. 18, Section 4.1 requires the actuary to produce documentation to support the pricing work. This documentation is usually similar to that produced in support of the initial pricing and actuarial certification but includes additional information in the actuarial memorandum, as described in Section 20.B.(3). This documentation would generally be maintained over the life of the policy form. If a company purchases a block of LTCI business priced under the 2000 Model Regulation, regulators may expect the purchasing company to be familiar with the actuarial support for the premium rates.

8. Ensure Experience Monitoring Is in Place

Once an inforce premium increase is implemented, the 2000 Model Regulation contains several provisions that require annual monitoring and reporting of experience. These requirements are described in Sections 20.D, E, F, G, and H of the 2000 Model Regulation, although some of the provisions only apply to larger or more frequent premium increases. Consistent with ASOP No. 18, Section 3.7, the actuary should consider whether the monitoring system is in place and may wish to make management aware of the implications of these provisions when preparing the reports.

Q&A:

What if adverse experience is the result of lower than expected investment returns?

The interest rate to be used in calculating the premium limit is defined in Section 20.C.(4) of the 2000 Model Regulation. As such, the premium limit requirement may leave little margin for a rate increase, depending on what the anticipated loss ratio was at the time of initial filing.

The actuary may consider adjusting margins for "moderately adverse experience" at the time of initial pricing, to recognize the limitations placed on rate increases in the event that investment returns do not meet initial expectations.

Can a company implement less than the full inforce premium increase needed?

At the time of the rate increase filing, Section 20.B.(2)(a) of the 2000 Model Regulation requires the actuary to certify the following:

> "If the requested premium rate schedule increase is implemented and the underlying assumptions, which reflect moderately adverse conditions, are realized, no further premium schedule increases are anticipated."

If less than the full inforce premium increase is requested, the actuary usually will be unable to make such a certification unless the company modifies its profit expectations. In this circumstance, the actuary, together with the company, may consider alternatives, for example:

- Filing for the entire increase necessary to make the certification.

- Filing for a tiered premium increase (e.g., 10% in the current year, additional 10% in year two). One actuarial certification could then be made based on the implementation of both increases. Disclosure to policyholders at the time of the first increase would also disclose all other assumed increases.

Do margins for "moderately adverse experience" have to be at the same level for an inforce premium increase as they were for initial pricing?

The margins for "moderately adverse experience" do not necessarily have to be the same for a premium increase filing as they were for the initial filing. Consistent with Section 20.B.(2)(a) of the 2000 Model Regulation, the appropriate margin at the time of a rate increase should be based on the actuary's judgment, given the information available at the time of the premium increase filing. The margin for "moderately adverse experience" needed at the time of the premium increase may be greater than or less than that included at the time of the initial filing.

This answer does not imply that regulators will necessarily approve a proposed rate increase that includes increased margin for "moderately adverse experience" from the level in the original pricing assumptions. However, the answer is consistent with the expectation that the actuarial certification would be based on the actuary's opinion and views at the time the certification was made.

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