4.2.4 Other Considerations

10m

Minimum Premiums

In some cases, a rating algorithm may specify a ***minimum premium*** for individual risks. A minimum premium amount is similar to a fixed expense fee in the sense that it ensures each individual risk pays enough premium to cover expected expenses plus expected loss. Implementing a minimum premium effectively increases the average premium.

$$\text{Effect of Minimum Premium} = \frac{\text{Total Premium with Minimum}}{\text{Total Premium without Minimum}} - 1 \quad (4.2.4$$

When adding a minimum premium to a policy, the base rate should be multiplied by the following factor to offset the increase in the average premium.

$$\text{Minimum Premium Offset Factor} = \frac{1}{1 + \text{Effect}} \qquad (4.2.4.2)$$

Since a minimum premium effectively does the same thing as an additive fixed expense fee, rating algorithms typically do not include both at once.

Premium Transition Rules

In the last section, we discussed capping individual rating variables when revising rates. Although this is effective for limiting the change in premium to a particular group, the change in premium can still be rather large for individual policies. This is because most insurance products use more than one rating variable. The combined impact on an individual policy's premium could be quite substantial, even if each individual rating variable has a small effect.

In an attempt to avoid losing a policyholder due to a sudden large increase in premium, an insurer may implement a ***premium transition rule*** to spread the effect of the rate change over time. To do this, the insurer would select a maximum and minimum allowable change to premium that a policyholder could observe **over a single renewal**.

For example, an insurer may set a premium transition rule that limits the premium impact to any individual policy to 25% for a single renewal. If a rate review indicates that an individual should receive a 30% increase in premium for their next renewal, they will instead receive a 25% rate increase for their first renewal. The remaining $(1.3/1.25) - 1 = 4\%$ increase would be deferred to their second renewal.

When implementing a premium transition rule, a company needs to consider:

- The maximum and minimum premium change amounts. These are usually determined by through scenario testing.
- The period of time needed to fully transition to the new rate. Shorter time periods are usually better because they minimize the possibility of multiple transition rules overlapping.
- The effect on the total average premium. For example, if the target average premium is $100 and the insurer applies a two-year transition rule, the company needs to decide whether the base rates should be set so that the average premium is $100 over both years or just averages $100 by the end of the second year, i.e., higher than $100 during one year and lower during the other.

As a final note, premium transition rules usually only apply to changes in premium due to a rate change. If a policyholder changes risk characteristics between rate reviews, changes in premium due to differing risk characteristics should be adjusted for.

Ratemaking Using External Rates

When a company is just starting to offer a new product, it may lack the historical data needed to create reasonable rates. In these cases, insurers tend to lean on external data from competitors who sell similar products or rating bureaus. This presents several challenges.

One challenge is gaining access to the necessary information. It requires the competitor's rating manual or the rating bureau filing to be publicly available. Even if this is the case, the relevant underwriting guidelines are usually not public information, so the company will likely need to use judgment when assessing the external information.

Another challenge is that the company's expenses and expected loss costs may differ from the ones used to create the external rates. As such, external data is typically considered supplementary; the company will likely combine it with internal information and make adjustments for differences between the two entities. Below are a few examples of ways a company can adjust externally obtained ratemaking data.

- If the company estimates that its fixed expenses will be different from the target company's, it can adjust the fixed expense fee to reflect that difference.
- If the company estimates that its variable expenses will be different from the target company's, it can adjust the base rate and expense fee by a factor of

$$\frac{\text{External Variable Permissible Loss Ratio}}{\text{Company Variable Permissible Loss Ratio}}$$

- If the company anticipates that its expected loss cost to be different, it may increase/decrease the base rate to account for the percent difference.

- Companies can make judgmental adjustments to the rating factors and base rates if they expect their target market to be significantly different from the competitor's market.

Communication and Monitoring

Before implementation, it is important for an actuary to communicate the expected effect of the rate change to relevant stakeholders, such as management or key regulators. Rate changes that impact existing policies or products usually require more communication than implementing rates for brand-new products. Internal management will likely be interested in the assumptions used to create the rate and in the potential impact on the company's competitive position, profitability, etc.

Additionally, the actual effects of the rate change should be monitored. Comparing the actual effects of a rate change with its expected effects can help companies identify patterns related to close rates, retention rates, claim frequencies, etc. Recognizing these differences allows the company to prepare accordingly.