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A Prospective Approach to Determining Allowable Rate Increases

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There have been notable shifts in the NAIC Model Regulations over the past two decades on Long-Term Care Insurance policy rate increases. Initially, the industry had both the initial premiums and rate increase premiums subjected to a minimum lifetime loss ratio of 60 percent (“60 percent Loss Ratio Method”). This was followed by the move to rate stabilization in 2000, which allowed for no minimum loss ratio at the time of initial premium filing, but called for the rate increase calculation to utilize loss ratios on original premium levels of 58 percent and an 85 percent loss ratio on the increased portion of the premium (“Rate Stability Method”). In 2014, the NAIC task force updated its Model Regulation (“2014 Model Reg”) to: a) require the use of the greater of 58 percent or the pricing loss ratio to apply to the original premium when calculating a rate increase, and b) limit the historical claims to be the lesser of the accumulated value of actual incurred claims and the accumulated value of historic expected claims.¹

Even in light of this regulatory framework, the road to rate increase approval is uncertain for insurers as regulators work to balance the regulations above with policyholder protection. This has prompted more regular and active discussions among states within the NAIC, many of which have not yet adopted the 2014 Model Reg. Their discussions focus on the various approaches that state regulators have taken in their review of rate increase filing requests. One approach that has recently gained traction is a prospective formula that the Texas Department of Insurance uses to compute an allowable rate increase for a block of long-term care insurance policies (“Prospective Method”).

Figure 1
Formula for the Prospective Method

$$\text{rate increase \%} = \frac{\Delta PV(\text{future incurred claims}) - \left(\frac{.58 + .85C}{1 + C} \right) \Delta PV(\text{future earned premiums})}{.85 PV_{\text{current}}(\text{future earned premiums})} \quad 2$$



The Prospective Method is a forward-looking approach for currently active policyholders, excluding paid-up policies. Looking forward limits the premium increases to the policyholders that are expected to receive the excess future policy benefits, causing the need for the rate increase. Of course, the implications for different blocks will vary depending upon the block’s history and characteristics. For example, which model regulation was applicable to the block at the time the original rates were filed and approved? Did the company historically request the fully allowable rate increase amount? Did the regulator approve the full rate increase? As expected, the Prospective Method may yield rather different results from the current standards that look at a block’s lifetime experience to determine what is allowable. This article aims to explore these and other implications by studying the range of allowable rate increases under the various methods for a range of scenarios.

But before diving into the scenarios, let’s first consider the formula for the Prospective Method:

1. Δ indicates the change in present value (PV) due to the change in actuarial assumptions between the time of the last rate increase (or the original assumptions if there was no prior rate increase) and the current assumptions.
2. C is the cumulative percent rate increase to date. For example, if the current rate (prior to the proposed rate increase) is 50 percent higher than the rate at initial pricing, then $C = .5$.
3. The current subscript in the denominator indicates that the PV should be computed using current assumptions.

The formula above is meant for post-rate stabilized blocks and can be adjusted for pre-rate stabilized policies by replacing .58 with .6 and replacing .85 with .8.

SCENARIO TESTING

We now explore a sample of scenarios in order to better understand the implications of such a prospective method relative to the NAIC's different lifetime approaches. In particular, we consider a single cohort block priced to a 60 percent loss ratio to which we vary morbidity, mortality, and lapse rates.

Scenario 1

In our first scenario, we consider a rate increase scenario where the first 10 years of experience had lower policy terminations and higher morbidity than originally expected. The projected experience is expected to maintain the same level of historical deviation. Figure 1 shows the comparison of the allowable rate increase and lifetime loss ratios under the main NAIC Model Regs and Prospective Method.

The allowable rate increase (RINC) calculated by the Prospective Method is less than that under all three Model Reg Methods.

Figure 1
Summary of Results for Scenario 1

First Rate Increase	60% Loss Ratio Method	Rate Stability Method	2014 Model Reg Method	Prospective Method
Lifetime Loss Ratio (before RINC)	77.7%	77.7%	77.7%	77.7%
Allowable RINC	57.7%	45.3%	38.6%	38.1%
Lifetime Loss Ratio (after allowable RINC)	60.0%	63.1%	64.9%	65.0%

Figure 2
Summary of Results for Scenario 2

First Rate Increase with historical morbidity gains	60% Loss Ratio Method	Rate Stability Method	2014 Model Reg Method	Prospective Method
Lifetime Loss Ratio (before RINC)	66.9%	66.9%	66.9%	66.9%
Allowable RINC	22.5%	20.5%	15.9%	18.4%
Lifetime Loss Ratio (after allowable RINC)	60.0%	60.5%	61.9%	61.1%

This is largely driven by the fact that the Prospective Method is a forward-looking method. The first two methods—60 percent Loss Ratio and Rate Stability—do not distinguish between prior and future losses. And although the 2014 Model Reg has limitations on prior losses, differences in actual versus expected prior termination experience may impact future losses.

Even if observed historical morbidity was double that in the scenario above, the allowable rate increase for both the 2014 Model Reg and the Prospective Method would be unchanged. This is a result of the 2014 Model Reg having formulaic caps to limit the re-capture of past losses and the Prospective Method only looking at the projected future premiums and claims, and as such not recognizing past losses. In contrast, the allowable rate increase would go up to 73.7 percent for the 60 percent Loss Ratio Method and 56.6 percent for the Rate Stability Method.

Scenario 2

In Scenario 2, we consider a rate increase scenario in which there is favorable morbidity and adverse policy termination experience for the first 10 years. The projected morbidity is expected to be worse than pricing while the termination assumptions are assumed to remain slightly adverse to pricing expectations.

Under this scenario, the Prospective Method provides for a larger allowable rate increase than the 2014 Model Reg because the Prospective Method does not account for the early favorable morbidity, but instead focuses only on the projected period in relation to pricing expectations. We also observe that the 60 percent Loss Ratio Method and the Rate Stability Methods provide even larger allowable rate increases while recognizing the favorable historical morbidity due to the loss ratios utilized in their formulas and the projected worse morbidity.

Figure 3
Summary of Results for Scenario 3

Second Rate Increase following a partial rate increase	60% Loss Ratio Method	Rate Stability Method	2014 Model Reg Method	Prospective Method
Lifetime Loss Ratio (before current RINC)	81.1%	83.2%	84.5%	85.0%
Allowable RINC	156.4%	109.2%	89.7%	53.1%
Prospective Method Allowable RINC	48.8%	51.0%	52.5%	53.1%
Cumulative RINC from First RINC + Second Allowable RINC	230.4%	156.6%	126.4%	82.3%
Lifetime Loss Ratio (after allowable RINC)	60.0%	65.8%	68.5%	74.7%

Scenario 3

For Scenario 3, we continue from Scenario 1 but assume a partial approval of 50 percent of the full allowable rate increase was granted. Then for the next 10 years after this first rate increase, morbidity experience has deteriorated further and this pattern is expected to continue into the future, while the policy terminations continue as expected from the first rate increase. For this second round of rate increases, the approved amount is based on the full current allowable amount. Scenario 3 below shows the comparison.

Following the partial approvals under the various Model Regs, we see that the allowable rate increase under the Prospective Method is much less than under the other methods. This is largely driven by two implicit assumptions of the Prospective Method:

1. Looks only at future projected experience, and
2. Any previous rate increase is assumed to be exactly what the company needed.

In this scenario, the Prospective Method does not allow the company to recover the actuarially-allowed portion not

approved previously, regardless of whether the company only filed for a partial rate increase or the regulator didn't approve the full amount.

Scenario 4

To further hone in on some differences between the newer 2014 Model Reg and the Prospective Method, we calculated the allowable rate increases under these two methods for the following scenarios:

- For 10 years, morbidity assumptions come in as expected, historical termination rates are lower than expected and future termination rates are adjusted to be lower (Terminations-only)
- For 10 years, termination assumptions come in as expected, historical claims come in higher than expected, and future morbidity is adjusted to be higher (Morbidity-only)
- For 10 years, historical terminations and morbidity both come in worse than expected. However, the projected assumptions continue to be consistent with the original pricing assumptions. (Historical-only)

Figure 4
Summary of Results for Scenario 4

First Rate Increase 10 Years of Experience	Terminations-only Deviation	Morbidity-only Deviation	Historical-only Deviation
Lifetime Loss Ratio (before RINC)	66.0%	66.0%	66.0%
2014 Model Reg Allowable RINC	13.5%	13.0%	2.8%
Prospective Method Allowable RINC	12.9%	13.0%	0.0%



In both the terminations-only and historical-only scenarios, we see that the lower termination rates have a larger impact under the 2014 Model Reg Method. Because the Prospective Method is a forward-looking method, we see no rate increase under the scenario where future expectations are the same as pricing, even though historical experience deviated.

For the morbidity-only scenario, we see that the allowable is the same under both methods. This allowable rate increase amount is wholly a result of the future morbidity deviations.

SUMMARY

In summary, while the scenarios considered above are purely hypothetical and only include a single issue cohort, they illustrate the following about the Prospective Method:

- The Prospective Method is impacted by the company’s prior rate increase history. It doesn’t look back to see what the company should have received. This may cause concern for companies where the full, actuarially-allowed rate increase was not obtained or there were significant delays in obtaining an approval.

- While the Prospective Method prohibits the recoupment of past losses, it also does not have an offset for past gains. Because it is forward-looking in nature, the Prospective Method is not impacted by historical experience, whether it be adverse or positive.
- The Prospective Method generally produces allowable rate increases well below the 60 percent Loss Ratio Method and the original Rate Stability Method.
- The Prospective Method produces results in line with, but generally less than, the existing 2014 Model Reg.
- The Prospective Method should generally be appropriate for smaller/decreasing blocks in addition to larger blocks that haven’t materially run off because of its prospective nature and inclusion of only active premium-paying policies.

At the time of this writing, the industry along with the ACLI are working to suggest improvements to the Prospective Method to help make it more appropriate in more cases. One such improvement is the inclusion of a “Catch-up Provision” to account for cases where prior actuarially allowed rate increases may have only been partially approved or there were material delays in approval. ■



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ENDNOTES

- 1 We refer the reader to “Recouping Past LTC Losses” by D. Plumb and R. Eaton from the April 2017 issue of *Long-Term Care News* for more details.
- 2 AHIP Letter to the NAIC LTC Pricing Subgroup, June 21, 2017
Re: Recouping Past Losses in Long-Term Care Insurance