

2.6 Summary

 5m

Previous sections covered adjustments to historical data for future conditions. This section introduces two methods to combine these adjusted estimates for setting future rates:

- **Pure Premium Method:** Calculates an indicated average rate based on pure premium, focusing on exposures. It is ideal for new business lines or when premium at current rates is hard to determine.
- **Loss Ratio Method:** Produces an indicated rate adjustment using the loss ratio and premium as the basis. This approach is best for lines without well-defined exposures or where rate change is key.

With consistent data and assumptions, both methods provide equivalent results.

Pure Premium Method

Under the pure premium method, pure premium is used to calculate the indicated average rate per exposure.

$$\text{Indicated Average Rate} = \frac{\overline{L} + \overline{E_L} + \overline{E_F}}{1 - V - Q_T}$$

Loss Ratio Method

Under the loss ratio method, the loss ratio is used to calculate the indicated average rate change from the current rate level.

$$\text{Indicated Avg Rate Change} = \frac{\text{Loss and LAE Ratio} + F}{1 - V - Q_T} - 1$$

Comparison of Methods

These methods will produce equivalent results as long as consistent data and assumptions are used for both methods. The two main differences between the methods are:

1. The underlying loss measure used in the calculations is different. The pure premium method utilizes pure premium, while the loss ratio method utilizes the loss ratio.
2. The two methods result in different outputs. The pure premium method results in an indicated rate, while the loss ratio method results in an indicated rate change.