

Errata for Introduction to Ratemaking and Loss Reserving for Property and Casualty Insurance – Fourth Edition

March 21, 2018

Changes:

Page 33 – Solution formula should be: $\frac{200,000}{(.80)(300,000)} \times 40,000 = 33,333$.

Page 71 – Table 3.2a, amount for AY4, development year 1 is 12,288 (not 22,288).

Page 73 – Revision for part beginning with formula 3.7a and ending with formula 3.7c:

The chain-ladder method can be summarized, for each accident year (i.e., each row of the triangle), as

$$\text{Estimated Ultimate Losses} = (\text{Losses Paid-to-Date}) \cdot \prod_{h=j+1}^{\infty} f_h \quad (3.7a)$$

where f_h is the loss-development factor from a paid-loss-development triangle at duration h (i.e., from $h - 1$ to h), and

$$\begin{aligned} \text{Estimated Loss Reserve} &= (\text{Estimated Ultimate Losses}) - (\text{Losses Paid-to-Date}) \\ &= (\text{Losses Paid-to-Date}) \cdot (f_{ult} - 1), \end{aligned} \quad (3.7b)$$

where $f_{ult} = \prod_{h=j+1}^{\infty} f_h$. Formula (3.7b) can also be written as

$$\begin{aligned} \text{Estimated Loss Reserve} &= (\text{Estimated Ultimate Losses}) \cdot \left(1 - \frac{1}{f_{ult}}\right). \end{aligned} \quad (3.7c)$$

Page 137: Table headings in the solution to example 4.6 should be:

Loss Ratio Method

Territory	Base Rate	Existing Differential	Loss Ratio	Indicated Differential
1	$\frac{250}{1.50} = 166.67$	1.000	$\frac{400,000}{500,000} = 0.8$	1.000
2	$\frac{500}{1.25} = 400.00$	2.400	$\frac{300,000}{500,000} = 0.6$	$2.4 \times \frac{0.6}{0.8} = 1.800$

Loss Cost Method

Territory	Base Rate	Existing Differential	Adjusted Loss Cost	Indicated Differential
1	$\frac{250}{1.50} = 166.67$	1.000	$\frac{200}{1.50} = 133.33$	1.000
2	$\frac{500}{1.25} = 400.00$	2.400	$\frac{300}{1.25} = 240.00$	$\frac{240}{133} = 1.800$

Page 149: Section 4.8 should be Section 4.7.

Page 152: Section 4.9 should be Section 4.8.

Page 153: Exercise 4.18: 210 should be 120, and 410 should be 140.

Page 165: Solution line 5 should read “\$87,000,000 (\$200,000×435)”.

Page 183: Replace 3rd paragraph of solution with the following:

“We can use the ILFs to estimate the losses within the treaty layer. This is done by first dividing each ILF by the ILF value for the highest limit available under the primary policy (i.e., \$5,000,000 in this example). This will re-index the ILFs into the following cumulative limited loss distribution:”

Page 189: Exercise 5.14. Question should read as “All policies are covered by a quota share treaty where the primary insurer retains 60% of the total risk.”