

EXAM 6 – UNITED STATES, SPRING 2015

26. (3 points)

A primary insurer has commuted a policy with an authorized reinsurer. The primary insurer's losses are shown below, both before and after the commutation (all figures are in thousands of dollars).

| | Before Commutation | | | After Commutation | | |
|-----------|--------------------|-------|-------|-------------------|-------|-------|
| | Gross | Ceded | Net | Gross | Ceded | Net |
| Paid Loss | 10,000 | 2,000 | 8,000 | 10,000 | 2,600 | 7,400 |
| Case Loss | 3,000 | 600 | 2,400 | 3,000 | 0 | 3,000 |
| IBNR Loss | 2,000 | 400 | 1,600 | 2,000 | 0 | 2,000 |

- The discount factor for tax purposes is 0.85.
- The income tax rate is 35%.

a. (0.5 point)

Briefly describe two reasons a primary insurance company would enter into a commutation.

b. (1.5 points)

Calculate the change in the primary insurer's statutory surplus as a result of the commutation described above. Include the effect of taxes.

c. (1 point)

Identify and briefly describe one distortion to the primary insurer's Schedule P and one distortion to the reinsurer's Schedule P that might result from the commutation.

SAMPLE ANSWERS AND EXAMINER'S REPORT

| | | | | | | | | | |
|--|---|--------------------------------------|-----|--|-------|--------------------------------------|-------------|--|---|
| QUESTION 26 | | | | | | | | | |
| TOTAL POINT VALUE: 3 | LEARNING OBJECTIVE: E1 | | | | | | | | |
| SAMPLE ANSWERS (BY PART, AS APPLICABLE) | | | | | | | | | |
| Part a: 0.5 point | | | | | | | | | |
| <p>The following provides examples of responses having the necessary components to demonstrate knowledge of the topic and obtain full credit; any two of the following received full credit:</p> <ul style="list-style-type: none"> • Concerns about reinsurer solvency/financial condition • Primary insurer wishes to exit a line of business • Troubled relationship with reinsurer (disputes about claims or contract provisions) • Insurer/Reinsurer have different ideas about future loss development • Accelerated settlement of the obligation • Improvement in current 'wealth' based on perception of cash vs. non-cash assets • Cash flow for investment or liquidity purposes • A certain immediate amount is substituted for an uncertain future amount • Administrative cost savings associated with monitoring/collection • Tax considerations • Desire to reduce provision for reinsurance | | | | | | | | | |
| Part b: 1.5 points | | | | | | | | | |
| <p>Sample 1:</p> <p>Received 600 (8,000 – 7,400), Increase surplus</p> <p>Assumed 600 + 400 = 1m in reserves, Reduce surplus</p> <p>Taxable income reduced (1m)×(0.85) = 850</p> <p>Taxable income increased 600 from consideration received</p> <div style="margin-left: 40px;"> <u>Reduced 850 from reserves</u> 250 reduction × 0.35 tax rate 87.5 tax reduction </div> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">Surplus increase from cash received:</td> <td style="text-align: right;">600</td> </tr> <tr> <td>Surplus reduced from reserves assumed:</td> <td style="text-align: right;">1,000</td> </tr> <tr> <td>Surplus increased for tax reduction:</td> <td style="text-align: right;"><u>87.5</u></td> </tr> <tr> <td></td> <td style="text-align: right;"><u>312.5k reduction in surplus</u></td> </tr> </table> <p>Sample 2:</p> <p>Net Incurred Loss before commutation = 12m</p> <p>Net incurred Loss after commutation = 12.4m</p> <p>Net taxable incurred loss before commutation = 8 + (2.4 + 1.6)×0.85 = 11.4</p> <p>Net taxable incurred loss after commutation = 7.4 + (3 + 2)×0.85 = 11.65</p> <p>Income tax before commutation = -11.4 × 0.35 = -3.99</p> <p>Income tax after commutation = -11.65 × 0.35 = -4.0775</p> | | Surplus increase from cash received: | 600 | Surplus reduced from reserves assumed: | 1,000 | Surplus increased for tax reduction: | <u>87.5</u> | | <u>312.5k reduction in surplus</u> |
| Surplus increase from cash received: | 600 | | | | | | | | |
| Surplus reduced from reserves assumed: | 1,000 | | | | | | | | |
| Surplus increased for tax reduction: | <u>87.5</u> | | | | | | | | |
| | <u>312.5k reduction in surplus</u> | | | | | | | | |

SAMPLE ANSWERS AND EXAMINER'S REPORT

Surplus before commutation = $12 - 3.99 = 8.01$
Surplus after commutation = $12.4 - 4.0775 = 8.3225$

Change in surplus = $8.01 - 8.3225 = \underline{-0.3125}$

Part c: 1 point

The following provides examples of responses having the necessary components to demonstrate knowledge of the topic and obtain full credit; any one of the following for each of the primary insurer and reinsurer received full credit:

Insurer:

- Net incurred loss triangles (Sch P, Part 2) will show upward development
- Net paid loss triangles (Sch P, Part 3) will show downward development
- Net (bulk & IBNR) reserves (Sch P, Part 4) will show upward development

Reinsurer:

- Net incurred loss triangles (Sch P, Part 2) will show downward development
- Net paid loss triangles (Sch P, Part 3) will show upward development
- Net (bulk & IBNR) reserves (Sch P, Part 4) will show downward development
- Claim closure rates (Sch P, Part 5) commuted claims will be considered closed

EXAMINER'S REPORT (BY PART, AS APPLICABLE)

- Candidates were expected to know the motivations behind a commutation (from the perspective of the insurer), how to calculate post-tax/discounted changes in surplus resulting from a commutation and how the commutation would impact both the insurer's and reinsurer's Schedule P.
- Candidates generally did very well on parts a. and c. and performed poorly on part b., specifically the calculation of the reserve discount and the impact of taxes.

Part a

- A broad array of answers was accepted (including those from both the Klann and Steeneck papers) for part a., and candidates generally did very well.
- Credit was not given for simple references to insurers 'profiting' from the transaction or the insurer wanting to get rid of the contract with no reasons specified.

Part b

- This question was challenging to candidates. Candidates were required to calculate the price of the commutation, the income change related to the commutation (using the discounted reserves), the tax change and ultimately the change in surplus net of tax effects.
- Candidates generally did well in calculating the price of the commutation and the pre-tax change in surplus.

SAMPLE ANSWERS AND EXAMINER'S REPORT

- The most common mistakes included ignoring the effect of taxes, applying the tax rate to the surplus (instead of the income) and taking the tax impact as the final answer. Another common error was having the wrong sign for the surplus and/or commutation payment.
- Whenever possible, partial credit was given for various interim calculations if they were accurate and labeled properly. In many cases, candidates were not labeling their work, making calculations difficult to follow.

Part c

- Candidates generally did very well on part c.
- Some common errors were not including the direction of the distortion, not labeling which distortion applied to which party (insurer vs reinsurer) or treating the consideration as a distortion to premium.