

# **INSTITUTE AND FACULTY OF ACTUARIES**

## **EXAMINERS' REPORT**

February 2017

### **Subject CA3 – Communications**

#### **Introduction**

The Examiners' Report is written by the Principal Examiner with the aim of helping candidates, both those who are sitting the examination for the first time and using past papers as a revision aid and also those who have previously failed the subject.

The Examiners are charged by Council with examining the published syllabus.

For the CA3 communications examination the examination is designed to examine the communication of an actuarial concept to a non actuarial audience. Sufficient technical detail on the scenario is provided in the question so that candidates from all backgrounds are able to answer the question.

One approach to a solution is reproduced in this report; other valid approaches were given appropriate credit.

Luke Hatter  
Chairman of the Board of Examiners  
May 2017

**A. General comments on the *aims of this subject and how it is marked***

1. Subject CA3 – Communications consists of two parts as follows:  
  
Part A – Written communication  
Part B – Oral communication
2. The overall objective is to draft communications intended for a non-actuarial person who is usually assumed to have some business knowledge. While it is recognised that some clients, such as Finance Directors or a Trustee Board Chairmen, might be actuaries, many clients will not be.
3. The communication needs to be of a standard that it would be acceptable as a first draft. It is important that the recipient would both understand the communication and be satisfied with the response. The marking schedules include details of the marks awarded for including the necessary content. Marks may also be lost for including irrelevant content or details that candidates have specifically been asked to exclude from their solution. Further details are provided in this report.

**B. Comments on *student performance in this diet of the examination***

**PART A – Written communication**

**Scenario: Paper for the Board of Bridge Insurance Limited**

**PART B – Oral communication**

**Scenario: Benefits of reinsurance**

Overall candidates sitting this exam performed less well in the written question than in the presentation question. Further details on student performance for each question are provided in the sections below.

**C. Pass Mark**

The Pass Mark for this exam was 63.

## PART A – Written communication

### Scenario: Paper for the Board of Bridge Insurance Limited

A possible answer is given below. This is not intended to be a model solution. In practice, a wide number of solutions were acceptable and candidates would have achieved good pass standards without having the same level of detail as the answer below.

Candidates were asked to draft a paper for the board of Bridge Insurance Limited setting out the effect that a recent change in exchange rates had had on their business.

Candidates were given clear instructions on what the paper should include:

- *“A brief summary of recent currency movements (to give relevant background).”*
- *“The effect that these currency movements will have on our business in the short term.”*
- *“The longer term implications, and the actions, if any, that we may need to take.”*

Further guidance was also given on the level of detail and content of the paper, for example:

- *“For the third bullet point I'd suggest you cover two actions highlighting potential drawbacks of each action.”*
- *“...include a couple of charts..”*
- *“When looking at profitability, you should concentrate on profit margins...”*
- *“You may want to consider showing profit margins in one of your charts...”*

All the information required to answer the question was provided in the question paper.

The main points that the Examiners were looking for and some common problems encountered were as follows:

1. Most candidates produced scripts that looked like a paper suitable for the Board. Scripts gained marks for having a clear introduction clearly explaining what the paper would cover. Poorer papers didn't have a clear introduction.
2. There was little evidence of candidates running out of time and therefore not completing their answer.
3. Most scripts were of an appropriate length and included the content that had been requested.
4. Candidates were asked to include two charts in their paper. There was a wide variety in the quality of charts and the accompanying commentary provided on the charts. For example, most candidates included a chart which showed the Dollar/Shilling exchange rate over the last three months. Good charts had clear axes which showed the appropriate dates and exchange rates and made appropriate comments that were backed up by what could be seen on the chart.
5. Some candidates included tables of figures in their paper. In general, this level of detail was unnecessary and the message that the table was trying to convey could be made much more clearly in a chart.
6. Most scripts included satisfactory spelling, grammar and punctuation.

## SOLUTION

Bridge Insurance ltd company logo  
1 March 2017

Brad Horta  
Brad@Bridgeinsurance.com

### The effect on Bridge Insurance's business of changes in the Dollar/Shilling exchange rate

This paper is addressed to the Board of Bridge Insurance, and provides:

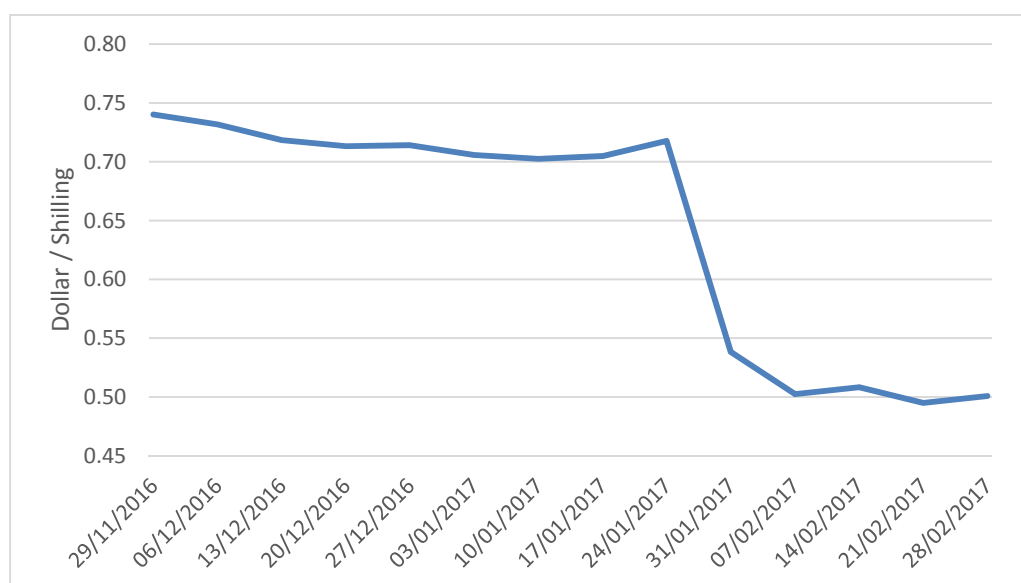
- information on recent Dollar/Shilling exchange rate movements;
- the impact these movements have on our business, specifically profit margins; and
- possible actions to mitigate the impact.

#### Background

Bridge Insurance writes home insurance in Country D, receiving premiums and paying claims in Dollars. However, because we are based in Country S, our expenses and profits are stated in Shillings.

#### Recent Dollar / Shilling exchange rates

The chart below shows the Dollar/Shilling exchange rate over the last three months:



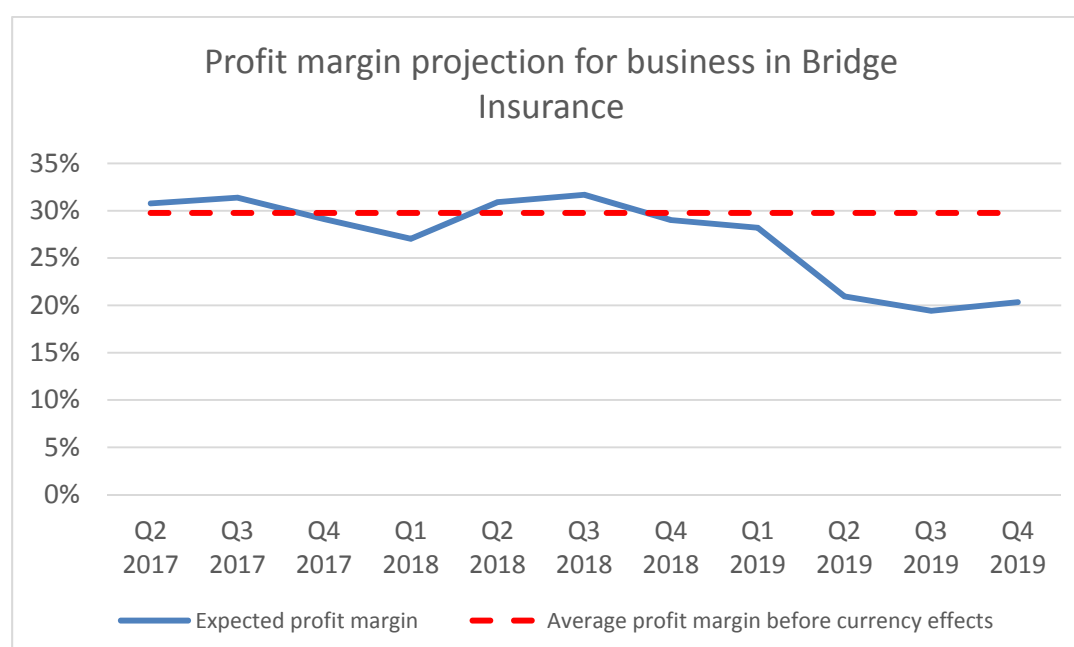
The chart shows the value of the Dollar has fallen over the period from 0.73 Shillings to 0.5 Shillings. The most significant fall was in January 2017 arising from Country D's government publishing poor economic forecasts.

## Effect of changing exchange rates on Bridge Insurance

If Bridge Insurance had no protection against exchange rate movements our profit margins (defined as profits divided by premiums) would have fallen. Profits are defined as premiums less claims less expenses. The value of premiums less claims arising from business written in Country D would fall when converted from Dollars to Shillings. Our expenses, incurred in Shillings, would not change.

The asset management department at Bridge Insurance has invested in assets which reduce our exposure to movements in the Dollar/Shilling exchange rate. The amount invested was determined based on our projected business levels. This means there will be no impact on our profit margins from the recent changes in exchange rates during the next two years, assuming we do not write more business than we expect.

We expect the current exchange rates to remain reasonably stable over the next few years. Therefore, unless we take action, our profit margins are likely to fall in two years' time due to the current low Dollar/Shilling rate, as shown in the chart below.



It is expected the profit margins will fall to around 20% from the current average of 30%.

If business volumes are higher than expected over the next two years, our protection against the change in exchange rates will not be sufficient. Any additional business will earn a profit margin of around 20%, rather than the 30% that we would have expected.

### **What actions should Bridge Insurance take?**

If exchange rates stay at their current level and the Bridge Insurance shareholders are not prepared to accept lower returns on their capital, action will need to be taken to ensure profit margins return to their original levels. Bridge Insurance may consider:

- Increasing premium rates. However, this could make Bridge Insurance uncompetitive.
- Opening a branch in Country D to ensure expenses are incurred in dollars. This will incur setup costs.

### **Summary**

The recent fall in the Dollar/Shilling exchange rate will reduce the value, in Shillings, of premiums and claims for business written in Country D. Because expenses, incurred in Shillings, are unaffected, profit margins will fall. However, our company has protection from exchange rate changes for the next two years provided business volumes are not higher than expected. To ensure profit margins are maintained after this time, or in the event that more business is sold than expected, premiums will need to increase or expenses reduced. A suggestion for the latter may be to open a branch in Country D. The Board will need to consider the implications of both actions.

Please contact me if you would like to discuss this further.

**[Solution – 566 words starting after the title of the paper]**

## MARKING SCHEDULE

OBJECTIVE	MARKS
<p><b><u>Length of answer</u></b></p> <p>The number of words should be calculated counting all words after the address, heading, salutation etc. up to the sign-off.</p> <p>550–650 words 4</p> <p>500–549, 651–700 words 2</p> <p>&lt;500 or &gt; 700 words 0</p> <p><b>Total for length of answer</b></p>	<b>4</b>
<p><b><u>Format of answer – memo</u></b></p> <p>Addressed to the Board if Bridge Insurance (1)</p> <p>Suitable heading – effect of exchange rate movements on business in Country D (2)</p> <p>From Name (1)</p> <p>Date of Paper (1)</p> <p><b>Total for format of answer</b></p>	<b>5</b>
<p><b><u>Language used</u></b></p> <p>1 mark for each bullet point, unless stated otherwise</p> <p>Overall language (up to 2 marks)</p> <ul style="list-style-type: none"> <li>understandable to Board</li> <li>a professional tone should be adopted (scripts should avoid comments which “talk down” to the Board)</li> </ul> <p>Jargon (up to 5 marks)</p> <p>Award five marks and then deduct marks where the script uses jargon that may be confusing for the Board. Jargon includes unnecessary technical terms where a simpler term exists, terms and/or abbreviations which are unexplained and so unclear. Superfluous accuracy in the quoted figures counts as jargon. Irrelevant information or complicated detail, for example on the calculation of a forward contract, should be treated as Jargon.</p> <p>Grammar, spelling and punctuation (up to 4 marks)</p> <p>Award four marks and deduct marks for errors. Minor errors (e.g. “typos” potentially arising as a result of using a keyboard where the candidate should be given the benefit of the doubt) should be ignored. Only deduct marks where the error compromises the professionalism of the document or may require sections to be redrafted.</p> <p><b>Total for language used</b></p>	<b>11</b>

OBJECTIVE	MARKS
<p><b><u>Planning and presentation (some marks inc in technical content section)</u></b></p> <p>Grouping of ideas (up to 4 marks)</p> <ul style="list-style-type: none"> <li>Points should follow a logical order so messages are clear and don't need to re-read to understand</li> </ul> <p>(4 marks if clear when read once. If you need to go back and read several times then this is less clear and lower marks should be awarded.)</p> <p>Appropriate short headings on each section (up to 2 marks)</p> <ul style="list-style-type: none"> <li>One mark for each appropriate heading up to 2 marks in total. Long headings or headings that don't succinctly describe what follows do not get a mark.</li> </ul> <p>Sentences kept brief (up to 3 marks)</p> <p>Three marks for a script with short sentences. Marks can be deducted for overly long sentence where this makes the message unnecessarily complicated. The principle is that a sentence containing more than one message or too many sub-clauses is too long (or, if spoken, a sentence that needs repeated breaks to articulate is too long). A guideline of a sentence that is too long is one that is over 35 words.</p> <p><b>Total for planning and presentation</b></p>	<p><b>9</b></p>
<p><b><u>Content (including some formatting &amp; planning and presentation marks)</u></b></p> <p><b>1. Introduction (Max 4 – see breakdown below)</b></p> <ul style="list-style-type: none"> <li>Clear that paper addresses the effect that recent exchange rate movements between the Dollar and the Shilling on the business. (2)</li> <li>Provides brief detail of what the paper will cover (2)</li> </ul> <p><b>2. Background (Max 11 – see breakdown below)</b></p> <ul style="list-style-type: none"> <li>Describes the business written in Country D (2)</li> <li>Explains that expenses are accrued in Shillings (2)</li> <li>Clear chart showing the recent exchange rate movements with appropriate comments relating to the chart including the fall in exchange rate between the Dollar and the Shilling in Jan 2017 (7)</li> </ul> <p><b>3. Effect worse exchange rates have on Bridge Insurance (Max 20 – see breakdown below)</b></p> <ul style="list-style-type: none"> <li>Fall in value of premiums in Country D (2)</li> <li>Corresponding fall in value of claims in Country D (2)</li> <li>Expenses are fixed as borne in Shilling (2)</li> <li>Define profit margin (2)</li> <li>Due to these movements profit margins will fall (2)</li> <li>Protection in place for next two years (2)</li> <li>Profit margins fall when protection runs out (2)</li> <li>Profit margins for business volumes above expected also fall (2)</li> <li>Chart showing expected profit margins over time (4)</li> </ul>	



OBJECTIVE	MARKS
<b>4. Actions the board can take (Max 10 – see breakdown below)</b> <ul style="list-style-type: none"> <li>• Comment on effect of inaction – profit margins will fall (2)</li> <li>• Link falling profit margins to lower returns on shareholder capital / equity (2)</li> <li>• Consider raising premiums (1)</li> <li>• Increasing premiums may make business uncompetitive (2)</li> <li>• Consider opening branch in Country D (1)</li> <li>• Opening branch will have large upfront cost (2)</li> </ul>	
<b>5. Conclusion / Summary (Max 6 – see breakdown below)</b> <ul style="list-style-type: none"> <li>• Fall in exchange rate leads to lower premiums and claims coming from Country D business but Expenses fixed in Shillings so profit margins will fall (2)</li> <li>• Protection in place for two years or up to end of 2018 (1)</li> <li>• Need to take action to mitigate effect after this period (1)</li> <li>• Consider increasing premiums Or opening a branch in Country D (1)</li> <li>• Offer follow up / answers to questions (1)</li> </ul>	
<b>Total for content</b>	<b>51</b>
<b><u>Meeting of objectives</u></b>	
The Board is likely to understand the answer.	10
The Board is likely to be satisfied with the answer.	10
<b>Total for meeting objectives</b>	<b>20</b>
<b>TOTAL MARKS</b>	<b>100</b>

**Marks are awarded up to the maximum shown in brackets.**

E.g. “Clear chart showing the recent exchange rate movements with appropriate comments relating to the chart including the fall in exchange rate between the Dollar and the Shilling in Jan 2017 (7)”

A maximum of 7 marks can be awarded for a clear chart with appropriate commentary. A smaller number of marks may be awarded for poor charts and commentary.

## PART B – Oral communication

### Scenario: Benefits of reinsurance

A possible set of slides to accompany a candidate's presentation is given below. This is not intended to be a model set of slides. In practice, a wide number of sets of slides were acceptable and candidates would have achieved good pass standards without having the same level of detail as the slides below.

Candidates were asked to give a presentation to two new directors of a life insurance company explaining why the company reinsures 80% of its business.

Candidates were given clear instructions from their manager on what the presentation should include:

- *"..briefly describe how reinsurance works."*
- *"...spend most of the time covering the three benefits that we get from reinsuring the risk as follows:*
  - a reduction in volatility of our results ...*
  - expertise in underwriting, claims management and product development; and*
  - relatively low reinsurance rates because of the capital benefits of reinsuring the risk."*

Candidates were provided with further guidance on the level of detail to include in their presentation, for example:

- *"There is no need to go into lots of detail here, particularly on the capital benefits."*
- *"..explain the high level concepts, rather than the detailed numbers."*

Candidates were provided with all the information that they needed to answer the question.

The main points that the Examiners were looking for and some common problems encountered were as follows:

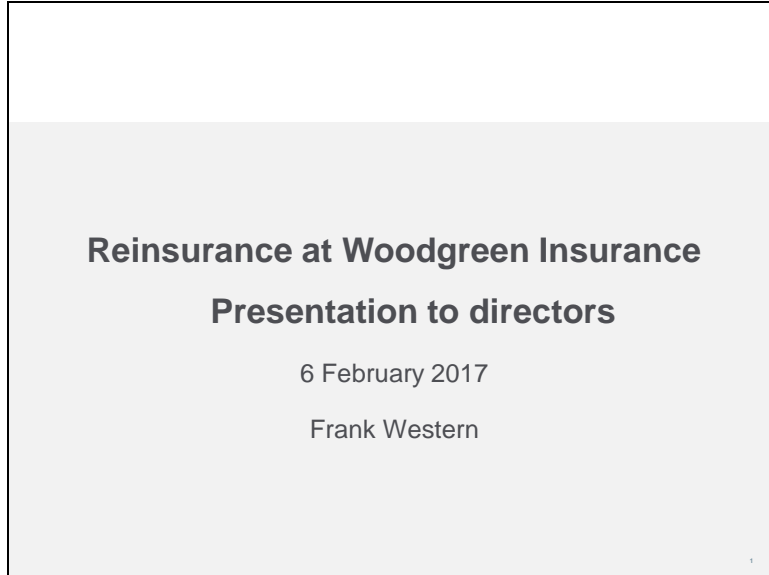
1. Candidates were asked to deliver a presentation lasting up to 10 minutes. Most candidates delivered presentations that were within an appropriate time frame.
2. Most presentations had an appropriate first slide with a clear title, date and name of presenter.
3. Most presentations had an agenda. On better presentations, the agenda linked directly to the titles and content of the following slides. On weaker presentations, too much time was spent on the agenda giving rise to a laboured start, which tended to disengage the audience.
4. There was a great variation in the quality of the format of slides. Good presentations had slides that clearly backed up the information that was being provided to the audience in a manner that they could understand.
5. Some candidates put full-length narrative sentences on the slides. This was not appropriate to the slide format and tended to make slides over-busy. This also distracted the audience from listening to the presenter.

6. Some candidates included slides with far too much information on them for example, bar charts with figures on each section of the bar. This level of detail was unnecessary and detracted from explaining the high level concepts. Better candidates included slides that contained simple appropriate diagrams or graphs which the candidate then explained clearly.
7. As the audience for this presentation was two directors from the Board it was expected that candidates should be more formal. Some candidates were too informal in their language.
8. Better candidates completed their presentation with a brief summary of the key points from their presentation and provided the opportunity to ask questions.

Candidates were not asked to provide a script to accompany the presentation.

## **SOLUTION**

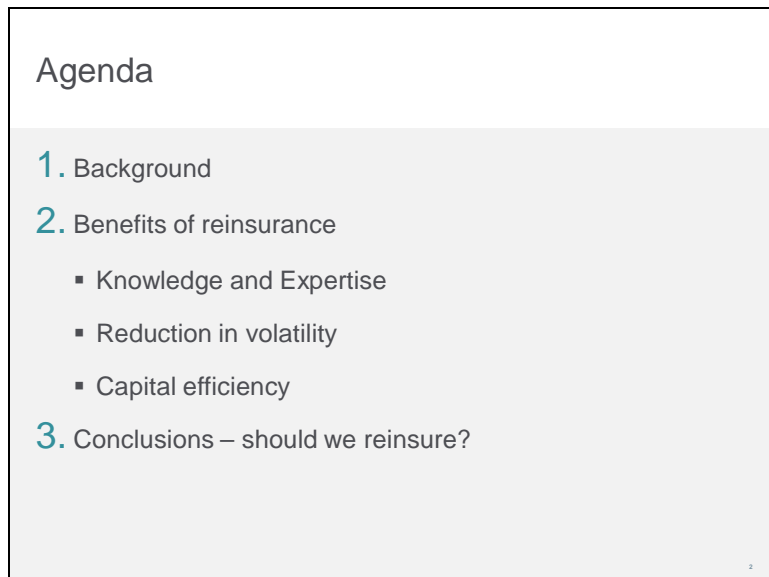
### **Slide 1**



**Reinsurance at Woodgreen Insurance**  
**Presentation to directors**  
6 February 2017  
Frank Western

1

### **Slide 2**



**Agenda**

1. Background
2. Benefits of reinsurance
  - Knowledge and Expertise
  - Reduction in volatility
  - Capital efficiency
3. Conclusions – should we reinsure?

2

**Slide 3**

### Background

- Reinsurers aggregate risk from many insurance companies
- Insurer pays a premium set by reinsurer
- Woodgreen Insurance reinsures 80% of its cost of claims
  - Reinsurance premiums paid in respect of each policy
  - Reinsurer pays Woodgreen 80% of each claim

3

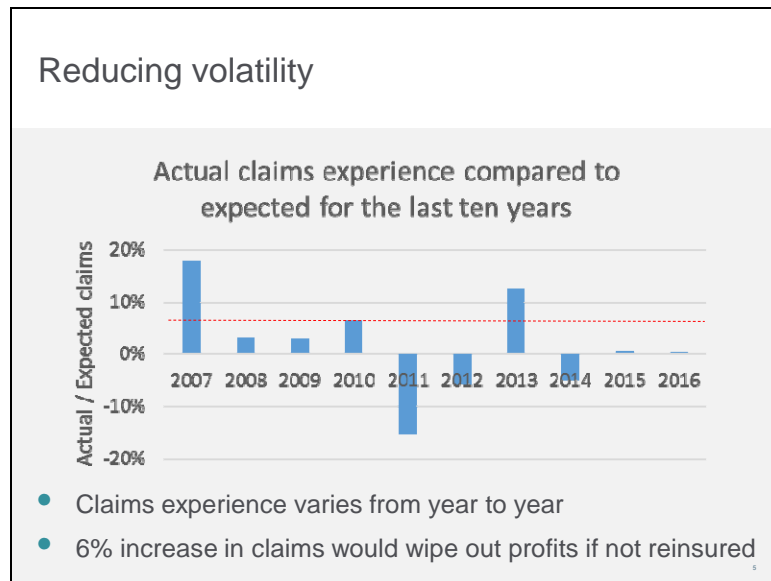
**Slide 4**

### Knowledge and expertise

- Reinsurers detailed knowledge of the market helps with:
  - Underwriting
    - Advice on non-standard cases
    - E.g. unusual medical history / lifestyles
  - Claims management
    - Advice on potentially invalid claims
  - Product development
    - Advice on costing different risks

4

Slide 5



Slide 6

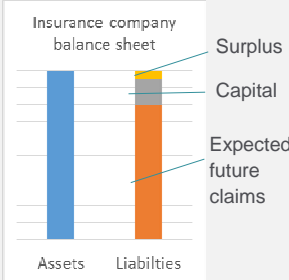
Reducing volatility

- Claims payments are biggest cost for an insurance company
  - Fluctuating claims leads to fluctuating profits
- Reinsurance reduces this fluctuation
  - We pay a known reinsurance premium
  - Reinsurer pays the varying claims cost
  - Profits will be more stable
- Reinsuring 80% of risk means we are less exposed to these fluctuations

## Slide 7

### Capital requirements

- All insurers must hold **capital** against their risks
  - Buffer of funds in excess of expected claims
  - Regulatory requirement
- More risk = more capital
- Capital is provided by shareholders
- Shareholders expect a return on capital



The diagram illustrates an insurance company's balance sheet. It consists of two vertical bars. The left bar, labeled 'Assets', is a solid blue bar. The right bar, labeled 'Liabilities', is composed of three segments: a bottom orange segment labeled 'Expected future claims', a middle grey segment labeled 'Capital', and a top yellow segment labeled 'Surplus'. Arrows point from the text labels to their respective segments in the 'Liabilities' bar.

7

## Slide 8

### Capital – benefits of reinsurance

- Reinsurance reduces capital of Woodgreen Insurance
  - Woodgreen takes less risk and so needs less capital
- Reinsurer must hold capital

But:

  - Reinsurer holds many diversified risks
    - so needs less capital for each piece of business
    - ...and shareholders require a lower return
  - This allows reinsurers to offer competitive rates

Reinsurance may be cheaper than Woodgreen holding capital against risk (even allowing for reinsurer's profits)

8

**Slide 9**

### Conclusions

Reinsurer takes on 80% of the claims cost in exchange for a premium from Woodgreen Insurance

Without reinsurance, Woodgreen Insurance would:

- Lose access to knowledge and expertise in
  - underwriting
  - claims management
  - product development
- Increase volatility in profits
- Pay more for capital

Stopping reinsurance could reduce profits and increase risk and volatility

**Slide 10**

### Questions?

Frank Western  
[fwestern@Woodgreen.com](mailto:fwestern@Woodgreen.com)  
Tel: 01234 567890



## MARKING SCHEDULE

MARKS FOR	MAXIMUM FOR SECTION
<p>Introduction (voice &amp; slide)</p> <ul style="list-style-type: none"> <li>• Purpose</li> <li>• Relevant slide</li> <li>• Agenda / what will cover</li> </ul>	3
<p>Voice (2 for each bullet)</p> <ul style="list-style-type: none"> <li>• Audible, clear</li> <li>• Suitable speed</li> <li>• Not monotone</li> <li>• Pause / take time</li> <li>• Emphasise key points</li> </ul>	10
<p>Slide format (2 for each bullet)</p> <ul style="list-style-type: none"> <li>• Not too busy</li> <li>• No full sentences</li> <li>• Interesting / Back-up what is being said</li> <li>• Any graphs labelled</li> <li>• Clear, not too small</li> </ul> <p>(In general, clip art is not appropriate for this audience for this presentation.)</p>	10
<p>Content (Max 36 – restrict to 26)</p> <ul style="list-style-type: none"> <li>• Brief introduction to reinsurance and the current arrangement (3)</li> <li>• States that Woodgreen Insurance reinsurers 80% of its risk (3)</li> <li>• Explains the knowledge and expertise that a reinsurer brings – underwriting, claims management and product development (5)</li> <li>• Chart to illustrate the volatility of claims figures over time (3)</li> <li>• Explanation that fluctuating claims lead to fluctuating profits, and reinsurance reduces this volatility (3)</li> <li>• increase in claims would mean Woodgreen Insurance does not make its required return on capital <u>and</u> &gt;6% increase means profit for 2016 wiped out (5)</li> <li>• Explanation of what capital is and why insurers need to hold it (5)</li> <li>• Reinsurer can hold less capital due to diversification (3)</li> <li>• Reinsurer's shareholders do not demand such a high return on capital (3)</li> <li>• Reinsurance may be cheaper than Woodgreen Insurance holding capital itself (3)</li> </ul> <p>(Total marks shown as available in this section are higher than the maximum of 26 marks that can be awarded. This is to reflect the different emphasis that students may place on the relevant points. Good students adequately covering the required content should be able to obtain the maximum of 26 marks on this section.)</p>	26
<p>Body language</p> <ul style="list-style-type: none"> <li>• Eye contact (4)</li> <li>• Movement &amp; gestures (4)</li> </ul>	8

<b>MARKS FOR</b>	<b>MAXIMUM FOR SECTION</b>
Language / jargon (voice & slide) <ul style="list-style-type: none"> <li>• Appropriate language (3)</li> <li>• No jargon (4)</li> <li>• Grammar / spelling reasonable (3)</li> </ul>	<b>10</b>
Close (voice & slide) <ul style="list-style-type: none"> <li>• Summarise main points made (6)</li> <li>• Invite questions (2)</li> <li>• Clear close (2)</li> </ul>	<b>10</b>
Time taken: 10.5–11.5 mins 1 8–10.5 mins 3 7–8 mins 2 6–7 mins 1 < 5 mins 0 >11.5 mins 0	<b>3</b>
Directors understand the main points: <ul style="list-style-type: none"> <li>• Three key benefits of reinsurance for Woodgreen Insurance</li> <li>• Knowledge and expertise in underwriting, claims management, and product development</li> <li>• Reduction in volatility of profits from fluctuating claims experience</li> <li>• Cost of capital is lower when using reinsurance – lower capital held because of diversification benefits with a large portfolio covering many risks, and lower return on capital targets because investors appreciate steady low risk profits that the reinsurer generates</li> <li>• <b>Reinsurance can increase our profit</b></li> </ul> <b>PLUS</b> <ul style="list-style-type: none"> <li>• High-level explanations</li> <li>• Coherent story</li> <li>• Logical order</li> <li>• No detailed figures (as instructed)</li> </ul>	<b>10</b>
Audience engaged / interested <ul style="list-style-type: none"> <li>• Answers audience's likely questions</li> <li>• Evidently geared for their needs</li> </ul>	<b>10</b>
<b>TOTAL MARKS</b>	<b>100</b>

Marks should be awarded up to the maximum shown in brackets depending on the clarity of the explanation.

## **END OF EXAMINERS' REPORT**