Institute and Faculty of Actuaries

EXAMINERS' REPORT

CP3 - Communications Practice

Core Practices

September 2023

Introduction

The Examiners' Report is written by the Chief 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. The Examiners have access to the Core Reading, which is designed to interpret the syllabus, and will generally base questions around it but are not required to examine the content of Core Reading specifically or exclusively.

For numerical questions the Examiners' preferred approach to the solution is reproduced in this report; other valid approaches are given appropriate credit. For essay-style questions, particularly the open-ended questions in the later subjects, the report may contain more points than the Examiners will expect from a solution that scores full marks.

For some candidates, this may be their first attempt at answering an examination using open books and online. The Examiners expect all candidates to have a good level of knowledge and understanding of the topics and therefore candidates should not be overly dependent on open book materials. In our experience, candidates that spend too long researching answers in their materials will not be successful either because of time management issues or because they do not properly answer the questions.

Many candidates rely on past exam papers and examiner reports. Great caution must be exercised in doing so because each exam question is unique. As with all professional examinations, it is insufficient to repeat points of principle, formula or other text book works. The examinations are designed to test "higher order" thinking including candidates' ability to apply their knowledge to the facts presented in detail, synthesise and analyse their findings, and present conclusions or advice. Successful candidates concentrate on answering the questions asked rather than repeating their knowledge without application.

The report is written based on the legislative and regulatory context pertaining to the date that the examination was set. Candidates should take into account the possibility that circumstances may have changed if using these reports for revision.

Sarah Hutchinson
Chair of the Board of Examiners
November 2023

 © Institute and Faculty of Actuaries

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

Written communication [80 marks]

Produce a written piece of communication that explains a scenario typically faced by an actuary in their day-to-day work. This communication will be aimed at a non-actuary, although the target audience's level of financial knowledge and understanding will vary from question to question.

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 including the necessary content. To the extent that it makes the communication unclear or confusing for the audience, marks may also be lost for including irrelevant content or details that candidates have specifically been asked to exclude from their solution.

Reflective questions [20 marks]

These are a set of questions designed to allow candidates to consider the approach that they took in their communication and justify certain decisions. For example, candidates may be asked what information they felt was relevant for this audience, or which terms they specifically excluded because they would constitute jargon.

Candidates are provided with some background reading a few days before the exam (the Scenario Material) to allow them to familiarise themselves with the scenario without being under exam conditions. Candidates are expected to read the information provided but are not required to do any further reading or research around the scenario.

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

For this exam, candidates were required to describe a series of data issues affecting the valuation calculations of a life insurance company. The paper they produced needed to explain the impact of these issues and put this in the context of the wider regulatory landscape. The target audience for the exam was the executive committee of the life insurer. While the exam material did not set out exactly who was on the executive committee it is reasonable to assume that all will be familiar with the business that the insurer writes, but not everyone will have a detailed understanding of how life insurance policies are valued.

This exam was generally well answered by candidates. The quality of answers for Question 2 was a significant indicator of the overall mark. Candidates passing the exam averaged 63% of Question 2, whereas candidates failing only averaged 39%. This indicated that candidates who had spent time thinking about the audience, and how to position their communication to meet the audience's needs, were much more likely to pass the exam.

There was evidence that some candidates were affected by time pressure in the exam. CP3 is not designed to be a time pressured exam, and the examiners expect that a well-prepared candidate would be able to complete the questions well within the time

 © Institute and Faculty of Actuaries

allocated. In general, where candidates had experienced time pressure, their written paper for Question 1 was far longer than it needed to be. The sample answer provided as part of the examiners report gives a good indication of the typical length of a paper expected for a CP3 exam.

C. Pass Mark

The Pass Mark for this exam was 56
1,743 presented themselves and 1,208 passed.

© Institute and Faculty of Actuaries

Solutions for Subject CP3 - September 2023

Q1
(i)
Format of Answer
Paper format:
Clearly addressed to the Executive Committee (in header or first line of paper). [1]
Suitable title for paper which makes the scope of the paper clear - mentions LifePlus and that the data has limitations. [1]
Date, author (acceptable for author to come at end of document). [1]

(ii)
Logical order of points:
Logical order of points between sections. [2]
(When awarding marks here, consider the overall heading and purpose of the section rather than the content within it. For this particular question it would be acceptable to deal with all issues followed by all mitigations, or deal with the issues separately, explaining the mitigations for each one before moving onto the next issue. If read once and clear then 2 marks, if needed to re-read parts then 1 mark, otherwise 0 marks.)

Logical order of points within each session. [3]
(When awarding marks here consider the order of points within each section. If read once and clear then 3 marks, if one section needed to be re-read then 2-1 marks, otherwise 0 marks.)

Points within each section are directly relevant to the heading. [1]

Appropriate short headings on each section. [2]
(Give a mark to each appropriate heading up to 2 marks in total. Long headings or headings that don't succinctly describe what follows don't get a mark.)

Sentences kept brief. [2]
(Award 2 marks if there are no overly long sentences. Award 1 mark if there is one overly long sentence. If more than one overly long sentence, award 0 marks. The principle is that a sentence containing more than one message or too many sub-clauses is too long.)

(iii)
Format of visual aids:
A chart showing the data on the number of policies on the full extract. [2]
(Fine to include the current policies extract on the chart as well, but not necessary to get the marks. Or, if no chart present, award 1 mark for key figures that are of interest to the executive committee presented in a way that makes them stand out, for example in bullet points, a table, or with bold text.)

Best visual aid:
If a chart:
Clear, with the appropriate chart type chosen for the data. [1]

 © Institute and Faculty of Actuaries

Axes labelled. [1]
Short title which effectively summarises the point of the chart. [1]

If a table:
Clear headings. [1]
Well formatted data. [1]
No Unnecessary detail. [1]
(No credit should be given for a table copied exactly from the exam or scenario material.)

[Total 18]

(iv)
Language Used
Overall language:
Language used is simple and will be easily understood by the exec. [5]
(Award:
5 marks if the document is understandable as a whole
4-3 marks if up to two points need to be redrafted
2-1 marks if three to four points or one section needs to be redrafted
0 marks if more than four points or more than one section needs to be redrafted.)

Professional tone (avoid comments which "talk down" to the exec). [1]
Avoid colloquialisms, informal and/or emotive language. [1]

(v)
Jargon terminology & relevancy:
Absence of technical terms. [4]
(Award 4 marks if there are no terms present which are too technical for the recipient. Award 2 marks if there is one unexplained technical term. If there are two or more unexplained technical terms, award 0 marks. A list of jargon terms is supplied below which will include unnecessary technical terms where a simpler term exists, terms and/or abbreviations which may be acceptable but are unexplained.)

Superfluous accuracy of numbers (such as too many decimal places) is avoided. [3]
(Award 3 marks if all numbers quoted use an appropriate level of accuracy.
Award 2-1 marks if up to two numbers quoted in the text or up to six numbers in a table have been quoted with excessive accuracy. If more numbers have been quoted with excessive accuracy award 0 marks.)

Absence of irrelevant points of content. [5]
(Award 5 marks if no irrelevancies, award 3 marks if one irrelevant point, 1 mark if two irrelevant points. If more than two irrelevant points award 0 marks.)
Examples of irrelevant points (not exhaustive):
Chart showing the breakdown of the percentage of options missing
Details of all of the options
Details of the number of claims
Too much detail on the regulations

[Total 19]

 © Institute and Faculty of Actuaries

Content

(vi)

Introduction:

State that the paper is in response to the concerns around data extraction for the LifePlus product that have been raised by the exec. [1]

Mention specifically that the concern is not meeting requirements under IRB Regulation 182. [1]

Mention that issues have been effectively mitigated. [1]

Clear signposting for the content of the note. [2]

(vii)

Summary of data requirements:

IRB Regulation 182 sets out expectations around data relevance and quality. [1]

Data must be accurate [1]

and free from material errors (paper needs to give an indication about what we mean by material here). [1]

Historical data must be consistent over time. [1]

Data must be sufficient to assess trends over time. [1]

Data should be relevant to the task being performed. [1]

External data can be used [1]

if more relevant than internal data. [1]

(viii)

Concerns with the data:

Legacy system is the issue. [1]

Data for LifeBasic has been migrated. [1]

Data for LifePlus will be migrated next year. [1]

Reliant on legacy system for 2023 year-end valuation for LifePlus. [1]

The options being shown in the extract are not accurate - not all options that are selected are present on the data extract. [2]

Full extract (including all lapsed and claimed policies) does not include all policies. [1]

C. 300,000 on extract but should be 590,000. [1]

Means we cannot do an analysis of previous claims rates to support assumption setting. [1]

(ix)

Mitigations for issues:

15% of options are not appearing on the data. [1]

Increased liability in respect of options by 20%. [1]

Experience has tracked industry average in the past - (*for full marks this must be well explained*) - that the number of claims the insurer expects to pay are in line with the average insurer in the industry. [2]

Therefore using industry average data for our assumption setting. [1]

Added an additional 5% to claims rates from industry average. [1]

Adjustments made to mitigate issues are prudent. [1]

Explanation of what is meant by prudent, and why it is needed. [1]

Auditors are aware of the deficiencies and mitigations and are happy that this is not a breach of the regulations. [2]

 © Institute and Faculty of Actuaries

(x)
Summary and proposals:
Currently deficiencies in the data - not all options present and not possible to get a full extract for assumption setting. [1]
We have mitigations for this which mean that we believe our liabilities are prudent. [1]
Auditors are comfortable with our approach. [1]
Continue with current plans for year-end and migration next year. [1]
Offer contact for further details. [1]
[Total 35]

(xi)
The executive committee will be completely satisfied with the response and the responder has made a good impression.
The communicated answer is clear and easy to read, the response flows through to a conclusion. It looks good, it is well set out, and it has the right tone of voice. It satisfactorily and completely answers the question. The responder has made a good impression on the executive committee. [6-8]

The executive committee are left with some question marks over the responder, and therefore over aspects of the answer given.
The executive committee have been given an answer that is partially understandable although the response does not quite flow freely through to a conclusion. Some information in the argument is obviously missing and/or there are one or two visual mistakes and anomalies in the look of the response. Some technical terms may have been used that are not entirely clear. The executive committee are left with some question marks over the responder, and perhaps therefore over aspects of the answer given. [3-5]

The executive committee are left with a poor impression of the responder, are confused by the answer and/or do not trust the answer.
The answer will leave the executive committee confused. The communication is poorly written or possibly too technical. There are some obvious mistakes in the arguments, tables or charts do not make sense and/or are not properly labelled. The answer does not flow, but rather jumps around. The layout is not consistent throughout the communication. There may be spelling mistakes or the working group have not been properly addressed. The tone of voice is wrong, perhaps too informal. The executive committee have been left with a poor impression of the responder and therefore do not trust the answer. [0-2]
[Total 80]

 © Institute and Faculty of Actuaries

Better answers set out the data issues in a simple way, focussing on the implications of having incomplete data. They outlined the reasons for the data issues briefly, perhaps illustrating the main issue with a chart. It was possible to produce a paper that would have satisfied the needs of the executive committee without producing a visual aid for this exam and a number of candidates wrote good papers which comfortably passed without a chart. However, a chart illustrating the number of policies on the data extract did help to make the extent of the issues clear for the audience.

There was a lot of variation in the way candidates explained the data quality regulations. Some candidates chose not to mention the regulations, instead just focussing on the implications of the data issues for the accuracy of the valuation. It was possible for candidates to produce a reasonable paper for the executive committee while taking this approach. While candidates would have not been awarded marks for not referring to the regulations, it is unlikely that this would have driven the marks down enough to fail if other areas had been strong. Others outlined the regulations in significant detail, in some cases effectively reproducing the regulations given in the exam scenario. The executive committee do not need this level of detail to understand the key implications of the issues, and these scripts would not be awarded marks for including irrelevant points, as well as for the overall impression that the paper gives to the executive committee.

Candidates generally did well at setting out the steps taken to mitigate the data issues. Almost all candidates clearly stated that the auditors were fully briefed of the issues and were satisfied with the steps that the team had taken.

Q2

(i)

The information in the paper highlights areas that could invite criticism of the company and of the valuation department. Describe how this influenced the drafting of your paper. [6]

(1 mark per well explained point. ½ marks can be awarded for points that are partially explained. Mark the best six points.)

Examples:

I kept my paper very factual and did not give an opinion as to whether the company was at fault.

I did not try to apportion blame to any individual or team - it is not my place to comment on this.

The focus of this note is on the current situation, and what is being done to mitigate the deficiencies - there is a clear plan to remedy the current deficiencies and so I focussed on this to give reassurance that the issue was in hand.

I made it very clear that the auditors were fully aware of the issue, and that they had indicated that given the mitigations in place this was acceptable for the 2023 year-end.

I paraphrased the regulations to show that as a valuation team we had a thorough knowledge of what was expected of us when it comes to data quality.

 © Institute and Faculty of Actuaries

I made it clear that our valuation would be prudent, to address any fears that there could be a significant worsening of the position when we have reliable data available.

(ii)
Describe your reasoning for the order in which information is presented in your paper. [3]
(1 mark per well explained point. ½ marks can be awarded for points that are partially explained. Mark the best three points.)

Examples:
I started with an introduction that set the scene. This made the scope of the paper clear and signposted the main points that the paper would deal with.
The first substantial section summarises the regulations around data quality - this is important context for everything that follows, and so it was important that this came first.
Next, I laid out the issues with the data, and gave some evidence for these issues. I separated the issues to make them clearer.
When the reader understood the issues, I then explained how we were mitigating these, and gave reassurance that the auditors were aware - the mitigations would not have made sense without first understanding the issues.
Finally, I summarised everything and proposed next steps, with a clear contact for further questions - the audience are therefore clear on the next steps, and if they disagree they know who to speak to.

(iii)
Explain how you selected which parts of the regulations to include in the paper. [5]
(1 mark per well explained point. ½ marks can be awarded for points that are partially explained. Mark the best five points.)

Examples
I decided to include a brief summary of all of the key regulations in the paper so that the audience had a full overview.
This gave confidence that the valuation team had a full understanding of the regulations.
To an extent all the regulations are pertinent to the data issues that LifeCo has, but I first highlighted the two I felt were most applicable to the situation.
I significantly summarised the requirements, leaving out points of detail because the exec did not need these to put the data issues into context.
I left out the reference to the data being appropriate to the statistical techniques that are being applied. Without going into much more detail about our processes it would be impossible to put this into context or covey to the Exec whether we were meeting this. It was also not relevant to the specific data issues we have.

(iv)
Identify three areas in your paper that you could have described differently had the audience been the valuation team (comprising entirely actuaries and actuarial candidates) and not the Executive Committee. [6]
(2 marks per area described. To gain full marks candidate must state the part of the paper or specific point they would have explained differently, and how they would have altered the explanation/description.)

 © Institute and Faculty of Actuaries

Examples:
If the paper had been intended for valuation, I would have included more information on the assumptions setting based on industry data. It is sufficient for the exec to know at a high level that the assumptions were set using the industry data, but the valuation team would benefit from more detailed information on this. I would have explained in detail how the assumptions were set and what data would have been reviewed.

I would not have needed to explain the timeline of the data migration to the valuation team - it is something that is discussed in detail among the team and this information would not add anything.

I would have included more details of the regulations - it is vital that the valuation team know these in detail, and therefore I would have included them in full rather than summarising them.

[Total 20]

In general candidates struggled with parts (i) and (iii) of question 2.

For part (i), where candidates scored poorly it was generally because they did not directly answer the question. For example, candidates explained how they drafted their paper without the point having any relevance to the sensitive nature of the topic being discussed.

For part (iii) few candidates generated the number of points necessary to score full marks.

Parts (ii) and (iv) were generally well answered, with comprehensive answers that were grounded in the scenario.

Jargon	**Possibly jargon**	**Not jargon**
Homogeneous (risk group)	Prudent	Cautious
Weighted liability	Margin for prudence	Data extract
Multivariate	Claims or lapse experience	Benefit options
	Liabilities	Risk
	Policy parameters	Inflation
	Valuation assumptions	
	Insurers obligations	
	Exposure	
	Any abbreviation without first stating what it stands for (e.g. IRB, WoP)	
	Benefit escalation	
	Assumptions underlying the liabilities	
	Inforce	

© Institute and Faculty of Actuaries

[Paper Total 100]

END OF EXAMINERS' REPORT

© Institute and Faculty of Actuaries

Sample Answer

The following is a solution that would have been awarded a pass. It is not intended to be a perfect solution and would not have gained full marks.

To: LifeCo Executive Committee

From: Anna Pudding, LifeCo Valuation Team

15 September 2023

Limitations of the LifePlus Portfolio Valuation Data

Introduction

This paper is addressed to the Executive Committee ("the Exec") and has been produced by the Valuation team. The Exec has raised concerns about the data being used to put a value on the LifePlus product. In particular, there are concerns that the data available from the legacy system is not of sufficient quality to meet the regulatory requirements, and we could be in breach of IRB Regulation 182. This note sets out the following:

- A summary of the data requirements under IRB Regulation 182
- The limitations of the data available on the LifePlus product
- Mitigations in place for the data deficiencies
- Summary and proposals

Summary of data requirements

IRB Regulation 182 sets out the regulator's expectations on the relevance and quality of the data that insurers should use as a basis for their financial statements. I have set out below my summary of the key data requirements:

- Data must be accurate, and free from significant errors that could change our view of the performance of the business.
- Historical information must be consistent over time, and sufficient to assess the risks to which the insurance company is exposed, including assessing trends over time.
- Data should allow the insurer to separately assess different groups of policies with distinct risk profiles.
- The data used should be relevant for the task being performed.
- External data can be used where it is fully understood and is more relevant than the internal data available.

Concerns with the data

We are in the process of migrating data from our legacy systems to our new system. This has been completed for the LifeBasic product, and we expect to complete migration of the LifePlus product next year. We will therefore continue to be reliant on the legacy system for the coming year-end valuation of the LifePlus product.

Our analysis of the data for the LifePlus product shows that there are two key issues.

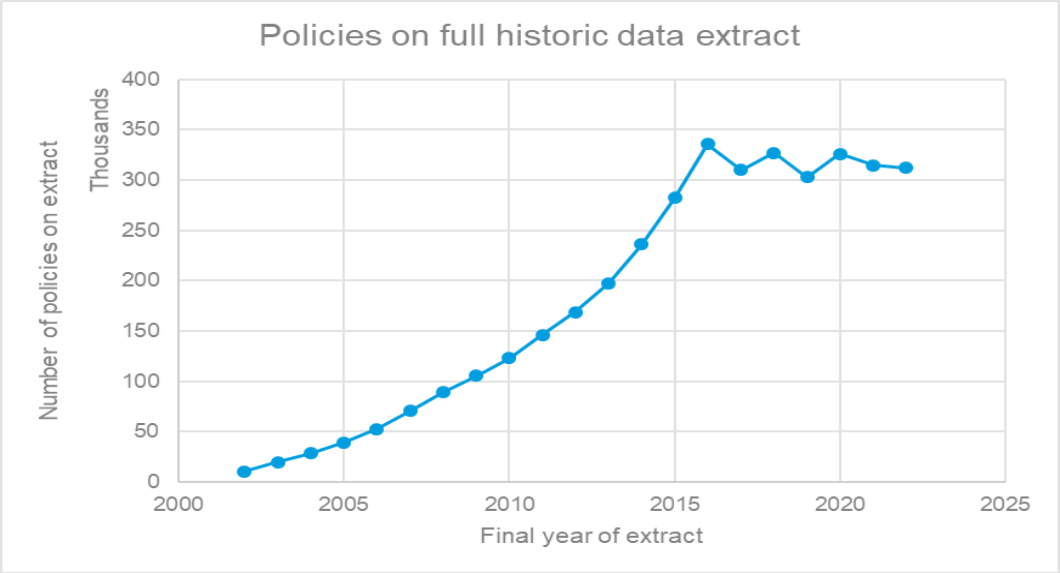
Inaccuracy of benefit details

It appears that the options that policyholders have selected are not correctly reflected in the data extract from the legacy system. In particular, some of the options that policyholders have selected are missing from the extract. On further investigation the underlying data in the system appears to be accurate, and the issue is caused by an error in the extract. The migration to the new system will correct the problem, but for this year-end we know that the data will not show all options selected.

 © Institute and Faculty of Actuaries

Inability to perform historic analysis of experience

To conduct a historic analysis of the claims and lapse rates we need a data extract that includes all current and historic policies. When performing this full data extract, the system fails to include all policies. This is evident from the following chart, showing the number of policies on the extract as we move the end-date of the extract forward:



As you can see, when the size of the extract exceeds just over 300,000 policies the system fails to include all policies. Based on other records we would expect to see around 590,000 policies on the most recent extract. System constraints mean that the start date for an extract is always the date at which the first policy was written, so there is no quick fix for this issue.

Mitigations for these concerns

We have made the following adjustments to allow for the deficiencies in the data:

- We have increased the liabilities to reflect the uncertainty around the options covered. Our analysis suggests that around 15% of options are not appearing on the data extracts. To be prudent we have increased the allowance in our models for options by 20% in our valuation figures.
- Our claims experience appears to match closely to the experience seen in the wider industry for the early years where we can reliably use our data. We have access to industry wide data, and have used this to support our assumption setting for the year-end. To ensure we are prudent we have assumed that our future claims rates will be 5% higher than the industry average.

We have taken our auditors through the deficiencies and these mitigations, and they are satisfied with the approach that we are taking for the 2023 year-end.

Summary and proposals

There are currently deficiencies with the data that will be used for the 2023 year-end valuation for the LifePlus product. In particular the data does not reliably report the options that policyholders have selected, and we cannot get a full historic data extract to support our assumption setting. However, we are mitigating this by adding a margin for prudence to our liabilities and using industry data to set assumptions. Our auditors are satisfied that this is not a material breach of the IRB regulations, particularly because we have firm plans in place to migrate our data to a new system, which will solve these issues. We therefore propose that LifeCo continues with its current plans to migrate the LifePlus data to the new system next year.

If you would like any further details please do not hesitate to speak to Anna Pudding.

 © Institute and Faculty of Actuaries

Q2

i)

- I kept my paper very factual and did not give an opinion as to whether the company was at fault
- I did not try to apportion blame to any individual or team - it is not my place to comment on this.
- The focus of this note is on the current situation, and what is being done to mitigate the deficiencies - there is a clear plan to remedy the current deficiencies and so I focussed on this to give reassurance that the issue was in hand.
- I made it very clear that the auditors were fully aware of the issue, and that they had indicated that given the mitigations in place this was acceptable for the 2023 year-end.
- I paraphrased the regulations to show that as a valuation team we had a thorough knowledge of what was expected of us when it comes to data quality.
- I made it clear that our valuation would be prudent, to address any fears that there could be a significant worsening of the position when we have reliable data available.

ii)

- I started with an introduction that set the scene. This made the scope of the paper clear, and signposted the main points that the paper would deal with
- The first substantial section summarises the regulations around data quality - this is important context for everything that follows, and so it was important that this came first.
- Next I laid out the issues with the data, and gave some evidence for these issues. I separated the issues to make them clearer.
- When the reader understood the issues I then explained how we were mitigating these, and gave reassurance that the auditors were aware - the mitigations would not have made sense without first understanding the issues
- Finally I summarised everything and proposed next steps, with a clear contact for further questions - the audience are therefore clear on the next steps, and if they disagree they know who to speak to.

iii)

- I decided to include a brief summary of all of the key regulations in the paper.
- This gave confidence that the valuation team had a full understanding of the regulations.
- To an extent all of the regulations are pertinent to the data issues that LifeCo has, but I first highlighted the two I felt were most applicable to the situation.
- I significantly summarised the requirements, leaving out points of detail because the exec did not need these to put the data issues into context.
- I left out the reference to the data being appropriate to the statistical techniques that are being applied. Without going into much more detail about our processes it would be impossible to put this into context or covey to the Exec whether we were meeting this. It was also not relevant to the specific data issues we have.

iv)

- If the paper had been intended for the valuation team I would have included more information on the assumptions setting based on industry data. It is sufficient for the exec to know at a high level that the assumptions were set using the industry data, but the valuation team would benefit from more detailed information on this. I would have explained in detail how the assumptions were set and what data would have been reviewed
- I would not have needed to explain the timeline of the data migration to the valuation team - it is something that is discussed in detail among the team and this information would not add anything.
- I would have included more details of the regulations - it is vital that the valuation team know these in detail, and therefore I would have included them in full rather than summarising them.

 © Institute and Faculty of Actuaries

Institute and Faculty of Actuaries

Beijing

14F China World Office 1 · 1 Jianwai Avenue · Beijing · China 100004
Tel: +86 (10) 6535 0248

Edinburgh

Level 2 · Exchange Crescent · 7 Conference Square · Edinburgh · EH3 8RA
Tel: +44 (0) 131 240 1300

Hong Kong

1803 Tower One · Lippo Centre · 89 Queensway · Hong Kong
Tel: +852 2147 9418

London (registered office)

7th Floor · Holborn Gate · 326-330 High Holborn · London · WC1V 7PP
Tel: +44 (0) 20 7632 2100

Oxford

1st Floor · Belsyre Court · 57 Woodstock Road · Oxford · OX2 6HJ
Tel: +44 (0) 1865 268 200

Singapore

5 Shenton Way · UIC Building · #10-01 · Singapore 068808
Tel: +65 8778 1784

© Institute and Faculty of Actuaries