

INSTITUTE AND FACULTY OF ACTUARIES

EXAMINATION

November 2015

Subject CA3 – Communications

Paper 1

Time allowed: 1 hour 30 minutes + 15 minutes reading time

INSTRUCTIONS TO THE CANDIDATE

1. *You have 15 minutes before the start of the examination in which to read the question. You are strongly encouraged to use this time for reading only, but notes may be made. You then have 1 hour 30 minutes to complete the paper.*
2. *The work you submit MUST be saved in Microsoft Word 2007 format, e.g. using the docx file extension. You may only upload one document and you must not embed files in the document.*
3. *Copies of the Formulae and Tables, Core Reading for subjects CT1–CT8 inclusive and CA1 will be available electronically during the exam. These documents are for use during the exam period only and not for general use. No other material can be referred to.*
4. *In addition to this paper you should have available your own electronic calculator from the approved list, <http://www.actuaries.org.uk/research-and-resources/documents/exam-policies>*
5. *You are not permitted to use the internet to help you during the exam.*
6. *You are required to work through the exam assignment without assistance from another person. You are reminded that by undertaking this exam you are bound by the Institute and Faculty of Actuaries' Examinations Rules and Regulations. By submitting your files you are confirming that all the material is entirely your own work and you wish this to be taken into account for this assessment. Only the first submissions will be accepted.*
7. *Save your work regularly. Saving your work is your responsibility so failure to do so will not be a significant mitigating circumstance. Do NOT log off the application until you receive confirmation of receipt from the Online Education Team.*
8. *At the end of the examination, save your completed assignment and follow the upload instructions that have been provided. Once the exam is over all related material and notes made during the examination must be destroyed.*
9. *If you encounter any difficulties please email online-exams@actuaries.org.uk or telephone the Online Education Team on +44 (0)1865 268255.*
10. *Professional behaviour is mandatory and no material relating to the exam may be disclosed or discussed with others, nor used in a further attempt at the exam. Failure to comply with this will be deemed to be a breach of the examination regulations and may result in disciplinary action.*

PLEASE NOTE THAT THE CONTENT OF THIS PAPER IS CONFIDENTIAL AND STUDENTS ARE NOT TO DISCUSS OR REVEAL THE CONTENTS UNDER ANY CIRCUMSTANCES.

You work as an actuarial student in a life insurance company. A policyholder has written the following letter to the customer services department of your company, ABC Limited:

“Dear Sir

10 April 2015

Policy number 21252133 – ABC saver plus product

I reach age 65 in around 5 years’ time and in February 2015 I wrote to ask for an updated projection of what I am likely to get from the saver policy I have with you.

I must say I was horrified at what you sent me. The updated illustration you sent me is ridiculous as it shows vastly lower numbers to what you originally led me to believe 20 years ago. The stock market has nearly doubled since the 2008 crash so I don’t think there is any way the numbers can be so low: something must be wrong and a mistake has been made. It seems as if £127,000 has been wiped off my fund. Where has this money gone?

Your letter also mentioned the projection had been referred to and agreed with your actuarial department. I knew an actuarial student many years ago and know that actuaries are highly paid and have to pass lots of complicated exams and are supposed to be experts in this sort of thing, but if they come up with answers like this then clearly they can’t really know much about the future.

Such a low figure will create severe financial hardship and will mean I have to delay my retirement plans by several years. I would appreciate it if you give this your urgent attention and send me a new and more realistic projection as soon as possible.

Yours faithfully

Steven Donohoe”

The customer services team has passed a copy of the letter to your manager.

Your manager has asked you to draft a letter in around 550 words that can be sent by the customer services team to Mr Donohoe, explaining why there is such a difference between the projection he received when he took out the policy in 1995, and the recent projection sent in 2015.

Your response letter should cover:

1. the difference in actual versus expected fund performance and comment on market returns since 2008.
2. the difference in the basis for future fund projection.
3. the use of current money terms in the February 2015 projection.

Your manager has indicated you should include figures to explain the impact of each of the three parts above.

A student in your team has prepared the following information:

Original quotation dated February 1995

ABC Limited

Saver Plus – policy number 21252133

Policy details

Mr S Donohoe

Date of birth: 1 February 1955

Policy maturity date: 1 February 2020

Date of initial investment: 1 February 1995

Initial lump sum invested: £25,000

Projected fund amount at age 65: £215,577

Assumptions

Future investment returns: 9% p.a.

Inflation: 3% p.a.

Note: Your funds will be invested by ABC Limited in our Diversified Mixed Managed Fund. This fund has a long term investment objective of investing in an asset mix of: 50% shares (UK and overseas), 15% property, and 35% bonds and cash (please see our Saver Plus explanatory leaflet for more information). Please note that neither the future investment performance nor projected fund amounts are guaranteed: what you will actually receive will be dependent on the actual investment returns achieved.

Date: 12 February 1995

Latest quotation dated February 2015

ABC Limited

Saver Plus – policy number 21252133

Policy details

Mr S Donohoe

Date of birth: 1 February 1955

Policy maturity date: 1 February 2020

Date of initial investment: 1 February 1995

Initial lump sum invested: £25,000

Fund amount at 1 February 2015: £80,178.39

Projected fund amount at age 65: £88,270.93

Assumptions

Future investment returns: 5% p.a.

Inflation: 3% p.a.

Notes:

- 1. Future funds are projected at 5% p.a. in line with the requirements of the Financial Oversight Authority in response to Statutory Instrument SI2014/8888: "Basis of projection of fund illustrations for insurance company policyholders".*
- 2. Projected fund values are expressed in current money terms, as is required under the above legislation.*
- 3. Your fund continues to be invested by ABC Limited in our Diversified Mixed Managed Fund. This fund continues to be split 50% shares (UK and overseas), 15% property, and 35% bonds and cash. Neither the future investment performance nor projected fund amounts are guaranteed: what you will actually receive will be dependent on the actual investment returns achieved.*

Date: 25 February 2015

Further notes from the student:

The investment mix of the Diversified Mixed Managed Fund has remained constant over the period, and is anticipated to remain so over the next 5 years.

The “Projected fund amount” using the recent statutory requirements is calculated as follows:

Fund Amount = F

Future investment return = $r\%$ p.a.

Inflation = $i\%$ p.a.

Term to maturity = n (years and days as a fraction of a year)

Projected Fund Amount (PFA) = $F \times [(1 + r) / (1 + i)]^n$

Mr Donohoe mentions a loss of £127,000. If we perform an analysis of surplus this can be broken down into three components:

Source of surplus	Contribution to surplus	Notes
Past investment returns	- £60,000	6% v 9%
Change in basis for future fund projection	- £53,000	5% v 9%
Conversion to current money terms	- £14,000	Impact of fund @ 65 / 1.03 ⁵
Total	- £127,000	

You should:

1. assume all figures are correct.
2. ignore tax and expenses.
3. ignore any other regulatory or legislative requirements.

END OF PAPER