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Subject CA2 -A practical exam covering Model documentation, analysis and reporting

7 October 2014

My experience of CA2

- Design and development of financial modelling courses at Kent
- Joined CA2 examination team soon after its introduction

Have been since involved in

- pre-exam training – until July 2014
- assessment and assessment methods
- development of the structure



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Agenda

Aims and objectives of CA2
What the students are taught
Format of the exam
Future changes in CA2
Use in office practice

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Aim

- The aim of this subject is to ensure that the successful candidate can:
 - **Model** data
 - **Document** the work with an audit trail, suitable for both a fellow student and senior actuary
 - **Analyse** the methods used and outputs generated
 - **Communicate** the approach, results and conclusions to a senior actuary



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Objectives

The successful candidate will be able to demonstrate:

- Analysis of data
- Development of a model with clear documentation (including an audit trail for a fellow student and senior actuary)
- Ability to analyse the methods used and the model's outputs
- Ability to apply and interpret the results
- Communication of the approach, results and conclusions to a senior actuary



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Student material available

From the IFoA website

- CA2 basics plus advice from Principal Examiner
- Knowledge assumed for the exam
- Guidance on how the exam is marked
- FAQs
- Selection of past exam papers



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Pre-exam training

Covers the following:

- Good spreadsheet design
including the use of self checks and reasonableness checks
- Good audit trail design
- Good summary format
- Reference to TASs – TAS(D), TAS(M)
- Marking schedule

Undertaken by use of assignments and group discussion



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Marking schedule

Marks available for:

- Use of appropriate techniques in the model – only 10 marks
- Audit trail - about 45 marks
- Summary - about 45 marks



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Format of the exam

Open book

Typically start at 8.45am, half hour for lunch, finish at 4.30pm

Only allowed to plan for first half hour

Need to model a few scenarios in Excel

Technical help available

Assignment in Excel/Word, submitted electronically

More online exams offered

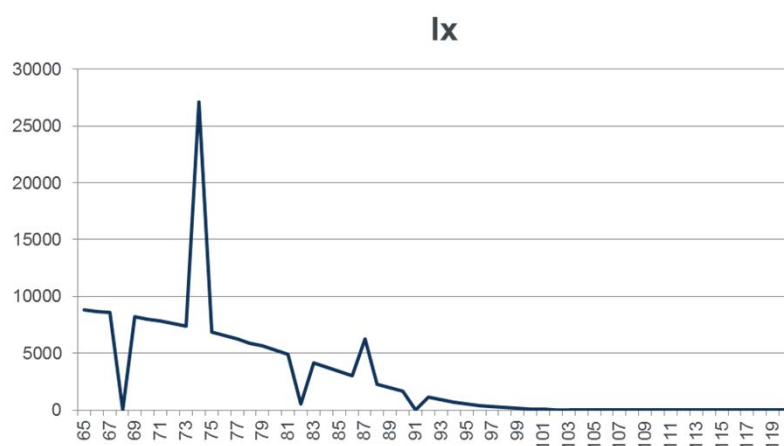


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How the students are tested - data



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How the students are tested - scenarios

Typically need to model a scenario (e.g. population modelling, financial calculations, cashflows)

Need to make model flexible for further scenarios

Required to produce certain results

Maintain an audit trail suitable for a fellow student and a senior actuary

Communicate approach, results, conclusions, typically to a senior actuary



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Common failings

- Data – not stating the source, not describing tests undertaken, spending too long on this aspect
- Assumptions – not justifying them, not stating them
- Model – not understanding the question, not planned
- Audit trail and summary – not enough detail
- Results – not checking for reasonableness, not producing what was asked for
- Conclusions – not stating any, not being clear in explaining
- Next steps – too generic



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Changes – parity with other exams

From 1 July 2014:

- ActEd take over all the pre-exam training
- Technical help given with exam paper; no bespoke help

From 1 March 2015:

- Eligibility requirements removed
- Day one exam – data analysis, produce an audit trail
- Day two exam – interpretation of results, produce a summary
- 3 hour exams; different models for each day; linked as CA1



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CA2 in the office

Triennial valuations of pension schemes

Complies with TAS D, R and M

- **Data** – reconciliation, validation
- **Model** – use of commercial software, ‘what if?’ scenarios
- **Reporting** – statutory requirements, what have the Trustees asked for

Not forgetting the Pensions TAS



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Questions

Comments

Expressions of individual views by members of the Institute and Faculty of Actuaries and its staff are encouraged.

The views expressed in this presentation are those of the presenter.



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