

Course Description

Module 4, '**Commercial Actuarial Practice**', was a new component in the Institute's Part III actuarial education program from Semester 2 of 2005. This module is compulsory for all new Part III students from 2005.

The overall objectives of Commercial Actuarial Practice are to provide students with the skills and knowledge to be able to

- apply actuarial skills across a range of traditional practice areas and in unfamiliar (i.e. non-traditional) areas by contextualising actuarial solutions or approaches in the wider commercial environment of the business as a whole
- apply ethical concepts, corporate governance requirements and actuarial professional standards when contextualising actuarial solutions or approaches.
- successfully communicate the actuarial solutions or approaches to a range of audiences.

Commercial Actuarial Practice consists of

- Pre course work
- A four day residential course
- Two assessments:
 - A post course case study report that is due two weeks after the residential course and
 - A one day Case Study Exam (8 Hours computer based exam) during examination period.

The nature of Module 4 requires a different approach to teaching from that currently in place for other Part III subjects. The learning objectives and the emphasis on judgement in commercial situations warrant a learning environment where discussion can take place, rather than reliance on self study methods alone. The Module will therefore comprise written material but will also include a four day residential course that allows students to examine case studies in detail.

This approach will allow students to use judgement in applying the knowledge and skills they have gained in the first three modules to simulated commercial problems. Case studies in both traditional and non-traditional practice areas will be covered during the course. Students will be provided with reading material in advance of the course.

Traditional practice areas to be covered will be:

- General Insurance
- Life Insurance, including funds management
- Global Retirement Systems

- Investment and Finance;

and the non-traditional applications will be:

- Banking
- Health Financing
- Enterprise Risk Management
- Environment

Contextualisation

One of the key words in the course description and the syllabus is “contextualisation”. While this concept will be covered extensively during the course this section provides a short overview of the essential content of the word as used in the CAP course.

All the work we do as actuaries takes place in a particular context. The usual description of the elements of the typical actuarial context includes financial, long term, stochastic issues set in material uncertainty. This description is sufficient for us to produce a proper technical answer to the question we are dealing with.

However, the production of a proper technical answer is the starting point of giving high quality actuarial advice not the finish. The technical answer is a necessary but not a sufficient condition for such advice.

The work we do before and after producing the technical answer is to make that answer relevant to the business issue to which our advice is directed.

All business decisions are about optimising between competing issues in the context of uncertainty. The executives making decisions, where actuarial advice is an important input, want to know the implications of the potential decisions on the future business results. They know that there is no, single, correct answer and they want advice from their actuaries as to the spectrum in which an acceptable answer might lie and the risks involved if the uncertainties involved produce an actual outcome which is far from the mean of the range of expected outcomes.

Always our work should be focussed on answering the business question not the actuarial question. Note that this does not mean that we should align our assumptions and modelling to produce the answer which the client wants. It does mean avoiding the, sometimes typical, actuarial arrogance which asserts that we know the answer!

Pre-Course Work

In the period between receipt of the materials and the commencement of the residential course students are expected to complete the following

- attend, or listen to, the orientation session
- read the background notes and at least the core reading relevant to each case in a non-traditional area
- read the Professional Behaviour & Corporate Governance notes
- read the communications material
- decide whether they will do the General Insurance, the Life Insurance or the Global Retirement Systems case
- for the four case studies noted below work out what your answer would be. This does not mean that you prepare a full report for each case, but you should do the following
 - digest the material
 - complete all the quantitative analyses required for the solution
 - commence the preparation of an answer by considering the major issues raised in the case and assemble the key elements of their answer

Each student is required to prepare written notes (two pages is the minimum expected and five pages the maximum) on the following four case studies

- The General Insurance, Life Insurance or Global Retirement Systems case which is selected by the student for the concurrent session,
- Investment
- Environment
- Health Financing

As part of this preparation ALL the quantitative analysis needed for a solution to the case must be completed prior to the course. The notes should contain the results of the quantitative analyses performed, but not the detail. The main purpose of the notes is to ensure you are well-prepared for the case study discussions at the course.

Students should bring any other analysis or reference material to the course that may be helpful in the syndicates to agree group solutions and develop presentations. Please make sure that you bring all of your notes, quantitative analysis and reference materials to the relevant sessions at the course

Orientation Session

The session will give an overview of the CAP course and provide students with an opportunity to raise questions at the beginning of the semester before they get too far in their pre-course work. There will also be an introduction to communications with particular attention to report writing.

Students will all have different approaches to their preparation for this residential course. It may be expedient to tackle as the first case the area in which you are specializing. The material should be more familiar and hence the case should be easier to grasp and prepare.

It is suggested that you start by identifying the key issues that are raised by the case. By "key issues", we mean the main questions that you will need to answer in order to properly address the task. The preliminary questions given in each case are a starting point. Once you have identified these key issues, you should start developing the main points you would want to make in your answer. This should include all quantitative analyses required. Each case is different in regard to the amount of analysis which is likely to be necessary.

Your notes on each case should typically start with your list of the key issues, and then list just the key points you would make in your answer to each. Keep in mind that the cases typically place you in a business environment, where you need to consider the practical business questions from the point-of-view of the different people involved, as well as the quantitative answers. A compliance type approach, particularly in the traditional cases, is unlikely to produce an acceptable response.

A time commitment of at least ten hours per case study is likely to be adequate as pre-course preparation. Cases with significant quantitative material will take longer while those without will take less. The time required for reading will depend very much on the extent of each student's existing understanding of the areas and no definitive guide can be provided. Remember that the case studies are designed to provide a learning opportunity for the contextualizing of actuarial advice, not to turn students into experts in each area covered.

Assumed Knowledge

In traditional practice areas, it is assumed that students have a level of understanding and competence in their chosen traditional practice area which is at the level required for a pass in both Modules 2 and 3 in that practice area.

If students' chosen traditional practice area is not Investment & Finance they are assumed to have the understanding and competence required for a pass in Module 1.

The understanding and competence required for each non-traditional practice area is at the general level but with sufficient clarity to contextualise the actuarial solutions at a high level, rather than at the detailed level required of traditional practice areas. That is, it is not expected that students would be able to pass equivalent Modules 2 or 3 in the non-traditional practice areas, were they to be offered.

Students are assumed to be competent in the use of Microsoft Excel, Word and PowerPoint. The MGSM computing facilities use the 2007 versions of all Microsoft software.

While there are no specified pre-requisites, it is the Institute's strong recommendation that students pay particular attention to the assumed knowledge detailed above.

The Case Study Learning Environment

As noted in the Course Description, the nature of this course requires a different learning environment to the other Part III modules.

The course is based on a set of eight case studies, one in each of the traditional practice areas and one in each of the non-traditional areas. Students must choose to do one of the General Insurance, the Life Insurance or the Global Retirement Systems cases. Every student will do all the other five cases.

Each case study covers several of the items in the detailed syllabus. All items in that syllabus are covered at least once. The case study style of instruction works effectively when each student contributes to the learning of their fellow students, and receives in turn. The purpose of the course staff is to guide the syndicate work and the plenary discussion sessions. They will ensure that the relevant issues are brought out and considered. Despite the inevitable false paths followed by syndicates the course staff will guide the discussions so that the right paths become clear to all when the case study has been concluded.

The program for each case study will vary for each case. There are five types of sessions for the case studies. The Course Program includes a Type indicator which shows what sort of output is required from each syndicate and gives an indication of the fashion in which the session will be run.

The indicators have the following meanings

- P The output is a presentation to the "client".
- PC The output is a presentation to the "client". The session will include the opportunity for each syndicate to have an individual

session with the "client" to ask questions and acquire additional information.

- R The output is a set of recommendations and the reasons supporting them which is being discussed and reviewed with a senior actuary, or a senior partner in a consulting situation, prior to the preparation of the presentation to the client. The output is a simple handout of the recommendations and the reasons. No technology enabled presentations are permitted.
- H The case will be provided ONLY at the beginning of the session at the residential course. The output is as in type "R".

In each type several syndicates will be given the opportunity to "deliver" their output. Each syndicate will "deliver" at least once.

The purpose of the H type is to give students some practise in developing a solution to a case in a limited time. While the "answer" is not a full report the opportunity to work on the solution is expected to be of some advantage in preparation for the Case Study Exam.

While some case studies ask for a report to be prepared the plenary discussion of the solution to each case study will not use a written report format. It will be substantially oral with appropriate visual aids at the discretion of each syndicate and according to the Type of the case.

Each case will include significant feedback from the presenter as to the key issues which should have been brought out.

Assessment

There is one assessment for Commercial Actuarial Practice which has two pieces –

- Post-Residential Report, worth 20%, and
- Case Study Exam, worth 80%.

Post-Residential Report

A full written report on a non-traditional case study is required. The report has a word limit of 4,000 words and material penalties will apply for any report which is more than 4,400 words. The word limit includes everything in the report, i.e. tables and appendices are counted.

The case study which is the subject of the report will be in one of the defined non-traditional areas. The case will be available at the end of day 4 of the course.

Case Study Exam Location

Sydney

190 - 200 George Street

SYDNEY NSW 2000

Ph: 02 9250 0999

Fax: 02 9250 0998

Email: enquiries@cliftons.com

Melbourne

TBC

Other Exam Centers

As per temporary exam center arrangements at the time of enrolment.

The Case Study Exam is a single question delivered in "case study" format. The style of the case will be similar to that used in the case studies considered during the residential course and in the report. The answer is to be a substantial piece of written communication which will be assessed in respect of both its content and the quality of its written communication.

As a guide to the extent of the answer expected, a report of around 10 pages of text, single spaced, excluding graphs, tables, etc., plus a one page executive summary would generally be quite adequate. There is no explicit limit.

The student will have up to 8 hours to absorb the question material, perform all the necessary analyses and prepare the written communication of the answer. The "case study" question will be **ONE** selected by the student from seven cases. There will be one case from each of the defined traditional practice areas and one from the three defined non-traditional areas which were not the subject of the Report (see above).

Any written material will be allowed, PC's equipped with the 2003 versions of Excel and Word will be provided but no outside communication will be allowed. The required report, as the answer, is to be produced as a printed Word document. Note that only material which is included in the printed Word document will be marked. Students are also required to submit an electronic version of that Word document. The process for that electronic submission will be given on the day of the Case Study.

Adequate printers will be provided. The Case Study will commence at 9:00am and the student has until no later than 5:00pm to submit their answer. Appropriate supplies of food and drink will be available during the day.

The Case Study Exam will take place during the usual Institute exam sessions at the end of the semester.

Course Materials and Reading

The materials supplied for the course are

- this Course Outline,
- the six case studies, including various attachments and spreadsheets containing supplementary information and data,
- background notes on each of the four non-traditional areas, and
- background notes on Professional Behaviour & Corporate Governance

There is no textbook for this course and students must resist the temptation to substitute any of the books or other readings for a textbook. The background notes each contain suggestions about further reading. Some identify readings as "core", others do not. Students need to make their own judgment as to the extent to which these readings are relevant to their understanding of the issues. The whole of Commercial Actuarial Practice is centered on the application of judgment and this applies as much to the selection of reading as to straight actuarial judgment. None of the readings should be approached as though they were the course textbook. In many cases the readings can be skimmed, particularly if the material is already familiar. One of the required competencies of any professional is the ability to discriminate when choosing sources of information. Students, about to become actuaries, are expected to be able to exercise some discrimination when deciding how much detail in a source is relevant to the particular issue.

In preparing for the case studies the readings selected should be those which are directly relevant to the particular scenario.

Any of the cases may include issues relating to professional behaviour and corporate governance. Hence, some reading material has been provided covering those areas. It should be specifically noted that in the Case Study Exam it is assumed that students fully understand any professional standards which apply to the traditional areas. Students should bring the relevant standards with them for both the course and the Case Study Exam.

There are no notes provided in respect to the traditional areas as students are assumed to have sufficient background understanding of each of the four to enable them to properly consider the cases in those areas. All students are assumed to have completed the compulsory Investment module.

Actuarial Communications

The issue of actuarial communications will be covered in the orientation session and in two sessions during the course. This will give students the opportunity to include that material in their various presentations and other communications in the discussion of each case.

There is a very wide range of potential material available in the area of written communication. It ranges from style manuals to advice on writing fiction or doctoral theses.

Two papers written specifically for actuaries are "The Eighth habit of highly effective actuaries", Brown A. (2005), Institute of Actuaries of Australia Convention 2005 and "Communicating Effectively with Words, Numbers & Pictures", Duklan, K. & Martin, M. (2002).

<http://www.cbe.anu.edu.au/research/papers/pdf/ACST0006WP.pdf>

The book "The pyramid principle: logic in writing and thinking" by Barbara Minto is the source of the material contained in the sessions on Actuarial Communication. The first half of this book is most relevant and is core reading.

Another source is to view good actuarial reports which have not been written for compliance purposes i.e. reports written in response to legislative requirements are likely to be heavily oriented to those requirements rather than more general communication principles. For most students some examples of these are likely to be available at work. They are recommended for study.