

Report to ECC from the Board of Examiners

SEMESTER ONE 2011
PART III
BOARD OF EXAMINERS REPORT
PUBLIC VERSION



Institute of Actuaries of Australia

Publisher

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CHAIR'S REPORT

SUMMARY

Examination Administration

The Semester One 2011 Part III examinations of the Institute of Actuaries of Australia ("Institute") were held between 27th April 2011 and 5th May 2011. Candidates attended the examinations in Australia (Sydney, Melbourne, Canberra, Perth, Adelaide, Hobart and Brisbane) and overseas (Canada, China, France, Hong Kong, Indonesia, Jordan, Korea, Malaysia, New Zealand, Singapore, Thailand and United Kingdom).

This is the seventh year in which twice yearly examinations will be held. The tables below show the number of candidates sitting each exam over recent years. The number of candidates sitting the Part III exams (excluding course 7A Enterprise Risk Management) in the latest period shows a decrease over the previous two years.

Table A: Candidate Numbers Sitting by Part III Course

	Subject	2007(2)	2008(1)	2008(2)	2009(1)	2009(2)	2010(1)	2010(2)	2011(1)
1	Investments	166	150	120	177	145	93	88	80
2A	Life Insurance	54	61	66	58	52	39	55	60
2B	Life Insurance	43	36	50	52	62	63	39	41
3A	General Insurance	82	69	51	65	57	76	66	72
3B	General Insurance	44	40	62	50	63	63	53	58
4B	Superannuation & Planned Savings	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5A	Investment Management & Finance ¹	n/a	35	n/a	n/a	46	n/a	38	n/a
5B	Investment Management & Finance ²	44	n/a	35	44	n/a	34	n/a	16
6A	Global Retirement Income Systems ³		19	n/a	14	n/a	16	n/a	18
6B	Global Retirement Income Systems ⁴			18	n/a	19	n/a	13	n/a
7A	Enterprise Risk Management ⁵						57 ⁶	63 ⁷	⁸
10	Commercial Actuarial Practice	70	83	87	74	92	97	102 ⁹	79
	Total	519	493	489	534	536	538	517	424

Table A1: Commercial Actuarial Practice

		2007(2)	2008(1)	2008(2)	2009(1)	2009(2)	2010(1)	2010(2)	2011(1)
1 st Attempt	Full Course	47	63	46	49	61	64	66	36
Resit	Report and Exam	3	2	2	2	1	22	27	41
	Post Course Report	11	13	24	21	2	-	1	-
	Case Study Exam	6	5	15	2	28	11	8	2
	Total	70	83	87	74	92	97	102	79

¹ 5A only offered once per calendar year.

² 5B only offered once per calendar year.

³ 6A GRIS introduced in Semester 1 2008 replacing 4A, only offered once per calendar year.

⁴ 6B GRIS introduced in Semester 2 2008 replacing 4B, only offered once per calendar year.

⁵ 7A Semester 1 2010 is the first time this course was run.

⁶ 67 candidates, 10 Fellows, 57 non-Fellows

⁷ 72 candidates, 9 Fellows, 63 non-Fellows

⁸ Results not yet known

⁹ This figure represents 101 candidates who sat the exam and 1 candidate who sat the post course report only

Pass Rates

The number of candidates presenting for the Semester One 2011 Part III Exams, the recommended passes and the resulting pass rates are shown in the table below, together with the corresponding numbers for the previous three exam periods:

Table B: Recommended Number of Passes by Part III Course

	2011 (1)			2010(2)			2010(1)			2009 (2)		
	Sat	Pass	%	Sat	Pass	%	Sat	Pass	%	Sat	Pass	%
1 Investments	80	26	33%	88	27	31%	93	33	35%	145	43	30%
2A Life Insurance	60	18	30%	55	17	31%	39	11	28%	52	31	60%
2B Life Insurance	41	16	39%	39	16	41%	63	28	44%	62	24	39%
3A General Insurance	72	24	33%	66	24	36%	76	28	37%	57	17	30%
3B General Insurance	58	20	34%	53	21	40%	63	22	35%	63	18	29%
5A Invest. Man. & Fin.	n/a	n/a	n/a	38	20	53%	n/a	n/a	n/a	46	17	37%
5B Invest. Man. & Fin.	16	6	38%	n/a	n/a	n/a	34	19	56%	n/a	n/a	n/a
6A GRIS	18	9	50%	n/a	n/a	n/a	16	4	25%	n/a	n/a	n/a
6B GRIS	n/a	n/a	n/a	13	7	54%	n/a	n/a	n/a	19	10	53%
7A ERM			¹⁰	63	22	34% ¹¹	57	11	19% ¹²	n/a	n/a	n/a
CAP	79	47	59%	102	56	55%	97	57	59%	92	55	60%
Total	424	166	39%¹³	517	210	41%¹⁴	538	223	40%¹⁵	536	215	40%¹⁶

The Chief Examiners aim to produce consistent standard of passing candidates, rather than a consistent pass rate from year to year. This semester, the recommended overall pass rate of 39% is slightly lower than the previous semester.

Prizes

Prizes are awarded only once in a calendar year following the Semester Two examinations.

Fellows

There are two ways in which candidates can qualify as Fellows.

- Candidates must pass one elective in Module 1 (C1 Investments or the newly introduced 7A Enterprise Risk Management & the Investments Bridging Course), one full specialist subject (Modules 2 and 3) and Module 4 (Commercial Actuarial Practice).
- Candidates in transition (ie. those who have completed at least one paper of a pre-2005 subject) must have passed three Modules by the end of 2006 and Module 4 (Commercial Actuarial Practice), providing that the equivalent of Modules 2 and 3 in one specialist area have been completed.

¹⁰ Results not yet known

¹¹ Figure represents pass rate in respect of non-Fellows only. The pass rate for fellows was 80%.

¹² Figure represents pass rate in respect of non-Fellows only. The pass rate for fellows was 60%.

¹³ Figure represents pass rate in respect of all 79 CAP candidates but not the 93 C7A candidates as results are yet to be notified.

¹⁴ Figure represents pass rate in respect of all 102 CAP candidates and 63 C7A candidates.

¹⁵ Figure represents pass rate in respect of all 97 CAP candidates and 57 C7A candidates.

¹⁶ Figure represents pass rate in respect of all 92 CAP candidates

If the Council adopts the recommended passes, the number of members that will be made Fellows (subject to attendance at a Professionalism Course and paying any relevant exemptions) will be:

Category	2011 (1)	2010(2)	2010(1)	2009(2)	2009(1)	2008(2)	2008(1)
New Fellows	40¹⁷	40¹⁸	51¹⁹	51	34²⁰	71²¹	37²²

¹⁷ 43 candidates completed all of the Part III Exams in semester one 2011, 2 of which are required to complete the Investments Bridging Course to become Fellows. Of these two, 1 has a pending result for 7A. 1 candidate has a pending result for CT7. Of the 40 eligible candidates, 10 have already completed the Professionalism Course.

¹⁸ 42 candidates completed all of the Part III Exams in semester two 2010 2 of which are required to complete the Investments Bridging Course to become Fellows. Of the 40 eligible candidates, 5 have already completed the Professionalism Course.

¹⁹ 53 candidates completed all the Part III exams in semester one 2010 but 2 of these candidates have not completed Part I.

²⁰ 35 candidates completed all the Part III exams in semester one 2009 but one of these candidates has a result pending for their last Part I exam. This candidate successfully completed their last Part I exam, after two subsequent attempts in semester 1 2010.

²¹ 72 candidates completed all the Part III exams in semester two 2008 but one of these candidates had not completed Part II. This candidate subsequently had their university confirm their performance in Part II and paid for their exemption in 2009.

²² 38 candidates completed all the Part III exams in semester one 2008 but one of these candidates had not completed all Part I exams. This candidate completed their last Part I exams in September 2008.

1. Examination Administration

1.1 The Board

The Board of Examiners oversees the Part III examination process of the Institute of Actuaries of Australia (Institute). The Board of Examiners consists of the Chair and his assistants and the Chief Examiners for each subject, supported by Institute staff.

1.2 Meetings of the Board

The Board met on three occasions as part of the Semester One 2011 exam process.

- The first meeting was held on 12th January 2011. It was attended by representatives from each Course (Chief Examiners/Assistant Examiners). The purposes of this meeting were to:
 - update on enrolment numbers and course offerings for Semester One 2011
 - identify Chief & Assistant Examiners and Course Leaders for each course for Semester One 2011
 - outline the responsibilities of Chief Examiners and the Semester One schedule
 - review progress on the drafting of the exams to date
- The second meeting was held on 30th March 2011. It was attended by a representative from all courses. The purposes of this meeting were to:
 - discuss the status of Semester One 2011 examination papers, model solutions and sign-off process.
 - discuss the marking spreadsheets and review the recruitment of markers.
- The third meeting was held on 8th June 2011 and was attended by Board of Examiners, Chief Examiners or their representative from all courses. The purposes of this meeting were to:
 - review the recommended pass lists and treatment of borderline candidates
 - review the recruitment of Chief Examiners and Assistant Chairs for Semester Two 2011.

1.3 Administration and Exam Supervision

The Board of Examiners was ably assisted by a number of Institute staff, in particular Mr Philip Latham and Ms Rebecca Moore. Philip and Rebecca were responsible for administering the entire process and ensuring key deadlines were met, compiling and formatting the examination papers, distributing material to candidates and to exam centres, processing results and collecting historical information for the production of this report. They did a great job for Semester One 2011 and the Board of Examiners team is indebted to them both.

The Semester One 2011 Part III Sydney and Melbourne examinations delivered by the Institute were once again run by an external consultancy – Language and Testing Consultancy (LTC). The Semester One 2011 Part III examinations delivered by Access Macquarie were arranged with UTS Sydney City Campus and The Portside Conference Centre in Sydney and the Centre for Adult Education in Melbourne as venues. Other examinations were administered by Fellows or other approved supervisors.

An incident occurred this semester with the 3A exam which was held on Friday, 29th April. The exam invigilator along with several students reported a disturbance from approximately 9:15 am to 10:45 am caused by noise from a sports carnival taking place on the grounds outside the examination room at the Sydney LTC exam centre.

The Institute and the Chief Examiner agreed that these circumstances needed to be taken into consideration in determining final grades. Upon review the Chief Examiner determined that this incident did in fact have an impact on the Sydney students and an adjustment to the pass criteria was implemented. Refer to the 3A examination report below for more detailed information.

1.4 Course Leaders

Since October 2004, Course Leaders have been appointed by the Institute to undertake a variety of tasks relating to modules 1-3 of the new Part III education program. One of the roles of the Course Leaders is to draft examination questions in consultation with the Chief Examiners. The following is a list of the Course Leaders for Semester One 2011:

Course 1 – Access Macquarie

Course 2A and 2B - Brendan Counsell (Acting Faculty Convenor), Aaron Bruhn (2A assignment), Steve Miles (2A exam), Bruce Thomson (2A tutorials and discussion forums), Steve Miles (2B assignment), Jonathan Hughes (2B exam), and Michael Lau (2B tutorials and discussion forums).

Course 3A and 3B - GI Faculty, Dave Finnis (3A Assignment, Exam, first half of discussion forums and 1 tutorial), Andrew Huszczo (3A second half of discussion forums and 2 tutorials), and Rick Shaw (3B Assignment, Exam, Tutorials and discussion forums).

Course 5A – Access Macquarie

Course 6B – Peter May (Faculty Convenor), David McNeice (assignment, exam, tutorials and discussion forums)

Course 7A – This course is run completely external to the Institute

Course 10 - David Service

Another role of the Course Leaders was to draft assignment questions in consultation with each subject Faculty. The Board of Examiners was not involved in this process.

1.5 The Examination Process

The Semester One 2011 examination process began with an initial meeting of the Board of Examiners. Once Chief Examiners had been appointed in all internally run subjects they met with Course Leaders (where applicable) to discuss the draft exam questions.

Question setting

The basic framework followed by each subject, excluding Course 7A, to setting exam papers is the same. The Semester One 2011 Part III examinations were run on an open book basis. Each subject includes rigorous review processes. The general framework used to set examination papers is described as follows:

- The Course Leader (or equivalent) drafts the examination questions in consultation with the Chief Examiners.
- Draft exams and solutions are reviewed for coverage and fairness.
- A recently qualified Fellow scrutineer 'sits' the paper under exam conditions to assess the length of the paper.
- For the CAP Course a new Fellow scrutineer is appointed to check calculations in the case study exam questions.
- Exams are redrafted after feedback from the scrutineer.

- Draft exams, solutions and marking guides are then submitted to the BoE team for review. Two members of the BoE team review the draft exams and solutions.
- Exams, solutions and marking guides are finalised by the Chief Examiners and their Assistants.
- The Chief Examiners sign off the final examination papers and solutions.
- A member of the BoE team also signs off on the examination papers and solutions.

Exam marking

The general framework used to mark examination papers, grade candidates and determine passes, except for Course 7A, is described as follows:

- Except for CAP two markers marked each question, with CAP only those candidates with a mark above 40% or below 70% were marked a second time. Inconsistencies in marks for a candidate were discussed by the markers and resolved (in most cases), before the results were forwarded to the Chief Examiner.
- Marks were scaled to allow for the fact that some questions were more difficult than others, in the CAP course the exam is only one question so no scaling was applied.
- Each candidate was awarded a grade for each question of A, B, C, D or E, where A was regarded as a strong pass and B an ordinary pass.
- Candidates' overall performance was determined using several metrics including total raw mark, total scaled mark, weighted average grade, weighted average rank and number of pass grades per question. The key determinant however was total scaled mark.
- Candidates were ranked based on these metrics, particularly total scaled mark.
- Candidates' assignment grades and marks were added to the exam metrics, with a weighting of 15% for Course 1 Investments and Modules 2 and 3. For CAP the post course assessment counts for 20% and the exam 80% of the mark.
- Candidates were divided into clear passes, clear failures and a middle group that required further consideration.
- The Chief Examiner reviewed the middle group individually. The pass/fail decision was made after assessing the candidate's whole exam paper, his/her performance in the judgement questions, how badly he/she performed in the questions he/she failed and whether they were 'key' areas of the course and his/her performance in the assignments.

1.6 The Assignment Process (Subject 1 and Modules 2-3)

Question Setting

The basic framework followed by each course to setting assignment questions is the same and all subjects contain review processes. The general framework used to set assignments is described as follows:

- The Course Leader drafts the assignment. They are each worth 15% of the total marks for the subject.
- Draft assignments and solutions are then reviewed by each Faculty for coverage and fairness.
- Each Faculty signs off the assignments.

Students were given access to the assignments via the specific link on the Institute learning management system.

The Board of Examiners did not review or comment on the assignments.

Assignment Marking

The general framework used to mark assignments, grade candidates and determine passes is described as follows:

- Each question was marked only once, with the assignments being divided up among multiple markers. Different markers had different marking standards and pass criteria.

Course Leaders sample marked 5% of all assignments (or at least one assignment from each marker). Inconsistencies in marks for a candidate were to have been discussed by the relevant marker and the Course Leaders and resolved, before the results were forwarded to the Chief Examiner.

- Marks were not scaled to allow for the fact that some questions were more difficult than others.
- Each candidate was awarded a grade for each question of A, B, C, D or E, where A was regarded as a strong pass and B an ordinary pass.
- Candidates' results were based on total raw marks.

In Semester One 2011 assignments were submitted electronically. Markers were allocated candidate numbers and accessed and marked on-line. Feedback was also posted electronically by the markers and/or IAA. This enabled a faster turn around and delivery of feedback as once all assignments were marked, students could access their feedback immediately.

1.7 Module 4 CAP - The Case Study Process

The CAP course was developed and originally delivered for the Institute by the ANU but is now run directly by the Institute. The CAP team included David Service, Ken McLeod, Bruce Edwards, Richard Madden, Peter Martin, Colin Priest, Jill Green, Adam Butt and Aaron Bruhn. The team also developed the assessment materials for the course and did the marking.

The assessment method changed in Semester Two 2010 due to the restructure of the CAP course. There are still two assessment tasks, but they are now:

1. A post-course report assignment on one of the three non-traditional topics, distributed after the residential course. This semester one third of the students were randomly allocated to each non-traditional topic. It is worth 20% of the final mark.
2. An 8-hour case study report chosen by each student from among the 5 traditional topic areas, to be prepared under exam conditions but with use of a computer. This is worth 80% of the final mark.

The pass mark is 50%. Candidates who had passed part of the previous course were allowed to submit only the other equivalent part this semester.

There were 43 candidates repeating the CAP course this semester, 25 passed the course overall and 18 failed overall. Of the 18 failing candidates there are 3 who will now be on their 4th attempt, 4 on their 3rd attempt and 11 on their 2nd attempt.

It is not mandatory for failing candidates to re-attend the residential course.

The development and delivery of the course was overseen by a Faculty, consisting of Ken McLeod (Chair), David Service (Course Leader), Bruce Thomson (Chief Examiner), assisted by Matthew Ralph and other members of the Faculty.

1.8 Examination Dates

The Semester One 2011 Part III examinations were held on the following dates:

Course 1:	Investments	27th April 2011
Course 10:	Commercial Actuarial Practice	5th May 2011
Course 2A:	Life Insurance	28th April 2011
Course 2B:	Life Insurance	29th April 2011
Course 3A:	General Insurance	29th April 2011
Course 3B:	General Insurance	28th April 2011
Course 5A:	Investment Management & Finance	4th May 2011
Course 6B:	Global Retirement Income Systems	4th May 2011

1.9 Assignment Dates

The Semester One 2011 Part III assignments were due on the following dates:

23rd February (C1, 2A, 3A, 6A)

9th March (2B, 3B, 5B)

12th April (CAP - Post Course Assignment)

1.10 Examination Centres

Candidates, not including those sitting Course 7A, sat the exams in 7 centres in Australia and 13 centres overseas. Individual exam locations were arranged in Canada (1), China (1), France (1), Hong Kong (10), Indonesia (1), Jordan (1), Korea (1), Malaysia (7), New Zealand (10), Singapore (14), Thailand (1), and the United Kingdom (10). This table includes candidates who sat the CAP Exam.

Table 1: Candidates by Exam Centre – Semester One 2011

Location	Number of Candidates
Australia	366
Brisbane	5
Canberra	6
Melbourne	81
Sydney	267
Adelaide	1
Hobart	2
Perth	4
Overseas	58
Canada	1
China	1
France	1
Hong Kong	10
Indonesia	1
Jordan	1
Korea	1
Malaysia	7
New Zealand	10
Singapore	14
Thailand	1
United Kingdom	10
Total	424

1.11 Exam Candidature

Candidate Numbers

The number of candidates sitting the Part III exams in Semester One 2011 has decreased from Semester Two 2010. Once again there was a decrease in the number of candidates sitting course C1 (Investments) over the previous semester. Courses 2A, 2B (Life insurance), 3A, 3B (General Insurance) course 6A (Global Retirement Income Systems) and course 7A (Enterprise Risk Management) had slight increases in candidate numbers where the other courses 5B (Investment Management & Finance) and C10 (Commercial Actuarial Practice) had decreases in candidate numbers over Semester 2 2010.

Table 2: Candidate Numbers Sitting by Part III Courses

	Subject	2007(2)	2008(1)	2008(2)	2009(1)	2009(2)	2010(1)	2010(2)	2011 (1)
1	Investments	166	150	120	177	145	93	88	80
2A	Life Insurance	54	61	66	58	52	39	55	60
2B	Life Insurance	43	36	50	52	62	63	39	41
3A	General Insurance	82	69	51	65	57	76	66	72
3B	General Insurance	44	40	62	50	63	63	53	58
4A	Superannuation & Planned Savings	n/a ²³	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4B	Superannuation & Planned Savings	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5A	Investment Management & Finance ²⁴	n/a	35	n/a	n/a	46	n/a	38	n/a
5B	Investment Management & Finance ²⁵	44	n/a	35	44	n/a	34	n/a	16
6A	Global Retirement Income Systems ²⁶		19	n/a	14	n/a	16	n/a	18
6B	Global Retirement Income Systems ²⁷			18	n/a	19	n/a	13	n/a
7A	Enterprise Risk Management ²⁸						57 ²⁹	63 ³⁰	31
10	Commercial Actuarial Practice	70	83	87	74	92	97	102 ³²	79
	Total	519	493	489	534	536	538	517	424

Table 2A: Commercial Actuarial Practice

		2007(2)	2008(1)	2008(2)	2009(1)	2009(2)	2010(1)	2010(2)	2011 (1)
1 st Attempt	Full Course	47	63	46	49	61	64	66	36
Resit	Report and Exam	3	2	2	2	1	22	27	41
	Post Course Report	11	13	24	21	2	-	1	-
	Case Study Exam	6	5	15	2	28	11	8	2
	Total	70	83	87	74	92	97	102	79

Withdrawal Rates

In Semester One 2011, 545 candidates initially enrolled in courses, however 39 candidates subsequently withdrew from courses or did not present for the examination.

The number of candidates that enrolled for a course but withdrew prior to the examination was highest in absolute terms for C1 Investments (8 officially withdrew prior to the examinations and 3 did not present for the exam, out of 91 originally enrolled). 5B (Investment Management & Finance) had the highest rate of withdrawal at 16%. Compared to Semester 2 2010, the overall withdrawal rate decreased by 2%. The number of candidates being absent from the exam was less than half from the previous semester – there were 16 in Semester 2 2010. The withdrawal rates for all subjects were:

²³4A not run Semester 2 2007 and replaced by 6A from 2008.

²⁴5A only offered once each calendar year.

²⁵5B only offered once each calendar year.

²⁶ 6A GRIS introduced in Semester 1 2008 replacing 4A, and only offered once each calendar year.

²⁷ 6B GRIS introduced in Semester 2 2008 replacing 4B, and only offered once each calendar year.

²⁸7A Semester 1 2010 is the first time this course was run.

²⁹67 candidates, 10 Fellows, 57 non-Fellows

³⁰72 candidates, 9 Fellows, 63 non-Fellows

³¹ Results not yet known

³²This figure represents 101 students who sat the case study exam and 1 student who sat the post course report only.

Table 3: Withdrawal Rates by Part III Course – Semester One 2011

	Subject	Initially Enrolled	Withdrawn prior to Exam	Absent from exam	Total Withdrawing	Rate %
1	Investments	91	8	3	11	12
2A	Life Insurance	62	1	1	2	3
2B	Life Insurance	45	4	0	4	9
3A	General Insurance	76	4	0	4	5
3B	General Insurance	66	6	2	8	12
5B	Invest Management & Finance	19	2	1	3	16
6A	Global Retirement Income Systems	20	2	0	2	10
7A	Enterprise Risk Management					33
10	Commercial Actuarial Practice	79	0	0	0	0
	Total	458	27	7	34	7%

Candidate Mix

The mix of courses sat by candidates is broadly similar to that in previous years. The proportion for Investments continued to abate this semester. The new Part III structure being introduced from next year will allow candidates to choose a variety of different options to obtain Module One. This change is expected to directly affect the enrolment numbers for Investments in Semester 2 and into 2012.

The enrolments for Life Insurance have steadied over the semesters. The General Insurance enrolments have increased to 31%. The Global Retirement Income Systems course, which effectively replaced the Superannuation & Planned Savings course, increased to 4% this semester. The Investment Management and Finance enrolments decreased to 4% from previous semesters of 6% and 7%. The CAP (Commercial Actuarial Practice) course has decreased enrolment numbers by 3% however is comparable with previous semesters.

Table 4: Candidate Mix by Part III Course – Enrolments Semester Two 2010

	Subject	2007(2)	2008(1)	2008(2)	2009(1)	2009(2)	2010(1)	2010(2)	2011(1)
1	Investments	33%	32%	25%	33%	27%	17%	17%	19%
2	Life Insurance	19%	19%	24%	21%	21%	19%	18%	24%
3	General Insurance	24%	23%	23%	22%	22%	26%	23%	31%
4	Superannuation & P.S.	3%	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5	Investment Mgt & Finance	9%	8%	7%	8%	9%	6%	7%	4%
6	Global Retirement Income Systems		4%	4%	3%	4%	3%	2%	4%
7	Enterprise Risk Management	n/a	n/a	n/a	n/a	n/a	11%	14%	34
10	Comm. Actuarial Practice	12% ³⁵	16% ³⁶	18% ³⁷	14% ³⁸	17% ³⁹	18% ⁴⁰	19% ⁴¹	19% ⁴²
	Total	100%	100%	100%	100%	100%	100%	100%	100%

³³ Results not yet known

³⁴ Results not yet known

³⁵ Includes all CAP candidates enrolled including case study and or exam only -70

³⁶ Indicates all CAP candidates enrolled including case study and or exam only - 83

³⁷ Includes all CAP candidates enrolled including case study and or exam only - 87

³⁸ Includes all CAP candidates enrolled including case study and or exam only - 74

³⁹ Includes all CAP candidates enrolled including case study exam and post course report only - 92

⁴⁰ Includes all CAP candidates enrolled including case study exam and post course report only - 97

⁴¹ Includes all CAP candidates enrolled including case study exam and post course report only - 102

⁴² Includes all CAP candidates enrolled including exam only -79

2. Examination Papers and Assignments

2.1 Examination Structure

The structure of the examinations in Semester One 2011 was a single three-hour exam paper for Course 1 and Modules 2 & 3. The exams for Course 1, and Modules 2 & 3 were worth 85% of the final assessment.

For Modules 2-3, each course was assessed individually. That is, a candidate can choose to sit (and subsequently pass or fail) only Course A (relating to Module 2) or Course B (relating to Module 3) of the subject. This differs from 2004 and earlier exams where candidates sat for the entire course (both A and B parts). For the 2004 exams, candidates were awarded a transitional pass for a paper if they passed either Paper 1 (Course A) or Paper 2 (Course B).

For Module 4, Commercial Actuarial Practice, candidates sat an eight-hour case study exam paper on five traditional areas of actuarial practice, answering 1 out of 5 questions and worth 80% of the final assessment.

2.2 Assignment / Case Study Structure

The structure of the assignments in Semester One 2011 was one assignment for Course 1, and Modules 2 & 3, with the assignment worth 15% of the final assessment.

Module 4 (Course 10 – Commercial Actuarial Practice) included a post course report on one of the 3 non-traditional topics (Banking, Health, Environment), distributed after the residential course for completion within 2 weeks. This semester one third of the students were randomly allocated to each topic which was worth 20% of the final assessment.

2.3 Examination Standards

In Course 1, and Modules 2 & 3, there was a mix of questions covering three categories:

- applying bookwork to familiar and unfamiliar circumstances. This category is aimed at testing the candidates' knowledge and understanding (KU)
- problem solving requiring simple judgement (SJ)
- problem solving requiring complex judgement (CJ).

The questions aimed to cover the whole syllabus. In the case of Course 1 (Investments) the examination was based on the syllabus and a previously determined set of readings.

The standards to be achieved by candidates sitting each course, the principles on which papers are to be set and the marking procedures, are set out in the Guidelines to Examiners. To ensure the examination papers had proper balance, guidance as to the proportion of marks given to each category needed to be established. The standards of difficulty as determined by the Chief Examiners at the time they set the papers are set out below, with a comparison to the prior semester.

Table 5: Standards of Difficulty by Part III Course

		Knowledge & Understanding		Simple Judgement		Complex Judgement	
	Subject	2010 (2)	2011(1)	2010 (2)	2011(1)	2010 (2)	2011 (1)
1	Investments	17%	21.5%	41%	32.5%	42%	46%
2A	Life Insurance	20%	21%	43%	39%	37%	40%
2B	Life Insurance	21%	20%	40%	43%	39%	37%
3A	General Insurance	22%	19%	40%	40%	38%	41%
3B	General Insurance	17%	20%	38%	39%	45%	41%
5A	Invest. Management & Finance	13%	n/a	42%	n/a	45%	n/a
5B	Invest. Management & Finance	n/a	21%	n/a	42%	n/a	37%
6A	Global Retirement Income Systems	n/a	21.5%	n/a	41%	n/a	37.5%
6B	Global Retirement Income System	15%	n/a	43%	n/a	42%	n/a
	Targets	15% - 25%		35% - 45%		35% - 45%	

The examination papers were broadly similar in standard of difficulty to prior periods.

Copies of the examination papers have not been included within this report in the interests of space. They are available from the Institute if required. Detailed comments on the quality of candidates' answers to the exam questions are contained in each Chief Examiner's report.

2.4 Assignment Standards

The setting of standards for the assignments used the same approach as for the examinations, that is, questions were set covering the following three categories:

- applying bookwork to familiar and unfamiliar circumstances. This category is aimed at testing the candidates' knowledge and understanding (KU)
- problem solving requiring simple judgement (SJ)
- problem solving requiring complex judgement (CJ).

Whilst the target weighting of each category for the exams was essentially 20% KU / 40% SJ / 40% CJ, the target weighting for the assignments was 40% KU / 40% SJ / 20% CJ. With the introduction of assessable assignments the exam is only worth 85% of the final assessment from 2007. This means that a higher component of the assessment is KU ("bookwork") and a lower proportion of the assessment is CJ ("complex judgement"), under the new system, compared with 2004 and earlier.

Although the target weightings of the assignments for each subject were 40%/40%/20% the Board of Examiners was not informed of the actual weightings of any of the assignments. Copies of the assignments were not supplied to the Board of Examiners, but should be available from the Institute if required.

2.5 Security of Examination Papers

With the use of modern technology the security of Examination papers has significantly improved. All scripts are scanned into an internal installation of the Institute's Learning Management System and made available to markers and examiners. Overseas supervisors were required to photocopy papers before sending them by courier to the Institute office and secure couriers were used to transport papers. The only challenge this presents is the time it takes to scan all the scripts following the examinations.

2.6 *Security of Assignments*

In Semester One 2011 the markers accessed and loaded comments via the on-line learning management system (LMS). This enabled students to receive feedback in a timelier manner than previous semesters.

For all results, spreadsheets were sent directly to either and the IAA and/or the Course Leader.

3. Results

3.1 Pass Standards

The standards for determining whether a candidate should be granted the status of Fellow of the Institute of Actuaries of Australia are based on whether an individual demonstrates core capabilities required for an actuary practicing professionally in their specialty area(s). Candidates are required to demonstrate:

- a strong knowledge of the nature, operations, legislation and current issues of the selected practice area(s)
- a detailed knowledge and understanding of the application of actuarial concepts and skills to the chosen practice area(s)
- an ability to apply judgement to solve problems in the chosen practice area(s) that may be characterised by complexity, varying degrees of clarity of definition and novel or unseen circumstances.

A candidate is not expected to demonstrate these capabilities at the level of an experienced and skilled practitioner. It is unreasonable to expect candidates to demonstrate the degree of understanding of an actuary of some year's experience. Rather, the benchmark is whether the candidate is proficient to commence practicing professionally in their specialty area(s). Provided the candidate shows a grasp of the main principles, a pass should be awarded. Conversely, a candidate who demonstrates dangerous misconceptions or misapplication of concepts or ideas is viewed more seriously than a candidate who shows a simple lack of knowledge.

The Chief Examiners in the Part III Courses place greater emphasis on the questions that require the candidate to demonstrate the ability to apply bookwork to specific situations and show judgement to solve problems. When grading borderline candidates, their ability to do well in such questions has a greater bearing on whether they pass or fail. The Chief Examiners however, are very conscious of the fact that it is unreasonable to expect candidates to demonstrate the degree of understanding of an actuary with years of experience. In addition, actuaries are expected to be able to demonstrate their skills to those outside the profession. Candidates are expected to be able to communicate clearly and may be penalised if their answers are not clearly expressed.

For Course 7A, passes are approved by the Board of Examiners for the Institute and Faculty of Actuaries in the UK.

3.2 Candidates' Results

Candidates' results in each subject and at each level are set out in the attachments to each Chief Examiner's report. In summary the results are:

Table 6: Recommended Candidate Passes by Part III Course

	Subject	2007(2)	2008(1)	2008(2)	2009(1)	2009(2)	2010(1)	2010(2)	2011(1)
1	Investments	69	59	61	86	43	33	27	26
2A	Life Insurance	21	21	32	23	31	11	17	18
2B	Life Insurance	14	14	21	20	24	28	16	16
3A	General Insurance	17	36	21	24	17	28	24	24
3B	General Insurance	21	16	23	16	18	22	21	20
4A	Superannuation & P.S.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4B	Superannuation & P.S.	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5A	Invest. Mngmt & Finance	n/a	17	n/a	n/a	17	n/a	20	n/a
5B	Invest. Mngmt & Finance	15	n/a	11	22	n/a	19	n/a	6
6A	Global Retirement Income Systems	n/a	11	n/a	5	n/a	4	n/a	9
6B	Global Retirement Income Systems	n/a	n/a	10	n/a	10	n/a	7	n/a
7A	Enterprise Risk Management	n/a	n/a	n/a	n/a	n/a	11 ⁴³	22 ⁴⁴	4 ⁴⁵
10	Comm. Actuarial Practice	47 ⁴⁶	41 ⁴⁷	62 ⁴⁸	41 ⁴⁹	55 ⁵⁰	57 ⁵¹	56 ⁵²	47 ⁵³
	Total	211	215	241	237	215	213	210	166

⁴³ 11 Non fellows and a further 6 Fellows passes

⁴⁴ 22 Non fellows and a further 8 Fellows passes

⁴⁵ Results not yet known

⁴⁶ 70 candidates, 47 passes in the course (including case study and/or exam)

⁴⁷ 83 candidates, 41 passes in the course (including case study and/or exam)

⁴⁸ 87 candidates, 62 passes in the course (including case study and/or exam)

⁴⁹ 74 candidates, 41 passes in the course (including case study and/or exam)

⁵⁰ 92 candidates, 55 passes in the course (including post course report and/or exam)

⁵¹ 97 candidates, 57 passes in the course (including post course report and/or exam)

⁵² 102 candidates, 56 passes in the course (including post course report and/or exam)

⁵³ 79 candidates, 47 passes in the course (including case study exam only)

Table 7: Recommended Pass Rates by Part III Course

	Subject	2007(2)	2008(1)	2008(2)	2009(1)	2009(2)	2010(1)	2010(2)	2011(1)
1	Investments	42%	39%	51%	49%	30%	35%	31%	33%
2A	Life Insurance	39%	34%	48%	40%	60%	28%	31%	30%
2B	Life Insurance	33%	39%	42%	38%	39%	44%	41%	39%
3A	General Insurance	21%	52%	41%	37%	30%	37%	36%	33%
3B	General Insurance	48%	40%	37%	32%	29%	35%	40%	34%
4A	Superannuation & P. S.	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4B	Superannuation & P. S.	44%	n/a	n/a	n/a	n/a	n/a	n/a	n/a
5A	Invest. Mngmt & Finance	n/a	49%	n/a	n/a	37%	n/a	53%	n/a
5B	Invest. Mngmt & Finance	34%	n/a	31%	50%	n/a	56%	n/a	38%
6A	GRIS	n/a	58% ⁵⁴	n/a	36%	n/a	25%	n/a	50%
6B	GRIS	n/a	n/a	56% ⁵⁵	n/a	53%	n/a	54%	n/a
7A	ERM	n/a	n/a	n/a	n/a	n/a	19%	34%	⁵⁶
10	CAP	67%	49%	71%	55%	60%	59%	55%	59%
	Total	41%⁵⁷	44%⁵⁸	49%⁵⁹	44%⁶⁰	40%⁶¹	40%⁶²	41%⁶³	39%⁶⁴

The Chief Examiners aim to produce a consistent standard of passing candidates, rather than a consistent pass rate from year to year. This semester, the recommended overall pass rate of 39% is slightly lower than the level achieved in the past several semesters. Excluding the CAP results the overall pass rate would have been 34%.

The pass rate for Course 10, Commercial Actuarial Practice (CAP), of 59% overall was significantly higher than the average pass rate for Course 1 and Modules 2 & 3 of 34%. We believe that this is due to the following factors:

- CAP is a fundamentally different subject to those in Course 1 and Modules 2 & 3. It is undertaken as a four day taught residential course, rather than as distance education, and has two assessment pieces, that is, the post course assignment and the case study examination.
- CAP is undertaken by more experienced candidates that are generally closer to final qualification. These candidates would be expected to achieve a higher pass rate than the average rate across all candidates.
- Where the initial mark for an assessment piece was above 40% and below 60% it was double marked. Candidates remaining in the borderline area are then reviewed by the CAP Chief Examiner. To ensure consistency across the different subjects, one of the markers was the second marker for all case study exams and post course reports.
- CAP is compulsory to all Part III students. Any fundamental differences between CAP and Course 1 and Modules 2 & 3 will impact equally on all students.

The Board agreed that the standard applied to marking the exams for all subjects was ultimately the same as in previous years.

⁵⁴ 6A GRIS –new course Semester 1 2008

⁵⁵ 6B GRIS –new course Semester 2 2008

⁵⁶ Results not yet known

⁵⁷ Based on CAP results of 70 candidates, 47 passes in the course (including case study and/or exam) = 67%

⁵⁸ Based on CAP results of 83 candidates, 41 passes in the course (including case study and/or exam) = 49%

⁵⁹ Based on CAP results of 87 candidates, 62 passes in the course (including case study and/or exam) = 54%

⁶⁰ Based on CAP results of 74 candidates, 41 passes in the course (including case study and /or exam) = 55%

⁶¹ Based on CAP results of 92 candidates, 55 passes in the course (including post course report and exam) = 60%

⁶² Based on CAP results of 97 candidates, 57 passes in the course (including post course report and exam) = 59%

⁶³ Based on CAP results of 102 candidates, 56 passes in the course (including post course report and exam) = 59%

⁶⁴ Based on CAP results of 79 candidates, 47 passes in the course (including post course report and exam) = 59%

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Further detail on the deliberations of each Chief Examiner is contained in their individual reports. I am satisfied that the processes adopted in the marking of papers and grading of exam papers have been fair and robust. The single marking of assignments may have led to some discrepancies among candidates, though due to the relatively few candidates whose results were changed by their assignment result (partly as a result of the reduced weighting given to assessments), this would not have had a big impact overall. Every effort has been made to ensure consistency between years and between subjects.

3.3 Pass Rates by Centre

The pass rates by exam centre, excluding course 7A, were as follows:

Table 8: Comparison of Pass Rates by Centre

	2007 (2)	2008 (1)	2008 (2)	2009 (1)	2009 (2)	2010 (1)	2010 (2)	2011 (1)
Sydney	45%	47%	55%	50%	39%	39%	43%	37%
Melbourne	44%	50%	45%	44%	45%	57%	43%	32%
Other Australian			61%	55%	67%	40%	28%	61%
Overseas			40%	41%	37%	37%	35%	36%
Other Australian & Overseas	29%	43%	44%	43%	41%	38%	33%	42%
Total	41%⁶⁵	47%⁶⁶	51%⁶⁷	48%⁶⁸	40%⁶⁹	42%⁷⁰	41%⁷¹	39%⁷²

I have examined the pass rates by specialist subject and examination centre. This analysis revealed a number of interesting features, including:

- The overall pass rate for all other Australian (non-Sydney/Melbourne) examination centres is significantly higher than the overall pass rate for the Sydney/Melbourne examination centres
- The pass rate in Sydney, the largest centre with 63% of all candidates, was 37% this semester.
- In Malaysia only 1 candidate from 7 attempts passed (14%).

3.4 Pass Marks and Scaling

The scaled pass marks since 2008 Semesters Two, out of 200 marks have been as follows:

⁶⁵ Number incorporates only 57 CAP students sitting the exam out of a total of 70 candidates

⁶⁶ Number incorporates only 70 CAP students sitting the exam out of a total of 83 candidates

⁶⁷ Number incorporates only 63 CAP students sitting the exam out of a total of 87 candidates

⁶⁸ Number incorporates only 52 CAP students sitting the exam out of a total of 74 candidates

⁶⁹ Number incorporates 90 CAP students sitting the exam and 2 sitting the post course report out of a total 92 candidates

⁷⁰ Number incorporates 97 CAP students sitting the exam

⁷¹ Number incorporates 101 CAP students sitting the exam

⁷² Number incorporates 79 CAP students sitting the exam

Table 9: Scaled Pass Marks by Part III Course

	Subject	2008(1)	2008(2)	2009(1)	2009(2)	2010(1)	2010 (2)	2011(1)
1	Investments	100	100	100	120	120	120	120
2A	Life Insurance	123	123	120	120	120	120	112
2B	Life Insurance	110	117	121.5	120	120	120	120
3A	General Insurance	115	120	115	120	120	120	120 ⁷³
3B	General Insurance	120	120	120	120	120	120	120
5A	Invest. Mngmt & Finance	120	n/a	n/a	120	n/a	120	n/a
5B	Invest. Mngmt & Finance	n/a	120	100	n/a	127.5	n/a	120
6A	Global Retirement Income Systems	120	n/a	120	n/a	120	n/a	120
6B	Global Retirement Income Systems	n/a	115	n/a	120	n/a	120	n/a
10	Comm. Actuarial Practice ⁷⁴	50-50	50-50	50-50	50-50	50-50	50-50	50-50

The relationship between scaled and raw marks for 2011 Semester One was:

Table 10: Raw and Scaled Pass Marks by Part III Subject

	Subject	Raw	Scaled
1	Investments	86.0	120
2A	Life Insurance	89	112
2B	Life Insurance	109	120
3A	General Insurance	109.8 ⁷⁵	120 ⁷⁶
3B	General Insurance	101.7	120
5B	Investment Management and Finance	99.6	120
6A	Global Retirement Income Systems	106.5	120

Consistent pass criteria have been used for all subjects whilst allowing for Chief Examiner judgement and discretion. The criteria are:

- the scaled mark
- number of questions passed being "at least 50% of questions" e.g. pass 3 from 6 questions; pass 4 from 7 questions or pass 3 from 5 questions.
- no more than 1D and no E grades.
- borderline candidates are to be assessed carefully, with the examiners re-marking their papers, as in previous years.
- assignments were included in the assessment process, being weighted at 15% of the overall assessment.

This semester the range of scaled marks was consistent for all subjects except Subject 2A which was revised to take account of a particularly difficult exam and Subject 3A where it was reduced for Sydney candidates due to special consideration. The range of scaled marks in Semester Two 2010 was consistent for all subjects.

It should be noted that, as discussed above, the scaled mark was not the sole factor used to determine whether a candidate passed or did not pass.

3.5 Fellows

There are two ways in which candidates can qualify as Fellows.

⁷³ Note that this was 108 for candidates in Sydney due to Special Consideration

⁷⁴ For CAP, the case study and the exam each had a pass mark of 50%.

⁷⁵ Due to special consideration, the raw marks for Sydney students was 100.6

⁷⁶ Due to special consideration, the raw marks for Sydney students was 108

- (iii) Candidates must pass one elective in Module 1 (C1 Investments or the newly introduced 7A Enterprise Risk Management & the Investments Bridging Course), one full specialist subject (Modules 2 and 3) and Module 4 (Commercial Actuarial Practice).
- (iv) Candidates in transition (ie. those who have completed at least one paper of a pre-2005 subject) must have passed three Modules by the end of 2006 and Module 4 (Commercial Actuarial Practice), providing that the equivalent of Modules 2 and 3 in one specialist area have been completed.

If the Council adopts the recommended passes, the number of members that will be made Fellows (subject to attendance at a Professionalism Course and paying any relevant exemptions) will be:

Category	2011 (1)	2010(2)	2010(1)	2009(2)	2009(1)	2008(2)	2008(1)
New Fellows	40⁷⁷	40⁷⁸	51⁷⁹	51	34⁸⁰	71⁸¹	37⁸²

⁷⁷ 43 candidates completed all of the Part III Exams in semester one 2011, 2 of which are required to complete the Investments Bridging Course to become Fellows. Of these two, 1 has a pending result for 7A. 1 candidate has a pending result for CT7. Of the 40 eligible candidates, 11 have already completed the Professionalism Course.

⁷⁸ 42 candidates completed all of the Part III Exams in semester two 2010 2 of which are required to complete the Investments Bridging Course to become Fellows. Of the 40 eligible candidates, 5 have already completed the Professionalism Course.

⁷⁹ 53 candidates completed all the Part III exams in semester one 2010 but 2 of these candidates have not completed Part I.

⁸⁰ 35 candidates completed all the Part III exams in semester one 2009 but one of these candidates has a result pending for their last Part I exam. This candidate successfully completed their last Part I exam, after two subsequent attempts in semester 1 2010.

⁸¹ 72 candidates completed all the Part III exams in semester two 2008 but one of these candidates had not completed Part II. This candidate subsequently had their university confirm their performance in Part II and paid for their exemption in 2009.

⁸² 38 candidates completed all the Part III exams in semester one 2008 but one of these candidates had not completed all Part I exams. This candidate completed their last Part I exams in September 2008.

Course 1 Investments

Examination Report Semester 1 2011

1. Summary

1.1. Pass Rates

83 candidates enrolled for the Semester 1 2011 exam. Of these 3 did not present at the exam. The assessment comprised one assignment worth 15% and an exam worth the remaining 85%.

It is proposed that 26 candidates be awarded a pass, which implies a pass rate of 32.5%. This compares with the following historical pass rates for this subject:

Table 1 – Course Experience

Semester	Sat	Passed	Pass Rate
2010 Semester 2	88	27	31%
2010 Semester 1	93	33	35%
2009 Semester 2	145	43	30%
2009 Semester 1	177	86	49%
2008 Semester 2	120	61	51%
2008 Semester 1	150	59	39%

1.2. Candidate Numbers

The Candidate numbers can be summarised as follows:

Table 2 – Candidate Numbers

	Number of candidates
Originally enrolled	91
Withdrawn prior to exam	8
Absent from exam	3
Presented at exam	80
Passed	26
Failed	54

The analysis by examination centre is as follows:

Table 3 – Analysis by Examination Centre

Centre	Presented	Passed	Pass Rate
Sydney	44	15	34.1%
Melbourne	16	5	31.3%
Canberra	1	0	0.0%
Brisbane	1	1	100.0%
Hobart	1	0	0.0%
Perth	3	1	33.3%
Subtotal Australia	66	22	33.3%
London	4	1	25.0%
Singapore	4	3	75.0%
York	1	0	0.0%
Auckland	2	0	0.0%
Hong Kong	1	0	0.0%
Kuala Lumpur	2	0	0.0%
Subtotal International	14	4	28.6%
Total	80	26	32.5%

2. Examination Administration

2.1. Degree of Difficulty and Course Coverage

The following tables show the distribution of questions and marks by level of difficulty and course coverage:

Table 5 – Degree of Difficulty of Exam

Question	Syllabus Performance Outcome	Units	Knowledge & Understanding	Straight-forward Judgement	Complex Judgement	Total Marks
Q1(a)	1.1	1	2			2
Q1(b)	1.1, 2.1	1		3		3
Q1(c)	1.1, 4.6	1, 2			7	7
Q1(d)	2.1	1		2		2
Q1(e)	2.1	1			4	4
Q2(a)	4.1	2		4		4
Q2(b)	4.2	2	3			3
Q2(c)	4.3, 4.4	2			6	6
Q2(d)	4.6	2			7	7
Q2(e)	2.1	1		2		2
Q3(a)	4.7, 5.1	2,3	3	3	2	8
Q3(b)	5.1 to 5.5	3	3	5	4	12
Q4(a)	3.1	1	2	1		3
Q4(b)	5.5	3	3	2	4	9
Q4(c)	5.5	3	2	2		4
Q4(d)	1.1	1	1	2	1	4
Q5(a)	1.1	1	2.5	1.5		4
Q5(b)	5.5	3		4	2	6
Q5(c)	5.3 to 5.5	3			5	5
Q5(d)	5.1 to 5.5	3		1	4	5
Total			21.5	32.5	46	100

2.2. Overall Performance

The exam paper proved to be a very good discriminator of student understanding and ability to apply judgement. The range of marks scored, as shown in the appendices, demonstrates this.

The examiners felt that this year's exam would provide a suitable level of challenge to the candidates. A very detailed marking guide was prepared for the markers which meant that some candidates showed understanding but did not pick up as many marks as they may have thought they would. This fact was taken into account by the examiners in adjusting the cut-off points for the letter grades awarded to each question.

Candidates clearly found Q1 very challenging. Question 2 proved to be a good discriminator. Question 3 was difficult but there were a number of good attempts. Questions 4 and 5 were of moderate difficulty and were handled well by about half of the candidates.

2.3. Exam Question by Question Analysis

Question 1

	Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass (A)	11.0	61.1%	0	0
Pass (B)	6.0	33.3%	4	5.0%
Slightly Below Standard (C)	5.0	27.8%	17	21.3%
Weak (D)	3.0	16.7%	42	52.5%
Showed Little Knowledge (E)	0.5	2.8%	17	21.3%
Did Not Attempt (X)	0.0	0.0%	0	0.0%
Maximum Mark	7.0			
Average Mark	3.8			
Standard Deviation	1.3			
Coefficient of Variation	0.34			

Parts (a) and (b) were well answered reflecting the bookwork nature of these parts. Parts (c) and (e) proved very challenging for students and caused the low pass mark on this question. Part (d) was reasonably handled.

Question 2

	Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass (A)	14.0	63.6%	9	11.3%
Pass (B)	10.5	47.7%	39	48.8%
Slightly Below Standard (C)	9.0	40.9%	14	17.5%
Weak (D)	7.0	31.8%	12	15.0%
Showed Little Knowledge (E)	0.5	2.3%	6	7.5%
Did Not Attempt (X)	0.0	0.0%	0	0.0%
Maximum Mark	16.5			
Average Mark	10.7			
Standard Deviation	2.70			
Coefficient of Variation	0.25			

a) Most students got one mark for the objective but not the second mark. Apart from mentioning the point, few (if any) discussed it to the point where we felt they deserved the 2nd mark. Most candidates did quite well on the constraints, naming at least one if not two. We ended up giving marks for constraints that were not listed in the model solution such as legislation.

b) Again, most candidates did reasonably well on the level of physical production and/or the use of derivatives. Fewer got the point that price was a control and even less that exploration was a control.

c) The responses were reasonable. Weakest points were jump processes for prices and conditioning of modeling variables.

- d) Very few candidates got the point for the optionality of mineral resources and even fewer got points for leverage.
- e) More candidates got the mark for insider information than for monopoly power.

Question 3

	Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass (A)	10.0	50.0%	3	3.8%
Pass (B)	7.0	35.0%	19	23.8%
Slightly Below Standard (C)	5.5	27.5%	31	38.8%
Weak (D)	3.5	17.5%	17	21.3%
Showed Little Knowledge (E)	0.5	2.5%	10	12.5%
Did Not Attempt (X)	0.0	0.0%	0	0.0%
Maximum Mark	11.0			
Average Mark	5.9			
Standard Deviation	2.12			
Coefficient of Variation	0.35			

The markers felt the question was not well answered. Perhaps there were fewer strong candidates than usual.

One of the things tested by the question was the students' knowledge of various asset classes, both Australian and ex Australian/Global and being able to compare them.

Obviously much more could be said about the Australian assets particularly in part (a) where most candidates could probably say is that the ex-Australian markets are much more diverse.

However we did not get this focus on treating the unique features of the Australia assets and the marks for this knowledge were largely missed, possibly in (a) because the students did not know much about the asset classes, while in (b) its possible technique or time pressure had an effect.

On ex-Australian markets we would get comments about diversification and better returns from investment in Emerging Economies (though their infrastructure and REIT markets remain fairly limited).

a) Apart from the diversification word not much more was said of relevance.

Only a few students made the point about Australian REITs being concentrated. Mostly what they said was that the Australian market was small (untrue). No candidates mentioned deferred income as a tax advantage of AREITs (the best we had was a student who said you didn't have the advantage of imputation credits). The specific structure of a REIT did not appear either. The discussion was often about property or real estate rather than REITs. Many candidates tried to make points from property having performed much better or worse in Australia than overseas and that this represented an opportunity or otherwise. Some talked

about property still being massively overvalued (maybe confusion with residential real estate?).

The students often spent time in describing the features of infrastructure making points about regular cash flows, matching liabilities, advantages of a monopoly (always an advantage, never talk of regulatory risk!) and getting few if any marks for this verbiage. (Not to mention a number discussing the floods and earthquakes as positive for infrastructure opportunities!) Only a couple attempted comparison with REITs.

For (iii) other, the main point for which marks were received was hedging. None of the overlaps were mentioned. It was also very hard to award anything for manager mandate, a lot of students talked about rationalising number of managers, but no more.

Knowing the marks available for each part might have helped here: We think the students felt this was a minor part of the question.

b)(i) & (ii)

These two questions were related to each other. Maybe a quarter of students handled them as one and may have lost a 1/2 mark or so by not addressing both questions.

For (i) sources of cash include withdrawals/redemptions, investment income, asset sales/maturities, contributions (rarely seen), mostly we'd just get one of items.

For (ii) as you'd expect most had liability management point and not the risk management point.

(iii) & (iv)

The question asked for arguments For and Against for each Option. A few candidates simplified by looking at the features of each asset class firstly, perhaps for reasons of time. Their scores may not have been better but they were focusing on the right things and could score marks with less writing.

With 4 options to be considered often with similar points under each option the answers were often weakly presented. Answers tended to be too brief on the key points, little more than just the phrases "More Diversification", "Sovereign Risk", "Higher Liquidity". A factor in this was that there was also always a lot of other stuff students felt they had to cover: hedging, administration cost, etc. It would have been so much easier for students to have just mentioned hedging considerations as an Other point, though can see how the students felt they needed to discuss it in detail for each option.

Interest Rate Cycle: many students pointed out Australian rates currently higher than US & European, but usually didn't tie to the stage in economic cycle.

Increases in Issuance: Many comments about credit risk, very brief in general, might just say Australia low risk or talk about sovereign credit risk, the point about increases in issuance was never made, but occasionally mention of their budget deficits.

Lesser depth of Australian government market: Very Rarely. (Possibly an issue of exam technique here.)

Structural Features of Australian credit markets: Very Rarely

Diversification vs. Opportunity Set: We often saw the diversification point, but not much explanation.

Each Option: Yes, usually each option was covered because of For and Against structure, but Option 3 and 4 often treated same.

Question 4

	Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass (A)	11.0	55.0%	3	3.8%
Pass (B)	8.0	40.0%	35	43.8%
Slightly Below Standard (C)	6.0	30.0%	24	30.0%
Weak (D)	4.0	20.0%	11	13.8%
Showed Little Knowledge (E)	0.5	2.5%	5	6.3%
Did Not Attempt (X)	0.0	0.0%	2	2.5%
Maximum Mark	13.3			
Average Mark	7.5			
Standard Deviation	2.57			
Coefficient of Variation	0.34			

Part (a)

- Most candidates understood that share price index futures had to be used to lock in the return linked to the market and the amount that had to be hedged.
- The better candidates that scored well understood the exact nature of the transaction, how executed and amounts involved.
- A few candidates confused the use of futures with making gain/losses from market movements when the objective was to use futures to eliminate the impact of market movements.
- Overall, most candidates scored reasonably well on this question.

Part (b)

- This, along with (c) was the most difficult part of the question.
- Very few candidates were able to identify that the value of the subsidiary could be different depending whether from the perspective of buyer/seller or on the risks that the subsidiary might not be sold.
- Some candidates identified using options as an alternative but did not score any marks as this comment should be in (c).
- Generally, most candidates able to identify some shortcomings in relation to basis risk, partial hedge and/or applicability of formulae over 12 months.
- Quality of discussion for this question was generally quite poor.

Part (c)

- Not so well answered.
- Most candidates had some idea that other risks (inflation and interest rate risk) could be hedged but the difficulty came with explaining how this might

- be hedged.
- Very few candidates identified that hedging inflation in the short term could also be used as a proxy to hedging interest rate risk in the short term.
- Very few candidates identified the types of derivative that would be used (short dated exchange traded derivatives) and that they would have to be rolled over.
- Some candidates identified that options could be used instead of futures and credit was given for options on companies in the branded goods sector.

Part (d)

- This was the part of the question where most candidates scored well.
- Most were able to identify what could be done with the proceeds of the sale (retain within the company or distribute to shareholders).
- Most answers were ok regarding the explanation of factors they would consider were the company to retain funds within the company.
- Strong candidates were able to identify and discuss tax issues to consider on the basis of receiving a distribution and/or there being a buyback.

Overall

- Would consider this question as being an above average level of difficulty. Part (b) and (c) were what caught out most candidates.
- Also, the worked solution in (a) regarding how much exposure to hedge (last part of the question) is shown as being V_0 incorrectly and should be $50\% * V_0$.

Question 5

	Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass (A)	11.0	55.0%	3	3.8%
Pass (B)	7.0	35.0%	36	45.0%
Slightly Below Standard (C)	6.0	30.0%	13	16.3%
Weak (D)	4.0	20.0%	20	25.0%
Showed Little Knowledge (E)	0.5	2.5%	7	8.8%
Did Not Attempt (X)	0.0	0.0%	1	1.3%
Maximum Mark	14.3			
Average Mark	6.9			
Standard Deviation	2.47			
Coefficient of Variation	0.36			

Overall

The answers to this question were of a poor quality in general, whether this was the result of candidates running into time pressure in the final question, or from over-interpreting the question beyond the obvious and straightforward answers. The worst aspect coming out of the answers were a general inability by the candidates to discern between key issues and trivialities. Many answers, while absolutely true on face value, fails to demonstrate any insight into what is actually important.

Part (a)

The ramifications of a rights issue should be very straightforward; the obvious points have to include the impact on leverage (as it is a capital raising) and the dilutionary impact of issuing more shares, and that the projects can be fully funded so no future raisings would be required. Weaker answers skirted around more peripheral issues.

Part (b)

Generally well answered as long as candidates did not confuse the very distinct types of risk (operational risks were often confused with market risks). Simple and obvious points provided easy marks.

Part (c)

This question caused almost all candidates problems. The question asked how equity capital would be best allocated among the projects. Many candidates interpreted this as "how the money should be spent on the projects". Actuaries need to demonstrate an understanding of the connection between capital requirements and risk; clearly capital should be allocated to projects with the highest risk. Clearly this will require modeling of some form. Very few candidates understood the key point of this question.

Part (d)

Candidates similarly struggled with this question; the question clearly states "do not include measures such as annual returns or volatility" and yet there were many answers with variations there-of. The key concerns here involve the operational issues. For executives managing a power asset, clearly a key remuneration metric must include how well they perform in managing the operational aspects of the asset.

Course 2A Life Insurance

Examination Report Semester 1 2011

1. Summary

1.1. Pass Rates

62 Candidates enrolled for the Semester 1 2011 Course 2A Life Insurance exam. Of these, there was 1 withdrawal and 1 candidate did not present at the exam. The assessment comprised one assignment worth 15% and an exam worth the remaining 85%.

It is proposed that 18 Candidates be awarded a pass, which implies a pass rate of 30%. This compares with the following historical pass rates for this subject:

Table 1 – Course Experience

Semester	Pass Rate
2010 Semester 2	31%
2010 Semester 1	28%
2009 Semester 2	60%
2009 Semester 1	40%
2008 Semester 2	48%
2008 Semester 1	33%

The 30% recommend pass rate is marginally lower than the previous exam.

1.2. Candidate Numbers

The Candidate numbers can be summarised as follows:

Table 2 – Candidate Numbers

	Number of candidates
Originally enrolled	62
Withdrawn prior to exam	1
Absent from exam	1
Presented at exam	60
Passed	18
Failed	42

The analysis by examination centre is as follows:

Table 3 – Analysis by Examination Centre

Centre	Presented	Passed	Pass Rate
Sydney	35	6	17%
Melbourne	14	4	21%
Brisbane	1	1	100%
Subtotal Australia	50	11	22%
Auckland	2	2	100%
Bangkok	1	0	0%
Beijing	1	0	0%
Hong Kong	2	2	100%
Kuala Lumpur	1	0	0%
Paris	1	1	100%
Singapore	2	2	100%
Subtotal International	10	7	70%
Total	60	18	30%

2. Examination Papers and Assignments

2.1. Degree of Difficulty and Course Coverage

The following tables show the distribution of questions and marks by level of difficulty and course coverage:

Table 5 – Degree of Difficulty of Exam

Question	Syllabus Performance Outcome	Units	Knowledge & Understanding	Straight-forward Judgement	Complex Judgement	Total Marks
1 (a)	1, 2	1	3			3
1 (b)	1, 2	1,2	4	4		8
1 (c)	1, 2	2				3
1 (d)	1, 9	2	4			4
2 (a)	14.2	4		7		7
2 (b)	14.1	4		5		5
2 (c)	5.2,5.3	2		5		5
2 (d)	5.1.7.1	2			5	5
3 (a)	14.1	4	3			3
3 (b)	8.1,8.3	3		6		6
3 (c)	2.4, 8.3	1,3			5	5
3 (d)	5.3	2		5		5
3 (e)	5.4	2			6	6
4 (a)	2.2,8.3,10.1	1,3			5	5
4 (b)	2.3,9.1,10.2	1,3			8	8
4 (c)	2.4	1			4	4
5 (a)	11.1	3	3			3
5 (b)	15.1,15.2	5		7		7
5 (c)	16.1	5			4	4
5 (d)	1.1,1.2	1	4			4
Total			21	39	40	100

Table 6 - Course Coverage by Question

Question	Units	Knowledge & Understanding	Straight-forward Judgement	Complex Judgement	Total Marks
1	1,2	11	4	3	18
2	2,4	0	17	5	22
3	1,2,3,4	3	11	11	25
4	1,3	0	0	17	17
5	1,3,5	7	7	4	18
Total		21	39	40	100

2.2. Overall Performance

The Chief Examiner sets out to test students in aspects of the course that are likely to be a part of their activities as a pricing actuary operating in Australia and internationally.

This led to an exam with low marks as the questions were in retrospect too challenging and the assessment of simple judgement was actually perceived as complex by the candidates under exam conditions.

The multiple part questions assisted in the separation of Knowledge and Understanding from judgement but the students missed easy marks.

2.3. Exam Question by Question Analysis

Question 1 total available marks 36

	Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass (A)	23.0	63.9	3	4.9%
Pass (B)	18.0	50.0	16	26.2%
Slightly Below Standard (C)	12.0	33.3	29	47.5%
Weak (D)	8.0	22.2	9	14.8%
Showed Little Knowledge (E)	1.0	2.8	3	4.9%
Did Not Attempt (X)	0.0	0.0	<u>1</u>	1.6%
Maximum Mark	24			
Average Mark	14.6			
Standard Deviation	4.5			
Coefficient of Variation	0.308			

The pass rate for this question was consistent with the overall pass rate but it was expected in drafting the exam that this should have been a relatively easy question as there was a reading that if well understood should have resulted in most candidates obtaining a pass. The issues around a single price for property unit linked funds were not well understood.

Question 2 total available marks 44

	Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass (A)	23.0	52.3	2	3.3%
Pass (B)	20.5	46.6	10	16.4%
Slightly Below Standard (C)	16.0	36.4	27	44.3%
Weak (D)	11.0	25.0	16	26.2%
Showed Little Knowledge (E)	1.0	2.3	5	8.2%
Did Not Attempt (X)	0.0	0.0	<u>1</u>	1.6%
Maximum Mark	24.5			
Average Mark	16.3			
Standard Deviation	4.5			
Coefficient of Variation	0.276			

The pass rate was lower than the overall pass rate. I was looking for candidates to understand the output of a profit test and critically assess what it really was telling them. Unfortunately under exam conditions many candidates failed to comment on basic issues with the pricing of this simple product. Candidates also failed to see some important risk aspects within the product design.

Question 3 total available marks 50

	Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass (A)	25	50	4	6.6%
Pass (B)	19.8	39.5	25	14.0%
Slightly Below Standard (C)	14.3	28.5	22	36.1%
Weak (D)	7.5	15.0	8	13.1%
Showed Little Knowledge (E)	1.0	2.0	1	1.6%
Did Not Attempt (X)	0.0	0.0	<u>1</u>	1.6%
Maximum Mark	29.8			
Average Mark	18.4			
Standard Deviation	5.0			
Coefficient of Variation	0.272			

Candidates did relatively well in this question. There was a reading in the course material directly relevant to the question and it was encouraging to see that some candidates had read and understood this paper. The majority of candidates did not fully appreciate the issues around the conversion of an aggregate incidence table into smoker/non smoker incidence rates.

Question 4 total available marks 34

	Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass (A)	18.0	52.9	0	0.0%
Pass (B)	13.5	39.7	4	6.6%
Slightly Below Standard (C)	9.5	27.9	19	31.1%
Weak (D)	4.0	11.8	33	54.1%
Showed Little Knowledge (E)	0.0	0.0	5	8.2%
Did Not Attempt (X)	0.0	0.0	<u>0</u>	0.0%
Maximum Mark	16.0			
Average Mark	8.0			
Standard Deviation	3.4			
Coefficient of Variation	0.425			

This question was a tough question evidenced by the fact that only 7% of candidates achieved a pass. Only 3 of the 18 recommended overall pass candidates achieved a pass for this question. Due to the relatively low pass mark and difficulties in marking this question 25% of candidates' papers were reviewed by the Chief Examiner.

Question 5 total available marks 36

	Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass (A)	22.0	61.1	5	8.2%
Pass (B)	17.0	47.2	11	18.0%
Slightly Below Standard (C)	13.0	36.1	17	27.9%
Weak (D)	7.0	19.4	18	29.5%
Showed Little Knowledge (E)	1.0	2.8	9	14.8%
Did Not Attempt (X)	0.0	0.0	<u>1</u>	1.6%
Maximum Mark	27.5			
Average Mark	12.6			
Standard Deviation	5.7			
Coefficient of Variation	0.452			

Being the last question in the paper some students had not allocated sufficient time to complete this question but these were generally the weaker candidates. The pass rate of 26% is slightly lower than the overall pass rate. What was disappointing was the appreciation of participating business. The question was essentially about a non participating endowment product but asked for the implications if this were a participating product. The understanding of the more complex issues surrounding setting a surrender value basis for a non participating endowment was also not well understood.

Common mistakes and weaknesses were the same as the previous semester which are repeated here for completeness

- Not reading the question. Candidates need to follow a process to ensure the question is read thoroughly. Otherwise too many marks are lost, hindering the chance of a pass.
- Providing general answers that do not address the specific circumstances set out in the question.
- Raising a valid point but not providing a clear and full explanation.
- Writing that is hard to read, making it difficult to award marks.

In addition candidate often missed out on easy marks awarded for layout and style where applicable.

Course 2B Life Insurance

Examination Report Semester 1 2011

1. Summary

1.1. Pass Rates

45 Candidates enrolled for the Semester 1 2011, 2B course. There were 4 withdrawals from the course, leaving 41 candidates sitting the exam.

The assessment comprised an assignment worth 15% and an exam worth the remaining 85%.

It is proposed that 16 candidates be awarded a pass, which gives a pass rate of 39%. This compares with previous pass rates from recent exams as follows:

Table 1 – Pass Rates from Recent Exams

Semester	Sat	Passed	Pass Rate
2010 Semester 2	39	16	41%
2010 Semester 1	63	28	44%
2009 Semester 2	62	24	39%
2009 Semester 1	52	17	33%
2008 Semester 2	50	21	42%
2008 Semester 1	36	14	39%

The 39% pass rate for this exam is slightly lower than the 41% pass rate for the previous exam (Semester 2 2010).

1.2. Candidate Numbers

The Candidate numbers can be summarised as follows:

Table 2 – Candidate Numbers

	Number of candidates
Originally enrolled	45
Withdrawn prior to exam	4
Absent from exam	-
Presented at exam	41
Passed	16
Failed	25

The analysis by examination centre is as follows:

Table 3 – Analysis by Examination Centre

Centre	Presented	Passed	Pass Rate
Sydney	23	6	27%
Melbourne	10	6	55%
Perth	1	1	100%
Australia	34	13	38%
Hong Kong	3	1	33%
Kuala Lumpur	1	1	100%
Singapore	3	1	33%
International	7	3	43%
Total	41	16	39%

2. Examination Papers and Assignments

2.1. Degree of Difficulty

The following tables show the distribution of questions and marks by level of difficulty and course coverage:

Table 6 – Degree of Difficulty of Exam and Course Coverage

Question	Syllabus Performance Outcome	Knowledge & Understanding (KU)	Straight-forward judgement (SJ)	Complex Judgement (CJ)	Total Marks
1 a)	5	1			1
1 b)	5	6	3		9
1 c)	2,5		5		5
1 d)	2,3,5			6	6
2 a)	7	2			2
2 b)	7		7		7
2 c)	1,7	2			2
2 d)	1,7		2		2
2 e)	7			6	6
3 a)	1, 2, 3		5		5
3 b)	2,7,12		2	6	8
3 c)	5,7		6		6
4 a)	4	4			4
4 b)	4	2			2
4 c)	4		4		4
4 d)	4		4		4
4 e)	4,9			7	7
5 a)	5,13		3		3
5 b)	5,13	3			3
5 c)	5,13			5	5
5 d)	5,13		2	7	9
TOTAL		20	43	37	100

Table 7 – Course Coverage

Question	Units	Knowledge & Understanding (KU)	Straight-Forward Judgement (SJ)	Complex Judgement (CJ)	Total Marks
1	1, 2, 3	7	8	6	21
2	1, 4	4	9	6	19
3	1, 2, 3, 4, 6	0	13	6	19
4	2, 5	6	8	7	21
5	3, 6	3	5	12	20
Total		20	43	37	100

Based on the table above, each of the five questions have similar coverage of the course material but a differing spread of KU, SJ and CJ type marks. This means that although the questions had differing degrees of difficulty, candidates were required to demonstrate an understanding of the course material in each

question.

2.2. Overall Performance

The aim in setting the exam was to have reasonable questions covering the basic principles of the course. A well prepared candidate should pass the exam. A 39% pass rate is considered reasonable.

The standard across questions was somewhat variable, with questions 5 (24%) and 2 (29%) having the lowest pass rates, and questions 3 (56%), 4 (54%) and 1 (41%) the highest pass rates.

The low pass rate for question 5 reflects a lack of understanding of the practical aspects of determining a supportable bonus rate based on total assets available. Instead most candidates defined assets as the VSA policy liabilities from LPS 1.04, not understanding that this a mechanism to smooth profits not to determine a supportable bonus rate. It is my opinion that this poor result reflects that students do not understand the practical aspects of traditional business. The teaching of this course needs to address this issue by focusing more on the practical aspects of traditional business through the course content, assignments and tutorials.

Candidates found question 2 challenging. This was disappointing as many candidates failed to demonstrate a basic understanding of appraisal value concepts.

Question 1 was answered reasonably by candidates. Given that a large part of the question was on a standard analysis of profit question, I would have expected a higher pass rate than 41%. A well prepared candidate should be able to obtain very good marks on such a standard analysis of profit question. In addition, very few candidates showed they could interpret the surrender experience loss, by stating that as a profit is made when policy surrenders, fewer surrenders than expected means actual surrender profits are lower than expected surrender profits, leading to a surrender experience loss.

Question 4 was well answered, with most candidates able to describe strategies to increase the capital that could be up-streamed. Although most candidates recommended an appropriate amount of capital to be up-streamed, very few candidates gave reasons behind their recommendation.

Question 3 was also answered well, with good answers provided on the complex judgement part of the question. However, only a few candidates understood the basic principle that a bonus distribution does not impact profit.

Common mistakes and weaknesses relate to exam technique and were:

- Not reading the question. Candidates need to follow a process to ensure the question is read thoroughly. Otherwise too many marks are lost, hindering the chance of a pass.
- Providing general answers that do not address the specific circumstances set out in the question.
- Raising a point but not providing a clear and full explanation.

- Writing that is hard to read, making it difficult to award marks.

The issues raised are consistent with comments made by the Chief Examiner on previous exams.

More details on specific mistakes and weakness are discussed further in the question by question analysis below.

2.3. Question by Question Analysis (Exam out of 200)

QUESTION 1

Table 13 – Summary of Question 1

	Raw Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass	29.0	69.0%	3	7%
Pass	22.0	52.4%	14	34%
Below Standard	18.0	42.9%	17	41%
Weak	12.0	28.6%	7	17%
Showed Little Knowledge	1.0	2.4%	0	0%
Did Not Attempt	0.0	0.0%	0	0%
Total Marks Available	42.0			
Maximum Mark	32.5			
Average Mark	21.3			
Standard Deviation	4.0			

Candidates performed reasonably on this question, with a pass rate of 41%.

Candidates were asked to perform an analysis of profit for non-par traditional business and then discuss the issues arising from the experience losses. Given the analysis of profit was relatively straight-forward, a higher pass rate was expected. We would expect candidates to have a sound grasp of how to do an analysis of profit, and thus would expect candidates to perform better on this type of question.

Part (a)

- Candidates were asked to calculate the actual and expected profit.
- This was an easy question with an average mark of 1.8/2.

Part (b)

- Candidates were asked to perform a straightforward analysis of profit.
- Candidates made a reasonable attempt at the analysis of profit with an average mark of 11.1/18.
- The weaker candidates did not:
 - Calculate actual or expected IORE.
 - Calculate expected profit margins and experience profits.
 - Clearly set out the total experience profit.
 - Explain whether the unexplained was reasonable (particularly when it was high due to a calculation error).

Part (c)

- Candidates were asked to provide an explanation to the CFO on his comment “that less surrenders than expected this year should result in profit for the company” in respect of i) current and ii) future profits.
- For part i) on current profit:
 - The average mark was only 1.5/4.
 - Most candidates mentioned that the surrender value was lower than the release of policy liability and this would generate a profit. A minority related this to MOS profits, with actual less than expected surrenders generating an experience loss. This was disappointing as the majority of students could not interpret the surrender experience item that they had calculated in part (b).
- For part ii) on future profits:
 - Answers were poor with an average mark of 1.5/6.
 - About half of the candidates mentioned the obvious point that lower surrenders in the current year would lead to more profits in the future as there are more policies in force than expected. A minority of candidates mentioned the impact of changes to the surrender rate assumption on future MOS profits, and even fewer mentioned the impact on expenses.

Part (d)

- Candidates were asked to discuss the implications of the CFO's proposal of investing in more risky assets to overcome the poor actual investment return in the current year.
- Reasonable answers were provided for a complex judgement question with an average mark of 5.4/12.
- Candidates generally wrote detailed answers covering a few of the points (the greater mismatching between assets and liabilities would increase the capital adequacy requirements, and equities cause greater volatility of investment returns).
- Points not covered included the impact of asset allocation changes on investment assumptions and MOS profit, potential liquidity issues with equities due to mismatching of cash flows, additional risk/return available from bonds and other issues to consider if changing asset allocations.
- Marks were awarded for valid points not included in the model solution, covering transactions costs, hedging, tax implications of selling assets and whether the company's risk profile allowed for an asset/liability mismatch.

QUESTION 2

Table 14 – Summary of Question 2

	Raw Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass	25.0	65.8%	1	2%
Pass	18.8	49.3%	11	27%
Below Standard	15.0	39.5%	15	37%
Weak	10.0	26.3%	11	27%
Showed Little Knowledge	1.0	2.6%	3	7%
Did Not Attempt	0.0	0.0%	0	0%
Total Marks Available	38.0			
Maximum Mark	25.8			
Average Mark	16.1			
Standard Deviation	4.0			

This question was answered poorly by candidates, with a pass rate of 29%.

The question concerned the issues arising from a life company (specialising in group risk business) purchasing the retail business (open non-par endowment business and open unit-linked business) from another life company.

Part (a)

- Candidates were asked to list 8 pieces of information they would request in order to understand the retail business being purchased.
- Given the numerous pieces of information that could be requested, the performance on this part of the question was relatively poor with an average mark of 2.1/4.
- Most of candidates could only come up with half of the marks available.
- For most candidates the pieces of information provided included documents which provide similar information (e.g. PDSs and policy documents).

Part (b)

- Candidates were asked how they would place a value on the business to be purchased covering i) assumptions, ii) capital requirements and iii) the calculations.
- For part i) on assumptions:
 - Candidates performed satisfactorily with an average mark of 2.9/6.
 - The key points were generally covered, such as shock lapses, expense synergies, risk discount rates and sales growth.
 - Most students suggested using best estimate assumptions as a starting point, rather than set own assumptions for the purpose of the valuation.
 - Few candidates mentioned other issues such as the impact of changes to underwriting practices on the mortality assumption, investment manager expenses, remuneration for the distribution channel and one off costs with the purchase.
 - A general comment on marking a number of candidates was that they were too general in their response and didn't relate the answer

enough to the question i.e. a purchase of a block of business and consideration of the assumptions in the purchase.

- For part ii) on capital requirements:
 - Answers were poor with an average mark of only 0.9/4.
 - Many students went into great detail about capital requirements in general, but not the specific impacts on the capital adequacy requirement as result of the purchase.
 - Many students did not consider including target surplus or the need for capital injections in their answers.
- For part iii) on calculations:
 - Answers were poor with an average mark of only 1.1/4.
 - The poorer answers did not explain VIF and VNB correctly, describing VIF/VNB as the present value of cash flows rather than distributable profits (allowing for capital adequacy requirements/target surplus).
 - Mention of tax was limited to one student.
 - Mention of valuing guarantees for investment linked business was also limited to one student.
 - No candidates described performing sensitivities on key assumptions.

Part (c)

- Candidates were asked to describe the checks they would perform.
- This part was not very well answered with an average mark of 1.2/4.
- Even the best candidate could only describe half the possible checks.

Part (d)

- Candidates were asked to describe how they would value an option for the maturing endowments into life annuities.
- Given this was a harder question, answers were reasonable with an average mark of 1.7/4.
- About half of the candidates described the importance of the rate of conversion option.
- Few students mentioned the use of stochastic projection models for the valuation of option.

Part (e)

- Candidates were required to discuss the key risks associated with the purchase.
- For a complex judgement question, this was well answered with an average mark of 6.2/12.
- Although the majority candidates were able to identify the key risks, they failed to explain adequately why they were risks.
- Only one student raised the question of why the company was selling, but failed to discuss how this was a risk.

QUESTION 3

Table 15 – Summary of Question 3

	Raw Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass	29.0	76.3%	6	15%
Pass	23.0	60.5%	17	41%
Below Standard	19.0	50.0%	12	29%
Weak	12.0	31.6%	5	12%
Showed Little Knowledge	1.0	2.6%	1	2%
Did Not Attempt	0.0	0.0%	0	0%
 Total Marks Available	 38.0			
 Maximum Mark	 30.5			
Average Mark	23.5			
Standard Deviation	5.0			

This was considered a straight forward question and should not have presented too big a challenge for candidates. This is reflected in the pass rate of 56%, showing that candidates performed well in this question.

The question covered the differences between the MOS and Net Premium Valuation (NPV) methods of calculating policy liabilities, the issues arising from a potential reduction in expenses and the impacts of reducing policyholder bonuses.

Part (a)

- Candidates were asked to describe the differences between the MOS and NPV methods of calculating policy liabilities.
- Most candidates performed well on this question as they were able to identify most of differences. This was reflected in the average mark of 5.9/10.
- Few candidates made the compulsory point about the difference in purpose of the valuation methods.
- A number of candidates listed the features of each method without explaining how each feature was different to the other method. This indicates that the candidates did not read the question properly, as the question specifically asked for differences. Hence, candidates who did not explain the differences, performed poorly.

Part (b)

- Candidates were asked to respond to the CEO's comment that the expense assumption used for the MOS valuation and Appraisal Value should be reduced in the light of a proposed redundancy program.
- Candidates performed well on this complex judgement question with an average mark of 10.5/16.
- Most candidates discussed the issues around complying with the actuarial standards, and the impacts on current and future profits.
- Fewer candidates provided sufficient discussion on the circumstances when expenses could be reviewed.

Part (c)

- Candidates were asked to respond to the CEO's request as to the impact of reducing the declared bonus on i) profits and ii) other impacts.

Part (c) i) on profit:

- This part was answered poorly with an average mark of 2/6.
- Most candidates failed to understand the basic principle that a bonus distribution comes out of profit once profit has been calculated. Hence, a reduction in declared bonus does not impact the current years' profit.

Part (c) ii) other impacts:

- Candidates performed well on this question with an average mark of 5.1/6.
- Most candidates were able to identify main issues such as policyholder expectations and competitive concerns from higher surrenders and lower sales.

QUESTION 4

Table 16 – Summary of Question 4

	Raw Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass	32.0	76.2%	3	7%
Pass	26.3	62.5%	19	46%
Below Standard	22.0	52.4%	10	24%
Weak	14.0	33.3%	6	15%
Showed Little Knowledge	1.0	2.4%	3	7%
Did Not Attempt	0.0	0.0%	0	0%
Total Marks Available	42.0			
Maximum Mark	35.8			
Average Mark	25.5			
Standard Deviation	5.7			

Candidates performed well on this question with a pass rate of 54%.

This question covered the issues with an overseas bank requesting the maximum amount of the capital that could be up-streamed by its Australian Life Insurance subsidiary.

Part (a)

- Candidates were asked to calculate the Solvency Requirement and Capital Adequacy Requirement.
- This was easy question with an average mark of 7.4/8. The majority of candidates scored easy full marks.
- Most candidates were able to set out the calculations in each step and get them correct.
- A few candidates failed to mention the first two steps of the Solvency Requirement (the solvency liability and the minimum termination value). Similarly a few candidates failed to mention the first two steps of the Capital Adequacy Requirement (the capital adequacy liability and the minimum termination value).

Part (b)

- This covered the definition and the purpose of Target Surplus.
- Answers were good with an average mark of 2.4/4.
- Most students were able to define target Surplus and state that its purpose was to protect the capital adequacy position from adverse experience

fluctuations. Only one candidate provided examples of these adverse experience fluctuations.

- A few students provided additional purposes of Target Surplus (required to meet policyholder obligations, strongly recommended by APRA and it may be required for a credit rating).

Part (c)

- Candidates were asked to discuss the implications of up-streaming all excess capital above the Solvency Requirement.
- Good answers were provided with an average mark of 5.5/8.
- The majority of candidates covered the main points: the request would leave it short of the Capital Adequacy Requirement, the company could easily become technically insolvent with assets falling below the Solvency Requirement, and no capital would be available fund the new business capital strain.
- The better candidates mentioned that no dividends could be paid if the Capital Adequacy Standard was breached.
- Only 2 candidates outlined the professional negligence issue faced by the Appointed Actuary

Part (d)

- Candidates were asked to recommend how much capital could be up-streamed with reasons, given that the Capital Adequacy Requirement would increase by 5% in a years' time.
- Answers were generally poor with an average mark of 2.7/8.
- Generally the calculation was done correctly.
- Few candidates provided reasons behind their recommendation.
- Many candidates expressed the incorrect view that a buffer should be retained on top of the Target Surplus.

Part (e)

- Candidates were asked to discuss the options available to reduce the capital requirements of the life company.
- Candidates performed reasonably well on this complex judgement question. The average mark was 7.2/14.
- Candidates covered points on strategies to reduce the Resilience Reserve and reducing the New Business Reserve. Using reinsurance to reduce the MTV and CTV was covered well.
- Fewer candidates covered using reinsurance to fund new business, and reducing the target surplus requirement.
- Candidates only received partial marks because full explanations were not provided. For example, "convert inadmissible to admissible" rather than "sell down holdings in assets which are above the admissibility threshold".
- No candidates provided comments on intangible assets and reducing future dividends.

QUESTION 5

Table 17 - Summary of Question 5

	Raw Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass	20.0	50.0%	3	7%
Pass	17.0	42.5%	7	17%
Below Standard	14.5	36.3%	14	34%
Weak	8.0	20.0%	11	27%
Showed Little Knowledge	1.0	2.5%	6	15%
Did Not Attempt	0.0	0.0%	0	0%
Total Marks Available	40.0			
Maximum Mark	23.3			
Average Mark	13.6			
Standard Deviation	4.8			

This question was challenging for candidates, reflected in the poor pass rate of 24%.

This question covered issues around a life company wanting to continue to declare high declared bonus rates which were no longer supportable.

Candidates performed poorly on parts (a) and (b), demonstrating a lack of understanding of the practical aspects of determining a supportable bonus rate for traditional business. The candidates who passed performed well on the complex judgement part of the question. These candidates were able to recommend an appropriate alternative bonus strategy with reasons.

Part (a)

- Candidates were asked to set out the principles of a supportable bonus rate.
- This was poorly answered with an average mark of 1.6/6.
- The majority of candidates did not understand what a supportable bonus rate is and provided answers about the general principles of bonus rate declarations.
- The question was generally interpreted correctly, but some students provided a formula in explaining the principles.

Part (b)

- Candidates were asked to explain how they would calculate a supportable bonus rate.
- This was poorly answered with an average mark of 1.3/6.
- Most candidates were not able to state the correct total assets to use, equal to Policy Liabilities, Policyholder Retained Profit and Shareholder Retained profits. Instead candidates used the Value of Supporting Asset formula set out in LPS 1.04. This formula is not appropriate to calculate a supportable bonus, as it does not include the Retained Profits and is a mechanism to recalculate profit margins and smooth profit.

Part (c)

- This addressed the issues arising from continuing to declare high declared bonus rates that are not supportable.
- This was answered reasonably with an average mark of 4.1/10.

- Most candidates identified the bonus rates were not sustainable, inequity between inforce and new business policyholders and the rundown of policyholder retained earnings.
- Inadequate responses were provided around Solvency and Capital Adequacy points. Although Solvency and Capital Adequacy were mentioned, often candidates did not demonstrate they understand the issues as they failed to explain how these were impacted.
- Most candidates interpreted the question correctly. A few candidates misread the question by writing down things they need to consider rather than issues faced.

Part (d) i)

- This required candidates to recommend alternative bonus rates, based on reversionary bonuses only.
- This was answered reasonably with an average mark of 1.8/4.
- Some students recommended the model solution. Others were able to give alternate solutions such as declaring different bonus rates by durations (i.e. differentiating more than just inforce versus new business) or changing to a super compounding reversionary bonus with different bonus rate on sum insured and existing bonus. Only a minority considered increasing the premium rate for new business. Many however, did not go into adequate details on what the bonus should be.
- Almost all students interpreted the question correctly, except a few who described a terminal bonus solution when the question specifically requested a form of reversionary bonus.
- Some students did find it difficult to come up with a solution even though they understand the issues the company is facing.

Part (d) ii)

- Candidates were asked to describe why their recommended bonus rates in i) were appropriate.
- This complex judgement question was challenging for candidates, reflected in the average mark of 2.7/8.
- Most students picked up on the inequity between inforce and new business policyholders.
- Students did not see the reduction of new bonus rates would impact sales and thus did not come up with multiple rates for new business on different pricing basis.
- Similarly, most students did not see a potential impact on lapses which is surprising given that they may have provided this as an appropriate answer to question 3 (c) ii) on the impact of reducing bonus rates.

Part (d) iii)

- Candidates were asked to describe strategies that would complement their recommended bonus rates in part i).
- This complex judgement question was challenging for candidates, reflected in the average mark of 2.1/6.
- Most candidates picked up on the terminal bonus point and mentioned something around communication strategy.
- As most students did not understand sales or lapse impact, most missed out on the marks surrounding increasing commission.

Course 3A General Insurance

Examination Report Semester 1 2011

1. Summary

1.1. Pass Rates

76 Candidates enrolled for the Semester 1, 2011 3A General Insurance exam. Of these, 4 withdrew. The assessment comprised one assignment worth 15% and an exam worth the remaining 85%.

It is proposed that 24 Candidates be awarded a pass, which implies a pass rate of 33%.

This compares with the following historical pass rates for this subject:

Table 1 – Course Experience

Semester	Sat	Passed	Pass Rate
2010 Semester 2	66	24	36%
2010 Semester 1	76	28	37%
2009 Semester 2	57	17	30%
2009 Semester 1	65	24	37%
2008 Semester 2	51	21	41%
2008 Semester 1	69	36	52%
2007 Semester 2	82	16	20%

1.2. Sydney examination centre

It should be noted that a significant issue arose at the Sydney examination centre (where there were 57 candidates out of the total of 72). This was described by the Institute as follows:

"We have received a notification from the Sydney Exam centre that there was excessive noise outside the centre during the 3A exam particularly during the reading time. A sports carnival was taking place outside and there was quite a bit of cheering and clapping going on.

I have had a few candidates come forward asking whether special consideration will be sought for 3A Sydney candidates as they found it difficult to concentrate. The exam centre supervisor did distribute earplugs to students during the exam to help reduce the noise but students have commented this was too late into the exam and did not help."

After reviewing the raw marks and taking the circumstances described into consideration, the examiners felt it appropriate to adjust the pass criteria for Sydney candidates. Prior to reviewing borderline candidates, the adjustments made were in two different ways as follows:

First method:

- Grade Cut-offs as advised by markers
- Scaled pass mark of 108 out of 200 (i.e. 54%);
- Raw pass mark of 98.8 (=90% of raw pass mark implied by question by question marks).

Second method:

- Grade Cut-offs as advised by markers multiplied by 90%
- Scaled pass mark of 120 out of 200 (i.e. 60%);

Any candidate who was a borderline under either of these approaches was considered borderline and reviewed.

Following review of borderline candidates (with Sydney borderline candidates determined using these revised criteria) the final pass rate was 33%, which is in line with historical pass rates.

Inevitably any such adjustment is somewhat subjective, however after considering

- The incident as described
- The final pass rate (in light of historical pass rates) and
- The review of borderline candidates

The examiners believe that the adjustment is appropriate.

The results shown in 1.1 and in the remainder of this report are based on the revised criteria for Sydney candidates described above.

1.3. Candidate Numbers

The Candidate numbers can be summarised as follows:

Table 2 – Candidate Numbers

	Number of candidates
Originally enrolled	76
Withdrawn prior to exam	4
Absent from exam	0
Presented at exam	72
Passed	24
Failed	48

The analysis by examination centre is as follows:

Table 3 – Analysis by Examination Centre

Centre	Presented	Passed	Pass Rate
Sydney	57	21	37%
Melbourne	5	1	20%
Canberra	1	1	100%
Adelaide	1	0	0%
Subtotal Australia	64	23	36%
Auckland	2	0	0%
Hong Kong	1	1	100%
Singapore	3	0	0%
Kuala Lumpur	2	0	0%
Subtotal International	8	1	13%
Total	72	24	33%

2. Examination Papers and Assignments

2.1. Degree of Difficulty and Course Coverage

The following tables show the distribution of questions and marks by level of difficulty and course coverage:

Table 5 – Degree of Difficulty of Exam

Question	Syllabus Performance Outcome	Units	Knowledge & Understanding	Straight- forward Judgement	Complex Judgement	Total Marks
1 (a)	4	4	4			4
1 (b)	4	4		8		8
1 (c)	4	4		5		5
2 (a)	2	2		5		5
2 (b)	2,3	2,3			6	6
2 (c)	2,3	2,3			6	6
3 (a)	3,4	3,4	3			3
3 (b)	3,4	3,4	3			3
3 (c)	1,4	1,4		8		8
4 (a)	2	2	1			1
4 (b)	2,3	2,3		5		5
4 (c)	2,3	2,3			6	6
4 (d)	2,3	2,3		3		3
4 (e)	2,3	2,3			3	3
5 (a)	1,4	1,4	2			2
5 (b)	1,4	1,4		4		4
5 (c)	1,4	1,4		4		4
5 (d)	1,4	1,4			3	3
5 (e)	1,4	1,4			4	4
6 (a)	2,3	2,3	2			2
6 (b)	2,3	2,3	2			2
6 (c)	2,3	2,3	2			2
6 (d)	2,3	2,3			11	11
TOTAL			19	40	41	100

Table 6 – Course Coverage by Question

Question	Units	Knowledge & Understanding	Straight-Forward Judgement	Complex Judgement	Total Marks
1	4	4	13	0	17
2	2,3	0	5	12	17
3	1,3,4	6	8	0	14
4	2,3	1	8	9	18
5	1,4	2	8	7	17
6	2,3	6	0	11	17
Total		19	40	41	100

2.2. Overall Performance

In setting the paper, the intention was to have a consistent level of difficulty with previous papers. The final standard (after making adjustments for Sydney candidates as discussed) was relatively similar to the average of previous semesters pass rates over the previous six semesters varied between 20% and 52% with an average of 36%. The pass rate for this semester is therefore in the middle of the range of historic pass rates.

Specific common mistakes and weaknesses are discussed in the question analysis below.

2.3. Exam Question by Question Analysis

Question 1

Course coverage: Unit 4

Mark allocation: Knowledge and Understanding – 4 marks

Straightforward Judgement – 13 marks

Complex Judgement – 0 marks

This required candidates to examine various accounting (balance sheet and profit and loss) information for a general insurer and provide various calculations and commentary.

Part a) presented candidates with various profit and loss and balance sheet information and required calculations of gross and net loss ratio, net underwriting profit and rate of return on technical provisions. This part was answered well with the majority of students calculating the gross and net loss ratio and underwriting profit well.

Part b) required candidates to comment on various aspects of the general insurance business based on the information provided including growth in the portfolio, claims experience, the nature of the reinsurance coverage for the line of business and any change in reinsurance coverage, whether the class of business is likely to be long tailed or short tailed and the nature of the investments backing technical provisions. This part was answered moderately well – some components (growth and long tail vs. short tail) were answered quite well but other parts (claims experience and reinsurance coverage) were answered poorly.

Part c) required candidates to set out the information needed in order to make projections for the coming business plan. This part was answered relatively poorly with most candidates failing to note that the information should be split by distribution channel and class of business.

	Raw Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass	23.0	67.6%	3	4%
Pass	17.0	50.0%	29	40%
Below Standard	11.5	33.8%	27	38%
Weak	8.0	23.5%	7	10%
Showed Little Knowledge	1.0	2.9%	6	8%
Did Not Attempt	0.0	0.0%	0	0%
Maximum Mark	28.0			
Average Mark	15.1			
Standard Deviation	4.8			

Question 2

Course coverage: Unit 2, 3

Mark allocation: Knowledge and Understanding – 0 marks

Straightforward Judgement – 5 marks

Complex Judgement – 12 marks

This question related to a Payments Per Claim Incurred analysis for a motor insurance portfolio, and the impact of additional information on the analysis. The question was reasonably well answered.

Part a) required candidates to select PPCI assumptions and determine the ultimate average claim size for one accident quarter. Most candidates selected reasonable PPCI assumptions, but few made allowance for payments in development quarters for which they did not have historic data.

Part b) required candidates to discuss the impact of three new pieces of information on their projections. The first piece of information related to changes in the cost of replacement parts, but few candidates commented that replacement parts are only a portion of total payments. Overall, this part was reasonably well answered.

Part c) asked candidates to discuss additional information and analysis that could be used to improve their valuation. Many candidates simply listed points relating to setting a provision, rather than responding to what the question was asking for. Marks were available for standard responses such as case estimates and claims numbers, but a disappointingly low number of students discussed these.

	Raw Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass	24.5	72.1%	5	7%
Pass	20.0	58.8%	30	42%
Below Standard	12.5	36.8%	32	44%
Weak	9.0	26.5%	2	3%
Showed Little Knowledge	1.0	2.9%	2	3%
Did Not Attempt	0.0	0.0%	1	1%
Maximum Mark	28.5			
Average Mark	18.7			
Standard Deviation	4.7			

Question 3

Course coverage: Unit 1, 3, 4

Mark allocation: Knowledge and Understanding – 6 marks

Straightforward Judgement – 6 marks

Complex Judgement – 2 marks

This question required candidates to calculate the insurance profit for a liability insurance portfolio. Candidates then needed to discuss differences between insurance profit, underwriting profit and pricing profit margins. Overall the question was not answered well, and in particular part (c).

Part (a) required candidates to calculate insurance profit for four financial years. This part was generally well answered, but a disappointing majority of the candidates failed to include unearned premium in technical provisions.

Part (b) required candidates to discuss the impact of monitoring underwriting profit instead of insurance profit. Most students identified the key point that underwriting profits exclude investment income on insurance funds. However, some students did provide sufficient discussion of the implications of only monitoring underwriting profit (e.g. the company may skew its business acquisition towards short tail classes). Overall this part was generally well answered.

Part (c) required candidates to discuss why actual profits have varied even though the portfolio has had stable pricing profit margins. Generally most candidates were able to identify the 2 major drivers (central estimate and risk margin), but overall this part was not well answered. Most candidates either did not write sufficient number of points to gain many marks and/or wrote lists of factors that affect profit, without actually explaining how they impact profit. Many candidates opted for a scattergun approach, listing a large number of irrelevant points.

	Raw Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass	21.0	75.0%	1	1%
Pass	15.0	53.6%	15	21%
Below Standard	12.0	42.9%	20	28%
Weak	8.0	28.6%	25	35%
Showed Little Knowledge	1.0	3.6%	10	14%
Did Not Attempt	0.0	0.0%	1	1%
Maximum Mark	22.0			
Average Mark	11.6			
Standard Deviation	4.1			

Question 4

Course coverage: Unit 2, 3

Mark allocation: Knowledge and Understanding – 1 mark

Straightforward Judgement – 8 marks

Complex Judgement – 9 marks

This question required candidates to comment on and perform various calculations in relation to the workers' compensation valuation for a government scheme.

Part (a) required candidates to calculate projected active claims for one accident year. This part was answered very well with most candidates calculating the correct figures.

Part (b) required candidates to calculate the inflated and discounted outstanding claims for one accident year. This part was relatively straightforward and also answered quite well with most candidates achieving the majority of marks.

Part (c) required candidates to calculate the inflated and discounted outstanding claims for one accident year incorporating a legislative change, which resulted in the introduction of common law. This part was challenging and this was reflected in the marks, with no candidates adjusting the PPACs and relatively few candidates making the correct adjustment to active claims.

Part (d) required candidates to calculate the inflated and discounted outstanding claims for one accident year for the common law benefits introduced by the legislative change. This part was more straightforward than part c) and was answered quite well.

Part (e) required candidates to comment on the impact of the legislative change on Claims Handling Expenses and Risk Margins in the short and long term. This part was answered moderately well with most candidates making at least a reasonable attempt.

	Raw Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass	25.5	70.8%	5	7%
Pass	21.5	59.7%	21	29%
Below Standard	17.0	47.2%	22	31%
Weak	9.0	25.0%	23	32%
Showed Little Knowledge	1.0	2.8%	1	1%
Did Not Attempt	0.0	0.0%	0	0%
Maximum Mark	27.5			
Average Mark	18.8			
Standard Deviation	4.7			

Question 5

Course coverage: Unit 1, 4

Mark allocation: Knowledge and Understanding – 5 marks

Straightforward Judgement – 4 marks

Complex Judgement – 8 marks

This question tested students' knowledge on travel insurance with an emphasis on premium liabilities. In the examiners' view this was one of the easier questions in the paper however it did appear that a number of students had cut themselves short on time when they came to answer this question. Many candidates did not understand or at least were unable to clearly articulate the process by which one would go about calculating an earned premium.

Very short bullet points without sufficient explanation to show how/why or demonstrate knowledge and understanding were not rewarded with marks (except where the question specifically requested a "list").

Part (a) was a simple bookwork question requiring candidates to list the risks covered by travel insurance. This part was generally well answered.

Part (b) required students to explain how they would determine a premium liability for travel insurance. There appears to be a general lack of understanding as to how

a premiums earning pattern would be calculated. Few students realised that historic claims by peril at the policy level could be used to build up an earnings pattern, which then could be applied to the unearned exposure period. Many candidates failed to recognise (or simply ignored) the fact that “the company prices each risk separately”, meaning analyses can be made at the policy level before being aggregated to a portfolio level.

Part (c) was a fairly simple question about data and design for a premium, exposure and profitability monitoring system. Many candidates failed to read the question and listed data items from the claims file. Marks were awarded for answering the question, in particular listing items from the policy file. Many candidates failed to tailor their answer to the measures detailed in the question, instead listing standard KPIs and ratios in a hope to gain marks. Few candidates made the link about emerging actual profit being a function of earned premiums, which again is a theme rolling on from part (b) above and in the question preamble before part (a).

Part (d) asked about annual travel insurance policies and was not well answered. Candidates almost always assumed that the question was prompting them to separate annual policies for analysis. Few candidates responded by suggesting that they could investigate different risk/incidence patterns on these policies/claims.

Part (e) asked about the advantages and disadvantages to the insurer of writing travel insurance as part of an overall portfolio of domestic risks. Many candidates did not read the question and commented on the advantages/disadvantages to the consumer rather than the insurer. Short bullet points listing advantages or disadvantages without stating why they were an advantage or disadvantage struggled to achieve marks. However, in general this question was answered fairly well.

	Raw Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass	23.0	67.6%	3	4%
Pass	18.0	52.9%	18	25%
Below Standard	12.0	35.3%	36	50%
Weak	8.0	23.5%	11	15%
Showed Little Knowledge	1.0	2.9%	4	6%
Did Not Attempt	0.0	0.0%	0	0%
Maximum Mark	24.0			
Average Mark	14.9			
Standard Deviation	4.4			

Question 6

Course coverage: Unit 2, 3

Mark allocation: Knowledge and Understanding – 6 marks

Straightforward Judgement – 0 marks

Complex Judgement – 11 marks

The first parts of this question required students to draw on knowledge of actuarial standards relating to liability valuations through critiquing the statements of another actuary. The last part required students to fill in the gaps in a simple valuation basis change. On the whole the first parts were answered well while the last part was answered poorly. It appears as though many students need to spend more time studying this topic.

(a) In this part students needed to point out that a valuation actuary should check data for themselves and that gross and recovery liabilities should be valued separately. Most students were about to identify both of these points, though only a few showed in their answers that they understand the reason for the latter is that reinsurance arrangement and recoveries may change in the future.

(b) Most students scored marks in this part for correctly identifying that while opinions of claims staff are useful, the valuation actuary should not rely solely on this. However only some identified that it the opinions of claims staff may not include IBNR, IBNER, future inflation or discounting. Not one student identified that the central estimate of liabilities should be the mean and not the mode.

(c) Again, this part was generally well answered. Most students identified that a wage-based inflation index would be more appropriate than the CPI for long tail classes. Some students also mentioned the need to consider superimposed inflation.

(d) This part required students to fill in the gaps in a basis change from one valuation period to the next. It was not well answered, though students who wrote out their formulae had a better chance of scoring marks than those who did not.

Common errors were:

- Using discounted payments for actual versus expected
- Not correctly allowing for interest earned on liabilities from one period to the next
- Confusing payment periods, reducing the prior year's liability by the payments made relating to accidents in the current period
- Not grasping the impact of a change in expected average claim size on the liabilities

However there were some items that were generally answered well. These were:

- Correctly identifying the item that was the impact of newly incurred claims
- Correctly deducing the impact of the change in ultimate claim numbers as 0
- Correctly identifying the impact of the change in discount rates, if not in number, at least in formula

We do note that this was the last part of the last question in a 6 question exam and as such some students may have been running out of time at this point.

	Raw Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass	22.0	64.7%	2	3%
Pass	16.5	48.5%	13	18%
Below Standard	12.0	35.3%	15	21%
Weak	8.0	23.5%	24	33%
Showed Little Knowledge	1.0	2.9%	14	19%
Did Not Attempt	0.0	0.0%	18	25%
Maximum Mark	25.5			
Average Mark	12.0			
Standard Deviation	5.1			

Course 3B General Insurance

Examination Report Semester 1 2011

1. Summary

1.1. Pass Rates

66 Candidates enrolled for the Semester 1 2011 exam. Of these, 8 did not present at the exam. The assessment comprised one assignment worth 15% and an exam worth the remaining 85%.

It is proposed that 20 Candidates be awarded a pass, which implies a pass rate of 34%. This compares with the following historical pass rates for this subject:

Table 1 – Course Experience

Semester	Sat	Passed	Pass Rate
2010 Semester 2	53	21	40%
2010 Semester 1	63	22	35%
2009 Semester 2	63	33	35%
2009 Semester 1	50	16	32%
2008 Semester 2	62	23	37%
2008 Semester 1	40	16	40%

1.2. Candidate Numbers

The Candidate numbers can be summarised as follows:

Table 2 – Candidate Numbers

	Number of candidates
Originally enrolled	66
Withdrawn prior to exam	6
Absent from exam	2
Presented at exam	58
Passed	20
Failed	38

66 candidates were originally enrolled in the course, 6 candidates have withdrawn prior the exam and 2 candidates were absent from the exam.

The analysis by examination centre is as follows:

Table 3 – Analysis by Examination Centre

Centre	Presented	Passed	Pass Rate
Sydney	41	12	29.3%
Melbourne	11	6	54.5%
Brisbane	3	2	66.7%
Australia	55	20	36.4%
Auckland	1	0	0.0%
Hong Kong	1	0	0.0%
London	1	0	0.0%
International	3	0	0.0%
Total	58	20	34.5%

2. Examination Papers and Assignments

2.1. Degree of Difficulty and Course Coverage

The following tables show the distribution of questions and marks by level of difficulty and course coverage:

Table 5 – Degree of Difficulty of Exam

Question	Syllabus Performance Outcome	Units	Knowledge & Understanding	Straight-forward Judgement	Complex Judgement	Total Marks
(a)	1, 2	1, 2, 3	4			4
1 (b)	1, 2	1, 2, 3	2			2
1 (c) (i)	1, 2	1, 2, 3	2			2
1 (c) (ii)	1, 2	1, 2, 3		8		8
1 (d)	1, 2	1, 2, 3		2		2
1 (e)	1, 2	1, 2, 3		4		4
2 (a)	3	3	2			2
2 (b)	3	3	2			2
2 (c)	3	3	4			4
2 (d)	3	3		6		6
2 (e)	3	3			6	6
3 (a)	1, 2	1, 2, 3		5		5
3 (b)	1, 2	1, 2, 3		5		5
3 (c)	1, 2	1, 2, 3		4		4
3 (d)	1, 2	1, 2, 3		3		3
3 (e)	1, 2	1, 2, 3			4	4
3 (f)	1, 2	1, 2, 3			2	2
4 (a)	1, 2, 3	1, 2, 3		2		2
4 (b)	1, 2, 3	1, 2, 3	2			2
4 (c)	1, 2, 3	1, 2, 3	1			1
4 (d)	1, 2, 3	1, 2, 3			11	11
5 (a)	3	3, 4	1			1
5 (b)	3	3, 4			7	7
5 (c)	3	3, 4			11	11
TOTAL			20	39	41	100

Table 6 – Course Coverage by Question

Question	Units	Knowledge & Understanding	Straight-Forward Judgement	Complex Judgement	Total Marks
1	1,2	8	14		22
2	3	8	6	6	20
3	1,2		17	6	23
4	1,2,3	3	2	11	16
5	3	1		18	19
Total		20	39	41	100

2.2. Overall Performance

The overall pass rate is slightly lower compared to recent semesters for this course. In my view, the exam was not a particularly difficult paper, in the sense that it did not contain one or more questions that required candidates to apply core concepts in extraordinary new areas.

A typical weak response generally contains a lot of generic stuff without much genuine understanding being shown.

Poor hand writing was a major problem. Markers cannot give marks for answers that cannot be read.

Candidates should avoid using abbreviated words and acronyms when answering a question. This made trying to interpret some answers quite difficult and cumbersome. While bullet point answers are to be encouraged, they should be written in clear English.

2.3. Exam Question by Question Analysis

Question 1

	Raw Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass (A)	30.5	69.3%	6	9%
Pass (B)	22.0	50.0%	31	47%
Slightly Below Standard (C)	14.0	31.8%	15	23%
Weak (D)	9.5	21.6%	2	3%
Showed Little Knowledge (E)	1.0	2.3%	4	6%
Did Not Attempt (X)	0.0	0.0%	8	12%
Maximum Mark	34.5			
Average Mark	20.1			
Standard Deviation	9.9			

Part a) for straight book learning questions, answers were generally poor. Few candidates gained 3 or more marks.

Part b) Numeric calculation question was easy and generally well answered

Part c) i) Majority of candidates recognised that frequency assumption was OK but severity assumption too low

Part c) ii) Wide variation in approach and knowledge shown. Most candidates made a reasonable attempt at development factors.

Part d) disappointingly few candidates recognised exposure measures as the most important further information. This is a very basic omission.

Question 2

	Raw Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass (A)	23.0	57.5%	18	27%
Pass (B)	18.0	45.0%	20	30%
Slightly Below Standard (C)	12.0	30.0%	16	24%
Weak (D)	8.0	20.0%	2	3%
Showed Little Knowledge (E)	1.0	2.5%	2	3%
Did Not Attempt (X)	0.0	0.0%	8	12%
Maximum Mark	33.0			
Average Mark	17.3			
Standard Deviation	8.4			

Part a) generally students demonstrated a sound understanding of the two options and answered reasonably well.

Part b) Responses were mixed both in terms of understanding the potential capital impacts and the difference between held and economic capital. Many students discussed that a decision would be required as to whether to change held capital based on the risk model or that held capital may need to vary (i.e. capital raising or dividend) which was awarded marks provided they demonstrated an understanding of held capital.

Part c) Generally the question was well understood and answered well.

Part d) Drawbacks of linear correlations and the implications of more complex modelling were reasonably well answered. The main differentiator between students was the ability to nominate and describe alternative approaches. Very few students described three alternatives.

Part e) a number of students showed an understanding of excess capital but did not relate it to the specifics of the recent capital raising, positive claims experience and change in capital model. Most students recognised the negative impact on profitability but few described the flow-on effects to the business and its management. Most students could come up with a number of alternative options for excess capital.

Question 3

	Raw Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass (A)	24.0	52.2%	2	3%
Pass (B)	18.5	40.2%	12	18%
Slightly Below Standard (C)	13.0	28.3%	33	50%
Weak (D)	8.5	18.5%	10	15%
Showed Little Knowledge (E)	1.0	2.2%	1	2%
Did Not Attempt (X)	0.0	0.0%	8	12%
Maximum Mark	25.5			
Average Mark	13.7			
Standard Deviation	6.1			

This was a difficult question for candidates. The difficulty of the question was taken into account when setting the pass level.

The minimum raw mark required to pass is only 40.2% of the total available marks for the question. A large majority of the candidates that did pass only passed due to a good attempt for parts (a) and (b). More often than not, the attempt for the rest of the question was very poor.

One point of concern is the lack of basic course knowledge shown by the majority of candidates for part(c). Hardly any candidates mentioned that Insurance Profit includes the Investment Income on the Technical Provisions. This is most concerning the question was very clear in asking for Insurance Profit NOT underwriting profit.

Part a) was generally well answered. Some candidates did not do well, due to failing to read the question and not listing functions affected. Instead, some went off on a tangent and focused on only one function in detail and accordingly scored poorly.

Part b) was general well answered. Again, some candidates could have scored better if they read the question and set out the answer in the form required, i.e. risks with corresponding mitigants.

Part c) was not well answered. In particular there was a lack of basic course knowledge shown by most candidates.

For part d), higher marks were given for candidates who provided explanations for the results and not just stated the facts. The better candidates covered more points. The weaker candidates tended to waffle on about profitability only and the really weak ones just set out the facts regarding profitability without attempting to explain the results.

Part e) was poorly answered, with very few candidates providing much detail at all. Most students appeared exhausted by this part of the question and were not prepared to put the extra effort in to provide explanations. Mostly, it was just a very quick calculation with little explanation.

Part f) was poorly answered, with most candidates being awarded 0.5 mark for business volumes impact but little marks for anything else.

Question 4

	Raw Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass (A)	21.0	65.6%	5	8%
Pass (B)	18.0	56.3%	15	23%
Slightly Below Standard (C)	12.0	37.5%	29	44%
Weak (D)	8.0	25.0%	5	8%
Showed Little Knowledge (E)	1.0	3.1%	4	6%
Did Not Attempt (X)	0.0	0.0%	8	12%
Maximum Mark	24.0			
Average Mark	13.5			
Standard Deviation	6.6			

Part a) generally good responses for this part of the question. Many people did not get the main point that there is concentration risk with regard to both the insurance and bank risk for the same entity (double whammy effect).

Part b) Many candidates mis-interpreted this question, generally listing out the different reinsurance treaties and what portfolios they would apply it to rather than answer explaining important features of a reinsurance program.

Part c) Most candidates understood the difference between "risk attaching" and "loss occurring" and subsequently candidates generally scored highly in this part.

Part d) This question generally differentiated the candidates that scored highly from those that scored lowly. The main points that would have contributed to a high score would be around a interpreting the DFA results correctly and discussion of the MER. The best answers also discussed the deficiencies in the liability treaty. No candidates mentioned that the lack of indexation of retention and limits would be a benefit to the insurer. Instead candidates commonly suggested that limits should be indexed to protect against inflation.

Question 5

	Raw Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass (A)	27.0	71.1%	4	6%
Pass (B)	22.0	57.9%	8	12%
Slightly Below Standard (C)	17.5	46.1%	14	21%
Weak (D)	10.5	27.6%	24	36%
Showed Little Knowledge (E)	1.0	2.6%	7	11%
Did Not Attempt (X)	0.0	0.0%	9	14%
Maximum Mark	30.5			
Average Mark	15.2			
Standard Deviation	8.0			

Part (a) required the calculation of the current MCR multiple. Most students recognised that goodwill needed to be deducted from the shareholders' funds, and achieved the one mark available.

Part (b) required students to list four actions the insurer could take to achieve its target MCR multiple. Students who answered Part (a) incorrectly were not penalised, provided their answer to Part (b) was consistent. Most students were able to list four sensible actions and to estimate the time each would take. Better students also quantified the financial impact, as required by the question.

Part (c) required students to prepare some discussion points following a takeover offer. This was a difficult question with 11 marks on offer. Three marks were available for using and correctly calculating the DCF method, but few students even mentioned it. Most students were able to comment on the difference between stand-alone value and value to an acquirer, but discussion of the offer in the context of the other valuations was generally poor.

Course 5B Investment Management and Finance Examination Report Semester 1 2011

1. Summary

1.1. Pass Rates

17 candidates enrolled for the Semester 1 2011 exam. Of these, 1 did not present at the exam. The assessment comprised one assignment worth 15% and an exam worth the remaining 85%.

It is proposed that 6 Candidates be awarded a pass, which implies a pass rate of 37.5%. This compares with the following historical pass rates for this subject:

Table 1 – Course Experience

Semester	Sat	Passed	Pass Rate
2010 Semester 1	34	19	56%
2009 Semester 1	44	22	50%
2008 Semester 2	35	11	31%
2007 Semester 2	44	15	34%

Note that Subject 5B is not offered in both semesters of the calendar year.

1.2. Candidate Numbers

The Candidate numbers can be summarised as follows:

Table 2 – Candidate Numbers

	Number of candidates
Originally enrolled	19
Withdrawn prior to exam	2
Absent from exam	1
Presented at exam	16
Passed	6
Failed	10

The analysis by examination centre is as follows:

Table 3 – Analysis by Examination Centre

Centre	Presented	Passed	Pass Rate
Sydney	10	4	40.0%
Melbourne	3	0	0.0%
Canberra	1	1	100.0%
Subtotal Australia	14	5	35.7%
New Zealand	1	0	0.0%
Indonesia	1	1	100.0%
Subtotal International	2	1	50.0%
Total	16	6	37.5%

2. Examination Papers and Assignments

2.1. Degree of Difficulty and Course Coverage

The following tables show the distribution of questions and marks by level of difficulty and course coverage:

Table 5 – Degree of Difficulty of Exam

Question	Syllabus Performance Outcome	Units	Knowledge & Understanding	Straight-forward Judgement	Complex Judgement	Total Marks
Q1(a)	2.3	2		7		7
Q1(b)	2.3	2	2			2
Q1(c)	3.1, 4.1	3,4		2		2
Q1(d)	3.1, 4.1	3,4		4		4
Q2(a)	4.4	4	3			3
Q2(b)	4.4	4		2		2
Q2(c)	4.4	4	3			3
Q2(d)	4.1	4	1			1
Q2(e)	4.1	4	1			1
Q2(f)	6.1	6			4	4
Q2(g)	4.4	4			6	6
Q3(a)	5.1	5		7		7
Q3(b)(i)	5.2	5	1			1
Q3(b)(ii)	5.2	5	1			1
Q3(b)(iii)	5.2	5		2		2
Q3(b)(iv)	5.2	5		4		4
Q3(c)	5.2	5			5	5
Q4(a)(i)	2.1, 3.6	2,3		8		8
Q4(b)	7	7	5			5
Q4(c)	4.1	4			5	5
Q4(d)	4.1	4			4	4
Q4(e)	4.1	4			3	3
Q5(a)	6.2	6	4			4
Q5(b)	6.2	6		6		6
Q5(c)	6.2	6			5	5
Q5(d)	6.2	6			5	5
Total			21	42	37	100

Note that Unit 1 is an introduction that covers requisite material required for most

questions on the paper.

Table 6 – Course Coverage by Question

Question	Units	Knowledge & Understanding	Straight-Forward Judgement	Complex Judgement	Total Marks
1	2, 3 and 4	2	13	0	15
2	4 and 6	8	2	10	20
3	5	2	13	5	20
4	2, 3, 4 and 7	5	8	12	25
5	6	4	6	10	20
Total		21	42	37	100

2.2. Overall Performance

The exam paper proved to be a very good discriminator of student understanding and ability to apply judgement. The range of marks scored, as shown in the appendices, demonstrates this.

The examiners felt that this year's exam would provide a suitable level of challenge to the candidates. A very detailed marking guide was prepared for the markers which meant that some candidates showed understanding but did not pick up as many marks as they may have thought they would. This fact was taken into account by the markers in determining the cut-off points for the grades awarded to each question.

Candidates clearly found Q5 very challenging. Question 1 proved to be a good discriminator. Question 2 was difficult but there were a number of good attempts. Questions 3 and 4 were not overly difficult but some candidates demonstrated a lack of understanding of some basic concepts required here.

2.3. Exam Question by Question Analysis

Question 1

	Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass (A)	11.5	76.7	2	0.13
Pass (B)	9	60.0	1	0.06
Slightly Below Standard (C)	6	40.0	8	0.50
Weak (D)	4	26.7	0	0.25
Showed Little Knowledge (E)	0.5	3.3	4	0
Did Not Attempt (X)	0	0.0	1	0
Maximum Mark	11.8			
Average Mark	7.22			
Standard Deviation	2.92			
Coefficient of Variation	0.40			

The performance on this question was disappointing. It was the view of the

examiners that the judgement required to answer this question was not complex and yet many candidates failed to make a start on many of the parts. These candidates often wrote out results which did not relate to the given option instead quoting results from options considered during class. Candidates who understood the payoff from the option and how to therefore begin the required manipulations performed well with the algebra necessary to complete the question. Overall the question proved to be a good discriminator.

Question 2

	Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass (A)	12.3	61.3	4	0.25
Pass (B)	10	50.0	4	0.25
Slightly Below Standard (C)	7	35.0	6	0.38
Weak (D)	4	20.0	1	0.06
Showed Little Knowledge (E)	0.5	2.5	1	0.06
Did Not Attempt (X)	0	0	0	0
Maximum Mark	12.8			
Average Mark	9.36			
Standard Deviation	2.79			
Coefficient of Variation	0.30			

Parts (a) and (d) of the question were well handled by most candidates. Parts (b) and (c) were well handled by about half of the candidates. It was clear that some candidates here had no understanding of the image approach given in the question. Part (e) was reasonably well handled. Part (f) proved too difficult for almost all candidates with nobody able to complete the required manipulations. Part (g) was also very difficult for the candidates with many only able to make very general statements that did not demonstrate sufficient understanding. The challenge provided by parts (f) and (g) was anticipated by the course examiner and the required marks for passing were set accordingly by the markers.

Question 3

	Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass (A)	11.3	56.3	2	0.13
Pass (B)	9	45.0	6	0.38
Slightly Below Standard (C)	6	32.5	4	0.25
Weak (D)	4.5	22.5	4	0.25
Showed Little Knowledge (E)	0.5	2.5	0	0
Did Not Attempt (X)	0	0	0	0
Maximum Mark	11.8			
Average Mark	8.55			
Standard Deviation	1.95			
Coefficient of Variation	0.23			

Part (a) of the question proved to be a very good discriminator. Weaker candidates failed to give sufficient detail with points being vague. Part (b) was intended to be straightforward. It was disappointing to see almost half of the candidates failing to answer simple questions relating to simple immunisation strategies. The marks on part (c) were less spread out than the previous parts with most candidates picking up the commonly known points but very few giving some of the points requiring more complex judgement.

Question 4

	Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass (A)	12.6	50.5	1	0.06
Pass (B)	10.1	40.5	6	0.38
Slightly Below Standard (C)	6.8	27.0	6	0.38
Weak (D)	4.5	18.0	2	0.13
Showed Little Knowledge (E)	0.5	2.0	1	0.06
Did Not Attempt (X)	0	0	0	0
Maximum Mark	12.8			
Average Mark	8.91			
Standard Deviation	2.35			
Coefficient of Variation	0.26			

Part (a) proved very difficult for candidates with only one candidate earning more than half of the marks available. Candidates found it difficult to apply their knowledge of option valuation methods to this new context. Part (b) on professional standards was reasonably well handled. Part (c) proved difficult for many with only a few candidates able to address the issues required. Part (d) required judgement and proved to be a very good discriminator. Part (e) was reasonably handled.

Question 5

	Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass (A)	11.5	57.5	0	0
Pass (B)	9	45.0	0	0
Slightly Below Standard (C)	6	30.0	8	0.50
Weak (D)	4	20.0	6	0.38
Showed Little Knowledge (E)	0.5	2.5	2	0.13
Did Not Attempt (X)	0	0	0	0
Maximum Mark	7.8			
Average Mark	5.63			
Standard Deviation	1.43			
Coefficient of Variation	0.25			

The question was answered extremely poorly; no student showed an understanding of the concepts or question. No parts of the question were

answered well. In most cases, students failed to answer the question. Part (b) was the best handled. There was evidence that some students ran out of time.

Course 6A Global Retirement Income Systems

Examination Report Semester 1 2011

1. Summary

1.1. Pass Rate

20 candidates enrolled for the semester 1 2011 Global Retirement Income Systems (subject 6A) course. Of these, 2 candidates withdrew without sitting the exam.

The course assessment comprised one assignment (15%) and one exam (85%).

It is proposed that 9 candidates be awarded a pass, which implies a pass rate of 50% of candidates sitting the exam. For comparison, recent pass rates are as follows:

Table 1 – Course Experience

Semester	Course	Sat	Passed	Pass Rate
2010 Semester 2	B	13	7	54%
2010 Semester 1	A	16	4	25%
2009 Semester 2	B	19	10	53%
2009 Semester 1	A	14	5	36%
2008 Semester 2	B	18	10	56%
2008 Semester 1	A	19	11	58%

1.2. Candidate Numbers

Table 2 – Candidate Numbers

	Candidates
Originally enrolled	20
Withdrawn prior to exam	2
Absent from exam	0
Presented at exam	18
Pass recommended	9
Fail recommended	9

Table 3 – Analysis by Examination Centre

Centre	Sat	Pass Proposed	Pass Rate
Sydney	7	4	57%
Melbourne	7	5	71%
Hobart	1	0	0%
Australia	15	9	60%
London	2	0	0%
Seoul	1	0	0%
Ex-Australia	3	0	0%
Total	18	9	50%

2. Examination Papers and Assignments

2.1. Degree of Difficulty and Course Coverage

The following table summarises the distribution of marks by level of difficulty and course coverage by question:

Table 5 – Course Coverage by Question

Question	K&U	SJ	CJ	Marks
1	9	5		14
2	4.5	1.5	4	10
3	2	4.5	9.5	16
4		16	8	24
5	4	7		11
6	2	7	16	25
Total	21.5	41	37.5	100

The following table shows the distribution of marks by level of difficulty and course coverage by part:

Table 6 – Degree of Difficulty of Exam

Question	Syllabus	Units	K&U	SJ	CJ	Marks
1(a)	1, 3	1, 2	2	3		5
1(b)	1	1	2	2		4
1(c)	3	2	5			5
2(a)	3, 6	2, 3	3		4	7
2(b)	3, 6	2, 3	1.5	1.5		3
3(a)	7, 14	3, 8	1	1	2	4
3(b)	7, 14	3, 8	1	0.5	4.5	6
3(c)	7, 14	3, 8			3	3
3(d)	7, 14	3, 8		3		3
4(a)	9	5		6		6
4(b)	6	3		6		6
4(c)	12	7			8	8
4(d)	6, 11	3, 7		4		4
5(a)	4, 5	2	4			4
5(b)	4, 5	2		4		4
5(c)	4, 5	2		3		3
6(a)	12, 13	7		5		5
6(b)	12, 13	7			3	3
6(c)	12, 13	7	2	2		4
6(d)	14	8			5	5
6(e)	14	8			4	4
6(f)	8	4			4	4
TOTAL			21.5	41	37.5	100

2.2. Question by Question Analysis

The following tables summarise the raw marks recommended to me by the markers, as adjusted for borderline candidates.

Question 1	Marks Required	% of Marks Available	Number of Candidates	Proportion of Candidates
Strong Pass	21	75%	2	11%
Pass	17	61%	9	50%
Slightly Below Standard	14	50%	5	28%
Weak	8	29%	2	11%
Showed Little Knowledge	1		0	0%
Did Not Attempt	0		0	0%
Highest Mark	22	79%		
Average Mark	17.1	61%		
Standard Deviation	2.9			

Question 1 was a poor differentiator. A relatively simple question, most candidates were able to list relevant points, resulting in a high pass rate.

A small number of candidates interpreted part (a) to be from an individual perspective rather than the intended country (government) perspective. Such an approach greatly simplified the question (too much so for 5 marks), which should have made marks hard to gain. However, given that very few candidates scored more than 3 marks, these candidates were not at all disadvantaged. Very few candidates mentioned the integration of private/public savings and the difficulty of assessing expenditure patterns, due possibly in part to the interpretation issue.

Part (b) drew reasonable answers but not as strong as would be expected for a bookwork question. There was not enough explanation of the meaning of adequacy, with many candidates jumping straight to definitions.

Part (c) was well answered, with nearly all candidates identifying the three pillars. Some marks were lost for not correctly describing the sources and for confusion between pillars two and three. Many candidates didn't identify sources outside of super for pillar three.

Question 2	Marks Required	% of Marks Available	Number of Candidates	Proportion of Candidates
Strong Pass	14	70%	1	6%
Pass	11	55%	8	44%
Slightly Below Standard	9	45%	3	17%
Weak	5	25%	6	33%
Showed Little Knowledge	1		0	0%
Did Not Attempt	0		0	0%
Highest Mark	14	70%		
Average Mark	10.0	50%		
Standard Deviation	2.6			

Question 2 was a fair differentiator. Most candidates were able to list relevant points, resulting in good marks and a relatively high pass rate.

In part (a) most candidates were able to state the obvious risks such as longevity and inflation-linked indexation. Those candidates who did well were able to demonstrate more complex judgement, explaining other risks such as the lack of incentive for prudential financial management by the individual.

Overall candidates answered part (b) better than part (a). This was surprising as part (b) followed on from part (a). In part (b) there were several additional points that the markers also rewarded for including encouraging annuities, encouraging longer participation in the workforce and actions to change the shape of the population. Some students repeated points using different phrases, other students wrote down facts and points about the age pension but they were not relevant to the question being asked.

Question 3	Marks Required	% of Marks Available	Number of Candidates	Proportion of Candidates
Strong Pass	22	69%	0	0%
Pass	16	50%	6	33%
Slightly Below Standard	13	41%	4	22%
Weak	8	25%	5	28%
Showed Little Knowledge	1		3	17%
Did Not Attempt	0		0	0%
Highest Mark	20.5			
Average Mark	13.1			
Standard Deviation	4.4			

Question 3 was a good differentiator. In part (a) most candidates correctly defined a "deficit" but the explanation of "past service liability" was generally not well provided. Very few candidates mentioned the method of valuing the assets.

In part (b) most candidates mentioned that there are options on the level of contribution increase to cover the deficit over time but some of the responses were poorly constructed. Some candidates failed to mention the need to seek the employer's opinion/agreement. Few candidates identified that the volatility of investment returns has an impact on the deficit. Very few candidates mentioned the Trustee's role in the funding policy or possible need to adjust benefits if the employer doesn't agree to fund the shortfall.

Responses to part (c) were fair. Many candidates failed to identify the main implications are that they need to ensure the employer agrees to the amended funding program and to monitor the progress to restoration of funding.

Part (d) was generally well answered.

Question 4	Marks Required	% of Marks Available	Number of Candidates	Proportion of Candidates
Strong Pass	25.5	53%	1	6%
Pass	18.5	39%	6	33%
Slightly Below Standard	13.5	28%	10	56%
Weak	7	15%	1	6%
Showed Little Knowledge	1		0	0%
Did Not Attempt	0		0	0%
Highest Mark	25.5			
Average Mark	18.1			
Standard Deviation	3.9			

Question 4 was a poor differentiator. The marks awarded and the pass rates were relatively low.

The responses to part (a) were mixed. Most candidates gained marks in relation to individual data and claims history but many did not mention acceptance procedures and the terms and conditions of the current self-insurance arrangements. Some candidates referred to fund data rather than focussing on

company data. In addition to the sample solutions, marks were also awarded for mentioning occupation data; previous actuarial report (if any); company reserving (if any); financial position of plan; employer covenant; opinion regarding ability to self insure; public offer. Some candidates did not read the question thoroughly, for example referring to the need check the current trust deed to see whether the benefits were permissible, whereas the question clearly stated that legal advice on this issue had been obtained.

Part (b) was generally well answered. Some candidates provided both advantages and disadvantages of external insurance, rather than looking at the relative advantages of self-insurance versus external insurance.

Many of the responses to part (c) appeared to have been copied straight out of the course notes, without considering the relevance to the particular circumstances described in the question. For example, some candidates referred to deductions from member accounts even though XYZ is a non-contributory plan. Most candidates mentioned calculation of expected death and disablement decrement rates and the cost to fund the new liabilities but very few considered the potential volatility in experience other than at a high level. Most candidates failed to consider the use of reserves released within the fund upon death or disablement under the current design.

Responses to part (d) were disappointing as most candidates did not consider the need for policies to accept new risks and assess claims and how these policies would affect the day-to-day operations of the administrator. Instead, many candidates referred to the actuarial oversight functions rather than the trustee and administrator functions.

Question 5	Marks Required	% of Marks Available	Number of Candidates	Proportion of Candidates
Strong Pass	17.5	80%	2	11%
Pass	14	64%	7	39%
Slightly Below Standard	11	50%	4	22%
Weak	8	36%	4	22%
Showed Little Knowledge	1		1	6%
Did Not Attempt	0		0	0%
Highest Mark	18.5			
Average Mark	13.1			
Standard Deviation	3.3			

Question 5 was a good differentiator. Part (a) was best handled by most candidates. However, candidates rarely discussed the nature of the two options proposed, which was not surprising as the question didn't really lead them in that direction. Marks were awarded for objectives such as increasing confidence in the system (or regulator) and promoting consistency with other financial institutions that are required to hold reserves.

Many students responded to part (b) in terms of the pros and cons of each option rather than adhering more strictly to how 'effective' each option was. Nonetheless, most students managed to provide reasonable responses, although few raised the potential inadequacy of reserves under option 1. Most students

were able to identify the moral hazard or potential cross subsidies that may arise under option 2. Marks were also awarded for comments relating to the greater confidence provided by option 2 given that it was externally managed and in a couple of cases where candidates noted that under option 2 the levy fund may come under stress in financial market downturns and for highlighting the adequacy of the levy itself.

Part (c) was handled least well and most candidates focussed almost solely on the administrative complexities. A few did mention funding issues but typically limited this to a brief comment about the employer not being happy about the need to contribute more. That is, comments around establishing reserves from any surpluses or a potential future reduction in member benefits were rarely noted. Similarly, references to legal issues, including wind up clauses, were rare.

Question 6	Marks Required	% of Marks Available	Number of Candidates	Proportion of Candidates
Strong Pass	38	76%	0	0%
Pass	30	60%	7	39%
Slightly Below Standard	20	40%	6	33%
Weak	8	16%	5	28%
Showed Little Knowledge	1		0	0%
Did Not Attempt	0		0	0%
Highest Mark	36			
Average Mark	25.7			
Standard Deviation	6.9			

Question 6 was a good differentiator. There were no standout candidates, hence no 'strong pass' was awarded, however most responses ranged from fair (viz. borderline fail) to good (pass). This may have reflected the structure of the question as 6 sub-questions. Further, being the last question on the paper, some candidates clearly ran out of time.

Part (a) was generally answered ok.

In part (b) most candidates were able to identify 3 factors but few identified more than 4. This was surprisingly for a bookwork question.

For part (c) most candidates scored 2 out of 2 for part (i) but missed out the second mark for part (ii) – i.e. they failed to recognise that EAN contribution rate is not dependent on past experiences or membership changes.

In part (d) the better students were able to show their understanding of how a surplus/deficit will arise from the payment of a withdrawal or retirement benefit.

In part (e) only one candidate mentioned the need to consider the change in strategic asset allocation when performing the analysis of surplus – and this was only in passing. Other candidates wrote out all the surplus formulas rather than concentrating on the interest surplus, as asked.

In part (f) some candidates did not consider the manner in which they gave their answer. The question asked how the candidate would respond to the finance director. Some answers read like a lecture to the finance director rather than explaining and educating the finance director on why assumptions are set as they are and the professional responsibilities of the actuary. The client management and acting in a professional manner aspects were missing. A few responses

missed the point of the question and went off to advise the finance director on how to achieve his desired goal.

Generally responses to parts (d) and (f) provided the differentiation between borderline fail and pass.

2.3. Overall Analysis

The recommended pass rate is pleasing, particularly following the low pass rate of course 6A for the past two years.

Interestingly, the recent pass rate for Course 6A has been lower than the preceding Course 6B. This of course means that the pass rate for Course 6A overall has been lower than Course 6B over this time. It is not clear to me why this would be the case.

The results for international (ex-Australia) candidates were disappointing, albeit that there was a small sample (3). The initial draft exam contained some Australia-centric references in Q1 and Q2; however these were removed through the review process. Nevertheless I reviewed the performance of international candidates in these questions to determine whether they had been subject to any content bias. I concluded that the results for these candidates showed no evidence of content bias and indeed reflected the standard of performance in the exam as a whole.

I thought this was a good and fair exam paper overall. 4 of the 6 questions were reasonable differentiators. The other questions were Q1 – which was possibly too simple and with too much bookwork to be a good differentiator, however this was a relatively small question and would have provided a gentle lead in for candidates, improving their confidence, which is not a bad thing either – and Q4 – for which the marks were too low and too compressed for material differentiation. As the overall impact on results was minor, I did not investigate the specific cause further.

Overall, I thought the exam paper was balanced and provided suitable coverage and with that in mind the new course leader is to be commended.

Course 10 Commercial Actuarial Practice

Examination Report Semester 1 2011

1. Summary

1.1. Course Outline

The overall objectives of the Commercial Actuarial Practice (CAP) Course are to enable students to:

- Apply actuarial skills across a range of traditional and non-traditional areas by “contextualizing” actuarial solutions or approaches in the wider commercial environment;
- Apply ethical concepts, corporate governance requirements and actuarial professional standards when writing a report; and
- Successfully communicate the actuarial solutions or approaches to a range of audiences.

Given these objectives, the assessment for the course is focused on the practical application of judgment and on the written communication skills of the students, rather than on bookwork.

The assessment structure changed slightly this semester, with ERM moved into the mainstream topics. The two assessment tasks are now as follows:

1. A take-home Post-Course Assignment (“Assignment”) on one of the 3 non-traditional topics (Banking, Health, Environment), distributed after the residential course for completion within 2 weeks. This semester one-third of the students were randomly allocated to each topic. It is worth 20% of the final mark. The result and feedback were supplied to candidates a week prior to the Exam.
2. An 8-hour Case Study Exam (“Exam”) worth 80% of the final mark, under exam conditions with the use of a computer (open book, but no internet access). The candidates had to absorb the question material, choose 1 from the 5 mainstream topics (Life, General, Investment, GRIS, and ERM), perform all the necessary analysis and prepare a substantial written report.

The pass mark is 50%, which is regarded as equivalent to the 60% scaled pass mark adopted for the part III courses. Candidates who had passed part of the previous course were allowed to submit only the other equivalent part this semester.

1.2. Pass Rates

Of the 79 candidates who presented for the course, it is proposed that 47 be awarded a pass, representing a pass rate of 59%. This is close to the long-term average pass rate of 61%, but hides a very poor 39% pass rate for those attempting the Life Insurance exam.

“Overseas” candidates had a slightly lower pass rate than Australian-based candidates, with 5 out of 11 or 45% of overseas candidates passing compared to 62% of those who sat in Sydney, Melbourne or Canberra. The full list is:

Results by Exam Centre			
Centre	Presented	Passed	Pass rate
Canberra	3	3	100%
Melbourne	15	9	60%
Sydney	50	30	60%
Auckland	1	1	100%
Canada	1	1	100%
Hong Kong	2	0	0%
Jordan	1	0	0%
Kuala Lumpur	1	0	0%
London	1	0	0%
Singapore	2	1	50%
Wellington	1	1	100%
York	1	1	100%
Australia	68	42	62%
Overseas	11	5	45%
Total	79	47	59%

1.3. Pass Rates by Topic

The following table of results by exam topic chosen shows that pass rates did vary substantially. However, section 5 presents evidence based on performance in the Post-Course Assignment, suggesting that Life Insurance students were a weaker-than-average group. A single additional pass or fail would markedly change the ERM or GRIS pass rates, but I am very comfortable with their general level.

Exam Case	Sat	Passed	Pass rate
ERM	3	2	67%
General Insurance	26	20	77%
GRIS	4	3	75%
Investment	15	10	67%
Life Insurance	31	12	39%
Total	79	47	59%

The Life pass rate was badly affected by 8 “automatic fails” due to them recommending a financial reinsurance arrangement that was clearly defined in the question as being illegal. (Full discussion is in section 6.5) If the 8 were excluded, the pass rate would have been 52%.

1.4. Candidate Numbers

A total of 79 candidates were enrolled for one or both of the assessments in Semester 1 of 2011. There were 35 first-time candidates, a major reduction on recent semesters, and they all attended the compulsory 4-day residential course. 44 repeat candidates also enrolled a similar number to recent semesters. No repeat candidates took the option to attend the residential course, presumably due to the time commitment and/or the \$4,400 cost.

The candidate numbers and results can be summarized as follows:

	Post-Course Assignment only	Case Study Exam only	Both	Total
Originally enrolled	0	2	77	79
Withdrawals	0	0	0	0
Absent	0	0	0	0
Presented	0	2	77	79
Passed	0	1	46	47
Failed	0	1	31	32

2. Post Course Assignment Results

Although marks and grades were given for the Post-Course Assignment, a pass/fail decision was not required for each candidate; this simply formed 20% of their overall mark. (Candidates were given the mark out of 20, but in this report all are quoted as percentages.) Nevertheless, marks around 50% were reviewed carefully by each Marker. David Service marked a selection from each topic to ensure consistency. The Examiners later reviewed other marks when they had the potential to impact the overall pass decision.

2.1. Banking

The Banking case study required candidates to provide advice to the Australian government on implementing a "Banking Super Profits Tax" and illustrate the impacts on Westpac as an example.

The question was generally answered well, with only 2 candidates (out of 26) given less than 45%. The average mark was 60%.

2.2. Environment

The Environment case study required candidates to advise a government on the impacts on greenhouse gas emissions that could be achieved by imposing fuel efficiency standards on new vehicles. Comments on benefits, costs and monitoring over 30 years were required.

Again the question was well answered, with only 2 candidates (out of 25) given less than 47%. The average mark was 64%.

2.3. Health

The Health case study required candidates to provide advice to a scheme funding rural Chinese county hospital benefits. Income and expenditure had to be projected after developing assumptions, and advice had to be given on dealing with the emerging deficit.

The results were pleasing, with 22 of 26 candidates being awarded clear passes. The other 4 failed clearly, with marks of 35% to 40%. The average mark was 63%.

3. Exam results

3.1. ERM

This semester, Enterprise Risk Management was changed from being a “non-traditional” CAP topic to become a mainstream subject. Although only 3 candidates chose it in the exam, we expect that number to grow as the part 3 ERM course generates more “specialist” graduates.

The ERM Case Study required candidates to provide advice to a rural shire Council on improving its risk management function, and on how (without hindsight) it might have avoided investing in a specific Collateralised Debt Obligation.

3.2. GRIS

The Case Study for Global Retirement Income Systems required candidates to provide advice to a closed defined benefit fund, regarding the employer's request for another repatriation of surplus. Changes in termination experience, related to a “greater of” benefit, meant that repatriation was not advisable.

3.3. General Insurance

The case for General Insurance required candidates to assist a motor vehicle repairer to retain its position on an insurer's panel by analysing its repair experience and recommending ways in which the repairer and insurer could work more effectively together.

26 candidates chose this topic, and 20 or 77% passed. The question was generally well answered with the majority of candidates correctly identifying the reason why the insurer's analysis was flawed and recommending appropriate action on the part of the repairer. In most cases, the candidates who failed dealt inappropriately with the element of the question which asked them to consider whether the insurer's claims manager was acting fraudulently and / or provided inappropriate recommendations.

3.4. Investments

The Investments case required candidates to give advice to a fund manager in a fictitious country. The country's government has proposed to set a benchmark performance level for retirement savings funds, with fund managers required to top up a portion of any performance shortfall and permitted to keep a smaller proportion of any out-performance. Candidates were expected to perform stochastic analysis of the profit profile of a range of asset allocations and suggest improvements to the scheme.

15 candidates attempted this topic, with 10 (or 67%) passing. The question was generally well answered, with several of the failing candidates being relatively close to passing. Failing candidates generally presented muddled reports or missed one or more key issues.

3.5. Life Insurance

The Life case required candidates to provide advice to a life company on the least expensive means of raising capital. The options were a loan from the

overseas parent, or 3 different reinsurance proposals. In general there was a good range in the quality of answers, but an “illegal financial reinsurance” issue dominated the results. I am so concerned with this, that I have described it in detail:

When I originally reviewed the question under construction, I thought the FinRe issue was interesting, but unlikely to catch many candidates. Professionalism and governance are aspects that are stressed in the CAP course, and candidates are looking out for something of that ilk in each question. The entire Life question and attachments comprise less than 3 pages of reading. The mythical country's life regulations conclude with this statement:

Financial reinsurance must be genuine reinsurance where the reinsurer is remunerated only through the profitability of the reinsured business. No separate arrangements, however constructed, are permitted.

The short description of one of the reinsurance offers concludes with:

BigSouthRe has indicated that the offer will be subject to a side letter between its parent and FWL, executed in Switzerland. This letter will ensure that the financial arrangements will be such that the capital effectively provided to SFL will be repaid to give BigSouthRe a return on that capital equal to long bond + 2% regardless of the profitability or otherwise of the reinsured business.

31 candidates attempted this topic, and 8 were failed automatically because they recommended the financial reinsurance as the best option. Sadly, 2 of them had scored very well in the Assignment. A further 2 borderline candidates were failed because, although they recommended a different option, the FinRe was rated second-best and was not recognized as illegal. Hence one-third of Life candidates failed due to not recognizing the illegality. Quite apart from lack of exposure to “profitability of the reinsurance business”, I am mystified that so many candidates did not recognize the side letter in Switzerland as a “separate arrangement”.