

Report to ECC from the Board of Examiners

SEMESTER TWO 2010

PART III

BOARD OF EXAMINERS REPORT

Excluding C7A results

(PUBLIC VERSION)



Institute of Actuaries of Australia

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CHAIR'S REPORT

SUMMARY

Examination Administration

The Semester Two 2010 Part III examinations of the Institute of Actuaries of Australia ("Institute") were held between 18th October 2010 and 22nd October 2010. Candidates attended the examinations in Australia (Sydney, Melbourne, Canberra, Perth Adelaide, Hobart and Brisbane) and overseas (Canada, China, Hong Kong, Korea, Malaysia, Netherlands, New Zealand, Singapore, Thailand and United Kingdom).

This is the sixth 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 in the latest period shows a decrease over that in Semester One 2010 and Semester Two 2009.

Table A: Candidate Numbers Sitting by Part III Course

	Subject	2007(1)	2007(2)	2008(1)	2008(2)	2009(1)	2009(2)	2010(1)	2010(2)
1	Investments	171	166	150	120	177	145	93	88
2A	Life Insurance	53	54	61	66	58	52	39	55
2B	Life Insurance	37	43	36	50	52	62	63	39
3A	General Insurance	64	82	69	51	65	57	76	66
3B	General Insurance	48	44	40	62	50	63	63	53
4A	Superannuation & Planned Savings	15	n/a ¹	n/a	n/a	n/a	n/a	n/a	n/a
4B	Superannuation & Planned Savings	n/a ²	16	n/a	n/a	n/a	n/a	n/a	n/a
5A	Investment Management & Finance ³	17	n/a	35	n/a	n/a	46	n/a	38
5B	Investment Management & Finance ⁴	n/a	44	n/a	35	44	n/a	34	n/a
6A	Global Retirement Income Systems ⁵			19	n/a	14	n/a	16	n/a
6B	Global Retirement Income Systems ⁶				18	n/a	19	n/a	13
7A	Enterprise Risk Management ⁷							57 ⁸	66 ⁹
10	Commercial Actuarial Practice	61	70	83	87	74	92	97	102 ¹⁰
	Total	466	519	493	489	534	536	538	520

¹ 4A not run Semester 2 2007 and replaced by 6A from 2008.

² 4B not run Semester 1 2007 and replaced by 6B from 2008.

³ 5A only offered once per calendar year.

⁴ 5B only offered once per calendar year.

⁵ 6A GRIS introduced in Semester 1 2008 replacing 4A, only offered once per calendar year.

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

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

⁸ 67 candidates, 10 Fellows, 57 non-Fellows

⁹ 75 candidates, 9 Fellows, 66 non-Fellows

¹⁰ This figure represents 101 candidates who sat the exam and 1 candidate who sat the post course report only

Table A1: Commercial Actuarial Practice

		2007(1)	2007(2)	2008(1)	2008(2)	2009(1)	2009(2)	2010(1)	2010(2)
1 st Attempt	Full Course	44	47	63	46	49	61	64	66
Resit	Report and Exam	4	3	2	2	2	1	22	27
	Post Course Report	12	11	13	24	21	2	-	1
	Case Study Exam	1	6	5	15	2	28	11	8
	Total	61	70	83	87	74	92	97	102

Pass Rates

The number of candidates presenting for the Semester Two 2010 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

	2010(2)			2010(1)			2009 (2)			2009 (1)		
	Sat	Pass	%	Sat	Pass	%	Sat	Pass	%	Sat	Pass	%
1 Investments	88	27	31%	93	33	35%	145	43	30%	177	86	49%
2A Life Insurance	55	17	31%	39	11	28%	52	31	60%	58	23	40%
2B Life Insurance	39	16	41%	63	28	44%	62	24	39%	52	20	38%
3A General Insurance	66	24	36%	76	28	37%	57	17	30%	65	24	37%
3B General Insurance	53	21	40%	63	22	35%	63	18	29%	50	16	32%
5A Invest. Man. & Fin.	38	20	53%	n/a	n/a	n/a	46	17	37%	n/a	n/a	n/a
5B Invest. Man. & Fin.	n/a	n/a	n/a	34	19	56%	n/a	n/a	n/a	44	22	50%
6A GRIS	n/a	n/a	n/a	16	4	25%	n/a	n/a	n/a	14	5	36%
6B GRIS	13	7	54%	n/a	n/a	n/a	19	10	53%	n/a	n/a	n/a
7A ERM	66	TBD	¹¹	57	11	19% ¹²	n/a	n/a	n/a	n/a	n/a	n/a
CAP	102	56	55%	97	57	59%	92	55	60%	74	41	55%
Total	520	188	41%¹³	538	223	40%¹⁴	536	215	40%¹⁵	534	237	44%¹⁶

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 41% is slightly higher than the previous semester.

Prizes

Prizes are awarded only once in a calendar year following the Semester Two examinations. Prizes winners are notified after the release of results in semester Two and are invited to attend

¹¹ Pass rates for Semester 2 are not yet known.

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 102 CAP candidates but not the 66 C7A candidates as results are yet to be notified.

¹⁴ Figure represents pass rate in respect of all 97 CAP candidates and 57 C7A candidates.

¹⁵ Figure represents pass rate in respect of all 92 CAP candidates

¹⁶ Figure represents pass rate in respect of all 74 CAP candidates

the next Presidential Dinner to receive their award. Prize winners are then announced in the next Actuary Australia Magazine.

Fellows

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

- (i) 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).
- (ii) 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	2010(2)	2010(1)	2009(2)	2009(1)	2008(2)	2008(1)
New Fellows	40 ¹⁷	51 ¹⁸	51	34 ¹⁹	71 ²⁰	37 ²¹

¹⁷ 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.

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

¹⁹ 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.

²⁰ 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.

²¹ 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. For this semester additional assistant chairs were recruited to meet the extra work required due to the change in the CAP course assessment format.

1.2 Meetings of the Board

The Board met on three occasions as part of the Semester One 2010 exam process.

- The first meeting was held on 7th July 2010. 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 Two 2010
 - identify Chief & Assistant Examiners and Course Leaders for each course for Semester Two 2010
 - outline the responsibilities of Chief Examiners and the Semester Two schedule
 - review progress on the drafting of the exams to date
- The second meeting was held on 15th September 2010. It was attended by a representative from all courses. The purposes of this meeting were to:
 - discuss proposed changes to the BoE Handbook
 - the status of Semester Two 2010 examination papers, model solutions and sign-off process.
 - discuss the marking spreadsheets and review the recruitment of markers.
- The third meeting was held on 1st December 2010 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 One 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 Two 2010 and the Board of Examiners team is indebted to them both.

The Semester Two 2010 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 Two 2010 Part III examinations delivered by Access Macquarie were arranged with UTS Sydney City Campus in Sydney and the Centre for Adult Education in Melbourne as venues. Other examinations were administered by Fellows or other approved supervisors.

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 Two 2010:

Course 1 – Access Macquarie

Course 2A and 2B - Brendan Counsell (Acting Faculty Convenor), Aaron Bruhn (2A Assignment and Exams), Bruce Thomson (2A tutorials and discussion forums). There was no course leader for 2B this semester. Volunteers were found to write exam questions which was coordinated by Ian Werner, Chief Examiner. The other Course Leader tasks were shared amongst, Michael Lau (Discussion Forums and Tutorials) and Steve Miles, (Assignment).

Course 3A and 3B - GI Faculty, Dave Finnis (3A Assignment, Exam, Tutorials and discussion forums), Rick Shaw (3B Assignment, Exam, Tutorials and discussion forums)

Course 5A – Access Macquarie

Course 6B – Peter May (Faculty Convenor), Jeffrey Chee (assignments and exams), David McNeice (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 Two 2010 examination process began with an initial meeting of the Board of Examiners and Course Leaders. 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 Two 2010 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 by one new Fellow scrutineer for coverage and fairness. A scrutineer was used for the Access Macquarie run examinations once again this semester.
- The new 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 Course 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:

- Two markers marked each question. 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.
- 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.
- 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 (Modules 1-3)

Question Setting

The basic framework followed by each course, except C7A Enterprise Risk Management, 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 Two 2010 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, Pat McConnell, Richard Madden, Peter Martin, Colin Priest, Jill Green, Charles Qin, 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 take-home report on one of the four non-traditional topics, distributed after the residential course. This semester one quarter 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 4 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 36 candidates repeating the CAP course this semester, 17 passed the course overall and 19 failed overall. Of the 19 failing candidates there are 2 who will now be on their 4th attempt, 7 on their 3rd attempt and 10 on their 2nd attempt.

The development and delivery of the course was overseen by a Faculty, consisting of Ken McLeod (Chair), Arie van den Berg and Donna Walker. Bruce Thomson was the Chief Examiner, assisted by Matthew Ralph and other members of the Faculty.

1.8 *Examination Dates*

The Semester Two 2010 Part III examinations were held on the following dates:

Course 1:	Investments	Monday 18 th October
Course 10:	Commercial Actuarial Practice	Friday 22 nd October
Course 2A:	Life Insurance	Tuesday 19 th October
Course 2B:	Life Insurance	Wednesday 20 th October
Course 3A:	General Insurance	Wednesday 20 th October
Course 3B:	General Insurance	Tuesday 19 th October
Course 5A:	Investment Management & Finance	Thursday 21 st October
Course 6B:	Global Retirement Income Systems	Thursday 21 st October
Course 7A:	Enterprise Risk Management	Tuesday 12 th October

1.9 *Assignment Dates*

The Semester Two 2010 Part III assignments were due on the following dates:

18th August (2A, 3A)
1st September (C1, 2B, 3B, 5A, 6B)
16th September (CAP - Post Course Report)

1.10 *Examination Centres*

Candidates, not including those sitting Course 7A, sat the exams in 7 centres in Australia and 10 centres overseas. Individual exam locations were arranged in Canada (1), China

(1), Hong Kong (12), Korea (1), Malaysia (8), New Zealand (7), Singapore (15), Thailand (1), The Netherlands (1) and UK (15). This table includes candidates who sat the CAP Exam

Table 1: Candidates by Exam Centre – Semester Two 2010 (excludes C7A)

Location	Number of Candidates
Australia	390
Brisbane	3
Canberra	9
Melbourne	80
Sydney	292
Adelaide	2
Hobart	1
Perth	3
Overseas	63
Canada	1
China	1
Hong Kong	12
Korea	1
Malaysia	8
New Zealand	7
Singapore	15
Switzerland	1
Thailand	1
The Netherlands	1
United Kingdom	15
Total	453

1.11 Exam Candidature

Candidate Numbers

The number of candidates sitting the Part III exams in Semester Two has decreased from Semester One 2010. Once again there was a decrease in the number of candidates sitting course C1 (Investments) over the previous semester. Course 7A (Enterprise Risk Management), Courses 2A (Life insurance) and C10 (Commercial Actuarial Practice) had slight increases in candidate numbers where all other courses 2A (Life Insurance), 3A and 3B (General Insurance), 5A (Investment Management & Finance) and 6B (Global Retirement Income Systems) all had decreases in candidate numbers over Semester 1 2010.

Table 2: Candidate Numbers Sitting by Part III Courses

	Subject	2007(1)	2007(2)	2008(1)	2008(2)	2009(1)	2009(2)	2010(1)	2010(2)
1	Investments	171	166	150	120	177	145	93	88
2A	Life Insurance	53	54	61	66	58	52	39	55
2B	Life Insurance	37	43	36	50	52	62	63	39
3A	General Insurance	64	82	69	51	65	57	76	66
3B	General Insurance	48	44	40	62	50	63	63	53
4A	Superannuation & Planned Savings	15	n/a ²²	n/a	n/a	n/a	n/a	n/a	n/a
4B	Superannuation & Planned Savings	n/a ²³	16	n/a	n/a	n/a	n/a	n/a	n/a
5A	Investment Management & Finance ²⁴	17	n/a	35	n/a	n/a	46	n/a	38
5B	Investment Management & Finance ²⁵	n/a	44	n/a	35	44	n/a	34	n/a
6A	Global Retirement Income Systems ²⁶	n/a		19	n/a	14	n/a	16	n/a
6B	Global Retirement Income Systems ²⁷	n/a			18	n/a	19	n/a	13
7A	Enterprise Risk Management ²⁸	n/a						57 ²⁹	66 ³⁰
10	Commercial Actuarial Practice	61	70	83	87	74	92	97	102 ³¹
	Total	466	519	493	489	534	536	538	520

Table 2A: Commercial Actuarial Practice

		2007(1)	2007(2)	2008(1)	2008(2)	2009(1)	2009(2)	2010(1)	2010(2)
1 st Attempt	Full Course	44	47	63	46	49	61	64	66
Resit	Report and Exam	4	3	2	2	2	1	22	27
	Post Course Report	12	11	13	24	21	2	-	1
	Case Study Exam	1	6	5	15	2	28	11	8
	Total	61	70	83	87	74	92	97	102

Withdrawal Rates

In Semester Two 2010, 567 candidates initially enrolled in courses, however 53 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 3A General Insurance (11 officially withdrew prior to the examinations and 3 did not present for the exam, out of 80 originally enrolled). 3A (General Insurance) and 5B (Investment Management & Finance) had the highest rate of withdrawal at 18% and 14% respectively. Compared to Semester 1 2010, the overall withdrawal rate increased by 3%. The number of candidates being absent from the exam was slightly higher – there were 10 in Semester 1 2010. The withdrawal rates for all subjects were:

²² 4A not run Semester 2 2007 and replaced by 6A from 2008.

²³ 4B not run Semester 1 2007 and replaced by 6B from 2008.

²⁴ 5A only offered once each calendar year.

²⁵ 5B 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.

²⁸ 7A Semester 1 2010 is the first time this course was run.

²⁹ 67 candidates, 10 Fellows, 57 non-Fellows

³⁰ 72 candidates, 9 Fellows, 63 non-Fellows

³¹ This 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 Two 2010

	Subject	Initially Enrolled	Withdrew prior to Exam	Absent from exam	Total Withdrawing	%
1	Investments	93	3	2	5	5%
2A	Life Insurance	61	5	1	6	10%
2B	Life Insurance	42	3	0	3	7%
3A	General Insurance	80	11	3	14	18%
3B	General Insurance	60	5	2	7	12%
5A	Invest Management & Finance	44	3	3	6	14%
6B	Global Retirement Income Systems	14	1	0	1	7%
7A	Enterprise Risk Management ³²	68	2	0	2	3%
10	Commercial Actuarial Practice	105	2	1	3	3%
	Total	567	35	12	47	8%

Candidate Mix

The mix of courses sat by candidates is broadly similar to that in previous years. The increased proportion for Investments seen in previous semesters seems to have abated this semester. The new Part III structure allows candidates to choose either C1 Investments or C7A Enterprise Risk Management as their elective for Module One. This change has directly affected the enrolment numbers for Investments in 2010.

The enrolments for Life Insurance have decreased slightly compared to the last four semesters. The General Insurance enrolments have decreased to 23% however they are comparable to previous semesters. The Global Retirement Income Systems course, which effectively replaced the Superannuation & Planned Savings course, reduced to 2% this semester. The Investment Management and Finance enrolments slightly increased with the previous semester at 6%. The CAP (Commercial Actuarial Practice) course has increased enrolment numbers by 2% however compares with previous semesters.

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

	Subject	2007(1)	2007(2)	2008(1)	2008(2)	2009(1)	2009(2)	2010(1)	2010(2)
1	Investments ¹	38%	33%	32%	25%	33%	27%	17%	17%
2	Life Insurance	20%	19%	19%	24%	21%	21%	19%	18%
3	General Insurance	24%	24%	23%	23%	22%	22%	26%	23%
4	Superannuation & P.S.	3%	3%	n/a	n/a	n/a	n/a	n/a	n/a
5	Investment Mgt & Finance ²	9%	9%	8%	7%	8%	9%	6%	7%
6	Global Retirement Income Systems	n/a		4%	4%	3%	4%	3%	2%
7	Enterprise Risk Management	n/a	n/a	n/a	n/a	n/a	n/a	11%	13%
10	Comm. Actuarial Practice	12%	12% ³³	16% ³⁴	18% ³⁵	14% ³⁶	17% ³⁷	18% ³⁸	20% ³⁹
	Total	100%	100%	100%	100%	100%	100%	100%	100%

³² Including Fellows there were 83 enrolments, 6 withdrawals and 2 absent from the exam

³³ Includes all CAP candidates enrolled including case study and or exam only - 70

³⁴ Indicates all CAP candidates enrolled including case study and or exam only - 83

³⁵ Includes all CAP candidates enrolled including case study and or exam only - 87

³⁶ Includes all CAP candidates enrolled including case study and or exam only - 74

³⁷ Includes all CAP candidates enrolled including case study exam and post course report only - 92

³⁸ Includes all CAP candidates enrolled including case study exam and post course report only - 97

³⁹ Includes all CAP candidates enrolled including case study exam and post course report only - 102

2. Examination Papers and Assignments

2.1 Examination Structure

The structure of the examinations in Semester Two 2010 was a single three-hour exam paper for Modules 1-3. The exams for Modules 1, 2 & 3 were worth 85% of the final assessment.

For Modules 1-3, 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 four traditional areas of actuarial practice, answering 1 out of 4 questions and worth 80% of the final assessment.

2.2 Assignment / Case Study Structure

The structure of the assignments in Semester Two 2010 was one assignment for Modules 1, 2 and 3, except for course 7A, 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 4 non-traditional topics (Banking, ERM, Health, Environment), distributed after the residential course for completion within 2 weeks. This semester one quarter of the students were randomly allocated to each topic and was worth 20% of the final assessment.

2.3 Examination Standards

In each course, excluding Course 7A, 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 Module 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 (1)	2010 (2)	2010 (1)	2010 (2)	2010 (1)	2010 (2)
1	Investments	20%	17%	38%	41%	42%	42%
2A	Life Insurance	20%	20%	41%	43%	39%	37%
2B	Life Insurance	20.5%	21%	30%	40%	39.5%	39%
3A	General Insurance	25%	22%	38%	40%	37%	38%
3B	General Insurance	21%	17%	38%	38%	41%	45%
5A	Invest. Management & Finance	n/a	13%	n/a	42%	n/a	45%
5B	Invest. Management & Finance	22%	n/a	40%	n/a	38%	n/a
6A	Global Retirement Income Systems	19%	n/a	42%	n/a	39%	n/a
6B	Global Retirement Income System	n/a	15%	n/a	43%	n/a	42%
	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

Procedures adopted in 2002 to improve the security of examination papers were continued in 2010:

- A marking day was not held this semester
- Scanned version of exam answers were made available to markers in an internal installation of the Institute's Learning Management System.
- Overseas supervisors were required to photocopy papers before sending them by courier to the Institute office.
- Secure couriers were used to transport papers between markers.
- Chief Examiners allocated two markers from the same city for each question as far as were possible (so papers were not moving too frequently between cities).

2.6 Security of Assignments

In Semester Two 2010 markers accessed and loaded comments via the on-line learning management system (LMS).

For all results, spreadsheets were sent directly to either 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

In summary the results are:

Table 6: Recommended Candidate Passes by Part III Course

	Subject	2007(1)	2007(2)	2008(1)	2008(2)	2009(1)	2009(2)	2010(1)	2010(2)
1	Investments	56	69	59	61	86	43	33	27
2A	Life Insurance	18	21	21	32	23	31	11	17
2B	Life Insurance	8	14	14	21	20	24	28	16
3A	General Insurance	24	17	36	21	24	17	28	24
3B	General Insurance	23	21	16	23	16	18	22	21
4A	Superannuation & P.S.	7	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
5A	Invest. Mngmt & Finance	6	n/a	17	n/a	n/a	17	n/a	20
5B	Invest. Mngmt & Finance	-	15	n/a	11	22	n/a	19	n/a
6A	Global Retirement Income Systems	n/a	n/a	11	n/a	5	n/a	4	n/a
6B	Global Retirement Income Systems	n/a	n/a	n/a	10	n/a	10	n/a	7
7A	Enterprise Risk Management	n/a	n/a	n/a	n/a	n/a	n/a	11 ⁴⁰	41
10	Comm. Actuarial Practice	35 ⁴²	47 ⁴³	41 ⁴⁴	62 ⁴⁵	41 ⁴⁶	55 ⁴⁷	57 ⁴⁸	56 ⁴⁹
	Total	177	211	215	241	237	215	213	188

⁴⁰ 11 Non fellows and a further 6 Fellows passes

⁴¹ Results not yet known

⁴² 61 candidates, 35 passes in the course (including case study and/or exam)

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

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

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

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

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

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

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

Table 7: Recommended Pass Rates by Part III Course

	Subject	2007(1)	2007(2)	2008(1)	2008(2)	2009(1)	2009(2)	2010(1)	2010(2)
1	Investments ¹	33%	42%	39%	51%	49%	30%	35%	31%
2A	Life Insurance	34%	39%	34%	48%	40%	60%	28%	31%
2B	Life Insurance	22%	33%	39%	42%	38%	39%	44%	41%
3A	General Insurance	38%	21%	52%	41%	37%	30%	37%	36%
3B	General Insurance	48%	48%	40%	37%	32%	29%	35%	40%
4A	Superannuation & P. S.	47%	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
5A	Invest. Mngmt & Finance ²	35%	n/a	49%	n/a	n/a	37%	n/a	53%
5B	Invest. Mngmt & Finance ³	-	34%	n/a	31%	50%	n/a	56%	n/a
6A	GRIS	n/a	n/a	58% ⁵⁰	n/a	36%	n/a	25%	n/a
6B	GRIS	n/a	n/a	n/a	56% ⁵¹	n/a	53%	n/a	54%
7A	ERM	n/a	n/a	n/a	n/a	n/a	n/a	19%	⁵²
10	CAP -	57%	67%	49%	71%	55%	60%	59%	55%
	Total	38%⁵³	41%⁵⁴	44%⁵⁵	49%⁵⁶	44%⁵⁷	40%⁵⁸	40%⁵⁹	41%

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 41% is slightly higher than the level achieved in the previous semester. Excluding the CAP results the overall pass rate would have been 37%.

The pass rate for Course 10, Commercial Actuarial Practice (CAP), of 55% overall was significantly higher than the average pass rate for Modules 1-3 of 40%. We believe that this is due to the following factors:

- CAP is a fundamentally different subject to those in Modules 1-3. 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 report and the exam.
- 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.
- Each assessment piece was double marked and then reviewed by the CAP Chief Examiner. To ensure consistency across the different subjects, one of the markers marked all case study exams and reviewed all post course reports.
- CAP is compulsory to all Part III students. Any fundamental differences between CAP and Modules 1-3 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.

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

⁵⁰ 6A GRIS –new course Semester 1 2008

⁵¹ 6B GRIS –new course Semester 2 2008

⁵² Results not yet known

⁵³ Based on CAP results of 61 candidates, 35 passes in the course (including case study and/or exam) = 57%

⁵⁴ Based on CAP results of 70 candidates, 47 passes in the course (including case study and/or exam) = 67%

⁵⁵ Based on CAP results of 83 candidates, 41 passes in the course (including case study and/or exam) = 49%

⁵⁶ Based on CAP results of 87 candidates, 62 passes in the course (including case study and/or exam) = 54%

⁵⁷ Based on CAP results of 74 candidates, 41 passes in the course (including case study and /or exam) = 55%

⁵⁸ Based on CAP results of 92 candidates, 55 passes in the course (including post course report and exam) = 60%

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

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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 (1)	2007 (2)	2008 (1)	2008 (2)	2009 (1)	2009 (2)	2010 (1)	2010 (2)
Sydney	40%	45%	47%	55%	50%	39%	39%	43%
Melbourne	50%	44%	50%	45%	44%	45%	57%	43%
Other Australian				61%	55%	67%	40%	28%
Overseas				40%	41%	37%	37%	35%
All Other ⁶⁰	34%	29%	43%	44%	43%	41%	38%	33%
Total	38%⁶¹	41%⁶²	47%⁶³	51%⁶⁴	48%⁶⁵	40%⁶⁶	42%⁶⁷	41%⁶⁸

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 non-Sydney/Melbourne examination centres is significantly lower than the overall pass rate for the Sydney/Melbourne examination centres
- The pass rate in Sydney, the largest centre with 68% of all candidates, was 43% this semester.
- In the UK only 5 candidates from 15 attempts passed (33%).

3.4 Pass Marks and Scaling

The scaled pass marks since 2007 Semesters Two, out of 200 marks have been as follows:

⁶⁰ Other Australian and overseas exam centres

⁶¹ Number incorporates only 49 CAP students sitting the exam out of a total of 61 candidates

⁶² Number incorporates only 57 CAP students sitting the exam out of a total of 70 candidates

⁶³ Number incorporates only 70 CAP students sitting the exam out of a total of 83 candidates

⁶⁴ Number incorporates only 63 CAP students sitting the exam out of a total of 87 candidates

⁶⁵ Number incorporates only 52 CAP students sitting the exam out of a total of 74 candidates

⁶⁶ Number incorporates 90 CAP students sitting the exam and 2 sitting the post course report out of a total 92 candidates

⁶⁷ Number incorporates 97 CAP students sitting the exam

⁶⁸ Number incorporates 101 CAP students sitting the exam

Table 9: Scaled Pass Marks by Part III Course

	Subject	2007(2)	2008(1)	2008(2)	2009(1)	2009(2)	2010(1)	2010(2)
1	Investments	90 ¹	100	100	100	120	120	120
2A	Life Insurance	123	123	123	120	120	120	120
2B	Life Insurance	110	110	117	121.5	120	120	120
3A	General Insurance	113	115	120	115	120	120	120
3B	General Insurance	120	120	120	120	120	120	120
4A	Superannuation & P.S.	-	n/a	n/a	n/a	n/a	n/a	n/a
4B	Superannuation & P.S.	122	n/a	n/a	n/a	n/a	n/a	n/a
5A	Invest. Mngmt & Finance ⁶⁹	-	120	n/a	n/a	120	n/a	120
5B	Invest. Mngmt & Finance	121	n/a	120	100	n/a	127.5	n/a
6A	Global Retirement Income Systems		120	n/a	120	n/a	120	n/a
6B	Global Retirement Income Systems		n/a	115	n/a	120	n/a	120
10	Comm. Actuarial Practice ⁷⁰	50-50	50-50	50-50	50-50	50-50	50-50	50-50

The relationship between scaled and raw marks for 2010 Semester Two was:

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

	Subject	Raw	Scaled
1	Investments	100	120
2A	Life Insurance	115.6	120
2B	Life Insurance	79.0	120
3A	General Insurance	97.5	120
3B	General Insurance	112	120
5A	Investment Management and Finance	102.8	120
6B	Global Retirement Income Systems	100	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. The range of scaled marks in Semester One 2010 was also consistent.

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 Andrew Prescott Memorial & Katherine Robertson Prizes

In December 1978, Council agreed to establish the Andrew Prescott Memorial Prize, in honour of the late Andrew Prescott, for meritorious performance in the Institute’s examinations. Prizes are awarded in two divisions:

- Prizes for the highest mark in the examination in each Part III subject provided a certain minimum standard is attained.

⁶⁹ Grossed up from 45/100 for consistency with historic data

⁷⁰ For CAP, the case study and the exam each had a pass mark of 50%.

- A prize for outstanding performance over the whole examination process on completing the Fellowship.

Since 2001, the Katherine Robertson Prize has been awarded for General Insurance in lieu of the Andrew Prescott Memorial Prize. Katherine Robertson was an outstanding young actuary working in General Insurance who passed away in October 2000.

Subject Prizes

At its meeting on 15 December 2009, Council requested that the subject prize criteria be modified to ensure that prizes were awarded more regularly. The Board of Examiners recommended new subject prize criteria and prize winners following its meeting on 13 January 2010 and this was forwarded to the Education Council Committee (ECC) for approval. ECC approved the following new subject prize criteria and the recommended prize winners at its meeting on 2 February 2010.

1. *The minimum standard for a subject prize has been set at achieving at least 120% of the scaled pass mark in at least one course in the calendar year that the prize is being awarded and, in cases where the subject prize covers more than one course, achieving an average of at least 120% of the scaled pass mark across both courses to be eligible.*
2. *In cases where the subject prize covers more than one course, the candidate may have passed Part A or Part B in a previous calendar year but must have passed their final course in the calendar year where the prize is being awarded.*
3. *The Chief Examiners for all related subjects in a calendar year will select the candidate with the most outstanding performance from those candidates that are eligible. In determining the best overall performance the Chief Examiner(s) may consider the average scaled pass mark, the number of A's, the average rank, the number of fails in the same subject area or any other factors.*
4. *If no candidates meet the eligibility criteria for a particular subject in a calendar year, the prize will not be awarded for that subject for that calendar year.*

Prizes are awarded only once in a calendar year following the Semester Two examinations. Prizes winners are notified after the release of results in semester Two and are invited to attend the next Presidential Dinner to receive their award. Prize winners are then announced in the next Actuary Australia Magazine.

Fellows

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

- (i) 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).
- (ii) 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	2010(2)	2010(1)	2009(2)	2009(1)	2008(2)	2008(1)
New Fellows	40 ⁷¹	51 ⁷²	51	34 ⁷³	71 ⁷⁴	37 ⁷⁵

⁷¹ 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.

Course 1 Investments Chief Examiner's Report Semester 2 2010

1. Summary

1.1. Pass Rates

93 Candidates enrolled for the Semester 2, 2010, C1 Investments exam. Of these, 3 withdrew prior to the exam and 2 did not present at the exam. The assessment comprised one assignment worth 15% and an exam worth the remaining 85%.

It is proposed that 27 Candidates be awarded a pass, which implies a pass rate of 31% for those sitting the exam. This compares with the following pass rates for this subject in recent semesters:

Table 1 – Course Experience

Year	Semester 1	Semester 2
2010	35%	31%
2009	49%	30%
2008	39%	51%
2007	33%	42%
2006	28%	31%
2005	24%	29%
2004		30%

1.2. Candidate Numbers

The Candidate numbers can be summarised as follows:

Table 2 – Candidate Numbers

	Number of candidates
Originally enrolled	93
Withdrawn prior to exam	3
Absent from exam	2
Presented at exam	88
Passed	27
Failed	61

The analysis by examination centre is as follows:

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

⁷³ 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.

⁷⁴ 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.

⁷⁵ 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.

Table 3 – Analysis by Examination Centre

Centre	Presented	Passed	Pass Rate
Canberra	2	0	0%
Sydney	61	23	38%
Melbourne	12	2	17%
Hobart	1	0	0%
Subtotal: Australia	76	25	33%
Bangkok	1	0	0%
Kuala Lumpur	2	0	0%
Hong Kong	2	1	50%
Singapore	4	1	25%
London	3	0	0%
Subtotal: International	12	2	17%
Total	88	27	31%

2. Examination Papers and Assignments

2.1. Degree of Difficulty and Course Coverage

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

Table 5 – Degree of Difficulty of Exam

Question	Unit	Knowledge & Understanding	Straight-forward Judgement	Complex Judgement	Total Marks
1 (a)	2		3		3
1 (b)	2		5		5
1 (c)	2			5	5
1 (d)	2		2		2
2 (a)	2		3		3
2 (b)	2	5			5
2 (c)	2			10	10
3 (a)	1	4			4
3 (b)	1	4			4
3 (d)	1		3		3
3 (e)	1		4		4
3 (f)	1			3	3
3 (g)	1	4			4
3 (h)	1			3	3
4 (a)	1		7		7
4 (b)	1			9	9
5 (a)	3			6	6
5 (b)	3		4		4
5 (c)	3		10		10
5 (d)	3			6	6
TOTAL		17	41	42	100

Table 6 – Course Coverage

Question	Unit	Knowledge & Understanding	Straight-forward Judgement	Complex Judgement	Total Marks
1	2		10	5	15
2	2	5	3	10	18
3	1	12	7	6	25
4	1		7	9	16
5	3		14	12	26
TOTAL		17	41	42	100

2.2. Overall Performance

The exam paper proved to be a good discriminator of student understanding and ability to apply judgement with raw marks (on the exam component only) ranging from 17% to

60% of raw marks. It had a coefficient of variation of 22% which indicates good discriminating power.

The following table summarises the exam performance in terms of raw marks:

	Question 1	Question 2	Question 3	Question 4	Question 5
AVE	7.2	7.0	11.6	6.2	10.4
STD DEV	1.7	2.3	3.0	2.1	3.8
CV	24%	32%	26%	34%	37%
% PASSING	32%	22%	42%	35%	31%
B/C cutoff	8.25	9.0	12.5	7.75	12.5

The coefficient of variation measures the relative variability of the mark and gives some information about the discriminating power of the question / exam. The average mark and the % passing give some idea of how difficult the questions are relative to each other.

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 because their answer did not cover all points required as per the marking guide. This fact was taken into account by both the markers and examiners in determining the cut-off points for the letter grades awarded to each question.

Candidates found that Q3 was the easiest being a question with most KU marks. Questions 2 and 5 were the most difficult with both having large CJ weights. The figures for % passing are after the adjustments made for borderline candidates.

As a guide to the relative quality of this student cohort in Semester 2, 2010, the assignment average mark was 56% versus an assignment average mark of 66% in Semester 1, 2010.

2.3. Question by Question Analysis

Question 1 (15 marks)

	Raw marks required	% of Total Marks	No. of Candidates	Proportion of Candidates
Strong Pass	9.25	62%	10	11%
Pass	8.25	55%	18	20%
Slightly Below Standard	6.25	42%	40	45%
Weak	3.50	23%	18	20%
Showed Little Knowledge	1.25	8%	2	2%
No Attempt	0.00	0%	0	0%
Total Marks Available	15.0			
Maximum Mark	10.5			
Average Mark	7.2			
Standard Deviation	1.7			
Coefficient of Variation	24%			

Overall, the standard of answers was disappointing given the straight-forward nature of the question.

In (a), almost all candidates correctly identified the need to achieve a VBI of at least 100% but most candidates failed to realise that a key investment objective for the employer is to minimise the volatility of future contributions.

In (b), most candidates correctly identified inflation as a critical component of both the asset model and the liability model, and therefore earned the two marks available for this key point. Most candidates appreciated that the model would be used to project the fund's solvency as measured by VBI, but many candidates failed to mention that the model would be very useful in determining the range of employer contributions for various efficient asset allocations.

In (c), many easy marks were on offer but many candidates failed to coherently describe how the model would be updated to reflect updated fund data, new asset return assumptions, current inflation expectations etc.

Candidates struggled most with part (d) with many failing to make the obvious point that the model would be amended to only allow contribution levels to be changed every three years. Majority of the candidates failed to recognise that allowing contribution levels to be changed offers flexibility and hence allow more aggressive investment strategy.

Question 2 (18 marks)

	Raw marks required	% of Total Marks	No. of Candidates	Proportion of Candidates
Strong Pass	12.0	67%	4	5%
Pass	9.0	50%	15	17%
Slightly Below Standard	7.0	39%	28	32%
Weak	3.0	17%	39	44%
Showed Little Knowledge	0.5	3%	2	2%
No Attempt	0.0	0%	0	0%
Total Marks Available	18.0			
Maximum Mark	13.3			
Average Mark	7.0			
Standard Deviation	2.3			
Coefficient of Variation	32%			

(a) (i) Not well done. 22 candidates of 88 presumably did not read the question as they did not attempt to provide a PE for an index but for an individual share.

(ii) Also poor. Generally the response was that it was not stationary, though they often then went on to talk about its mean reversionary nature, so possibly not aware of what is meant by "stationarity". Others didn't bother to respond yes or no, though they might have set out a collection of points that were arguing their case.

(b) Well answered by many of the students, who obviously knew what points the examiner was after and made attempts at all bits that were in model solutions.

(i) However many didn't get the full 3 points prepared for a good ERP definition (usually the 3rd point was the one missed).

(iii) Approximately 20% threw away ½ mark by getting mistakes in the formula or omitting to specify typical values for constants but generally done reasonably well and mostly the second formula was used.

(c) Difficult. Few students got good marks. As I view the question, for each part marks were available for answering the following items:

- 1 What is the normal situation / model assumptions?
- 2 What happened in GFC?
- 3 Why did it happen?
- 4 What are the implications, do our models handle this?
- 5 If no what change to models or what else can we do?

In practice many students tended to focus on what happened & covered only 1 or 2 of the reasons why it did happen (in very little or great detail) and jumped to suggesting changes to the models when not necessary. For the latter, this might end up being an answer of the form "... allow for <whatever> in model ...".

My impression is many students were also let down by a poor knowledge and understanding of what happened during GFC (not much different to that of a newspaper reader) and that added to their difficulty in answering this question. As an example 12 candidates specified that there had been sovereign debt defaults (sometimes giving examples such as Iceland, Greece, US). Other candidates may have been unsure and were deliberately vague.

Some of the weaker candidates would have done better with greater understanding of the basics of economics (e.g. what is fiscal policy?) and asset classes (some took bonds to mean corporate bonds in scenario 3 and even scenario 5).

Question 3 (25 marks)

	Raw marks required	% of Total Marks	No. of Candidates	Proportion of Candidates
Strong Pass	15.5	62%	8	9%
Pass	12.5	50%	29	33%
Slightly Below Standard	10.0	40%	30	34%
Weak	8.0	32%	11	13%
Showed Little Knowledge	5.5	22%	10	11%
No Attempt	0.0	0%	0	0%
Total Marks Available	25.0			
Maximum Mark	18.6			
Average Mark	11.6			
Standard Deviation	3.0			
Coefficient of Variation	26%			

Part A

This question was straightforward enough, and a whole range of causes of inflation would be acceptable. However marks were lost when candidates provided points that were too similar or were in fact overlapping. Marks were also deducted for ambiguous or unclear dot point answers.

Part B

Generally, answers lacked clarity given that there were two clear parts to the question. The answer should have been quite straightforward, being a 'textbook' topic on the RBA and monetary policy and tools, and yet the range in the quality of answers was surprising.

Part C

In this question it was quite clear which were the better answers. Candidates that merely stated that "there is a link between infrastructure and inflation, hence infrastructure is a good inflation hedge" were not awarded marks. The better answers were able to explain the nature of the link, how strong the relationship was and hence how good a hedge the asset provided.

Part D

This part was generally answered well, but similar to Part C, the better candidates explained why the asset was an appropriate inflation hedge. Some asset classes that were proposed had very spurious links to inflation and were generally not accepted unless the explanation was sufficiently convincing.

Part E

This part was very much the differentiator for the entire question – candidates were well split between those who understood the break-even concept and how it would apply in inflation bond management, and those who didn't. Nonetheless points were allocated as much as possible for insightful answers.

Part F

Very 'textbook' question – answers could be better explained, especially since the question asked for how inflation fitted into the theory. But generally well answered.

Part G

Straightforward question – marks allocated for relevant points.

Question 4 (16 marks)

	Raw marks required	% of Total Marks	No. of Candidates	Proportion of Candidates
Strong Pass	10.3	64%	1	1%
Pass	7.75	48%	30	34%
Slightly Below Standard	6.0	38%	22	25%
Weak	4.5	28%	18	20%
Showed Little Knowledge	0.5	3%	15	17%
No Attempt	0.0	0%	2	2%
Total Marks Available	16.0			
Maximum Mark	10.3			
Average Mark	6.2			
Standard Deviation	2.1			
Coefficient of Variation	34%			

Question four is a good test on student's knowledge on characteristics of different asset classes, strategic asset allocation and management style, and allows students to demonstrate their ability to apply judgment to the impact of asset class changes.

Part a of the question is well understood, most students were able to touch on the obvious points in terms of asset class changes (45% scored 3.5 or above). It was possible for students to pick up easier marks by briefly describing the changes in asset allocations. Those who did this set themselves up to pass the question.

Many missed scoring marks by explaining that the relative investment returns could vary rather than categorically stating that one is better - though most were able to determine that the default would be cheaper and many did suggest that the reduced fees would enhance returns on the default.

Some were able to broadly discuss that the active style was better placed to enhance relative returns assuming a less than efficient market and picked up points for that.

Generally results for a) could have been better if more students had methodically gone through the impact of the changes in AA. It seemed that many of the students could have done better in this question by simply referring to the basics i.e. liquidity, cost, active aiming to take advantage of the market etc. A complex discussion was not required.

Part b is poorly understood by students. Only around 25% managed to elaborate and relate back to the particular situation the fund in the question is in. Many students had gone down the wrong path to answer the question, such as different investment needs at different ages or what the fund can do to avoid changing default.

Most were able to suggest that a longer phase in was required - which did show that most recognised the difficulty of realising unlisted, PE etc - but simply didn't discuss any aspect of this.

Most also did not give any details of the issues but were given marks for recognising the issues. Most did not mention common assets and missed a point there.

Given the complex judgment nature of part b, marks were awarded more generously. Those who passed the question generally did well in part a).

Question 5 (26 marks)

	Raw marks required	% of Total Marks	No. of Candidates	Proportion of Candidates
Strong Pass	15.5	60%	8	9%
Pass	12.5	48%	19	22%
Slightly Below Standard	9.5	37%	32	36%
Weak	5.0	19%	23	26%
Showed Little Knowledge	0.5	2%	6	7%
No Attempt	0.0	0%	0	0%
Total Marks Available	26.0			
Maximum Mark	19.8			
Average Mark	10.4			
Standard Deviation	3.8			
Coefficient of Variation	37%			

Overall not so well answered in what would seem a fairly "average" question.

- (a) Most candidates provided answers either from the perspective of considering the liabilities/solvency position of the fund or the performance of assets (vs. benchmark, competitors etc.). The better candidates considered both aspects. Some candidates went into too much detail about the liability characteristics.

Surprisingly, not many candidates discussed the importance of an attribution analysis, what they would look for and how the attribution might be done.

- (b) Most candidates were able to describe key quantitative characteristics of value stocks.

The rest of the parts to the question were surprisingly not well answered.

Some candidates identified that the price could reflect expectations of declining future revenue or that future revenue, profits and dividends would fall but rarely both.

Very few candidates identified the combined effect of falling price and eventual falling of future earnings (dividends) would lead to the PE ratio (dividend yield) eventually rising (dropping) to a "normal" level, therefore not meeting quantitative requirements of a value stock.

- (c) Some candidates mentioned quantitative aspects such as financial ratios rather than qualitative aspects which the answer was looking for.

Most candidates were able to include a reasonable list of items of information that may prove useful in assessing the company's value but the reasons for why these were useful were not always well answered.

Fewer candidates included reference to the last two points of the answer: "potential future write-downs of underperforming businesses and assets" and "Point in the business cycle".

- (d) Part (d) is not precise in terms of what we are looking for from the candidates, and was confusing in the fact that managing the portfolio over the next 12 months was not so relevant to the answer nor the reference in (a) which was in relation to assessing performance of the fund. All the above reasons might have contributed to part (d) being the worst part of the whole question 5 by the candidates.

Surprisingly few candidates made reference to the demographics of the fund (members between 18 and 40) and how this might impact on the management of the portfolio and similarly, the overall risk appetite of the Trustees both of which are critical.

Also, few discussed consideration of diversification (by asset classes) which would seem to be quite easy marks.

Few candidates considered the impact of portfolio size, how this might impact assets classes and manager arrangements.

Course 2A Life Insurance Chief Examiner's Report Semester 2 2010

1. Summary

1.1. Pass Rates

61 Candidates enrolled for the Semester 2 2010, 2A course. There were 5 withdrawals from the course and 1 candidate was absent from the exam, leaving 55 candidates sitting the exam.

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

It is proposed that 17 candidates be awarded a pass, which gives a pass rate of 31%. This compares with previous pass rates from recent exams as follows:

Table 2 – Pass Rates from Recent Exams

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

The 31% pass rate for this exam is slightly higher than the 28% pass rate for the previous exam (Semester 1 2010). Ignoring the 60% pass rate for the Semester 2 exam (anecdotally considered a relatively easy exam by students), the pass rate for this exam is low compared to the pass rates for recent exams.

1.2. Candidate Numbers

The Candidate numbers can be summarised as follows:

Table 2 – Candidate Numbers

	Number of candidates
Originally enrolled	61
Withdrawn prior to exam	5
Absent from exam	1
Presented at exam	55
Passed	17
Failed	38

The analysis by examination centre is as follows:

Table 3 – Analysis by Examination Centre

Centre	Presented	Passed	Pass Rate
Sydney	31	10	32%
Melbourne	17	6	35%

Australia	48	16	33%
Auckland	1	1	100%
Hong Kong	2	0	0%
Shanghai TC	1	0	0%
Kuala Lumpur	1	0	0%
Singapore	2	0	0%
International	7	1	14%
Total	55	17	31%

The Australian pass rate of 33% is slightly higher than the pass rate for the previous exam (Semester 1 2010).

The International candidates performed poorly with a pass rate of 14% (1 pass out of 7 candidates), which is lower than the pass rate of 20% (2 passes out of 10 candidates) for the previous exam.

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 4 – Degree of Difficulty of Exam

Question	Syllabus Aims	Knowledge & Understanding	Straight-forward Judgement	Complex Judgement	Total Marks
1 a)	1,2,7,9,12		3		3
1 b)	2,8,9,10,11,14	6	3		9
1 c)	2,4,5,7,9,10,12			6	6
2 a)	1,2,4,5,7,10,12	6			6
2 b)	2,5,12,13,14			4	4
2 c)	2,5,7,9,15		10		10
3 a)	1,4,6,7,14		4		4
3 b)	1,4,6,7,14		4		4
3 c)	2,4,6,7,11,12,14,15			8	8
3 d)	1,3,4,5,6,7,9,14	4			4
4 a)	1,9,12	2			2
4 b)	1,9,12	1			1
4 c)	1,7,9,12,14	1	5		6
4 d)	1,8,9,12,14			4	4
4 e)	1,8,9,12,14			4	4
4 f)	1,2,4,5,7,8,9,12,14			6	6
5 a)	1,2,5,7,9,10,11,15,16		5		5
5 b)	1,7,10,12,15		5		5
5 c)	1,2,4,7,9,12,13		4		4
5 d)	1,4,5,7,9,10,13,14			5	5
TOTAL		20	43	37	100

Table 5 – Course Coverage

Question	Units	Knowledge & Understanding	Straight-Forward Judgement	Complex Judgement	Total Marks
1	1,2,3,4	6	6	6	18
2	1,2,3,4,5	6	10	4	20
3	1,2,3,4,5	4	8	8	20
4	1,2,3,4	4	5	14	23
5	1,2,3,4,5	0	14	5	19
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

In setting the exam, the intention was to have a less challenging paper than the previous exam (Semester 1 2010) where the pass rate of 28% was poor. Considering that this was a

reasonable exam, the 31% pass rate was disappointingly low.

Students need to commit the time and effort to produce a good quality assignment answer, as the results from the assignment can help them in passing the course.

The standard across questions was somewhat variable, with questions 2 (24%), 3 (27%) and 4 (25%) having the lowest pass rates, and questions 1 (53%) and 2(45%) the highest pass rates.

The low pass rate for question 2, likely reflects a lack of understanding of traditional business and reinsurance (the complex judgement part of the question). In common with previous exams, candidates tended to struggle with reinsurance questions. Candidates need to obtain a more thorough and deeper understanding of reinsurance. Reinsurance questions will always be a possible exam topic, as it tends to distinguish the better candidates from the poorer ones.

Candidates found question 3 challenging. Most candidates found it difficult to identify the risks of an investment linked policy with an underlying investment guarantee and outline suitable strategies to overcome these risks. This question had the highest proportion of poor responses with 52% of candidates receiving a D.

Candidates found question 4 also difficult. Understanding of a buy back option was poor. Candidates found it difficult to identify issues with group insurance arising from offering a continuation option and a profit share arrangement under reinsurance.

Question 5 was well answered, considering it was all straight-forward judgement and complex judgement. Most candidates were able to identify the issues relating to increasing expense levels, rationalisation of products and the introduction of an annuity product. However, candidates found the complex judgement part of the question difficult (on introducing stand alone morbidity products).

Question 1 was the easiest question, including straightforward calculations for a pricing scenario. A higher pass rate than 53% was expected. More marks gained on this question may have meant that a candidate passed rather than failed the exam.

Common mistakes and weaknesses 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.

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

	Raw Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass	28.0	77.8%	6	11%
Pass	21.0	58.3%	23	42%
Below Standard	17.0	47.2%	10	18%
Weak	10.0	27.8%	13	24%
Showed Little Knowledge	1.0	2.8%	3	5%
Did Not Attempt	0.0	0.0%	0	0%
 Total Marks Available	 36.0			
 Maximum Mark	 35.0			
Average Mark	20.8			
Standard Deviation	6.3			

This was a relatively straightforward question dealing with the pricing of a directly-marketed term product to credit card holders. Candidates performed reasonably on this question, with a pass rate of 53%. Given the question was relatively easy, a higher pass rate was expected.

Part (a)

- Candidates were asked to describe the benefits to a credit card company of an insurance company paying the outstanding credit card balance due on the death of a credit card holder.
- Candidates performed well on this part, with an average mark of 2.2/3. A few candidates scored full marks.
- A small number of candidates misread the question and commented from the insurance company's perspective instead.

Part (b) i)

- For the first part of a pricing question, candidates were asked to calculate the expected claims cost over the next year.
- Candidates performed well on this part, with an average mark of 2.2/3. A number of candidates scored full marks.
- The weaker candidates, made errors such as ignoring the take-up rate, ignoring female mortality or getting the exposure wrong by a factor of 1000.

Part (b) ii)

- To complete the pricing question, candidates were asked to calculate all the other expected cashflows (besides the claims cost) and expected profit for the insurance company over the next year.
- Given this was a relatively easy question, this was not answered as well as expected with an average mark of 3.4/6.
- Only a few candidates were able to derive the correct total premium.
- Several candidates could not quote back the administration expenses, even though it was stated in the question and required no calculation.
- A few candidates made basic errors like excluding the claims cost from the premium or profit calculation, or treating commission as revenue rather than expense.

Part (c)

- Candidates were asked to discuss the shortcomings of the pricing proposal.
- Reasonable answers were provided for a complex judgement question with an average mark of 2.8/6.
- Most candidates correctly identified anti-selection as an issue, although the quality of their explanations varied.

- Many candidates missed important points such as the use of marginal costing, the need to consider reinsurance and the potential for the actual customer profile to differ from the pricing assumption.
- Many candidates missed out on easy points such as not allowing for lapses, tax and the time value money. These were explicitly described in the question as to be excluded in the calculations.
- Marks were awarded for valid points not included in the model solution, covering sensitivity analysis and the use of a single year calculation.

QUESTION 2

	Raw Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass	28.0	70.0%	0	0%
Pass	22.0	55.0%	13	24%
Below Standard	18.0	45.0%	17	31%
Weak	12.0	30.0%	18	33%
Showed Little Knowledge	1.0	2.5%	7	13%
Did Not Attempt	0.0	0.0%	0	0%
Total Marks Available	40.0			
Maximum Mark	26.0			
Average Mark	17.9			
Standard Deviation	4.7			

This question was answered poorly by candidates, with a pass rate of 24%.

The mark required for an A was set consistently with those for other questions, but no candidate answered this question to that standard.

The question concerned a life company in Asia selling traditional products, wishing to expand its product range by selling YRT products.

Part (a)

- Candidates were asked to provide six reasons why a policyholder might want to change from a whole of life/endowment policy to a YRT policy.
- Candidates performed well on this question with an average mark of 3.7/6.
- Most candidates were able to describe the key points such as cheaper premiums, greater transparency, preference for temporary cover, and seeking better investment returns elsewhere.
- Marks were awarded for valid points not included in the model solution, covering not wanting a savings product and seeking a product that better suits their needs.

Part (b)

- Candidates were asked to discuss how including traditional business within a reinsurance treaty would impact the reinsurance arrangements for the YRT insurance product.
- Poorly answered with an average mark of 0.8/4, with a number of candidates not attempting this part.
- The poor answers indicate candidates do not understand traditional business and reinsurance.
- Additional marks granted for points not in the model solutions, such as using whole of life and endowment affects the overall experience and the provision of extra services (product development) may help in the negotiation of reinsurance premium rates.

Part (c)

- Candidates were required to discuss changes required to mortality, lapse and expense assumptions used for traditional business, so they could be used for the YRT insurance product.
- Reasonable answers were provided with an average mark of 4.5/10.
- Many candidates answered with comments about anti-selection for YRT policies, which were not fully developed and it was unclear what was meant.
- Very few candidates talked of the different shape of lapses over time.
- Few candidates considered differences in investment expenses.
- A number of candidates seemed to get confused between surrender penalties and surrender values.
- Candidates misread the question. Candidates described whether mortality, lapses or expense assumptions would be higher or lower, rather than the reasons for the change required.
- Marks were awarded for valid points not included in the model solution. For mortality, marks were given for discussing anti-selection and the impact of stepped rates versus level rates. For lapses, marks were given for discussing short term vs. long term effects, impact of competition, selective lapses, and lapses for WOL are affected by bonuses, economic reasons and overall size of premium. For expenses, marks were given for overheads, systems costs, expense inflation considerations and the flow on effects from mortality and lapse assumption changes.

QUESTION 3

	Raw Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass	28.0	70.0%	2	4%
Pass	22.0	55.0%	13	24%
Below Standard	18.3	45.6%	10	18%
Weak	10.0	25.0%	28	51%
Showed Little Knowledge	1.0	2.5%	2	4%
Did Not Attempt	0.0	0.0%	0	0%
Total Marks Available	40.0			
Maximum Mark	30.0			
Average Mark	18.3			
Standard Deviation	5.2			

This question was challenging for candidates with a pass rate of 27%.

The question covered the issues arising from providing a unit linked investment with an underlying investment guarantee.

Part (a)

- Candidates were asked to describe the risks to a life company of providing the investment guarantee.
- Most candidates found this question difficult. This was reflected in a relatively low average pass mark of 1.6/4.
- Many candidates described the key risks: the asset/liability mismatch and the pricing of the guarantee.
- Candidates failed to describe the operational risks from having appropriate administration systems in place and having the specialist staff.

Part (b)

- Candidates were asked to describe the other risks to the insurance company (besides those associated with the investment guarantee).

- For a relatively straightforward question on risks associated with an investment linked product, an average mark of 1.6/4 was poor.
- A common mistake was failing to distinguish whether the risk was associated with the investment guarantee for part (a) and other risks associated with the product (required for this part).

Part (c) i)

- Candidates were asked to describe the product features that could be adopted to protect against the risks arising from the investment guarantee.
- This was poorly answered with an average mark of 2/5.
- Many candidates failed to describe how the suggested product feature would reduce the risks associated with the guarantee.
- A majority of candidates failed to read the information provided correctly. The choice of the guarantee can only be made at "policy issue". Yet many thought the guarantee applied at any time and this impacted the quality of the answers.

Part (c) ii)

- Candidates were asked to describe strategies other than product features that could be adopted to protect against the risks arising from the investment guarantee.
- This was reasonably answered with an average mark of 1.4/3.
- Most students were able to provide the key point about hedging strategies against adverse market movements.
- Fewer candidates mentioned using reinsurance and holding additional capital.

Part (d)

- Candidates were asked to describe the purpose of a PDS and the information included in a PDS for an investment linked product.
- This was an easy question. This was reflected in the average mark of 2.5/4.
- Most candidates were able to describe most of the information included in a PDS.
- Very few candidates mentioned the point that a PDS exists because of a legal requirement.

QUESTION 4

	Raw Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass	32.0	69.6%	0	0%
Pass	26.0	56.5%	14	25%
Below Standard	20.0	43.5%	12	22%
Weak	12.0	26.1%	20	36%
Showed Little Knowledge	1.0	2.2%	9	16%
Did Not Attempt	0.0	0.0%	0	0%
Total Marks Available	46.0			
Maximum Mark	31.0			
Average Mark	19.0			
Standard Deviation	6.7			

This was a challenging question for candidates, with a pass rate of 25%.

The mark required for an A was set consistently with those for other questions, but no candidate answered this question to that standard.

This question covered the benefits to a policyholder with an individual term insurance policy of buy back options and future insurability options. The rest of the question covered issues that arise in group insurance, including offering continuation options, profit share under reinsurance and other general issues.

Part (a)

- Candidates were asked to describe the benefits of a buy back option on an individual term product for a policyholder and the conditions that apply when exercising this option.
- For an easy question, answers were poor with an average mark of 0.8/2.
- No candidates scored full marks.
- Product knowledge was poor. "No further underwriting" was missed by many candidates and few candidates knew the conditions that had to apply for the buy back option to be exercised.

Part (b)

- Candidates were asked to describe the benefit to a policyholder of a future insurability option on an individual term product.
- Answers were good with an average mark of 0.6/1.
- Most students were able to describe the benefits of a future insurability option.
- "No further underwriting" was again missed by many candidates.

Part (c)

- Candidates were asked various questions on a continuation option provided in group insurance.
- Good answers were provided with an average mark of 3.1/6.
- In part i), candidates were able to describe very well the benefits to a policyholder of a continuation option, including "no further underwriting".
- In part ii), many candidates adequately described the claim risk differences, but fewer properly explained how the anti-selection arises.
- Answers were not as good for part iii) on how the cost of claim arising from a continuation option is built into premium rates. The better candidates were able to provide an adequate explanation, commenting on the cost would be reflected as a loading to the premium and a certain proportion of policyholders would exercise the continuation option. No one explained that the individual policy affected by exercising the continuation option has the same premium rate as a normally underwritten individual policy.

Part (d)

- Candidates were asked to discuss the issues arising from offering a continuation option in a group insurance policy.
- Answers were generally poor with an average mark of 1.7/4.
- Many students raised the key point that the continuation option does have a cost in terms of the higher mortality of those exercising their option to take an individual cover when leaving the group.
- Many candidates mentioned reinsurance issues.
- Few candidates described other points such as needs of the claims team or that a suitable individual policy to continue into is required.

Part (e)

- Candidates were asked to discuss the issues arising providing profit share in a reinsurance arrangement.
- Candidates found this the hardest part of the question. More than half of the candidates received no marks. Thus the low average mark of 0.6/4.
- This demonstrates that candidates do not understand profit share under reinsurance.

Part (f)

- Candidates were asked to discuss other issues, besides the continuation option and profit share arrangements.
- Reasonable answers were provided with an average mark of 2.8/6.
- Most candidates were able to describe adequately the various other risks.
- A number of candidates wasted time by addressing continuation option and profit share issues, even though these were explicitly excluded in the question.

QUESTION 5

	Raw Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass	27.0	71.1%	2	4%
Pass	21.0	55.3%	23	42%
Below Standard	16.0	42.1%	19	35%
Weak	10.0	26.3%	10	18%
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	28.5			
Average Mark	19.5			
Standard Deviation	4.4			

This question was answered reasonably well with a pass mark of 45%.

This question covered issues facing a life company on expense levels, rationalizing its products, introducing an annuity product and expanding its morbidity products from riders on traditional products to stand alone products.

Part (a)

- This part of the question required candidates to provide reasons for why expenses were increasing more than anticipated.
- Candidates in general performed well in this part, with an average mark of 3.3/5. A few candidates scored full marks.
- Most candidates were awarded marks for identifying key issues such as higher cost to maintain large variety of products and out-dated system, as well as increasing unit cost due to fall in sales level and lapses of in-force portfolio.

Part (b)

- Candidates were asked to describe methods that could be adopted to encourage policyholders to move to another product.
- Candidates performed reasonably on this part, with an average mark of 2.4/5.
- Most candidates were able to identify the various methods of encouraging policyholders to switch in general terms, but unable to provide more specific details.
- A few candidates misinterpreted the question as to what the company should do in rationalising its products.
- Some candidates repeated the same point on communicating to policyholders the better terms and conditions of the new products.

Part (c)

- This addressed the advantages to the company of developing an annuity product.
- This was well answered with an average mark of 2.3/4.
- Most candidates were able to identify the key points such as making use the high level of capital and the natural hedge against the mortality risk of existing whole of life product.

Part (d)

- This required candidates to discuss the risks to the company of expanding its morbidity products, from riders attached to traditional policies to stand alone products.
- This was poorly answered with an average mark of 1.8/5.
- Most candidates were able to identify the issues around the complexity of policy and systems with the expansion.
- Many candidates did not relate their answer to the specific scenario outlined in the question, and simply provided a list of potential risks of marketing a new product.

- Not many candidates identified the significant cost involved and provided examples of these costs.

Course 2B Life Insurance Chief Examiner's Report Semester 2 2010

1. Summary

1.1. Pass Rates

42 Candidates enrolled for the Semester 2 2010, Life Insurance 2B exam. All of the Candidates presented at the exam. The assessment comprised one assignment worth 15% and an exam worth the remaining 85%.

It is proposed that 16 Candidates be awarded a pass, which implies a pass rate of 41%. This compares with the following historical pass rates for this subject:

Table 1 – Course Experience

Semester	Sat	Passed	Pass Rate
2010 Semester 1	63	28	44.4%
2009 Semester 2	62	24	38.7%
2009 Semester 1	52	17	32.7%
2008 Semester 2	50	21	42.0%
2008 Semester 1	36	14	38.9%
2007 Semester 2	43	14	32.6%

1.2. Candidate Numbers

The Candidate numbers can be summarised as follows:

Table 2 – Candidate Numbers

	Number of candidates
Originally enrolled	42
Withdrawn prior to exam	3
Absent from exam	0
Presented at exam	39
Passed	16
Failed	23

The analysis by examination centre is as follows:

Table 3 – Analysis by Examination Centre

Centre	Presented	Passed	Pass Rate
Sydney	22	11	50%
Melbourne	5	2	40%
Canberra	1	0	0%
Auckland	1	0	0%
Hong Kong	3	0	0%
Kuala Lumpur	2	1	50%
Singapore	2	1	50%
London	3	1	33%
Total	39	16	41%

Australia	28	13	46%
International	11	3	27%

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)	6	3	3			3
1 (b)	6	3		7		7
1 (c)	6, 11	3,5		3		3
1 (d)	6,8	3,4	2	3	2	7
2 (a)	5	3	3			3
2 (b)	5	3		5		5
2 (c)	5	3			6	6
2 (d)	5	3			3	3
2 (e)	5	3			4	4
3 (a)	13	6	5			5
3 (b)	1	1	3			3
3 (c)	3	2		3		3
3 (d) (i)	5	3	2			2
3 (d) (ii)	5	3			7	7
4 (a) (i)	2	1	3			3
4 (a) (ii)	2	1		1		1
4 (b)	2	1		4		4
4 (c)	1	1			5	5
4 (d) (i)	2	1		4		4
4 (d) (ii)	1,2	1			3	3
5 (a)	11	5		5		5
5 (b)	2,11	4,5		5		5
5 (c)	2	4			4	4
5 (d)	2	4			5	5
TOTAL			21	40	39	100

Table 6 – Course Coverage by Question

Question	Units	Knowledge & Understanding	Straight-Forward Judgement	Complex Judgement	Total Marks
1	3,4,5	5	13	2	20
2	3	3	5	13	21
3	1,2,3,6	10	3	7	20
4	1	3	9	8	20
5	4,5	0	10	9	19
Total		21	40	39	100

2.2. Overall Performance

I don't believe that this was a very difficult exam although perhaps just a little on the long side. Only Question 3 was well answered, Questions 1 and 2 were moderately well answered while Questions 4 & 5 were poorly completed by candidates.

Unfortunately, the same comments as last semester are again relevant concerning poor examination technique namely:

- Candidates missing out on easy marks on points that should be obvious eg past financial statements are needed for business planing.
- Candidates not reading the question thoroughly and understanding the information provided.
- Candidates not understanding the requirements of the answer eg. discuss, describe, give examples etc

Particular areas of concern are highlighted by the following markers comments concerning some quite basic issues:

- Some students failed to identify the most common data needed for business planning.
- There was some evidence that students were listing points from the text book without thinking at all.
- Only a small number of candidates offered appropriate techniques to perform an investigation of the unexplained item in the analysis of profit.
- Very few candidates seemed to grasp that the policy liability would be negative or the effect of this on the expected profit impact due to lapses.
- MoS for participating policies: understanding of MoS was good, although a surprising number did not know that bonuses were the appropriate profit carrier.
- Most people didn't get the basic formula for BEL correct.

The overall pass rate of 41% was lower than last semesters (44%) but higher than the semester before that (39%). As soon as the question moved away from the straightforward as with Question 5 (regarding the Australian subsidiary of an International reinsurer and the Global Financial Crisis) candidate performance fell off very markedly as shown by the low pass marks for this question. However of more concern perhaps is Question 4 that was about reasonably straightforward valuation issues and was equally poorly answered.

2.3. Exam Question by Question Analysis

The "Total Marks" referred to below are the marks from Marker 1 and Marker 2 combined.

Assignment

	Raw Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass	58.0	58.0%	9	23%
Pass	48.0	48.0%	13	33%
Below Standard	40.0	40.0%	7	18%
Weak	1.0	1.0%	8	21%
Showed Little Knowledge	0.0	0.0%	0	0%
Did Not Attempt	0.0	0.0%	2	5%
Maximum Mark	76.0			
Average Mark	47.1			
Standard Deviation	17.0			

Question 1

	Raw Marks Required	% of Total Marks (40)	Number of Candidates	Proportion of Candidates
Strong Pass	23.0	57.5%	4	10%
Pass	15.5	38.8%	13	33%
Below Standard	11.0	27.5%	11	28%
Weak	6.0	15.0%	8	21%
Showed Little Knowledge	1.0	2.5%	3	8%
Did Not Attempt	0.0	0.0%	0	0%
Maximum Mark	25.8			
Average Mark	14.7			
Standard Deviation	5.6			

This question was about business planning, the basic calculation of IFRS profit and the differences between IFRS profit and Appraisal value earnings. This question was somewhat poorly answered. In adjusting the marker's pass mark for this question (reducing it by 1.2 marks out of 20) consideration was had to the difficulty of this question relative to the general standard of the exam, in addition the papers of the candidates around the pass mark were examined to see if their result (a pass or fail) was consistent with the general standard of their answer to the question.

Some students failed to identify the most common data needed for business planning (eg past financial statements, FCR, projection model etc) required for part a) and a number had problems with a basic profit calculation. Many students did not understand that the profit was dominated by the earnings on reserves and accumulated profits and some students were quite confused over what it really meant to spread profit over the life of the contract. Many students missed easy marks on this question.

Question 2

	Raw Marks Required	% of Total Marks (42)	Number of Candidates	Proportion of Candidates
Strong Pass	21.5	51.2%	3	8%
Pass	17.3	41.1%	15	38%
Below Standard	14.5	34.5%	12	31%
Weak	11.0	26.2%	7	18%
Showed Little Knowledge	1.0	2.4%	2	5%
Did Not Attempt	0.0	0.0%	0	0%
Maximum Mark	25.8			
Average Mark	17.1			
Standard Deviation	3.7			

This question was about the analysis of profit for disability income business. This question was moderately well answered. In adjusting the marker's pass mark for this question (reducing it by 0.5 marks out of 21) consideration was had to the difficulty of this question relative to the general standard of the exam, in addition the papers of the candidates around the pass mark were examined to see if their result (a pass or fail) was consistent with the general standard of their answer to the question.

There was some evidence that students were listing points from the text book without thinking at all. Very few candidates seemed to grasp that the policy liability would be negative or the effect of this on the expected profit impact due to lapses. Quite a few students did not understand what "drivers of profit" was referring to. Only a small number of candidates offered appropriate techniques to perform an investigation of the unexplained item in the analysis of profit. A number of students did not structure their answers to meet all the requirements of the question.

Question 3

	Raw Marks Required	% of Total Marks(40)	Number of Candidates	Proportion of Candidates
Strong Pass	26.0	65.0%	4	10%
Pass	22.5	56.3%	14	36%
Below Standard	18.0	45.0%	11	28%
Weak	8.0	20.0%	9	23%
Showed Little Knowledge	1.0	2.5%	1	3%
Did Not Attempt	0.0	0.0%	0	0%
Maximum Mark	31.5			
Average Mark	20.9			
Standard Deviation	4.9			

This question was about operating outside of Australia, bonus policy, valuation of assets and characteristics of a MoS valuation. This question was reasonably well answered. In adjusting the marker's pass mark for this question (increasing it by 0.8 marks out of 20) consideration was had to the difficulty of this question relative to the general standard of the exam, in addition the papers of the candidates around the pass mark were examined to see if their result (a pass or fail) was consistent with the general standard of their answer to the question.

The question was quite clear in how the answer should be structured but many candidates failed to realize this. Part (a) asked about areas of investigation. Almost all candidates failed to mention professional standards. Part (a) also asked about "the internal business areas you would consult" as actuaries need to recognise that they work as part of a team. Many candidates did not name the business area and therefore lost valuable marks. Part (b) was about MoS for participating policies. Understanding of MoS was good, although a surprising number did not know that bonuses were the appropriate profit carrier. In Part (c) many candidates did not give comments on each asset class mentioned and therefore missed many easy marks.

Question 4

	Raw Marks Required	% of Total Marks(40)	Number of Candidates	Proportion of Candidates
Strong Pass	15.0	37.5%	2	5%
Pass	10.7	26.8%	14	36%
Below Standard	9.0	22.5%	10	26%
Weak	6.0	15.0%	8	21%
Showed Little Knowledge	1.0	2.5%	5	13%
Did Not Attempt	0.0	0.0%	0	0%
Maximum Mark	15.8			
Average Mark	10.1			
Standard Deviation	3.1			

This question was about the accounting and actuarial standards relevant to the calculation of policy liabilities, an example of the calculation of policy liabilities, stochastic valuation of options and the differences between the best estimate liability and that calculated under LPS 1.04. This question was poorly answered. It should be noted that the original marker's suggested pass mark would have meant that only 1 of the 39 candidates would have passed this question. In adjusting the marker's pass mark for this question (reducing it by 2.1 marks out of 20) consideration was had to the difficulty of this question relative to the general standard of the exam, in addition the papers of the candidates around the pass mark were examined to see if their result (a pass or fail) was consistent with the general standard of their answer to the question.

Even part (a) that was about knowing the relevant standards was not well answered on average. Very few mentioned AASB4 and no one mentioned LPS5.02. For part (b), most had an idea about the PL and got close to the LICL result, some got the DAC right but very few said anything about amortization or recovery of DAC. For part (c), a lot had an answer about an economic scenario generator but there weren't a lot of good answers apart from that. For part (d), many tried to set out cashflows over the years but there were just too many mistakes eg people discounted FUM instead of surrender values to get the liability. Most people didn't get the basic formula for BEL correct.

Question 5

	Raw Marks Required	% of Total Marks(38)	Number of Candidates	Proportion of Candidates
Strong Pass	14.0	36.8%	4	10%
Pass	10.0	26.3%	13	33%
Below Standard	8.0	21.1%	6	15%
Weak	6.0	15.8%	9	23%
Showed Little Knowledge	1.0	2.6%	5	13%
Did Not Attempt	0.0	0.0%	2	5%
Maximum Mark	15.3			
Average Mark	8.6			
Standard Deviation	4.0			

This question was about the Australian subsidiary of an international reinsurer that was under pressure due to the Global Financial Crisis. This question was also poorly answered. The marker's suggested pass mark was not altered for this question.

Part a) : Most candidates commented on obtaining financial statements and estimated capital positions as required data. However, only some candidates explicitly mentioned the need to quantify the impact of the economic crisis on assets and liabilities. There are a few obvious questions to ask the parent company that make for easy marks (such as why is S&P considering a downgrade, and why is cash required to be remitted) but very few candidates actually commented on these.

Part b) : Most candidates identified that relevant factors included the recapture price (this is taken to be a proxy for assets to be returned on recapture) and the capital requirements of the recaptured business. Surprisingly, very few identified the parent company's credit rating problems as a factor. Weaker candidates mentioned irrelevant factors or gave brief answers.

Part c : The part of the question on setting target surplus was generally well answered by most candidates. Very few candidates showed recognition of the rule within LPS 3.04 regarding the impact on admissible assets as a result of Specialist Reinsurer's credit rating being downgraded to below counterparty grade 3, despite the hint within the question to look at the relevant section of the standard.

Course 3A General Insurance Chief Examiner's Report Semester 2 2010

1. Summary

1.1. Pass Rates

80 Candidates enrolled for the Semester 2, 2010 3A General Insurance exam. Of these, 11 withdrew and 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 24 Candidates be awarded a pass, which implies a pass rate of 36%. This compares with the following historical pass rates for this subject:

Table 1 – Course Experience

Semester	Sat	Passed	Pass Rate
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. Candidate Numbers

The Candidate numbers can be summarised as follows:

Table 2 – Candidate Numbers

	Number of candidates
Originally enrolled	80
Withdrawn prior to exam	11
Absent from exam	3
Presented at exam	66
Passed	24
Failed	42

The analysis by examination centre is as follows:

Table 3 – Analysis by Examination Centre

Centre	Presented	Passed	Pass Rate
Sydney	45	15	33%
Melbourne	7	4	57%
Adelaide	1	0	0%
Brisbane	3	2	67%
Canberra	1	1	100%
Perth	1	0	0%
Subtotal Australia	58	22	38%
Auckland	2	2	100%
Hong Kong	1	0	0%
Singapore	2	0	0%
Kuala Lumpur	2	0	0%
London	1	0	0%
Subtotal International	8	2	25%
Total	66	24	36%

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	1,2	6			6
1 (b)	1,2	1,2		4		4
1 (c)	2,3	2,3			6	6
1 (d)	3,4	3,4		4		4
2 (a)	2	2		6		6
2 (b)	2,3	2,3			7	7
2 (c)	2,3	2,3			4	4
2 (d)	3	3			3	3
3 (a)	2,3	2,3	6			6
3 (b)	2,3	2,3		4		4
3 (c)	1	1		6		6
3 (d)	3	3	2			2
3 (e)	3	3		2		2
4 (a)	2	2		6		6
4 (b)	2	2	3			3
4 (c)	2,3	2,3			4	4
4 (d)	2,3	2,3			6	6
4 (e)	2	2		4		4
5 (a)	1,4	1,4		4		4
5 (b)	1,4	1,4	5			5
5 (c)	1,4	1,4			4	4
5 (d)	1,4	1,4			4	4
TOTAL			22	40	38	100

Table 6 – Course Coverage by Question

Question	Units	Knowledge & Understanding	Straight-Forward Judgement	Complex Judgement	Total Marks
1	1,2,3,4	6	8	6	20
2	2,3	0	6	14	20
3	1,2,3	8	12	0	20
4	2,3	3	10	10	23
5	1,4	5	4	8	17
Total		22	40	38	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 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.

The average raw exam mark this semester was 89, relative to 98, 99, 93, 90, 110, 74, 104, 85, 100 and 86 for the April 2010, November 2009, May 2009, November 2008, May 2008, November 2007, May 2007, November 2006, May 2006 and November 2005 examinations.

The average raw marks in each of the five exam questions ranged from 33% to 57% of the total marks available. Prior exam raw marks were (45% to 65% in April 2010, 38% to 55% in May 2009, 39% to 61% in November 2008, 36% to 57% in May 2008, 27% to 45% in November 2007, 47% to 59% in May 2007, 29% to 58% in November 2006, 43% to 55% in May 2006 and 26% to 57% in November 2005).

The standard across questions was somewhat variable, with Questions 2, 4 and 5 having the lowest pass rates (below 30%) and Questions 1 and 3 the highest (over 50%).

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

2.3. Exam Question by Question Analysis

Question 1

Course coverage: Unit 1,2,3,4

Mark allocation: Knowledge and Understanding – 6 marks

Straightforward Judgement – 8 marks

Complex Judgement – 6 marks

This question covered data issues, modeling and unexpired risk relating to a general insurer. The question was fairly straightforward and was answered moderately well.

Part a) presented candidates with a list of items included in a policy and claims file and required the candidate to list further data and information they would request in order to carry out some modeling. Most candidates understood the need for extra data and the need to talk to claims managers. Those that scored poorly tended to have listed a large number of items without giving much detail as to what they were or why they were required.

Part b) required identification of checks that should be done on the data. No candidate scored full marks for this part and many produced lists that were repetitive. Few came up with more than 2 solid points and none identified the need to check claims process or governance issues.

Part c) was in two parts and involved commenting first on why the results of a PCE and PPCI method were different to each other and second on why the results of the PPCI were different to the previous year's result. For the first part, most students were able to identify the different drivers behind the two models however many students went off on tangents about why the PCE would be more reliable in earlier accident years without actually saying why its results would be different to the PPCI's.

For the second part, most students identified the fact that a different actuary performing the analysis would produce different results, but many missed the fact that changes in claims management practice, which were identified in the question, would likely have led to changes in payment experience and hence the PPCI result.

Part d) required calculation of an unexpired risk reserve, using written premium, loss ratio, expense rates, risk margins and general information about the policy exposures. Most candidates correctly calculated the earning pattern for policies earned evenly throughout the years but only a minority identified that policies were written on 30 June 2010. Most were able to correctly determine a premium liability and perform the Liability Adequacy Test to give a correct unexpired risk result, though some had a poor understanding of this concept altogether. This part was the best answered of all of question 1.

	Raw Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass	28.0	70.0%	10	15%
Pass	23.0	57.5%	25	38%
Below Standard	16.0	40.0%	27	41%
Weak	10.0	25.0%	4	6%
Showed Little Knowledge	1.0	2.5%	0	0%
Did Not Attempt	0.0	0.0%	0	0%
Maximum Mark	36.3			
Average Mark	22.3			
Standard Deviation	6.7			

Question 2

Course coverage: Unit 2,3

Mark allocation: Knowledge and Understanding – 0 marks

Straightforward Judgement – 6 marks

Complex Judgement – 14 marks

This question provided various data in relation to the outstanding claims valuation for a medical malpractice portfolio where several valuation methods were used, and required candidates to perform calculation and consider how they would combine the results of the various methods. Overall the question was not answered particularly well with a large number of candidates failing to make much progress on the main parts of the question.

Part (a) required candidates to calculate the outstanding claims for one notification year for each of the three methods used (PPCN, PPCF and PCE). The results for all other notification years as well as various other data (claims notified and finalised, payments and case estimates) were provided. This part was answered poorly – a large number of candidates failed to demonstrate a basic understanding of the drivers of each of the valuation methods and did not provide reasonable outstanding claim estimates. While this part of the question did require candidates to think a bit “laterally” it is disappointing that so few make any significant progress.

Part (b) required candidates to discuss features of the data and model results that would impact their approach to determining a central estimate valuation result. This part was

answered somewhat better with most candidates at least making the obvious points (e.g. greater weight to the PCE method in older accident periods). However it was disappointing that a very small number of candidates paid any attention to the data in relation to large claims or to the increased case estimates in the middle accident years.

Part (c) required candidates to identify additional investigations they would undertake to further support their choice of models. Again in this part candidates generally made the more obvious point in relation to investigation of case estimates but did not make many other points.

Part (d) required candidates to discuss how changes in claims handling practices would affect their determination of an appropriate risk margin for inclusion in the provision adopted in the insurer's accounts. This part was answered reasonably well with most candidates identifying that an increase in risk margin would be required although few candidate scored any additional marks.

	Raw Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass	24.0	60.0%	1	2%
Pass	13.0	32.5%	17	26%
Below Standard	10.5	26.3%	20	30%
Weak	7.5	18.8%	15	23%
Showed Little Knowledge	1.0	2.5%	12	18%
Did Not Attempt	0.0	0.0%	1	2%
Maximum Mark	25.5			
Average Mark	10.5			
Standard Deviation	5.5			

Question 3

Course coverage: Unit 1,4

Mark allocation: Knowledge and Understanding – 8 marks

Straightforward Judgement – 12 marks

Complex Judgement – 0 marks

This question required candidates to consider the issues involved in moving from deterministic valuation models to stochastic valuation models.

This was a very straightforward question, with a reasonable proportion of “book work” answers. The response to this question was generally solid, with more than half of the candidates passing.

Part a) required candidates to discuss the advantages and disadvantages of replacing the deterministic valuation models with stochastic valuation models. Most students obtained average marks, by identifying the opportunity to model uncertainty within a stochastic model, as well as the increased time and cost and difficulty communicating these models.

Part b) involved identifying methods to minimise the disadvantages identified in part a). A number of candidates did not attempt this part, and most candidates that did attempt the question did well.

Part c) required candidates to identify and explain claim cost factors for the WA Workers' Compensation and LMI classes for inclusion in the stochastic models. This question was reasonably well answered, with candidates able to list a number of relevant factors for each class, although a number of generic responses were noted in relation to WA Workers' Compensation, rather than specifying factors particularly relevant to that scheme.

Part d) was a book work question about the standards governing risk margins. Almost all candidates identified GP310 and described the standard appropriately. Half of the candidates identified PS300, however the key requirements regarding risk margins were not as well explained. A number of candidates mentioned AASB1023, however no marks were awarded for this response.

Part e) required candidates to respond to a suggestion to hold risk margins at the statutory minimum level. This question was well answered with many students identifying that the statutory margin is required to be reported to APRA, and that the risk margin held should reflect the companies risk tolerance. However many students suggested that holding risk margins at the 75th percentile was a risky approach, although many companies currently hold provisions at this level in their statutory accounts.

	Raw Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass	28.0	70.0%	16	24%
Pass	22.5	56.3%	29	44%
Below Standard	18.5	46.3%	16	24%
Weak	15.5	38.8%	4	6%
Showed Little Knowledge	1.0	2.5%	1	2%
Did Not Attempt	0.0	0.0%	0	0%
Maximum Mark	36.0			
Average Mark	23.5			
Standard Deviation	6.5			

Question 4

Course coverage: Unit 2,3

Mark allocation: Knowledge and Understanding – 3 marks
Straightforward Judgement – 10 marks
Complex Judgement – 10 marks

This question required candidates to comment on and perform various calculations in relation to the public liability valuation for an insurer which purchased another smaller insurer. This question was challenging and this was reflected in the responses with nearly half the candidates only managing “weak” responses or worse.

Part (a) required candidates to comment on the initial claim number and PPCI assumption selections for the combined portfolio. This part was answered relatively poorly with a disappointing number of candidates not recognizing that the additional portfolio (where claims are reported a lot more quickly) resulted in the ultimate claim numbers selected being too high. Also a lot of candidates did not really comment on the PPCI assumptions as requested by the question.

Part (b) required candidates to comment on the PPCF assumptions used for the valuation of the Native portfolio (i.e. those claims relating only to the purchasing insurer) and then select PPCF assumptions for early delays. This part was better answered with most candidates identifying that the assumptions selected appeared reasonable and then themselves making fairly reasonable selections.

Part (c) required candidates to calculate the outstanding claims for Native (the purchasing insurer). This part was relatively mechanical given the PPCF selections from the previous part and most candidates performed the calculations required. Few candidates used the correct inflation and discounting despite the question providing sufficient information to enable these.

Part (d) required candidates to calculate the outstanding claims for Local (the purchased insurer). This part was difficult, requiring candidates to deduce a PPCF assumption, and to deduce the timing of claim finalisation given information in the question. Relatively few candidates made much progress on this part with a large number not correctly calculating the number of outstanding claims or reasonable PPCF assumptions.

Part (e) required candidates to consider the appropriateness of the PPAC and PPCF in operational time as supplements for the PPCI and PPCF methods. This part was answered reasonably although a surprising number of candidates saw the PPAC method as appropriate for a public liability portfolio (despite the lump sum settlement nature of the public liability portfolio).

	Raw Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass	26.5	57.6%	3	5%
Pass	21.0	45.7%	16	24%
Below Standard	18.0	39.1%	15	23%
Weak	11.0	23.9%	29	44%
Showed Little Knowledge	1.0	2.2%	3	5%
Did Not Attempt	0.0	0.0%	0	0%
Maximum Mark	28.0			
Average Mark	16.9			
Standard Deviation	5.7			

Question 5

Course coverage: Unit 1,4

Mark allocation: Knowledge and Understanding – 5 marks
Straightforward Judgement – 4 marks
Complex Judgement – 8 marks

This question related to management information systems and profit and loss. Most students made a reasonable attempt to answer each part of the question, however the total number of marks achieved was disappointingly low.

Part a) required a list of items that should be included in a budgeting and forecasting model and should have been fairly easy. Most students were able to list a number of generic items such as premium, claims expense and management expense, but many failed to go into any detail on these, not giving any mention to breaking such items down by risk class, product or claim type.

Part b) required candidates to calculate various items of an insurer's profit. Most students were able to go some way to identifying the key elements of underwriting and insurance profit and NPAT but few succeeded in getting the calculation correct. Very few candidates recognised the need to exclude investment income on shareholder funds for insurance profit. As in previous years, many candidates did not write down the formulae they had used and therefore missed out on marks they would otherwise have had, had the markers been able to see their working.

Part (c) required the candidate suggest ways of adapting a management information system to deal with environmental change. This was answered very poorly, with an average mark of only 0.6 out of a possible 4. Many students identified scenario/sensitivity suggestion as one solution. Only one pointed out the need to emphasise exposure over past claim trends. It seemed as though the majority of students had misunderstood this question.

Part (d) centred around the needs of different users of a management information system. This part was answered reasonably well, with most students engaging with the different

needs of the different users, although few provided sufficient detail on these needs in order to get full marks.

	Raw Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass	18.0	52.9%	5	8%
Pass	14.0	41.2%	11	17%
Below Standard	11.0	32.4%	19	29%
Weak	8.0	23.5%	18	27%
Showed Little Knowledge	1.0	2.9%	13	20%
Did Not Attempt	0.0	0.0%	0	0%
Maximum Mark	23.0			
Average Mark	10.4			
Standard Deviation	4.7			

Course 3B General Insurance Examiner's Report Semester 2 2010

1. Summary

1.1. Pass Rates

55 Candidates enrolled for the Semester 2, 2010 exam. Of these, 2 did not present at the exam. The assessment comprised one assignment worth 15% and an exam worth the remaining 85%.

It is proposed that 21 Candidates be awarded a pass, which implies a pass rate of 40%. This compares with the following historical pass rates for this subject:

Table 1 – Course Experience

Semester	Sat	Passed	Pass Rate
2010 Semester 1	53	21	40%
2009 Semester 2	63	33	35%
2009 Semester 1	50	16	32%
2008 Semester 2	62	23	37%
2008 Semester 1	40	16	40%
2007 Semester 2	44	21	48%

1.2. Candidate Numbers

The Candidate numbers can be summarised as follows:

Table 2 – Candidate Numbers

	Number of candidates
Originally enrolled	60
Withdrawn prior to exam	5
Absent from exam	2
Presented at exam	53
Passed	21
Failed	32

57 candidates were originally enrolled in the course, 2 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	16	39%
Melbourne	4	0	0%
Adelaide	1	0	0%
Perth	1	0	0%
Australia	47	16	34%
Auckland	1	1	100%
Wellington	1	1	100%
Singapore	2	2	100%
London	2	1	50%
International	6	5	83%
Total	53	21	40%

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)	3	3	3			3
1 (b)	3	3	3			3
1 (c)	3	3		6		6
1 (d)	3	4		2		2
1 (e)	3	4		4		4
2 (a)	3	3		4		4
2 (b)	3	3		1		1
2 (c)	1, 2, 3	1, 2, 3	2			2
2 (d)	3	3			6	6
2 (e)	3	3			3	3
2 (f)	1, 2, 3	1, 2, 3		5		5
3 (a)	1, 2	1, 2	3			3
3 (b)	1, 2	1, 2		2		2
3 (c)	1, 2	1, 2			4	4
3 (d)	1, 2	1, 2			6	6
3 (e)	1, 2	1, 2		3		3
3 (f)	1, 2	1, 2			3	3
4 (a)	1, 2	1, 2			6	6
4 (b)	1, 2	1, 2			10	10
4 (c)	1, 2, 3	1, 2	1			1
4 (d)	1, 2, 3	1, 2		3		3
5 (a)	1, 2, 3	4		3		3
5 (b)	3	3		2		2
5 (c)	3	3	5			5
5 (d)	3	3			7	7
5 (e)	3	3		3		3
TOTAL			17	38	45	100

Table 6 – Course Coverage by Question

Question	Units	Knowledge & Understanding	Straight-Forward Judgement	Complex Judgement	Total Marks
1	3	6	12		18
2	1,2,3	2	10	9	21
3	1,2	3	5	13	21
4	1,2,3	1	3	16	20
5	1,2,3	5	8	7	20
Total		17	38	45	100

2.2. Overall Performance

The overall pass rate is slightly higher 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. Consideration needs to be given to getting candidates to use computers in exams.

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.

This exam has a relatively heavier focus on reinsurance, and candidates have shown a lack of substantial reinsurance knowledge leading to a lot of waffle in answers.

2.3. Exam Question by Question Analysis

Question 1

	Raw Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass (A)	24.0	66.7%	9	16%
Pass (B)	22.5	62.5%	5	9%
Slightly Below Standard (C)	18.5	51.4%	22	40%
Weak (D)	13.0	36.1%	14	25%
Showed Little Knowledge (E)	1.0	2.8%	3	5%
Did Not Attempt (X)	0.0	0.0%	2	4%
Maximum Mark	31.0			
Average Mark	19.0			
Standard Deviation	5.6			

Part (a) The first half was well answered, with many students achieving full marks. The second half was less well answered with many failing to comment on the key drivers at all.

Part (b) was answered reasonably well, though some students missed relatively easy marks.

Part (c) The first part asked students to list four key assumptions for the capital model. Many students listed risks (e.g. operational risk) as opposed to assumptions like premium volume and claim costs. Other students failed to mention ways of assessing the reasonableness of each assumption. The second part was poorly answered. Most students failed to include enough factors to get full marks.

Part (d) Many students correctly identified that because ABC is a monoline insurer, there is no diversification between classes of business, but that there might be diversification between the outstanding claims and premium liability provisions. Better students also suggested possible diversification by geographic location.

Part (e) Most students managed to copy the definition to pick up the one mark available for that part. The estimation methods part was generally poorly answered. Many students listed methods more suitable for a property insurer.

Question 2

	Raw Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass (A)	30.0	71.4%	9	16%
Pass (B)	24.0	57.1%	25	45%
Slightly Below Standard (C)	19.0	45.2%	10	18%
Weak (D)	13.0	31.0%	6	11%
Showed Little Knowledge (E)	1.0	2.4%	3	5%
Did Not Attempt (X)	0.0	0.0%	2	4%
Maximum Mark	34.0			
Average Mark	23.0			
Standard Deviation	7.5			

This was a question which was a mixture of easy marks for reproducing book work, and some thinking. The majority of students could reproduce the book work, though only a minority could put it into a proper context. The key issues in parts (e) and (f) were missed by a majority of candidates.

Part (a) most candidates could tick of sufficient points to score the majority of the marks.

Part (b) most candidates got the current MER. A lesser proportion got the MER after the bushfire loss.

Part (c) most candidates got this, and appeared to understand that the level of exchange commission is driven by the needs of the insurer for reimbursement of costs, and the needs of the reinsurer to make a profit.

Part (d) a number of candidates did not understand "qualitative" and gave a numerical answer. This did not score well. Only a couple of candidates put the question in context and started with "why would Strahan want to buy either of these covers?"

Part (e) Marks were given for anyone who talked about gaps being generated by multiple small losses, and for any sensible solution, but many candidates did poorly here.

Part (f) Only a small minority of candidates understood the key issue of flood coverage being for either everyone (in which case there are cross subsidies and the insurer is relying on the rest of the market doing likewise), or being a self selected option, in which case the price is huge for the flood exposed areas.

Question 3

	Raw Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass (A)	24.0	57.1%	6	11%
Pass (B)	19.0	45.2%	19	35%
Slightly Below Standard (C)	15.0	35.7%	14	25%
Weak (D)	11.0	26.2%	13	24%
Showed Little Knowledge (E)	1.0	2.4%	1	2%
Did Not Attempt (X)	0.0	0.0%	2	4%
Maximum Mark	28.0			
Average Mark	17.7			
Standard Deviation	5.7			

Overall responses to this question were average. There seemed to be limited understanding of basic reconciliations to be applied both pre and post valuation as well as what monitoring is appropriate to be carried out through the year.

Most students had a reasonable understanding of the likely impacts of the GFC although a common mistake was to not fully understand the timing of the GFC. In general most students chose sensible assumptions. Common mistakes in this area were to:

- Not recognise the increasing trends within common law claims.
- Not recognise that figures were already provided on an inflated basis and therefore make another allowance for inflation.
- Many candidates went through the motions of taking averages of the frequency and claim size development without really trying to draw out trends that could be GFC related.
- Be inconsistent with the treatment of frequency and average claim size within a claim type.

Question 4

	Raw Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass (A)	27.0	67.5%	6	11%
Pass (B)	23.0	57.5%	20	36%
Slightly Below Standard (C)	17.5	43.8%	16	29%
Weak (D)	13.0	32.5%	4	7%
Showed Little Knowledge (E)	1.0	2.5%	7	13%
Did Not Attempt (X)	0.0	0.0%	2	4%
Maximum Mark	31.0			
Average Mark	20.2			
Standard Deviation	7.1			

The first 2 parts of this question are complex judgment questions. While most students demonstrate basic understanding of pricing, only about half of the students were able to score more than 50% of the total marks.

Part (a) most candidates understood of the application of indexation to historical losses and the calculation of net losses for the excess of loss policy. However, many responses did not demonstrate the allocation of losses by policy year and future indexation correctly.

Part (b) Overall, most candidates demonstrated some knowledge of the various components required for pricing, e.g. adjusting for exposure, allowing for inflation, expenses and profits. Not many candidates mentioned adjustments for IBNR allowance, trend adjustments etc. in their responses.

Part (c) Most candidates were able to state the purpose of reinstatement premium in their responses.

Part (d) Most candidates demonstrated some basic understanding of the calculation of reinsurance recoveries and reinstatement premiums. Some candidates were confused with the timing for the payments of reinstatement premiums.

Question 5

	Raw Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass (A)	26.5	66.3%	9	16%
Pass (B)	22.0	55.0%	19	35%
Slightly Below Standard (C)	16.0	40.0%	20	36%
Weak (D)	9.0	22.5%	5	9%
Showed Little Knowledge (E)	1.0	2.5%	0	0%
Did Not Attempt (X)	0.0	0.0%	2	4%
Maximum Mark	28.8			
Average Mark	21.0			
Standard Deviation	5.7			

Part (a) required students to comment on the key economic considerations impacting the capital position and profitability. This was reasonably answered. Weaker students only listed possible general considerations; better students identified issues in the current environment and explicitly described the link to capital implications.

Part (b) required students to list the professional issues of being offered the CRO role in addition to being the appointed actuary. Most students identified the potential conflict of interest and required skill set; though the more subtle considerations were missed by many.

Part (c) required students to define four types of capital, their objectives and stakeholders, and relationship in size. The definitions were well answered, though some students neglected to include the objectives, stakeholders and relationship.

Part (d) the first part was reasonable well answered, though only a handful of responses were full and complete. The advantages of a DFA were sometimes not completely explored. The second part required students to discuss an analysis of reinsurance programs. There were many easy points to be achieved in this question, though many students didn't achieve this. Answers to the third part were variable, with most identifying the possible advantage of reduced price, but few recognising the diversification benefit.

Part (e) was not well answered.

Course 5A Investment Management and Finance Examiner's Report Semester 2, 2010

1. Summary

1.1. Pass Rates

44 candidates enrolled for the Semester 2, Course 5A Investment Management and Finance exam. Of these, 6 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 53%. This compares with the following historical pass rates for this subject:

Table 1 – Course Experience

Semester	Sat	Passed	Pass Rate
2010 Semester 2	38	20	53%
2010 Semester 1	n.a.	n.a.	n.a.
2009 Semester 2	46	17	37%
2009 Semester 1	n.a.	n.a.	n.a.
2008 Semester 2	n.a.	n.a.	n.a.
2008 Semester 1	35	17	49%

1.2. Candidate Numbers

The Candidate numbers can be summarised as follows:

Table 2 – Candidate Numbers

	Number of candidates
Originally enrolled	44
Withdrawn prior to exam	3
Absent from exam	3
Presented at exam	38
Passed	20
Failed	18

The analysis by examination centre is as follows:

Table 3 – Analysis by Examination Centre

Centre	Presented	Passed	Pass Rate
Sydney	23	12	52.2%
Melbourne	8	4	50.0%
Canberra	2	1	50.0%
Subtotal Australia	33	17	51.5%
Ontario	1	1	100.0%
Hong Kong	1	1	100.0%
Singapore	1	1	100.0%
Auckland	1	0	0.0%
Netherlands	1	0	0.0%
Subtotal International	5	3	60.0%
Total	38	20	52.6%

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	1		4	1	5
1 (b)	1	1		3		3
1 (c)	1	1	2	3		5
1 (d)	1,3	1, 3			8	8
2 (a)	2	2	2			2
2 (b)	2	2		2		2
2 (c)	2	2	1			1
2 (d)	2	2		2	2	4
2 (e)	2	2		2		2
2 (f)	2	2			2	2
2 (g)	2	2		3	3	6
3 (a)	3	3		3	3	6
3 (b)	3	3			6	6
3 (c)	3	3	1	2		3
3 (d)	3	3			4	4
4 (a)	4	4	1			1
4 (b)	4	4		3		3
4 (c)	4	4			4	4
4 (d)	4	4		2	1	3
4 (e)	4	4	2		2	4
4 (f)	4	4		3	3	6
5 (a)	5	5		2		2
5 (b)	5	5	3			3
5 (c)	5	5		2		2
5 (d)	5	5			3	3
5 (e)	5	5	1	1		2
5 (f)	5	5			3	3
5 (g)	5	5		5		5
Total			13	42	45	100

Table 6 – Course Coverage by Question

Question	Units	Knowledge & Understanding	Straight-Forward Judgement	Complex Judgement	Total Marks
1	1,3	2	10	9	21
2	2	3	9	7	19
3	3	1	5	13	19
4	4	3	8	10	21
5	5	4	10	6	20
Total		13	42	45	100

2.2. Overall Performance

This semester's exam proved to be a very good discriminator of student

performance. The pass rate of 53% is not out of line with past examinations and is higher than last semester's pass rate of 37% but very similar to the pass rate from 2008 of 49%. While some concerns could be expressed regarding the overall performance, the overall performance of the passing candidates was sufficiently strong with some candidates towards the top performing uniformly well across a paper that tested technical and judgement skills in ways that candidates would not have seen previously.

The results should also be considered in light of the fact that the exam was challenging in terms of its breadth and the level of detailed knowledge required in each of the areas. Candidates were, as expected, presented with some difficult challenges, especially in light of the time constraints involved.

2.3. Exam Question by Question Analysis

Question 1

	Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass (A)	10.5	50.0%	6	15.8%
Pass (B)	9	42.9%	10	26.3%
Slightly Below Standard (C)	6.5	31.0%	13	34.2%
Weak (D)	4	19.0%	8	21.1%
Showed Little Knowledge (E)	0.5	2.4%	1	2.6%
Did Not Attempt (X)	0	0.0%	0	0.0%
Maximum Mark	13.0			
Average Mark	8.4			
Standard Deviation	2.28			
Coefficient of Variation	0.27			

Overall comments on the question are as follows:

Overall the question was not well answered for a reasonably easy question. Generally candidates that did not perform well just looked to write an answer, not necessarily thinking whether it was relevant or not. On a section by section basis:

a) We were surprised that people answered this so badly and missed simple calculations – a common mistake was to not average values across the two years but rather look at 2009 and 2010 individually. Some students also used total revenue and not sales revenue in the profit margin.

b) Generally people got the first part, but did not extend beyond that.

c) Most missed the point but got some of the easy marks for the balance sheet and P&L items impacted.

d) We were quite surprised how badly this was done. Not many people picked up basic points.

Question 2

	Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass (A)	10.5	55.3%	12	31.6%
Pass (B)	7	36.8%	18	47.4%
Slightly Below Standard (C)	5	26.3%	7	18.4%
Weak (D)	4	21.1%	1	2.6%
Showed Little Knowledge (E)	0.5	2.6%	0	0.0%
Did Not Attempt (X)	0	0.0%	0	0.0%
Maximum Mark	14.0			
Average Mark	9.2			
Standard Deviation	2.73			
Coefficient of Variation	0.30			

Formulae-type sections: (a) & (e) were generally right or wrong and students performed reasonably well on them. Part (c) was also well done by most.

In other parts, failure to answer the question as asked was the biggest issue, followed by waffle when the candidate clearly didn't know the answer.

No major misunderstandings – failure may be more due to poor exam technique than lack of knowledge, or maybe a general inability to extract the most relevant facts from all the background knowledge they have.

A wider spread of marks than for Q3, which reflects the nature of the question.

Question 3

	Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass (A)	14	73.7%	0	0.0%
Pass (B)	10	52.6%	20	52.6%
Slightly Below Standard (C)	9	47.4%	12	31.6%
Weak (D)	4	21.1%	6	15.8%
Showed Little Knowledge (E)	0.5	2.6%	0	0.0%
Did Not Attempt (X)	0	0.0%	0	0.0%
Maximum Mark	12.0			
Average Mark	9.8			
Standard Deviation	1.12			
Coefficient of Variation	0.11			

Candidates' performance on this question was less diverse than other questions of the exam. This question extended ideas that were covered in the assignment. It was clear that some candidates, despite performing quite well on the assignment, had not thought sufficiently about their answers on the assignment and about how they could extend their understanding of that material.

Question 4

	Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass (A)	14	66.7%	5	13.2%
Pass (B)	12	57.1%	13	34.2%
Slightly Below Standard (C)	9	42.9%	12	31.6%
Weak (D)	5	23.8%	6	15.8%
Showed Little Knowledge (E)	0.5	2.4%	2	5.3%
Did Not Attempt (X)	0	0.0%	0	0.0%
Maximum Mark	15.5			
Average Mark	11.0			
Standard Deviation	2.76			
Coefficient of Variation	0.25			

Candidates generally performed well on parts (a) to (c) of the question showing a good understanding of some of the statistical issues connected with the modelling from this question.

Part (d) was handled well by about half the candidates. Those who performed poorly on this part were too vague in their answers and did not directly address the issues.

Parts (e) was well handled.

Part (f) proved difficult for the majority of candidates. Again candidates resorted to vague answers that did not specifically address the question asked.

Question 5

	Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass (A)	13	65.0%	5	13.2%
Pass (B)	11	55.0%	10	26.3%
Slightly Below Standard (C)	7.5	37.5%	12	31.6%
Weak (D)	5	25.0%	9	23.7%
Showed Little Knowledge (E)	0.5	2.5%	2	5.3%
Did Not Attempt (X)	0	0.0%	0	0.0%
Maximum Mark	14.3			
Average Mark	9.4			
Standard Deviation	2.89			
Coefficient of Variation	0.31			

Parts (a)-(c) were very well done with most candidates securing most of the marks available here.

Part (d), on the Black-Litterman model proved difficult for many. A number of candidates did not provide a derivation, which was required, instead resorting to wordy descriptions which did not demonstrate sufficient understanding for the

marks to be awarded.

Parts (e) and (f) were well handled.

Part (g) was challenging and only a handful of candidates could discuss the issues involved in an informative way.

Course 6B Global Retirement Income Systems Examination Report Semester 2 2010

1. Summary

1.1. Pass Rate

14 candidates enrolled for the semester 2 2010, Global Retirement Income Systems (subject 6B) course. Of these, 1 candidate withdrew without sitting the exam.

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

It is proposed that 7 candidates be awarded a pass, which implies a pass rate of 54% of candidates sitting the exam. For comparison, recent pass rates are as follows:

Table 1 – Course Experience

Semester	Sat	Passed	Pass Rate
2010 Semester 2	13	7	54%
2010 Semester 1	n.a.	n.a.	n.a.
2009 Semester 2	19	10	53%
2009 Semester 1	n.a.	n.a.	n.a.
2008 Semester 2	18	10	56%
2008 Semester 1	n.a.	n.a.	n.a.

1.2. Candidate Numbers

Table 2 – Candidate Numbers

	Number of candidates
Originally enrolled	14
Withdrawn prior to exam	1
Absent from exam	0
Presented at exam	13
Pass recommended	7
Fail recommended	6

Table 3 – Analysis by Examination Centre

Centre	Presented	Passed	Pass Rate
Sydney	4	2	50%
Melbourne	3	2	67%
Perth	1	1	100%
Australia	8	5	63%
London	4	2	50%
Seoul	1	0	0%
Ex-Australia	5	2	40%
Total	13	7	54%

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	Knowledge & Understanding	Straightforward Judgement	Complex Judgement	Total Marks
1	4	8	5	17
2		10	15	25
3	6	7	2	15
4	4	13	10	27
5	1	5	10	16
Total	15	43	42	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 Performance Outcome	Units	Knowledge & Understanding	Straight-forward Judgement	Complex Judgement	Total Marks
1a	1,11	1,7	2			2
1b	1,2,11	1,7	1	3		4
1c	1,11	1,7		2	1	3
1d	1,5,8,11	1,3,5		1	4	5
1e	7,8	4,5	1	2		3
2a	3	2		6		6
2b	3,5	2,3			9	9
2c	3,4	2			4	4
2d	3	2		4	2	6
3a	8	5	1	3		4
3b	8	5	2			2
3c	13	7		1	2	3
3d	13	7	3	3		6
4a	6	3	2	2	1	5
4b	7,8,14	4,5,8	1	10	5	16
4c	14	8			2	2
4d	14	8	1	1	2	4
5a	9	6	1	2		3
5b	9,10	6			4	4
5c	9,10	6		3	6	9
Total			15	43	42	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 Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass	19.5	57%	1	8%
Pass	15	44%	5	38%
Slightly Below Standard	11	32%	4	31%
Weak	8	24%	3	23%
Showed Little Knowledge	1		0	0%
Did Not Attempt	0		0	0%
Highest Mark	20			
Average Mark	13.8			
Standard Deviation	3.2			

Question 1 was a fair differentiator. Parts (a) and (b) were answered well with most candidates understanding the key disadvantages of and stakeholder interests in the DB arrangements. Candidates generally did not recognise the consequences of a voluntary transfer offer in Part (c) and many seemed to interpret the "expected benefits of the transfer exercise" in terms of defined benefits rather than "expected advantages from the transfer exercise". In part (d), most candidates understood the trade-off between investment risk and expected contribution levels but few recognised the full consequences of the minimum benefit underpin applying to all benefit contingencies. Part (e) was not handled well with many candidates apparently running out of time and most of the remainder not fully understanding the consequences for the scheme of a material salary increase for different members. Generally, candidates did not relate the latter parts of the question to the earlier focus on advantages to the employer. As a result, many 'easy' marks were missed.

Question 2	Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass	30	60%	1	8%
Pass	22	44%	4	31%
Slightly Below Standard	18	36%	5	38%
Weak	12	24%	2	15%
Showed Little Knowledge	1		1	8%
Did Not Attempt	0		0	0%
Highest Mark	31			
Average Mark	20.1			
Standard Deviation	5.5			

Question 2 was a very good differentiator. Although candidate marks were not spread as much as some other questions, all candidates who passed this question also passed the course overall. Furthermore, there was a strong correlation between performance in this question and performance in the course overall.

The recommended marks provided to me seemed to result in a disproportionately high number of candidates in the 'slightly below standard' grade. Upon review, increasing the

cut off for this grade had no material impact on the overall recommendations and therefore I considered there to be no need for further investigation.

Few candidates managed to pick up most points in this question. Candidates included vague and sometimes irrelevant points that did not attract marks. Candidates, while making points that could be relevant, often failed to connect these to the circumstances. Part (a) was answered reasonably well, although a surprising number of candidates did not comment on the desirability for a post-retirement product to be simple to understand (major engagement issue) and the ability to participate in upside investment gains. Most candidates mentioned the ability to leave money (residual amount or death benefit) to heirs/estate/spouse as a desirable feature of a post-retirement product. It is noted that post-retirement products can be priced to allow for this feature. Part (b) was answered best. Many candidates who missed identifying features in part (a) generally missed points in part (b). Many basic points were missed by candidates in part (c). Quite a few commented that the 'safety net' provided by government pensions meant people could take on more risk in their personal retirement savings. This is not relevant in the context of the question. Part (d) was not answered well despite being reasonably straightforward. Few candidates noted that the fund in question was DC (hence some products were more likely to be suitable) and many did not articulate how their advice would change depending on the product considered.

Question 3	Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass	20	67%	3	23%
Pass	15	50%	2	15%
Slightly Below Standard	12.5	42%	4	31%
Weak	8	27%	3	23%
Showed Little Knowledge	1		1	8%
Did Not Attempt	0		0	0%
Highest Mark	23.5			
Average Mark	15.0			
Standard Deviation	5.2			

Question 3 appeared to be a good differentiator in that it provided a spread of marks but this proved deceptive because on further investigation performance in this question had an extremely low correlation (30%) to performance in the course overall. This question had the fewest marks available in the exam and its inclusion or exclusion had no impact on the overall pass/fail course recommendations. The grade cut offs (specifically B/C and C/D) similarly had no material impact on the recommendations and therefore I considered there to be no need for further investigation.

Part (a) was generally reasonably well-answered by candidates. Most of the relevant points were either made and explained by candidates or at least referred to in responses. Responses for part (b) were mixed. Most candidates were able to explain base plus benefits and/or deferred pay, however many were unable to correctly identify which approach corresponded with a total remuneration approach. Part (c) was quite challenging for candidates. While most candidates were able to identify the difficulties in determining the cost of benefits to be included in the total remuneration package, the issues involved in determining a salary on which defined benefits should be based proved difficult for most candidates to identify and explain. Part (d) also proved challenging for candidates. Some candidates had difficulty identifying the 3 different approaches while some used an accounting basis as a proxy for an individual cost of accrual. Most candidates who identified different methods were able to provide reasonable advantages and disadvantages for each.

Question 4	Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass	37.5	69%	2	15%
Pass	28	52%	7	54%
Slightly Below Standard	20.5	38%	3	23%
Weak	13	24%	1	8%
Showed Little Knowledge	1		0	0%
Did Not Attempt	0		0	0%
Highest Mark	38			
Average Mark	30.5			
Standard Deviation	6.7			

Question 4 was a fair differentiator. It was a standard question, covering a key area of superannuation, and it would reasonably be expected that a candidate wishing to qualify as a FIAA would demonstrate an ability to respond well to the issues raised. Overall, most candidates captured many of the points required. Part (a) was generally well-answered with many candidates picking up the major points. An additional point mentioned by many candidates was advice on the investment strategy. In part (b), most candidates failed to identify changing member contributions as a possible action. Some candidates did not identify corrective actions beyond increased employer contributions and change in investment strategy. Many candidates in responding to the conflicts did not consider who the primary client was. Part (c) was straight-forward and generally well-answered. Many candidates picked up the main points in part (d) around any surplus going to members and a recommendation to de-risk the portfolio. However, most candidates failed to gain the remainder of the marks, as the model solution was broader than the general nature of answers provided by candidates.

Question 5	Marks Required	% of Total Marks	Number of Candidates	Proportion of Candidates
Strong Pass	22	69%	3	23%
Pass	18	56%	6	46%
Slightly Below Standard	14	44%	2	15%
Weak	8	25%	1	8%
Showed Little Knowledge	1		1	8%
Did Not Attempt	0		0	0%
Highest Mark	25.5			
Average Mark	18.3			
Standard Deviation	5.7			

Question 5 was a good differentiator. In part (a) very few students defined 'adequacy', with most simply assuming it was having enough savings. A number of students referred to the fact that the employer was bearing the investment risk in a defined benefit scheme but rarely mentioned the link to salary and the cost of living. Credit was also given where students mentioned that member contributions could be adjusted in a DB scheme, which would enhance adequacy and also where there was sufficient (and sensible) discussion around the benefits of the employer bearing investment risk (pooling and a long-term approach, as well as the increased certainty this provided for the member). In part (b) very few students provided a definition/explanation of 'total wealth' but overall this question was answered well. Part (c) overall was generally well-answered. One key omission was that students rarely mentioned that under scenario 1 the maximum amount would be invested close to age 65 and hence any losses at this point would have a

significant impact on the level of adequacy of their benefit, which follows on from earlier parts of the question. It pays to consider the answers to the previous parts of the questions! Credit was given to students who considered it sub-optimal that members could potentially make more reckless investment choices under the second scenario due to the fact that there is a means-tested age pension benefit, which would compensate members for a fall in their assets. Another shortcoming here was that rather than talking about risk aversion, students tended to talk about inertia with respect to investment choice being the cause of sub-optimal outcomes; this assumes that the default option itself is sub-optimal, which is unfounded. Marks were rarely awarded for this type of discussion as it didn't really focus on excessive conservatism. However some students did not consider that the question specifically asked to consider the period close to retirement. These students tended to put down a number of very general points that did not address the question. Overall, most of the points were covered but sometimes the discussion that was required to link observations and conclusions was deficient.

2.3. Overall Analysis

The recommended pass rate is pleasing, particularly in contrast to the low pass rate of course 6A last semester, in which I also acted as chief examiner.

Four of the five questions proved to be reasonable differentiators and the other question (Q3) had no impact on the overall pass/fail course recommendations.

I thought this was a good and fair exam paper overall, which, particularly considering the timing of delivery, is a credit to the course leader, scrutineer and exam reviewers.

Course C10 Commercial Actuarial Practice

Examiner's Report Semester 2 2010

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 method changed slightly this semester. The two assessment tasks are now as follows:

1. A take-home Post-Course Assignment ("Assignment") on one of the 4 non-traditional topics (Banking, ERM, Health, Environment), distributed after the residential course for completion within 2 weeks. This semester one quarter 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 4 mainstream topics (Life, General, Investment, GRIS), perform all the necessary analysis and prepare a substantial written report.

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. Marks are no longer awarded for quality of participation in the residential course.

1.2. Pass Rates

Of the 102 candidates who presented for the course, it is proposed that 56 be awarded a pass, representing a pass rate of 55%. This is a little below the long-term average pass rate of 62%.

The pass rate for repeat candidates was 47% (17 out of 36) while first-time students achieved a 59% pass rate (39 out of 66).

A statistic that is not apparent from the results is the number of candidates who have failed multiple attempts at the CAP course. Nevertheless, discussion with Institute staff reveals that this can soon be studied by matching successive candidate numbers back to names. As the pass rate this semester for repeat candidates was again below 50%, I believe that a group of persistently failing candidates could benefit from specific mentoring or advice.

"Overseas" candidates had a similar pass rate to Australian-based candidates, with 5 out of 10 or 50% of overseas candidates passing compared to 55% of those who sat in Sydney,

Melbourne or Canberra. For a communication-based course such as CAP, the alignment of the overseas pass rate is pleasing. The full list is:

Results by Exam Centre			
Centre	Presented	Passed	Pass rate
Canberra	3	0	
Melbourne	23	14	61%
Sydney	65	36	55%
PCR only	1	1	100%
Hong Kong	3	1	33%
Kuala Lumpur	1	0	
London	2	1	50%
Singapore	3	2	67%
Zurich	1	1	100%
Australia	92	51	55%
Overseas	10	5	50%
Total	102	56	55%

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 General Insurance candidates were a stronger cohort this semester and Life students were weaker. A single additional pass or fail would markedly change the GRIS or Investment pass rates, but I am comfortable with their general level.

Exam Case	Sat	Passed	Pass rate
General	35	22	63%
GRIS	10	5	50%
Investment	16	9	56%
Life	40	19	48%

1.4. Candidate Numbers

A total of 105 candidates were enrolled for one or both of the assessments in Semester 2 of 2010. 66 were first-time candidates and attended the compulsory 4-day residential course. 2 withdrew due to inability to attend the residential. 37 repeat candidates also enrolled, none of whom 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	1	8	96	105
Withdrawals	0	0	2	2
Absent	0	0	1	1
Presented	1	8	93	102
Passed	1	6	50	56
Failed	0	2	43	46

2. Take-home 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. Nevertheless, marks around 10 / 20 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 comment on a proposed model for operational risks in a bank. Some statistical analysis was required, but it was important to recognize the limitations of any purely quantitative approach.

Most candidates did enough to pass, but few were exceptionally good. Marks ranged from 25% to 75%, but 16 of the 24 were between 55% and 65%. Only 4 did not achieve a pass mark. The average mark was 58%. Although this average was below the overall post-course assignment average, an addition of up to 1 mark only had to be considered for 1 marginally-failing candidate, and in that case I thought the Banking mark of 58% (coincidentally only) was already sufficiently generous so no adjustment was made.

2.2. Environment

The Environment case study required candidates to model possible reduction paths for greenhouse gas emissions through the 21st century. Developed and developing countries had to be treated separately.

14 of 24 candidates were awarded pass marks, and there was a good spread of results from 30% to 90%. The average mark was 62%, in line with the overall average. I regard these outcomes as satisfactory and have made no topic-specific adjustments.

2.3. Enterprise Risk Management

The ERM case study asked for a review of the weaknesses in an imaginary stockbroker's "Buy" recommendation on RAMS home loans just before it failed in August 2007. Some interesting professional issues surrounding personal trading by the author also had to be addressed.

17 of 22 candidates were awarded pass marks. The spread was from 35% to 75%. The average mark was 56%.

2.4. Health

The Health case study required public advice on the introduction of a universal medical insurance scheme for a developing country. Political, risk management and design aspects needed comment, and formulae had to be developed for costing the scheme.

Only 3 of 24 candidates received less than 60%, and those 3 failed. The average mark of nearly 72% was 10% higher than the post-course average, and it seemed to me that was indicative of generosity rather than a higher standard. Hence marginal overall candidates were considered for a reduction from their Health mark.

3. Exam results

3.1. GRIS

The Case Study for Global Retirement Income Systems concerned the transfer of a group of public servants from their defined benefit scheme to a private sector defined contribution scheme. The employees had engaged an actuary to calculate appropriate compensation payments in respect of the difference in expected past and future superannuation benefits, and the task was to critique this work on behalf of the government and provide an alternative recommendation.

10 candidates chose this topic, and 5 passed. In general it was not well answered, with no candidate scoring more than 60 from either marker. Only three candidates had a clear pass.

3.2. General Insurance

The case for General Insurance required candidates to undertake a Minimum Capital Requirement calculation, and forecasts of future funding levels, for an insurance company in a fictitious country undergoing a change in its MCR requirements. Candidates were required to identify a change in payment pattern as the key reason for the large increase in MCR and make appropriate recommendations to ensure future solvency.

35 candidates chose this topic, and 22 or 63% passed. The question was generally well answered with the majority of candidates identifying the cause of the high level of MCR. However, several candidates failed to apply the prescribed methodology, either using their own methodology or adapting the methodology to provide more favourable results. Several candidates who had performed strongly in the post course assignment did not do well with the exam, however the question does not appear to have been ambiguous in terms of the intended approach.

Overall following the marking of the course and review of borderline cases the pass mark was set at a mark of 50.

3.3. Investments

The Investments case required candidates to give advice to a fictitious government cabinet on proposals to require 50% of all retirement savings to be capital guaranteed, and a formula for determining the capital to be held by the fund managers. Candidates were expected to perform stochastic analysis related to asset allocation.

16 candidates attempted this topic, and it was generally well answered, but the slightly disappointing pass rate of 56% reflected the number of reports that were reasonable but just below pass standard. Several of the top failures were very close to passing after standardisation additions to their Assignment marks, but their clear failures in Investment meant they had to fail.

3.4. Life Insurance

The Life case required candidates to provide advice to a financial planning firm on how to maximize their bonus commission from 2 competing life insurers' offers, while still

maintaining their "independent" status. The benefits and risks to the planner and to clients had to be considered. A present value of future cash-flows was expected, driven by assumptions including business volumes and persistency.

40 candidates attempted this topic, with a range of marks from 36% to 67%. The standard was very disappointing, particularly the number of candidates who did not produce a projection of future cash-flows. 19 passed, or 48%.