

**External examiner's report**  
**MSc in Mathematical and Computational Finance, 2013-2014**

1. PREPARATION OF EXAM PAPERS

Each student's total mark is determined by a formula involving four ingredients:

- (1) Written exams, composed of four papers, with each paper covering three courses,
- (2) Two mini-projects,
- (3) A programming exam,
- (4) A dissertation.

I was asked to review the exam papers of item (1). I received draft questions for Papers A & B in December and for Papers C & D in March. The questions were set at a level appropriate for an MSc, covering a good breadth of mathematical finance. I suggested some minor changes to the wording and content, and these suggestions were incorporated in the final versions of the papers.

I should note that although items (2), (3) and (4) actually constitute a majority (60 %) of each student's total mark, I was not asked to comment on them. For instance, I was not asked to judge the suitability of the selection of mini-project topics available to students.

2. EXAMINERS' MEETINGS

There were three examiners' meetings: the 6th February, the 7th of May and the 22nd of July. I attended the first and third meetings in Oxford, and participated in the second meeting by telephone.

The main purpose of the first two meetings is to assign interim classification based on item (1), the written exam papers. Interim classification does serve a useful role by providing the students with some feedback on their progress in the course. However, as mentioned above, this feedback only covers a minority of their final total mark.

The third examiners' meeting was devoted to assigning final classifications. The exam committee found to be straightforward the classification of most candidates. However, there were two candidates who required special consideration.

**2.1. Distinction borderline.** The examiners were given a list of candidates (anonymised) ordered by their combined marks in the four categories of assessment. The discussion of where to draw the Distinction boundary was focused on one candidate who had done extremely well on item (1), the written exams, and indeed was ranked first by this metric. However, the candidate's performances on items (2), (3) and especially (4) was less impressive. After careful scrutiny of the candidate's work, we satisfied ourselves that there was a significant gap in the achievement of this candidate compared to the next highest ranked candidates. The committee decided to classify this candidate as Distinction, and those ranked lower were classified as either Pass or Fail.

**2.2. Suspected plagiarism.** Another candidate was found to have reused parts of the mini-project write-up in the dissertation. This case of suspected auto-plagiarism was taken to the Senior Proctor, who instructed us as follows: "As I found no evidence of dishonesty on the part of the candidate, I therefore instruct the Examiners to mark the Dissertation as part of the normal examination process, taking into consideration if you wish the candidate's re-use of material." The Committee agreed that a mark of 50 on the dissertation would be consistent with the Senior Proctor's ruling.

### 3. RECOMMENDATIONS

**3.1. Reminding assessors of the criteria for distinction.** During the discussion of the Distinction borderline candidate, the wording of the *Examination Conventions* document, section 5.10 *Criteria for distinction*, was consulted. It became apparent that some assessors of dissertation may not realise that a mark below 60 would automatically disqualify a candidate for Distinction classification. In the future, I recommend that assessors are alerted to this fact. Indeed, the dissertation mark is assigned by a process of reconciling the marks of a principal and secondary assessor, combined with the result of the assessment of an oral presentation by the candidate. During this process it might be useful to remind assessors that a mark of 60 and a mark of 59 have very different consequences for the candidates.

**3.2. Reminding students not to re-use work.** The Senior Proctor decided that the case of suspected plagiarism was the result of honest misunderstanding. In the future, I recommend that students are told explicitly that the re-use of work in more than one category of assessment is not permitted.

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