

<b>Title of Examination(s):</b>		MSc in Mathematical and Computational Finance
<b>External Examiner Details</b>	<b>Title:</b>	Dr
	<b>Name:</b>	Michael Tehranchi
	<b>Position:</b>	University Lecturer
	<b>Home Institution:</b>	University of Cambridge, Statistical Laboratory

**Please complete both Parts A and B.**

<b>Part A</b>					
		<i>Please (✓) as applicable*</i>	<b>Yes</b>	<b>No</b>	<b>N/A / Other</b>
A1.	Did you receive sufficient information and evidence in a timely manner to be able to carry out the role of External Examiner effectively?		✓		
A2.	Are the academic standards and the achievements of students comparable with those in other UK higher education institutions of which you have experience?		✓		
A3.	Do the threshold standards for the programme appropriately reflect the frameworks for higher education qualifications and any applicable subject benchmark statement? <i>[Please refer to paragraph 3(b) of the Guidelines for External Examiner Reports].</i>		✓		
A4.	Does the assessment process measure student achievement rigorously and fairly against the intended outcomes of the programme(s)?		✓		
A5.	Is the assessment process conducted in line with the University's policies and regulations?		✓		
A6.	Did you receive a written response to your previous report?		✓		
A7.	Are you satisfied that comments in your previous report have been properly considered, and where applicable, acted upon?		✓		
<p><b>* If you answer "No" to any question, please provide further comments in Part B. Further comments may also be given in Part B, if desired, if you answer "Yes" or "N/A / Other".</b></p>					

## Part B

### B1. Academic standards

- a. *How do academic standards achieved by the students compare with those achieved by students at other higher education institutions of which you have experience?*

The vast majority of students have achieved a strong understanding of several relevant topics of quantitative and computational finance, based on their exam performance and dissertations. The samples of the students' written work that I read seemed to be at least at the level of work at comparable MSc programmes in the UK.

- b. *Please comment on student performance and achievement across the relevant programmes or parts of programmes (those examining in joint schools are particularly asked to comment on their subject in relation to the whole award).*

It appears that some courses were found more challenging than others based on aggregate exam performance, but the variation was within expected limits. The marks for the dissertation were in a narrower bound than the written exams, with few high flyers and no failures, but again this is not surprising given both the time constraints and the fact that the work is well supervised.

### B2. Rigour and conduct of the assessment process

*Please comment on the rigour and conduct of the assessment process, including whether it ensures equity of treatment for students, and whether it has been conducted fairly and within the University's regulations and guidance.*

I checked each written exam paper and was satisfied that the questions were of a suitable standard. I also read through a large fraction of the dissertations and agreed with the assessment of the internal examiners. I am aware of no irregularities arising during the course the examination.

### B3. Issues

*Are there any issues which you feel should be brought to the attention of supervising committees in the faculty/department, division or wider University?*

The number of Distinctions awarded this year seemed to me too low, but this is based on my memory of how things went the past three years. However, the faculty guidelines allow for no flexibility with respect to the Distinction criterion. It might be useful for the faculty to announce a target percentage of Distinctions, and perhaps clarify what discretion, if any, the exam committee has to achieve the target.

Also, I received the draft exam papers to read in plenty of time to check them before they were sat. However, since the exam structure is rather elaborate (for instance, there are two papers called Paper D.1), it can be confusing to sort through a large envelope of unbound and unnumbered pages of questions. A future examiner may prefer to have pages labelled in a consistent way to avoid the confusion after the pages fall out of their paperclip and onto the floor in a random order.

### B4. Good practice and enhancement opportunities


*Please comment/provide recommendations on any **good practice and innovation relating to learning, teaching and assessment**, and any **opportunities to enhance the quality of the learning opportunities** provided to students that should be noted and disseminated more widely as appropriate.*

I have no suggestions.

B5. Any other comments

*Please provide any other comments you may have about any aspect of the examination process. Please also use this space to address any issues specifically required by any applicable professional body. If your term of office is now concluded, please provide an overview here.*

My term as External Examiner has now concluded. In the past three years, the MSc Programme has expanded in its scope, including not just “classical” financial mathematics (the area of my expertise) to include more modern topics in data science such as machine learning. This expansion has resulted in a more complicated exam system involving two streams, and doubtlessly more demands on the faculty’s teaching resources, but I am happy to say that it has been managed very well from my perspective.

Signature:	
Date:	28/09/2016
<p><b>Please email your completed form (preferably as a word document attachment) to: <a href="mailto:external-examiners@admin.ox.ac.uk">external-examiners@admin.ox.ac.uk</a> and copied to the applicable divisional contact.</b></p> <p><b>Alternatively, please return a copy by post to: The Vice-Chancellor c/o Catherine Whalley, Head of Education Planning &amp; Quality Review, Education Policy Support, University Offices, Wellington Square, Oxford OX1 2JD.</b></p>	