• 1. Course data

Course name:	"Portfolio Theory and Risk Management"
Course number:	SF2942
Credits:	7.5 hp (100% via final exam)
Period:	Period 1, HT 2017
Course responsible:	Anja Janssen
Teaching assistant:	Carl Ringqvist
Lectures:	18*90 minutes of lectures + 6*90 minutes of problem sessions
Number of registered students	88

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Prestationsgrad	55%
Examinationsgrad	55%

• 2. Aims of the course

The aim of the course is that the student should master the methods and concepts of portfolio theory, basic interest rate theory and the measurement and management of risk. The student should also be able to, according to different criteria, construct optimal portfolios of financial assets and instruments for investment and/or risk management. The aim is also that the student should understand the strengths and weaknesses of different criteria for optimal portfolio choice.

• 3. Results of course survey

The course survey was carried out using the survey system on the math homepage and available from 6.10.2017-23.10.2017. After several encouragements in Canvas and during lectures 18 students took part in the survey. All results are available at:

http://www.math.kth.se/cgi-bin/evaluation/results/evaluation_showresults? command=showresults&evaluationid=461

The general impression was in my opinion positive:

Please indicate your evaluation of the quality of the course overall.

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Some students mentioned that the are missing a kind of "bigger picture" in the course and that the material is too scattered ("[...] but to finish the sentence: The main content of the course Portfolio theory is seems to me quite difficult.")

Regarding the level of difficulty the opinions were very mixed. Some thought that the course was quite easy (*"The course doesn't need too much time. Bonus points are a really nice gift to the*

students. ") while others thought it to be too theoretical and challenging ("*Some of the mathematical calculations (like long proofs) were difficult to follow.*", but of course this could also be my fault). Students highlighted the relevance of the topics and most of them got interested in the material:

Did the course arouse your interest in the covered topics?



The evaluation of the efforts of lecturer and teacher was generally positive (although a bit of mixed reviews about the problem sessions):

Would you recommend this lecturer to other students?



Would you recommend your teaching assistant (Carl) to other students?

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The biggest shortcoming mentioned in the course analysis was the lack of opportunities to solve problems and thereby to prepare properly for the exam ("*Problem sessions were more example sessions than problem sessions. The students don't solve the problem by themselves. The TA just present the answer of some typical problems. That's not uninteresting but it is also important for the student to have time to try by themselves."*). See next section about how to adress this.

• 4. Pedagogic development of the course

I think that the last point mentioned in the previous section should be addressed in further instances. The course is a lot about problem solving skills, so these have to be trained, while reading and understanding the material is just a preliminary step towards this. In the problem sessions, some of the exercises from the textbook ("Risk and Portfolio Analysis" by Hult et al.) were presented by Carl. As an innovation towards last instance of the course, I prepared short questions for each exercise which students should try to answer themselves before the problem session. A problem with the exercises from the book is in my opinion that they are often a bit too complex to be tackled by the students on their own. The same holds true for the examples covered during lectures, which are often a bit lengthy and ramified, and thereby not really suitable to stand as an example for exam questions. So, for the next instance of the course, I will try to come up with exercises on my own (I did this with two or three exercises already this year), which are a bit easier, and to advise students to try to solve the whole exercise on their own. Problem sessions can then be used to present sample solutions and to discuss them afterwards. This should give the students more opportunity to train their problem solving skills and maybe also to get more acquainted with my "personal style" of questions, so it's also a better preparation for the exam.

Hopefully, this will also encourage students earlier to catch up on prerequisites, if necessary. Students who failed the final exam often showed a lack a basic skills in intermediate probability theory, for example in deriving expected values of a random variable with a given density function. During the course I used the online survey system PINGO a few times, which got a positive mention in the survey. In addition, I got the impression during class that these interactive exercises were appreciated by students. I will definitely continue using little quizzes like that.

Finally, next time I would try make more connections between different Chapters, in order to illustrate better what "the big picture" of this course is.

• 5. Minutes of the course analysis meeting.

The meeting was held 23.11., 10:00-10:30 in room F11. Present were:

- Boualem Djehiche
- Michael Hanke (Program Director TTMAM)
- Nazim Huseynov (PAS for TTMAM)
- Anja Janssen (Course responsible)

Participants briefly discussed the heterogeneity of students' backgrounds. From the previous instance of the course Nazim remembered the lack of examples as being a problem for exam preparation, which has also been mentioned in point 4. of this analysis. Having an extra compendium of suitable exercises and solutions (which could also be taken from old exams, for example) accompanying the course was suggested for the next instance.