

Module Description

MA9976: Financial Econometrics (FIM)

TUM Department of Mathematics

Module level: Master	Language: English	Module duration: one semester	Occurrence: summer semester
--------------------------------	-----------------------------	---	---------------------------------------

Credits*: 4	Total number of hours: 120	Self-study hours: 75	Contact hours: 45
-----------------------	--------------------------------------	--------------------------------	-----------------------------

* The number of credits can vary depending on the corresponding SPO version. The valid number is always indicated on the Transcript of Records or the Performance Record.

Description of achievement and assessment methods:

The module examination is based on a written exam (90 minutes) with both theoretical and practical components. Students have to show their theoretical understanding of a generalized linear regression model by answering questions on model set-up and assumptions, the generalized least squares estimation methodology, finite and asymptotic properties as well as hypothesis testing. In the practical section, students have to demonstrate their understanding of the methodology on an economically motivated application. By analyzing and interpreting results from a variety of candidate models, students are led to reach a decision about the most plausible model for the application at hand. The exam includes a one-page formula sheet provided in advance to the students via lecture notes as well as an Appendix with output in R-code related to the practical component. The theoretical part represents a 55% of the total grade while the practical component takes the remaining 45%.

Exam type: written	Exam duration (min.): 90	Possibility of re-taking: In the next semester: No At the end of the semester: No	Homework: No
------------------------------	------------------------------------	--	------------------------

Lecture: No	Conversation: No	Written paper: No
-----------------------	----------------------------	-----------------------------

(Recommended) requirements:

none

Contents:

This course is an intensive introduction to various econometric concepts like sampling, estimation, hypotheses testing, and (generalized) linear regression used in applied financial research. The emphasis will be on developing and applying regression-based techniques in both cross-sectional and time-series contexts. Their usefulness will also be examined in the light of current financial studies.

Study goals:

After successful completion of the module, students are able to analyze cross-sectional and time-series data with regression-based techniques. Furthermore, students will learn how to set up and to estimate econometric models that can be used to test theories or to make forecasts. They understand the properties and limitations of these models and are able to assess how they fit different applications. Students will be able to use a programming software like Matlab or R to implement and evaluate the models.

Teaching and learning methods:

Lectures with beamer presentation and whiteboard, tutorials where students work under instructor assistance on

assignments for implementation using programming software like Matlab or R

Media formats:

Presentation slides, whiteboard, assignment sheets, programming software like Matlab or R

Literature:

Econometric Analysis, Greene, W.H. (2008), 6th ed., New York: Prentice Hall.

Additional Reading: Market Risk Analysis: Quantitative Methods in Finance (Market Risk Analysis). Carol Alexander. Wiley; Har/Cdr edition 2008.

Responsible for the module:

Zagst, Rudi; Prof. Dr.: zagst@tum.de

Courses (Type, SH) Lecturer:

000002142 Financial Econometrics (FIM) (3SWS L, SS 2016/17) [BF]

Escobar M

For further information about this module and its allocation to the curriculum see:

<https://campus.tum.de/tumonline/wbModHb.wbShowMHBRReadOnly?pKnotenNr=961769>

Generated on: 18.07.2017 11:50