APPLIES TO ACADEMIC YEAR 2011/2012

EXC 3610 Empirical Methods in Finance

Programme
Bachelor in Business Administration (BBA) (3. year)

Responsible for the course
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Department
Department of Financial Economics

Term
According to study plan

ECTS Credits
7,5

Language of instruction
English

Introduction

Welcome to Empirical Methods in Finance. The importance of this course can be summarised in the following three questions: 1) What do I need to be able to identify the empirical predictions of a financial or economic theory? 2) What do I need to be able to test the empirical predictions of the theory? 3) What do I need to be able to critically evaluate the research methodology used in financial research? Answer: Empirical Methods in Finance.

Learning outcome

The aims of this course are to introduce students to important econometric techniques that are used in empirical finance and to create awareness with students of how these techniques can be applied. More specifically, on completion of the course the students' acquired knowledge and skills should be as follows:

Acquired knowledge

On completion of the course students should:

- Understand the importance of basic data handling involving different graphical representations, descriptive statistics such as the mean, median, variance, standard deviation, skewness, kurtosis.
- Be able to interpret the above mentioned numerical measures.
- Understand what is meant by correlation and regression analysis - and the difference between them.
- Understand that correlation is not causation.
- Understand some of the peculiarities of financial data.
- Understand the difference between an econometric model and a financial model.
- Understand what is meant by Ordinary Least Squares (OLS) - the estimation technique used in order to estimate our econometric model.
- Understand how to interpret the estimated model.
- Understand the statistical assumptions that OLS rests upon.
- Understand the concept of Autoregressive (AR) modelling.
- Understand, at a basic level, important time series issues such as Stationarity, Cointegration and Error Correction (ECM) modelling.
- Understand the difference between the unconditional and conditional variance and how the latter can be modelled with an ARCH-type model.

Acquired skills

On completion of the course students should be able to use software like Eviews in order to:

- Perform basic data handling
- Estimate financial models formulated as linear regression models (Econometric models).
- Test the statistical assumptions underlying OLS.
- Take corrective action if some of these assumpyions are violated.
- Estimate AR models.
- Test for Stationarity and Cointegration.
- Estimate Error Correction Models (ECMs).
- Test for ARCH effects.
- Estimate basic ARCH models and GARCH(1,1) models

Prerequisites

Basic statistics course

Compulsory reading
Books:
Koop, Gary. 2006. Analysis of financial data. John Wiley. Kap.1-10, 12

Recommended reading

Course outline
This course introduces students to modern econometric techniques that are relevant for empirical research in finance. More specifically, the course content is as follows:

1. Basic data handling.
2. Correlation and simple regression analysis.
3. Multiple regression analysis.
4. Statistical aspects of the OLS estimation technique.
5. Regression with dummy variables.
6. Regression with lagged explanatory variables.
7. Univariate time series analysis.
8. Times series issues (Stationarity, Cointegration and Error Correction)
9. Financial volatility.

Each topic will be accompanied by a hands-on practical application of an empirical finance topic. The software package Eviews will be an integral part of the lectures and the coursework

Computer-based tools
The software package Eviews will be available on BI's computers. Other tools include ISI web of science, Business Source Complete, Google Scholar, It's Learning.

Learning process and workload
The course will consist of a combination of lectures and plenary tutorials where solutions to exercises will be explained.

Please note that whilst attendance is not compulsory, it is the students responsibility to obtain any information provided in class that is not included on the course homepage/It's learning or in the text book.

A course of 7,5 ECTS credits corresponds to a workload of 200 hours. The following is an indication of the time required for different activities:

Activity	**Hours**
Lectures	39
Plenary tutorials where exercises will be explained	6
Preparation for lectures and plenary tutorials	110
Preparation for the final examination	45
Total recommended use of time	**200**

Use of hours
39 hour - Lectures
6 hours - Plenary tutorials where exercises will be explained
45 hours total

Examination
The course grade will be based on the following activities and weightings:
60% of the course grade will be based on a final three-hour written examination. The remaining 40% are based on two written assignments, each accounting 20%, and class participation.

Specific information regarding assessment of performance beyond the information given in the course description will be provided in class. This information may be relevant for requirements related to term papers or other hand-ins, and/or where class participation can be one of several elements of the overall assessment

This is a course with continuous assessment, which applies to the part accounting for 40% (several examination elements). Each examination element will be graded by means of points on a scale (e.g. 0-100). The elements will be weighted together according to the information in the course description in order to calculate the final letter grade for the course. You will find detailed information about the point system and the cut off points with reference to the letter grades on the course site in It's learning.

Examination code(s)
EXC 36101 - Process evaluation, counts 100% towards final grade in EXC 3610 Empirical Methods in Finance, 7,5 credits.

Examination support materials
A BI-approved examination calculator, TEXAS INSTRUMENTS BA II Plus™
Examination support materials at written examinations are specified under exam information in our web-based Student Handbook. Please note the use of calculator and dictionary.
http://www.bi.edu/studenthandbook/examaids.

Re-sit examination
A re-sit is held in connection with the next scheduled examination in the course. Students who are retaking examination must take the course all over again including all parts of the evaluation.

Additional information