



COURSE SYLLABUS

Financial Time Series Analysis, 7.5 credits

Financial Time Series Analysis, 7,5 högskolepoäng

Course Code:	FSGK13	Education Cycle:	First-cycle level
Confirmed by:	Council for Undergraduate and Masters Education Jan 4, 2013	Disciplinary domain:	Technology
Valid From:	Jul 1, 2013	Subject group:	ST1
Version:	1	Specialised in:	G1F
Reg number:	IHH 2014/2183-122	Main field of study:	Statistics

Intended Learning Outcomes (ILO)

On completion of the course the students will be able to:

Knowledge and understanding

- Demonstrate understanding of the basic concepts within time-series analysis.
- discuss what problems arise with various model misspecifications.

Skills and abilities

- select the most proper model and estimation method for the case study under consideration when using time series data.
- determine when a time-series model is correctly specified, and be able to make the appropriate adjustments when such a model is misspecified.

Judgement and approach

- present results in a way that avoids possible bias arising from the researcher.

Contents

1. Stationary time-series models (Box-Jenkins, ARMA-models).
2. Financial volatility models (ARCH, GARCH, EGARCH etc.).
3. Models with trend (Stochastic and deterministic trends, random walk and unit root testing by e.g. the ADF-test).
4. Vector Autoregressive (VAR) models and the Granger Causality test.
5. Cointegration and Error-Correction Models (ECM).

Type of instruction

Teaching is done through a combination of lectures and hands-on lab sessions. A large part of the course consists of computer labs in EViews. An important element of the course is to prepare the student for writing bachelor and master theses in Business Administration, Statistics, Economics, and particularly in Financial Economics.

The teaching is conducted in English.

Prerequisites

30 credits including Business Statistics 2, 7.5 credits or Econometrics 1, 7,5 credits (or the equivalent).

Examination and grades

The course is graded A, B, C, D, E, FX or F.

The ILOs within knowledge and understanding will be examined through a written exam and written assignments while the ILO's within Skills and abilities and Judgment and approach will be examined through written assignments.

Registration of examination:

Name of the Test	Value	Grading
Examination ¹	6 credits	A/B/C/D/E/FX/F
Assignments	1.5 credits	U/G

¹ Determines the final grade of the course, which is issued only when all course units have been passed.

Course evaluation

At the outset of the course the course manager ensures that course evaluators are elected (or exist) among the students. The course evaluation is carried out continuously as well as at the end of the course. On the completion of the course the course evaluators and course manager discuss the course evaluation and possible improvements. The result is reported to, among others, the Associate Dean for Education, the Council for Undergraduate and Master Education, and the Board of Directors of JIBS. The course manager shall at the outset of the following course report results and measures taken in the previous course evaluation.

Other information

The course will replace the course JTSB17 Time Series Analysis.

Course literature

Compulsory literature

Enders, W. (2009) Applied Econometric Time Series (3rd edition). Wiley. Edition 1 or 2 may also be used.