Module title			Abbreviation
Analysis of Financial Market Data			12-M-FMO-111-m01

Module coordinator	Module offered by
holder of the Chair of Econometrics	Faculty of Business Management and Economics

ECTS	Method of grading	Only after succ. compl. of module(s)
5	numerical grade	--

Duration	Module level	Other prerequisites
1 semester	graduate	--

Contents

Description:
The module covers the fundamentals, methods and concepts for the empirical analysis of financial market data. The concept of market efficiency is explained and critically examined with reference to the random walk hypothesis. To test this hypothesis, a number of parametric and non-parametric methods are proposed and applied in practice. Based on the findings, market microstructure models that can explain some important empirical findings will be discussed. In addition, the course describes event studies for testing the significant impact of corporate news on the share price and discusses issues of univariate time series analysis such as AR(I)MA and ARCH / GARCH models that are indispensable for modelling financial market data. In the final part of the course, the CAPM is discussed and examined, in particular, with regard to its empirical applicability.

Outline of syllabus:
1. Information efficiency
2. Random walk
3. Theoretical market models
4. Event studies
5. Univariate modelling of time series data
6. Models to explain volatility (ARCH and GARCH)
7. Estimation of the capital asset pricing model

Reading:
Alexander, C.: A Guide to Financial Data Analysis, Wiley.
Campbell, JY, Lo, AW, MacKinley, AC: The Econometrics of Financial Markets, Princeton University Press.
Geyer, A.: Information, Erwartung und Risiko. Aspekte der Verteilung, Abhängigkeit und Varianz von finanzwirtschaftlichen Zeitreihen, Verlag V. Florentz.
Hamilton, JD: Time Series Analysis, Princeton University Press.
Mills, T.: Econometric Modelling of Financial Time Series, Cambridge University Press.
Taylor, S.: Modelling Financial Time Series, Wiley.

Intended learning outcomes

Students have significant knowledge of the fundamentals, methods and concepts that are needed for the empirical analysis of financial market data. They can autonomously perform statistical test decisions with statistics programs such as EViews or Gretl and critically analyze in terms of their economic importance. In addition, the students learn the independent handling of empirical capital market data and have at the end of the course the ability to develop also own functions and routines, for example for EViews.

Courses (type, number of weekly contact hours, language — if other than German)

V + Ü (no information on SWS (weekly contact hours) and course language available)

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) written examination (approx. 60 minutes) or b) term paper (approx. 15 pages)

Allocation of places

--

Additional information
--
Referred to in LPO I (examination regulations for teaching-degree programmes)
--
Module appears in
Master's degree (1 major) Economathematics (2011) Master's degree (1 major) Business Management (2011) Master's degree (1 major) Economics (2011) Master's degree (1 major) China Business and Economics (2014) Master's degree (1 major) China Business and Economics (2012) Master's degree (1 major) Chinese and Economics (2014) Master's degree (1 major) Chinese and Economics (2012)