

<b>Module title</b>		<b>Abbreviation</b>
Analysis of Financial Market Data		12-M-FMO-161-m01
<b>Module coordinator</b>		<b>Module offered by</b>
Holder of the Chair of Econometrics		Faculty of Business Management and Economics
<b>ECTS</b>	<b>Method of grading</b>	<b>Only after succ. compl. of module(s)</b>
5	numerical grade	--
<b>Duration</b>	<b>Module level</b>	<b>Other prerequisites</b>
1 semester	graduate	--
<b>Contents</b>		
<p>Description:</p> <p>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, CAPM is discussed and examined, in particular with regard to its empirical applicability.</p> <p>Syllabus:</p> <ol style="list-style-type: none"> <li>1. Information efficiency</li> <li>2. Random walk</li> <li>3. Theoretical market models</li> <li>4. Event studies</li> <li>5. Univariate modelling of time series data</li> <li>6. Models to explain volatility (ARCH and GARCH)</li> <li>7. Estimation of the capital asset pricing model</li> </ol> <p>Reading:</p> <p>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.</p>		
<b>Intended learning outcomes</b>		
<p>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 statistic programs such as R and critically analyze their economic importance. In addition, the students learn the independent handling of empirical capital market data and at the end of the course, they will have the ability to develop own functions and routines, for example for R.</p>		
<b>Courses</b> (type, number of weekly contact hours, language – if other than German)		
V (2) + Ü (2)		
<b>Method of assessment</b> (type, scope, language – if other than German, examination offered – if not every semester, information on whether module is creditable for bonus)		
<p>a) written examination (approx. 60 minutes) or b) term paper (approx. 15 pages)  Language of assessment: German and/or English  creditable for bonus</p>		

<b>Allocation of places</b>
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<b>Additional information</b>
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<b>Workload</b>
150 h
<b>Teaching cycle</b>
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<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)
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<b>Module appears in</b>
Master's degree (1 major) Economathematics (2016) Master's degree (1 major) Business Management (2015) Master's degree (1 major) China Business and Economics (2016) Master's degree (1 major) International Economic Policy (2015) Master's degree (1 major) China Language and Economy (2016)