

Universität Passau · 94030 Passau

Telefon	Frau Albert +49 (0)851 509-5010
Telefax	+49 (0)851 509-3242
E-Mail	fincon@uni-passau.de
Zeichen	Fincon I
Datum	5. April 2023

Course Syllabus

SS 2023

Empirical Finance

Course Outline

The course introduces to the principles of empirical methods in modern capital market research. Among the major issues to be discussed are the underlying economic models and assumptions, common statistical and econometric methods, as well as their application. Students participate actively via self-prepared presentations on studies in capital market research. Prerequisites are fundamental skills in statistics and probability (random variables and their distributions, statistical methods, testing and inference), as well as the contents of an introductory course in corporate finance (valuation of bonds and stocks, capital market theory, asset pricing).

Rules for Course Participation

This course is open to all students in the Master- and PhD-Program, especially those specializing in subject area of Financial Economics, Econometrics or Accounting, Finance and Taxation. Most parts of the course material and references are in English. However, the lecture language is German. Hence, for course participation, basic knowledge of the German language is required. The course comprises 3 SWS of which 2 SWS are lectures and 1 SWS is a seminar. Participants are encouraged to participate in the seminar with their presentation and discussion of a research paper written by members of the Chair in Finance and Financial Control (see the website <http://www.wiwi.uni-passau.de/finanzcontrolling/forschung/publikationen> for a research paper overview and use for example SSRN www.ssrn.com, ideas repec <https://ideas.repec.org>, or Researchgate <https://www.researchgate.net> for downloads). This deliberate presentation is then part of the course's final grade and implies a bonus

of up to 6 points (i.e. a maximum of 10%) on top of the final written examination (with 60 points maximum).

Timetable

The course material and additional information on course organization are available in Stud.IP (course number 31802). The schedule for the lecture is as follows.

Date	Time	Topic	CLMK
19.04.	14:00-17:00	Introductory session, key concepts in basic financial calculations and statistics	Chapter 1: pp. 1-19
26.04.	14:00-17:00	Efficient market hypothesis	Chapter 1: pp. 20-25
03.05.	14:00-17:00	Empirical properties of financial data	Chapter 2: pp. 27-33
10.05.	14:00-17:00	Tests for Random Walk I	Chapter 2: pp. 33-55
17.05.	14:00-17:00	Tests for Random Walk II	Chapter 2: pp. 55-80
24.05.	14:00-17:00	Market microstructure I	Chapter 3: pp. 83-128
31.05.	14:00-17:00	Market microstructure II	
07.06.	14:00-17:00	Event Studies I: Theory and models for expected returns	Chapter 4: pp.149-166
14.06.	14:00-17:00	Event Studies II: Measurement of abnormal returns	
21.06.	14:00-17:00	Multifactor pricing models I	Chapter 6: pp. 219-251
28.06.	14:00-17:00	Multifactor pricing models II	
05.07.	14:00-17:00	In-class presentations I	
12.07.	14:00-17:00	In-class presentations II	
19.07.	14:00-17:00	In-class presentations III	
t.b.a.	t.b.a.	Final examination (5 ECTS): one hour written in-class exam (60 Points).	

Main Reference

Campbell, J. Y., Lo, A. W., and MacKinlay, A. C. (1997). *The Econometrics of Financial Markets*, Princeton University Press, Princeton. [CLMK]

References for Further Reading

- Alexander, C. (1996). *Econometric Modelling of Financial Instruments*. Wiley, New York.
- Benninga, S. (2014). *Financial Modelling*. 4th Edition, MIT Press, Cambridge.
- Bhagat, S. and Jefferis, R. (2005). *The Econometrics of Corporate Governance Studies*. MIT Press, Cambridge.
- Brandimarte, P. (2006). *Numerical Methods in Finance and Economics: A MATLAB-Based Introduction*. 2nd Edition, Wiley, New York.
- Brooks, C. (2014). *Introductory Econometrics for Finance*. 3rd Edition, Cambridge University Press, Cambridge.
- Bühler, W., Hax, H., and Schmidt, R. (1993). Empirische Kapitalmarktforschung. *ZFBF Sonderheft*. 31.
- Bühler, W., Hax, H., and Schmidt, R. (1999). *Empirical Research on the German Capital Market*. Physika, Heidelberg.
- Carmona, R. (2004). *Statistical Analysis of Financial Data in S-Plus*. Springer, New York.
- Cochrane, J. (2005). *Asset Pricing*. Princeton University Press, Princeton.
- Davidson, R. and MacKinnon, J. (1993). *Estimation and Inference in Econometrics*. Oxford University Press, New York.
- Emprechts, P., Klüppelberg, C., and Mikosch, T. (2003). *Modelling Extremal Events for Insurance and Finance*. 4th Print., Springer, New York.
- Franke, J., Härdle, W., and Hafner, C. (2004). *Einführung in die Statistik der Finanzmärkte*. 2nd Edition, Springer, Berlin.
- Franses, P. and van Dijk D. (2008). *Non-Linear Time Series Models in Empirical Finance*. 6th Print., Cambridge University Press, Cambridge.
- Gourieroux, C. and Jasiak, J. (2002). *Financial Econometrics*. Princeton University Press, Princeton.
- Greene, W.H. (2012). *Econometric Analysis*. 7th Edition, Pearson, Prentice Hall, New Jersey.
- Hackl, P. (2012). *Einführung in die Ökonometrie*. 2. Auflage, Pearson Studium, München.
- Hamilton, J. (1994). *Time Series Analysis*. Princeton University Press, Princeton.
- Jäckel, P. (2006). *Monte Carlo Methods in Finance*. Wiley, Chichester.
- Kendall, M. and Ord, J. (1990). *Time Series*. Oxford University Press, Oxford.
- Lo, A. and MacKinlay, A. (1999). *A Non-random Walk down Wall Street*. Princeton University Press, Princeton.

- McNeil, A., Embrechts, P., and Frey, R. (2015). *Quantitative Risk Management*. Princeton University Press, Princeton.
- Mills, T. (2005). *The Econometric Modelling of Financial Time Series*. 2nd Edition, Cambridge University Press, Cambridge.
- Pagan, A. (1996). The econometrics of financial markets. *Journal of Empirical Finance*, 3:15–102.
- Rachev, S. and Mitnik, S. (2000). *Stable Paretian Models in Finance*. Wiley, Chichester.
- Ruppert, D. (2004). *Statistics and Finance*. Springer, New York.
- Taylor, S. (2007). *Asset Price Dynamics, Volatility, and Prediction*. 3rd Print., Princeton University Press, Princeton.
- Tsay, R. (2005). *Analysis of Financial Time Series*. 2nd Edition, Wiley, New York.
- Vogelvang, B. (2005). *Econometrics – Theory and Applications*. Prentice Hall, Harlow.
- Wang, P. (2002). *Understanding Financial Econometrics*. Routledge, Florence.