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Freiburg, October 26, 2022

Seminar Advances in Empirical Finance
Winter Semester 2022/2023

1. Goal

The goal of this seminar is to acquaint master students with advanced and modern econometric methods and their applications to research questions related to financial econometrics, quantitative risk management, high-dimensional and high-frequency finance as well as machine learning in empirical finance.

During the work on the seminar the students learn a new quantitative methodology and apply it to solve theoretical or empirical problems in finance. In particular, besides acquiring deep theoretical knowledge on modern advanced econometric and machine learning methods, the students undergo complex empirical analyses on real (usually big) financial data by means of standard and advanced econometric tools as well as by means of self-developed programming codes.

The topics can be individually adapted to allow for being pursued further in a subsequent master thesis.

2. Seminar Website

https://www.econometrics.uni-freiburg.de/en/teaching/winter-term-2022-2023/seminar-advances-in-empirical-finance

3. Basic requirements

1. Successful completion of the classes Intermediate Econometrics and Time Series Analysis
2. Good knowledge in a programming language (R, Python, Matlab, etc.)
3. Parallel enrolment in Financial Econometrics is highly recommended.

4. Organizational Issues

- It is highly desired that you work on a topic jointly with another colleague.
- Students will have time until **24 October 2022** to find a partner and choose the topic or to withdraw from the seminar. If you withdraw from the seminar after this deadline, you will receive the grade 5.0.
- Please write an email to Ms. Conny Hupfer (conny.hupfer@vwl.uni-freiburg.de) until **24 October 2022** with the first two topics you choose (in preference order) and with the name of your co-worker.
- The rule of appointing the topics is in general "first come, first served". You will receive an email from Ms. Hupfer with the topic you received. If you are not satisfied, please contact the supervisor.
- Please contact the supervisor of the topic immediately after being assigned the topic in order to discuss how you should further proceed.
- Please keep contact with the supervisor during working on the topic in order to get feedback on your progress.
- Office hours:
  - **Roxana Halbleib**: Thursdays, 9–11 a.m., to book a slot, please write to conny.hupfer@vwl.uni-freiburg.de until Wednesday 4 p.m. (before the desired appointment)
  - **Lukas Bauer:** Wednesdays, 10–12 a.m., please chose a slot in ILIAS until Tuesday 4 p.m. (before the desired appointment)
  - **Christian Mücher**: Tuesdays 9–11 a.m., please chose a slot in ILIAS until Monday 4 p.m. (before the desired appointment)
  - **Jasper Rennspies**: Fridays 10–12 a.m., please chose a slot in ILIAS until Thursday 6 p.m. (before the desired appointment)

- The joint seminar papers should not exceed 25 pages.
- The joint seminar paper in pdf format together with the accompanying programs and data you worked with have to be uploaded in ILIAS one week before the presentations, i.e. until **21 March 2023**.
- The presentations will take place on **28–29 March 2023.**
- In due time, you will receive instructions on how to upload your files in the ILIAS.
- The seminar paper should have an introduction (with references to the literature and integrating the own contribution in the literature), a short but understandable presentation of the method and an empirical part as well as a conclusion. You can use appendixes for tables and graphs.
- Very special attention should be paid to correctly citing and writing the references. Include the list of bibliography at the end of the seminar paper.
- The presentations will consist of 25 minutes of paper presentation, 5 minutes of discussion of a fellow student's paper, plus 10 minutes of open discussion.
- ECTS: 6 credits