PG Course Outline

EC5333: Financial Econometrics

2017/18

Spring: Financial Econometrics
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AIMS

This is an introductory course in time series and financial econometrics. The emphasis is on time series econometrics methods and the underlying theory with discussion on their applicability.

LEARNING OUTCOMES

By the end of this course, students should:

- have an understanding of current econometrics method used in the analysis of macro and financial time series;
- be able to analyze and critically evaluate empirical research in finance and macroeconomics;
- be able to undertake quantitative research projects using time series data.

COURSE DELIVERY

This course will be delivered by one 2-hour lecture and one 1-hour seminar over a 10 week period.

ASSESSMENT

Formative assessment:

- Problem sets and classes provide feedback.

Summative assessment:

- One 2-hour unseen written exam, to be taken in the summer term, contributing 75% of the final mark.
- Coursework (25%), details of coursework to be confirmed by the course leader.

Dates of tests and coursework hand-in deadlines can be found in the Departmental Student Handbook and on the Economics Department website.

READING

The lectures will follow Brooks, Introductory Econometrics for Finance, Cambridge University Press. Other more advanced books will be suggested if and when needed.

COURSE TOPICS

The course will cover topics from the following list:

1. Review of the linear model, OLS, GLS, GMM, Log-Likelihood and testing;
2. Univariate linear time series. In particular, stationarity, autoregresive processes, moving average processes, ARMA processes and estimation via Yule Walker equations and ML.
3. Non-stationarity, unit roots, random walks and testing.
4. Non-linear time series. Models for volatility clustering, such as ARCH, GARCH and stochastic volatility.
5. Multivariate time series, vector autoregression, cointegration.