

FIN-604

Financial Econometrics I

Fuster Andreas, Jondeau Eric

Cursus	Sem.	Type
Finance		Opt.

Language of teaching	English
Credits	3
Session	
Exam	Written
Workload	90h
Hours	28
Lecture	28
Number of positions	

Frequency

Every year

Remark

If you would like to attend this course, please send an email to: edfi@epfl.ch to register

Summary

We provide a comprehensive overview of the econometric tools that are essential to estimate financial models, both for asset pricing and for corporate finance.

Content**Financial Econometrics - Time series**

We focus on the empirical techniques used most often in the analysis of financial markets and how they are applied to actual market data.

We model different aspects of the distribution of asset returns: conditional mean, conditional volatility, conditional distribution. For this

purpose, we analyze several estimation techniques: Time Series Analysis, Maximum likelihood (ML), Quasi ML.

1. Characteristics of Financial Time Series
2. Modeling Volatility: GARCH Models
3. Modeling Non-Normality
4. Multivariate Models

Financial Econometrics - Panel data

This part of the course provides students with a toolbox of empirical methods used in corporate finance research. These methods include

panel data and various methods to deal with problems of endogeneity. Students will learn the economic intuition behind each method and

how to implement the methods on real data.

1. Panel data
2. Instrumental Variables
3. Difference-in-Differences
4. Regression Discontinuity Design

Learning Outcomes:

- Understand and apply fundamental concepts in financial econometrics and panel data
- Learn how to use statistical software to analyze data for empirical research
- Develop a deeper understanding of and critical thinking about topics in financial econometrics and corporate finance research
- Acquire the knowledge and skills to design and carry out empirical research projects

Keywords

Times series, volatility, non-normality, panel data, endogeneity

Learning Prerequisites

Important concepts to start the course

Basics in statistics and econometrics