

Syllabus

[cmcd.economia@fgv.br]

Course: Special Topics in Finance II – Financial Econometrics

Professor: Pedro Valls

2020 SECOND SEMESTER

COURSE OUTLINE

The objective of the course is to present linear and non-linear models for both conditional mean and conditional variances. The Extreme Values Theory, Theory of Copulas and Additional Topics (Models for High Frequency Data or Continuous Time Models) will also be presented.

METHODOLOGY

Apart from lectures, students will have to choose a research paper in financial econometrics to present, critically assess and replicate. The in-class presentation should be based on slides prepared by the student and submitted as part of the assessment. Students will also write a referee report on the selected paper. The guidelines for the report will be given in the lectures. Finally, students will have to carry out an empirical application (or simulations) intimately connected to the selected research paper.

PROGRAM

1. Stylized Facts in Financial Data
2. Review of Time Series
3. Structural Time Series Models
4. Univariate Volatility Models
5. Non-Linear Models
6. Extreme Value Theory
7. Local Dependence Models – Copula
8. Multivariate Volatility Models
9. High Frequency Models for Volatility
10. Continuous Time Models

BIBLIOGRAPHY

No textbook covers every topic that we will discuss in this course. The list below offers only some incomplete reading material. Students will have to read papers related to all topics.

1. Ait-Sahalia, Y & Jacob, J. (2014) *High Frequency Financial Econometrics* Princeton University Press
2. Campbell, J.Y.; Lo, A.D. e MacKinlay, A.C. (1997) *The Econometrics of Financial Markets* Princeton University Press

3. Kim, C-J e Nelson, C. R, (1999) *State-Space Models with regime Switching*. MIT Press
4. Gouriéroux, C. e Jannak, J. (2001) *Financial Econometrics*. Princeton University Press.
5. Linton, O. (2019) *Financial Econometrics*. Cambridge University Press
6. Tsay, R. S. (2010) *Analysis of Financial Time Series 3rd ed.* Wiley.
7. Taylor, S. J. (2005) *Asset Price Dynamics, Volatility and Prediction*. Princeton University Press.

ARTICLES

Can find some of them here ([artigos](#))

GRADING

Applied Econometric Paper: 50%
Referee Report: 20%
Presentation: 20%
In class participation: 10%

[OBS: Art. 46° - Aos alunos dos Cursos de Mestrado Acadêmico e Doutorado é atribuída nota em cada disciplina, variável de 0 (zero) a 10 (dez).

I - A nota final dos alunos em cada disciplina, variável de 0 (zero) a 10 (dez), é a média ponderada das notas atribuídas:

I.I) a uma ou mais formas de avaliações intermediárias;

I.II) à avaliação final, que pode constar de prova escrita ou de trabalho final;

II - O peso atribuído à nota de cada uma das formas de avaliação da disciplina é determinado pelo professor da disciplina e deve constar explicitamente do respectivo programa, não sendo permitido atribuir peso superior a 60% (sessenta por cento) a nenhuma das formas de avaliação especificadas.]

PROFESSOR - EMAILS

pedro.valls@fgv.br