FIRN National PhD Program

Advanced PhD Course in Empirical Finance

Course Syllabus – Semester 1 2021

Venue: Online via Zoom

Instructor: Prof. Federico Nardari

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Office: Room 11.016, The Spot Building

Consultation: via Zoom by appointment

Overview and Objectives

This course is meant to be a capstone course in empirical finance and it is designed for advanced PhD students. As such it aims to integrate knowledge and skills acquired in previous finance and econometric courses. Students will be assumed to be familiar with asset pricing and investments theory. Knowledge of statistics and econometrics at the doctoral level will also be assumed.

The course provides an exposure to methodologies and research topics in asset pricing and investments that have appeared in mainstream journals in recent years and that, in the instructor's assessment, present opportunities for further development going forward.

The course is structured around three intensive weeks of instruction. Students are expected to complete pre-readings before each week and will have practical tasks to work on between those weeks. The focus will be on a) economic intuition; b) methodological aspects and c) implementation issues.

It is *necessary* that students keep up as much as possible with the materials between modules.

By the end of the course, students should be able to: (i) identify good (and bad…) empirical research questions; (ii) design and execute empirical analysis, including sourcing and processing data and estimating models; and (iii) interpret results using a solid conceptual/theoretical framework and place them in the context of existing literature.

Meeting Dates and Times

Module 1: 15-19-20 March

Module 2: 19-23-24 April

Module 3: 17-21-22 May

Note: on the above dates the meetings will start at 1:30 PM (Melbourne time) and finish around 6:30 PM.

Every session will be streamed live via Zoom. In addition, each session will be recorded and made available for viewing.

Course Content

The topics covered during the term are grouped under the following broad areas:

- Bayesian Econometric Methods in Financial Economics

- Return Predictability, Volatility and Asset Allocation

- Evaluation of Trading Strategies and of Managed Portfolio Performance

Assessment

There will be two individual homework assignments: both assignments are of an empirical nature and involve data processing, application of econometric techniques, programming and usage of statistical/econometric software (SAS, Eviews, Stata or equivalent) and last, but certainly not least, the writing of a research report. To successfully complete the assignments, students need to be proficient in a programming language such as Matlab, R or equivalent. Tentatively: the first assignment will have several components, due periodically in April and May; the second assignment will be due in mid-to-late June (i.e, about four weeks after the conclusion of the third module). The exact due dates and specifics for delivery will be communicated during the term.

Please, be advised that the homework assignments are rather time consuming, especially in terms of coding.

Grading

Assignment 1: 40%

Assignment 2: 60%

Plagiarism and Collusion

- Plagiarism is the presentation by a student of an assignment identified as his or her own work even though it has been copied in whole or in part from another student's work, (whether that student is in the same class, from an earlier year of the same course, or from another institution altogether) or from any other source (eg. published books, web-based materials or periodicals), without due acknowledgement in the text. Paraphrasing or otherwise using the ideas of another author duly acknowledging the source also constitutes plagiarism. Regardless of the form, plagiarism is intellectual theft.

- Collusion is the presentation by a student of an assignment as his or her own work when it is, in fact, the result (in whole or in part) of unauthorised collaboration with another person or persons. Both the student presenting the assignment and the student(s) willingly supplying unauthorised material are considered participants in the act of academic misconduct.

- Plagiarism and collusion are considered academic misconduct and attract severe penalties. Penalties can include a mark of zero for the piece of assessment or a fail grade for the subject.

About the Instructor

Federico Nardari is a Professor of Finance at the Faculty of Business and Economics, University of Melbourne where he joined in 2014. Prior to coming to the University of Melbourne Prof. Nardari was on the Faculty at the University of Houston (USA) and at Arizona State University (USA). He received a Ph.D. and an MSBA in Finance from the Olin School of Business at Washington University in Saint Louis, a B.S. in Business Administration with concentration in Finance at the University of Bergamo, Italy.

Prof. Nardari's primary research interests are in the area of empirical asset pricing and financial econometrics, with a particular focus on asset allocation and portfolio choice, return predictability, volatility modelling, risk-return trade-offs, the relations between financial markets and the macro-economy, the determinants of trading activity, and the measurement of mutual funds performance. He has developed and applied Bayesian econometric methods of interest in financial economics.

Professor Nardari has published several research papers in leading academic journals such as Review of Financial Studies, Journal of Financial Economics, Journal of Financial and Quantitative Analysis, Journal of Econometrics, and Review of Economics and Statistics.

Readings

- Required Textbook:

  Bayesian Econometrics, by Gary Koop, Wiley, 2003

- In addition to the Koop's textbook, the following will be a very useful reference in several instances:

  Asset Pricing, by John Cochrane, Revised Edition, Princeton University Press, 2005

- Lecture notes (all compulsory) will be made available prior to each module.

- A list of papers (compulsory and supplemental) will be announced prior to each module.

- Students are required to download and study the readings (notes and papers) prior to each meeting.