# Université Paris I *Panthéon-Sorbonne*

**APPLIED ECONOMETRIC TIME SERIES**
Master 1 MoSEF
Christophe BOUCHER

Academic Year 2009-2010
(First Semester)

**Applied Econometric Time Series**

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## Course Objective

This course aims at providing the student basic knowledge about relatively advanced regression models and time series techniques that are relevant to applied economists. Both univariate and multivariate models are considered with and without the stationary assumption. The goals of the course are twofold: (1) develop a comprehensive set of tools and techniques for analysing various forms of univariate and multivariate time series and for understanding the current literature in applied time series econometrics in the areas of Macroeconomics and Finance; and (2) demonstrate how to use econometric software EVIEWS for problems in time series econometrics. With a mix of econometric theory and applications the course will develop the student's skills to conduct own empirical research projects.

**Time:** Monday 8:30AM-12:30PM

**Place**: C402 (PMF).

**First day of the course**: 12th October 2009

## Organization of the course

The course is covered in 12 lectures of 4 hours in computer room. Each lecture is composed in 4 parts:

- Methodological part - where the main ideas, definitions and concepts are introduced,
- Empirical applications,
- Exercises,
- Progress of student's applied econometric project.

## Assessment

Course works and applied econometric project (50%) and semester econometric project (50%).

## Main References

- Brooks C., (2008), *Introductory Econometrics for Finance*, Cambridge, 648 pages.
- Campbell J., A. Lo and A. C. MacKinlay, (1997), *The Econometrics of Financial Markets*, Princeton, 611 pages.
- Hamilton J., (1994), *Time Series Analysis*, Princeton, 799 pages.
- Mignon V. and S. Lardic, (2002), *Économétrie des séries temporelles macroéconomiques et financières*, 418 pages.

**General Agenda of the Course**

- Session 1: General Introduction to Time Series Analyses and EVIEWS
- Session 2: Classical Linear Regression Model (I)
- Session 3: Classical Linear Regression Model (II)
- Session 4: Classical Linear Regression Model (III)
- Session 5: Model Assumptions and Diagnostics
- Session 6: Univariate Time Series Modeling and Forecasting (I)
- Session 7: Univariate Time Series Modeling and Forecasting (II)
- Session 8: Modeling Long-run Relationship in Economics and Finance (I)
- Session 9: Modeling Long-run Relationship in Economics and Finance (II)
- Session 10: Modeling Volatility and Correlation (I)
- Session 11: Modeling Volatility and Correlation (II)
- Session 12: MATLAB Applications

**Applied Econometric Project**

- The Determinants of the US Consumer Sentiment

**Semester Project Topic Suggestions**

- Does Liquidity Affect Stock Prices?
- Macroeconomic Determinants of Stock Market Volatility
- Forecasting Volatility with GARCHX Models
- Investment Styles and the Business Cycles
- Sentiment Consumer and the Predictability of Activity
- Predicting US Recessions
- Long-Run Models : Oil, Exchange Rates, Stock Prices, Bonds, Commodities, Gold.
- A Financial and Monetary Conditions Index for the US
- A Comparison Between the Fed and the ECB: Taylor Rules
- The Output Effect of Monetary Policy
- Does Risk Appetite Measures Affect Stock Prices

**Dr Christophe M. Boucher**

Christophe is a Lecturer in Economics and Finance at the University of Paris-1 and Economist/Strategist within AAAdvisors-QCG (ABN AMRO) and Variances. He received a PhD in Economics in 2006 ("Misalignments, Aggregated Returns and Aggregated Volatility"). He has published several comments in newspapers and articles in academic journals such as *Economics Letters*, *Finance*, *International Journal of Finance*, *Applied Economics Letters* and serves as a referee in several international leading journals. His interest mainly concerns strategic allocation, predictability of returns and volatility, asset pricing and macroeconomy. He received the Young Economist Award in 2006 from the European Economic Association.