

Applied Time Series Econometrics in Finance and Economics

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- ◆ 2 h per week lecture
- ◆ Revise ~2h per week
- ◆ Exam : Revision last but one lecture (focus)
written exam last lecture

Material of lectures

- ◆ Prerequisites : Undergraduate Math & Stats & Economics (Micro)
- ◆ Take notes !
- ◆ Applied finance workshop
- ◆ Why follow the course ?

Why follow the course : Time Series Techniques Essential in Economics & Finance

Finance

- ◆ Predictability of returns
- ◆ Testing and Estimating Asset Pricing models
- ◆ Properties of price formation processes

Economics

- ◆ Properties of macroeconomic time series
- ◆ Persistence of macro-shocks
- ◆ Testing economic theories (PPT, Expectation Hypothesis of Term Structure)
- ◆ Transmission of monetary policy

Agenda

- ◆ Basic concept of time series analysis : stationarity and ergodicity
- ◆ Some stochastic processes : Martingales, white Noise, Brownian Motion,
Autoregressive Processes, Ornstein Uhlenbeck-Process and their use in
economics & finance.
- ◆ Describing stationary time series : The autocorrelation function
- ◆ Application : Are asset returns predictable ?
- ◆ Regression analysis using stationary time series
- ◆ Application : Long run predictability of asset returns
- ◆ Vector Autoregressive systems
- ◆ Application : Effects of Monetary Policy in Switzerland
- ◆ Equilibrium Correction and Cointegration : An intuitive introduction.