



# 151163A - Financial Econometrics

## Introduction

CHEUNG Ying Lun

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  - ▶ By appointment
  - ▶ Please write an email announcing your concern before showing up in the office.

- ▶ Course title: Financial Econometrics
- ▶ Course code: 151163A
- ▶ Course website (first part only): [Link](#)
- ▶ Language of instruction: English
- ▶ Instructors:
  - ▶ Part 1: CHEUNG Ying Lun
  - ▶ Part 2: Sui LUO
- ▶ Class venue and time:
  - ▶ Mon 08:00-10:00 博学楼 606
  - ▶ Wed 10:00-12:00 博学楼 502

- ▶ Exam date: 2019/11/13 (Week 11, Wed)
- ▶ Grade decomposition (50% of the course grade):
  - ▶ Class participation: 10%
  - ▶ Assignments: 20%
  - ▶ Exam: 70%
- ▶ Assignments will be given regularly. Please type your solutions with Word or LaTeX.

1. No stupid questions!

## 1. No stupid questions!

- ▶ No question is stupid! Feel free to ask questions!

## 1. Primer on financial econometrics

- ▶ Price, returns, and compounding
- ▶ Review of statistical methods
- ▶ Value at risk and expected shortfall

## 2. Stationary time series

- ▶ Market efficiency hypothesis
- ▶ Stationarity and ergodicity
- ▶ ARMA model
- ▶ Estimation, inference and model selection
- ▶ Forecasting

## 3. Nonstationary time series

- ▶ Deterministic trends and unit root
- ▶ Unit root tests
- ▶ ARIMA model
- ▶ *Price bubbles (Tentative)*

Main reference:

- ▶ R. S. Tsay, Analysis of Financial Time Series, 2010
- ▶ J. D. Hamilton, Time Series Analysis, 1994

Supplementary reference:

- ▶ M. H. Pesaran, Time Series and Panel Data Econometrics, 2015
- ▶ J. Y. Campbell, A. W. Lo and A. C. MacKinlay, The Econometrics of Financial Markets, 1997