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Financial Forecasting

M.Sc. in Finance – 2018/19 – 1st Semester

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Classes: 1. Tuesdays: 18:00-21:00
2. Thursdays: 19:30-22:30

Textbook: Gloria Gonzalez-Rivera, *Forecasting for Economics and Business*, Pearson, 2013

Complement: A. A. Costa (1998). Notes on pragmatic forecasting procedures and exponential smoothing, CEMAPRE working paper

Software: EViews, ISTM2000, or any other software with time series analysis and forecasting capability

Goals: To introduce the main topics in time series analysis and forecasting with an emphasis in financial applications. To develop essential time series forecasting practical ability.

Evaluation: Group work, and final exam

Week	Topic	Text Chapters
Sep 18 / 20	Introduction to time series: trends, cycles, seasonality Forecasting: error and horizon, stationarity, transformations	1 3.1-2
Sep 25 / 27	Autocorrelation and partial autocorrelation. Univariate and multivariate data. Forecast horizon. Reference to loss functions	3.3-3.4 4.1-3
Oct 02 / 04	Exponential smoothing	Costa 1-3, 5-6
Oct 09 / 11	WN and MA processes	6.1, 6.3
Oct 16 / 18	AR processes	7.1-2
Oct 23 / 25	Seasonality and Seasonal ARMA models	7.3
Oct 30 / tba	Recap and examples	8.1
Nov 06 / 08	ARMA model selection	8.2
Nov 13 / 15	ARMA forecasting, brief reference to error criteria and measures	8.3, 9.1-2
Nov 20 / 22	Deterministic and stochastic trends – unit roots	10.1-2
Nov 27 / 29	Unit roots, forecasting with ARIMA models	10.2
Dec 04 / 06	Volatility	13.1-3
Dec 11 / 13	ARCH and GARCH models	13.5, 14.1