

Financial Forecasting

M.Sc. in Finance – 2020/21 – 1st Semester

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- Office contact: By appointment
- Classes: Thursdays, 20:00-23:00 F1-AF21
- Labs classes: Wednesdays, 21:30-22:15 + 22:15-23:00 online
- Textbook: Gloria Gonzalez-Rivera, *Forecasting for Economics and Business*, Pearson, 2013
- 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: Tests (2 x 15%), group project (35%) and final exam (35%)

Week	Topic	Text Chapters
Sep 17	Introduction to time series: trends, cycles, seasonality Forecasting: error and horizon, stationarity, transformations	1 3.1-2
Sep 24	Autocorrelation and partial autocorrelation. Univariate and multivariate data. Forecast horizon. Reference to loss functions	3.3-3.4 4.1-3
Oct 01	WN and MA processes	6.1, 6.3
Oct 15	AR processes – Test 1	7.1-2
Oct 22	Seasonality and Seasonal ARMA models	7.3
Oct 29	ARMA model selection and forecasting	8.1-3
Nov 05	Error criteria and fit measures – Working groups constitution	9.1-2
Nov 12	Deterministic and stochastic trends – unit roots – Test 2	10.1
Nov 19	Forecasting with ARIMA models	10.2
Nov 26	Volatility	13.1-3
Dec 03	ARCH models – Group projects submitted	13.5
Dec 10	GARCH models – Group projects presentations	14.1
Dec 17	Group projects presentations	