Winter 2001

Prof. Allan Timmermann Economics 178

Economic and Business Forecasting

Required Text

Francis X. Diebold "Elements of Forecasting. Second Edition". South-Western College Publishing 2001.

Topics and Readings

This is a course on forecasting methods and their applications in economics, business and finance. Students will be introduced to regression methods from time series analysis illustrated using a variety of real data sets. At the end of the course students should be able to go through the cycle of proposing a model, carrying out diagnostic tests, revising the model and setting up out-of-sample forecasting experiments.

I. Basic Concepts and Tools in Forecasting

- 1. Forecasting situations. Diebold, ch. 1.
- 2. Forecasting concepts. Diebold, ch. 2.
- 3. Forecasting with linear regression models. Diebold ch. 1 (pages 15-31), ch. 10 (pages 241-246)
- 4. Model selection. Diebold, ch. 4.4 (pages 83-89).
- 5. Graphic tools (read on your own). Diebold, ch. 3.

II. Trend, Seasonality and Cycles

- 1. Modeling and forecasting trend. Diebold ch. 4 (pages 72-83, 89-102).
- 2. Modeling and forecasting seasonality. Diebold ch 5.
- 3. Characterizing cycles. Diebold ch. 6.
- 4. ARMA models. Diebold ch. 7.
- 5. Forecasting cycles. Diebold ch. 8.
- 7. Forecasting model with trend, seasonality and cycle. Diebold ch. 9.

III. Further Topics

- 1. Unit roots and stochastic trends. Random walk model. Diebold ch. 12.
- 2. Forecast Evaluation and Forecast combination. Diebold, ch. 11.
- 3. Forecasting with Multivariate Models. Diebold, ch. 10 (pages 246-276).

Course Resources

Announcements regarding the course will be made on the course web page at

http://www.econ.ucsd.edu/~apatton/econ178.html

You can also find course assignments, data and a copy of the course syllabus on this homepage.

E-mail Addresses

Allan Timmermann:	atimmerm@ucsd.edu
Andrew Patton:	apatton@econ.ucsd.edu
Daniel Vine	dvine@weber.ucsd.edu

Regular Office Hours

These will be announced during the first week of classes.

Grading

Course requirements and grading weights are as follows:

Problem sets: 20%

Midterm Exams: 15% each (scheduled for Tuesday, January 30 and Thursday, February 22) Final Exam: 50%