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	Nota di contenuto	Forecasting With Univariate Box- Jenkins Models CONCEPTS AND CASES; CONTENTS; PART I. BASIC CONCEPTS; 1 Overview; 1.1 Planning and forecasting; 1.2 What this book is about; 1.3 Time-series data; 1.4 Single-series (univariate) analysis; 1.5 When may UBJ models be used?; 1.6 The Box-Jenkins modeling procedure; 1.7 UBJ models compared with other models; Summary; Questions and problems; 2 Introduction to Box-Jenkins analysis of a single data series; 2.1 Differencing; 2.2 Deviations from the mean 2.3 Two analytical tools: the estimated autocorrelation function (acf) and estimated partial autocorrelation function (pacf)Summary; Questions and problems; 3 Underlying statistical principles; 3.1 Process, realization, and model; 3.2 Two common processes; 3.3 Statistical inference at the identification stage; Summary; Appendix 3 A: Expected value rules and definitions; Questions and problems; 4 An introduction to the practice of ARIMA modeling; 4.1 What is a good model?; 4.2 Two examples of UBJ-ARIMA modeling; Summary; Questions and problems; 5 Notation and the interpretation of ARIMA

models
5.1 Three processes and ARIMA (p,d,q) notation5.2 Backshift notation; 5.3 Interpreting ARIMA models I: optimal extrapolation of past values of a single series; 5.4 Interpreting ARIMA models II: rationalizing them from their context; 5.5 Interpreting ARIMA models III: ARIMA(O,d,q) models as exponentially weighted moving averages; Summary; Questions and problems; 6 Identification: stationary models; 6.1 Theoretical acfs and pacf's for five common processes; 6.2 Stationarity; 6.3 Invertibility; 6.4 Deriving theoretical acf's for the MA(1) process
6.5 Deriving theoretical acf's for the AR(1) processSummary; Appendix 6A: The formal conditions for stationarity and invertibility; Appendix 6B Invertibility, uniqueness,and forecast performance; Questions and problems; 7 Identification: nonstationary models; 7.1 Nonstationary mean; 7.2 Nonstationary variance; 7.3 Differencing and deterministic trends; Summary; Appendix 7A: Integration; 8 Estimation; 8.1 Principles of estimation; 8.2 Nonlinear least-squares estimation; 8.3 Estimation-stage results: have we found a good model?; Summary; Appendix 8A: Marquardt's compromise; 8A.1 Overview
8A.2 Application to an MA(1)Appendix 8B: Backcasting; 8B.1 Conditional least squares; 8B.2 Unconditional least squares; 9 Diagnostic checking; 9.1 Are the random shocks independent?; 9.2 Other diagnostic checks; 9.3 Reformulating a model; Summary; Questions and problems; 10 Forecasting; 10.1 The algebra of ARIMA forecasts; 10.2 The dispersion of ARIMA forecasts; 10.3 Forecasting from data in logarithmic form; 10.4 The optimality of ARIMA forecasts; Summary; Appendix 10A:The complementarity of ARIMA models and econometric models; Questions and problems; 11 Seasonal and other periodic models
11.1 Periodic data

Sommario/riassunto

Explains the concepts and use of univariate Box-Jenkins/ARIMA analysis and forecasting through 15 case studies. Cases show how to build good ARIMA models in a step-by-step manner using real data. Also includes examples of model misspecification. Provides guidance to alternative models and discusses reasons for choosing one over another.