

ETW3420

Principles of Forecasting and Applications

Topic 3 Post-Tutorial Activity

Instructions

Perform and complete the following tasks before answering the Quiz questions on Moodle.

Question 1

Consider the daily closing IBM stock prices (data set `ibmclose`)

- (a) Produce a line chart of the data in order to become familiar with it. Determine if this is typical of a random walk with or without drift.
- (b) Split the data whereby the first 300 observations form the training set, whilst the remaining observations will form the test set (i.e. the test set begins from the 301st observation). You should also determine how many observations there are in the test set.
- (c) Using the training set data, produce forecasts for the time periods in the test set by using the following benchmark methods: Average, Naive and Drift methods. Print the point forecasts and prediction intervals from these methods.
- (d) Which method did best in forecasting?
- (e) Check the residuals of your preferred method. Do they resemble white noise?