Forecasting: principles and practice

Exercises: Set 3 28 October 2013

Before doing any exercises in R, load the **fpp** package using `library(fpp)`.

1. Use the `seasonplot` and `monthplot` functions to explore the seasonal patterns in the following time series:

   `bricksq`, `writing`, `fancy`.

   (a) What can you say about the seasonal patterns?

   (b) Can you identify any unusual years?

2. The function `tsdisplay(data, plot.type="scatter")` is useful for showing a time plot, ACF plot and lagged scatterplot on the same graph. Use it to produce plots of the following time series:

   `bicoal`, `bricksq`, `hsales`, `ibmclose`, `internet`, `writing`.

   Can you spot the effects of seasonality, cyclicity and trend?

3. For each of the following time series: `bricksq`, `ibmclose`, `hsales`.

   (a) Use the preferred forecasting method you identified for that time series in the Exercise Set 2 and apply it to the full data set.

   (b) Compute the residuals and plot their ACF. Do the residuals appear to be white noise? What did your forecasting method miss?