Exercise 3

Consider the dataset 2010CL_BL.xls and perform the following tasks:

1. Construct a time series for the daily and the weekly returns on your chosen PORTFOLIO over the period 2/1/2006-2/2/2009. Plot your results.

2. Construct some measure of the first order autocorrelation of daily returns and squared daily returns and compare them.

3. Construct and histogram of daily and weekly returns and comment on their (a-)normality

4. Estimate a GARCH(1,1) model and an exponential smoothing model for the daily returns. On the basis of your estimated models produce alternative forecasts of volatility of daily and weekly returns over the period 02/02/2009-01/02/2010. Compare your results.

5. Produce daily measures of daily and weekly VaR of your portfolio for the period 2/2/2009-2/02/2010 and compare them with the observed returns.