Assignment of Session 3:

1. Suppose that a one-day 98% VaR is estimated as $12 million from 1,000 observations. The one-day changes are approximately normal with mean 0 and standard deviation $5 million. Estimate a 99% confidence interval for the VaR estimate.

2. Suppose that the portfolio considered in Section I of Handout 3 has (in $000) 3,000 in DJIA, 3000 in FTSE, 1,000 in CAC40 and 3,000 in Nikkei 225. Use the spreadsheet named "HW3Q2_VaRExampleRMFI4eHistoricalSimulation.xls" to calculate what difference this makes to
(a) The one-day 99% VaR and ES that are calculated in Section I
(b) The one-day 99% VaR and ES that are calculated using the weighting-of-observations procedure in Section III
(c) The one-day 99% VaR and ES that are calculated using the two volatility-updating procedures in Section III
(d) The one-day 99% VaR and ES that are calculated using extreme value theory in Section IV