Financial Data Analysis: Problem Set 1

1. Import the time series of DAX30, FTSE100, CAC40 and MIBTEL from StockIndex.xls into Eview. Use the data during the period 01.10.1997 to 28.09.2007.

2. Plot the graphs of all the index series. Are the index series stationary? Transform the data into log-return. Check the stationarity of the returns data again.

3. Test whether the returns data exhibit excess kurtosis. What are the results of the Jarque-Bera test? Propose alternative distributions for modelling stock returns.

4. Test whether the autocorrelation coefficient of the returns data at lags 5 are significant at 5%.

5. Test whether there are autocorrelations up to lags 5, 10, 30 in the returns data?

6. What is the potential reason for the results in question 2? Compare the partial autocorrelations of the index data with the return data.