Exercise Class 1 - February 2012

Asset Allocation in the 70s'

1. Import data in Matlab from the file *Stockint2011.xls.* You should have in your workfile the time series of prices and dividends for the US, UK and German stock markets, of exchange rates, of the yield on German 10-years government bond and of the yield of the German 3-months government bond. Data have monthly frequency and are collected for the sample 05/1977:09/2010.

2. Assume you are a German investor. Compute from your perspective (*use exchange rates!*) monthly total returns (*i. e.* including dividens) in excess of the risk free rate for the the US, UK and German stock markets and for the German 10-years bond. Use the annulaized yield of the 3-months government bond as the risk free rate. **Work with logs, even if in the next sections this choice will lead to some inaccuracy**.

3. Compute and plot cumulative excess returns of risky assets over the time period 01/1978:12/2003.

4. Assume you want to invest your wealth in the risky assets for the period 01/2004:12/2007. Solve the asset allocation problem using the historical sample 01/1978:12/2003. In order to compute weights, use the solution to the Markowitz mean-variance optimization problem. Base this exercise on unconditional moments.

5. What do you notice by looking at weights? Plot the performance of your portfolio against the one of the risky assets over the investment period.

6. Re-estimate the weights calculating the unconditional moments over the sample 01/2004:12/2007; are the weights equal to the ones computed in question 4?

7. Assume that you have a view on the expected excess returns of stock market indexes over the investment period 01/2004:12/2007. How would you now approach the asset allocation problem?