Assignment 1
Learning and Computational Intelligence in Economics and Finance (CF963-7-AU), 2011-2012

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1. Introduction:

This is an assignment on research and data analysis. This assignment accounts for 15% of your total marks in this course. This assignment should be submitted electronically. The deadline of this assignment is ***11:59:59am, Monday 14 November 2010***.

2. Objective:

The objective of this assignment is to familiarize you with data required for portfolio optimization.

3. Given:

The spreadsheet *cf963data.csv* associated to this assignment contains end of day prices of 10 FTSE100 stocks (500 days to 8 August 2011).

4. Your task:

Your tasks are:

i. To create a spreadsheet that contains all the necessary data, formulae and programs to calculate the quality of a portfolio;
ii. To pick <u>five</u> portfolios at random, and display the risk and expected return of each of the portfolios were these portfolios held on the first day of the series. All portfolio should contain integer number of shares, i.e. you cannot buy 12.7 shares of a particular stock.

5. Submission requirements:

Submit a spreadsheet to show your answers in points i and ii. You may do everything on a spreadsheet. For this assignment, you do not have to write any programs unless you want to. If you have written any programs, you should submit them. Write a short report of no more than 250 words to explain which parts of the process were done manually, and which parts are done by formulae and computer programs.

6. Assessment criteria for this assignment:

Your assignment will be assessed on the quality of your spreadsheet, and how clearly you explain what you have done. NO attention will be paid to the quality of the portfolios that you have picked; it only matters whether you compute their risk and returns correctly.

This assignment tests your basic understanding and basic skills in data processing. Therefore, I expect the median mark to be between 80% and 90%, which should be much higher than the median of the final mark in the module, which is typically around 58% to 65%.

7. Please refer to the Student's handbook on the Departmental Policy on Plagiarism and Late Submission