

STOCKHOLM UNIVERSITY
Dept of Mathematics
Div if Mathematical Statistics
Advanced Finance Mathematics
Spring 2009

COMPUTER ASSIGNMENT 1

Portfolio Insurance

Data

Download the development of a stock of your own choice during a period that is sufficiently long to cover different market conditions, 10 years are often available.

Here are three examples of sources (June 13, 2008):

Nasdaq (Nasdaq Stock Market) <<http://quotes.nasdaq.com/asp/MasterDataEntry.asp?page=charting>>

NYSE (New York Stock Exchange) <nyse.com> You can use the nasdaq address above.

Stockholmsbörsen <http://omxnordicexchange.com/kursinformation/historiska_kurser>

The Assignment

Start from Section 3.3.1 “Portfolio Insurance”.

Write a program that calculates and plots the development of the insured portfolio together with the development of the stock during a period (that can be varied).

The program shall be written in such a way that also the parameters n , u , b , c and g (or l) can be varied. The parameter $n \geq 3$ shall be of moderate size so that the stock holdings of the trading strategy is easy to survey.

Apply the strategy during a few periods and vary at least three of the parameters. Plot the development of the portfolio together with the development of the stock.

Conclusions: Describe which properties different choices of the parameters give to the portfolios.