Sheet - 2

Asset and Liability Management

   
   • Estimate the AVaR by using historical method, therefore without assuming any distributional assumption.

5. Consider daily returns of the Exxon Mobil Corp., General Electric, AMD (Ticker symbols on Yahoo Finance: XOM, GE, AMD) from January 1, 2005 to January 1, 2007 (the same data of the Sheet - 1). Historical prices can be downloaded from http://finance.yahoo.com. Assume the following vector of weights $w = (0.25, 0.5, 0.25)$.
   
   • Evaluate the 95% AVaR by using the the multivariate normal assumption.

6. Consider the same data of the previous exercise and assume the normal distributional assumption.
   
   • Evaluate the 95% AVaR by using the Monte Carlo method. In order to investigate how the fluctuations of the 95% AVaR change, consider samples of different sizes: 500, 1000, 5000, 10000, 20000 scenarios.


For any problem or remark, do not hesitate to contact me, bianchi@statistik.uni-karlsruhe.de