HARALD SCHMIDBAUER İstanbul Bilgi Üniversitesi

FM 431: Econometrics of Financial Markets

Fall 2009

PROBLEM SHEET # 3

Problem 1: A series of daily returns of the gold price from 2001-01-03 through 2008-11-18 (1979 observations) was analyzed with respect to sign iterations. There are 996 iterations in the series. The number of days with a positive return is 1056.

a) Estimate the probability that a day has a positive return.

b) Determine the approximate distribution of the number of iterations for this case, if the random walk hypothesis of iid returns is fulfilled. Also compute the expectation and the variance of this distribution.

c) Using the distribution in (b), compute the probability that the number of observed iterations is further away from their expectation than 996.

d) In view of the probability in (c), what are your conclusions concerning the gold market? Why?

Problem 2: Analyze sign iterations of daily returns on İMKB100 (XU100), using data in file `data_xu100_daily_ind.dat` and the function `analyze.iterations` (folder `iterations_xu100`). Does the İMKB100 return sequence behave like DJIA, or rather like SSEC? (Compare your results with those from Chapter 2, Section 2!)