

ON THE STATIONARITY OF THE EAR(2) PROCESS: A SIMULATION STUDY

GEORGIANA POPOVICI*

We investigate the behaviour of EAR(2) processes (autoregressive of the second order, with Exponential marginal distribution) within and near the border of their stationarity domain. Stability of the mean function is not influenced by the position of the parameter – points. Neither are the properties of the sample mean. The autocovariance and autocorrelation functions take alternating positive and negative values, and the speed of their convergence to zero (as functions of lag) depends on the position of the parameter – points. Thus, we can identify the need for longer observed trajectories – depending on different positions near the border of the stationarity domain.

Keywords: autocovariance function, autocorrelation function.

AMS classification: 65C20, 62M10.

* University of Bucharest, Faculty of Mathematics, 14, Academiei St., 010014 Bucharest, Romania, email: gpopovici@fmi.unibuc.ro