Estimation of threshold diffusions

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Résumé

We refer by threshold diffusions to a class of continuous-time Markov process which admits a change of dynamics on a fixed level. We study the (quasi)-maximum likelihood estimation of the drift parameters, for continuous and discrete time observations. Two consistent estimators for the volatility parameters are also proposed. We discuss about the consistency and the speed convergence of these estimators in long time and high frequency for the ergodic case. Based of these results, we propose an application to the Threshold Cox-Ingersoll-Ross (CIR) model.

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