

Estimation of the two-sided jumps of asset returns via Kalman filtering

George Tsaklidis

Department of Mathematics, Aristotle University of Thessaloniki,
Greece

Abstract

Change point detection for the case of Nasdaq index. By this presentation, we establish a model for the estimation of the positive and negative (two sided) jumps in the time series of asset returns. For that purpose, the daily Nasdaq returns during the 3 year period 2006-2008 are used. The daily return R is considered to be the difference of the respective daily positive and negative jump, under noise inclusion. Change point analysis is carried out in order to detect the relation between the change points in the time series of the index in comparison with the change points of the two components.