

The empirical evidence from financial markets suggests that the pattern of response of market volatility to shocks is highly dependent on the magnitude of shocks themselves. Markov-Switching GARCH (MS-GARCH) models are a valuable tool for modelling state dependence in the dynamics of the volatility process. However, their application is still limited by the severe difficulties arising at the estimation and identification stages. In order to allow for time varying persistence in the volatility dynamics, it is here suggested to use a modification of the component GARCH model proposed by Ding and Granger (1996) in which the weights associated to the model components are time varying and depend on adequately chosen state variables such as lagged values of the conditional standard deviation. Differently from MS-GARCH models, likelihood based inference for the proposed model is readily available using standard numerical tools. Since the proposed model implies a non-linear representation for the squared observations, the generation of multi-step-ahead volatility predictions imposes some additional difficulties with respect to standard GARCH models, for which a linear ARMA representation can be obtained. In the paper, we apply simulation based techniques for estimating the predictive density of returns.