ABSTRACT

The approach combining asymmetric conditional autoregressive range (ACARR) models to estimate the current volatility and classical extreme value theory (EVT) to estimate the tail of the innovation distribution of the ACARR model is proposed by Chou and Wang (2014). They show that this approach has better performance than the McNeil and Frey (2000) approach for Value at Risk (VaR) estimation on the financial portfolio data. The McNeil and Frey (2000) approach combines generalized autoregressive conditional heteroskedasticity (GARCH) models and modern EVT. In this study, we explore the better performance of the Chou and Wang (2014) approach is from the advantage of ACARR model compared with GARCH model on specific financial data, while the classical EVT is actually not as good as modern EVT.