

We extend the stochastic volatility model with realized measures of volatility (realized stochastic volatility model-RSV model). We incorporate the multiple realized measures. Our particular interest is how to introduce the different type realized measures simultaneously, e.g. realized volatility with and without jump parts, and semivariance. Moreover, we consider the link of the volatility latent variables and the mean of the return equations. Proposed models are applied for the daily returns and several realized measures. Several models are compared with the predictive performance.