Volatility modelling using range-based measures and weighted exogenous threshold CARR model.

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Three volatility measures including the squared returns and range based Parkinson and Garman Klass were applied to estimate the financial volatility. These measures are then fitted to conditional autoregressive range (CARR) models and its weighted exogenous threshold extensions using generalised Beta type two distribution. The daily All Ordinaries index is studied by fitting the three volatility measures to the two types of CARR models and compare their model performances. Results show that the Garman Klass measure fitted to weighted exogenous threshold CARR model gives the best in-sample model fit based on Akaike information criterion. Different levels of value-at-risk are also provided.