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MULTIVARIATE GARCH MODELS WITH CORRELATION CLUSTERING

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This paper proposes a clustered correlation multivariate GARCH model (CC-MGARCH) which allows the conditional correlations to form clusters where each cluster follows the same dynamic structure. One main feature of our model is to form a natural grouping of the correlations among the series while generalizing the time-varying correlation structure proposed by Tse and Tsui (2002). To estimate our proposed model, we adopt Markov Chain Monte Carlo methods. Forecasts of volatility and value at risk can be generated from the predictive distributions. The proposed methodology is illustrated using simulated and financial market data.