Currency Exchange Rate Forecasts Using Quantile Regression

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Abstract : In this paper, we discuss a Bayesian approach to quantile autoregressive (QAR) time series model estimation and forecasting. Together with a combining forecasts technique, we then predict USD to GBP currency exchange rates. Combined forecasts contain all the information captured by the fitted QAR models at different quantile levels and are therefore better than those obtained from individual models. Our results show that an unequally weighted combining method performs better than other forecasting methodology. We found that a median AR model can perform well in point forecasting when the predictive density functions are symmetric. However, in practice, using the median AR model alone may involve the loss of information about the data captured by other QAR models. We recommend that combined forecasts should be used whenever possible.