

Title: Bayes Factors for Assessing Dynamic Quantile Forecasts

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Abstract: This paper proposes Bayesian evaluation and Bayes factor methods for assessing dynamic forecasts of quantile levels. Bayes factor analogues of several popular frequentist tests for independence and correct coverage of quantile forecasts are developed. Multivariate quadrature methods and the standard asymmetric Laplace quantile likelihood function are employed, when analytic formulas are not available, to obtain relevant marginal likelihoods. The proposed methods are extensively assessed via simulations and compared to the relevant frequentist testing procedures. For the empirical study, the favoured methods from the simulation study are applied to test the adequacy of a range of forecasting methods, including from nonlinear and threshold GARCH models, for Value at Risk (VaR) in several financial market data series.