Improved Autoregressive Forecasts in the Presence of Non-normal Errors

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Abstract

This paper adopts a new method to obtain more accurate point and interval forecasts. Specifically, we apply the residual augmented least squares (RALS) estimator to autoregressive models to utilize the additional moment restrictions embodied in non-normal errors. Although information on non-normal errors might have been ignored in the literature, we show that in the presence of non-normal errors the forecasting accuracy can improve significantly over traditional autoregressive forecasts, especially when the sample size is small and a long run forecast is of interest.

Keywords:
Forecast; Autoregressive Model; Residual Augmented Least Squares; Non-normality

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