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A Cross-Validation Analysis of Neural Network Out-of-Sample Performance in Exchange Rate Forecasting

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ABSTRACT

Econometric methods used in foreign exchange rate forecasting have produced inferior out-of-sample results compared to a random walk model. Applications of neural networks have shown mixed findings. In this paper, we investigate the potentials of neural network models by employing two cross-validation schemes. The effects of different in-sample time periods and sample sizes are examined. Out-of-sample performance evaluated with four criteria across three forecasting horizons shows that neural networks are a more robust forecasting method than the random walk model. Moreover, neural network predictions are quite accurate even when the sample size is relatively small.

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