APPLICATION OF RADIAL BASIS FUNCTION NEURAL NETWORK TO PREDICT EXCHANGE RATE WITH FINANCIAL TIME SERIES

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Abstract: The literature indicates that exchange rates are largely unforecastable from the fact that the overwhelming majority of studies have employed linear models in forecasting exchange rates. In this paper, we applied Radial Basis Function Neural Network (RBFNN) to predict exchange rate, motived by the fact that RBFNN have the ability to implicitly detect complex nonlinear relationships between dependent and independent variables as it "learns" the relationship inherent in the exchange rate data presented to it. The model learning algorithm uses a diverse data set for training so as to adapt itself quickly for new exchange rate data. We apply the RBFNN to panel data of the exchange rates (USD/EUR, JPN/USD, USD/GBP, USD/CHY) are examined and optimized to be used for time-series predictions, some experiments testified the proposed method is effective and feasible.

Keywords: RBFNN, Exchange Rate Prediction, financial time series.