

## Forecasting EURO/TRY Exchange Rates With Artificial Neural Networks

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**Ali Göksu**

*International Burch University, Sarajevo, Bosnia and Herzegovina*  
agoksu@ibu.edu.ba

**Olcay Erdoğan**

*International Burch University, Sarajevo, Bosnia and Herzegovina*  
olcay.erdogan@sarajevocollege.ba

Forecasting of financial data has been a field of research since the efficiency of prediction is essential for future investments. Forecasting exchange rates is not a simple task because it is influenced by many factors and linear models are not able to capture nonlinear relationships in the data. Therefore Artificial Neural Networks (ANN) have been used in financial forecasting problems since it is capable of handling complex data. The aim of this study is to consider predictive accuracy of ANNs with SBP (Standard Back propagation) and normalized back propagation using the historical EUR/TRY exchange rates. The data is obtained from CBRT (Central Bank of the Republic of Turkey) and TSI (Turkish Statistical Institute) over the period 2008-2013. Several factors affect the accuracy of neural network in the implementation process. Various structures are built by changing the number of neurons, number of layers and learning algorithms to acquire higher performance. This empirical research has been a comparative study of accuracy in different ANN architectures. The results are evaluated by MSE (Mean Squared Error) values of each case and it has been found out that ANNs can closely forecast the future EUR/TRY exchange rates.

**Keywords:** ANN, back propagation, exchange rate forecasting, financial time series