Universiti Teknologi MARA

Forecasting Malaysian Exchange Rate Using Artificial Neural Network: 2010-2018

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STUDENT'S DECLARATION

I certify that this report and the research to which it refers are the product of my own work and that any ideas or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.

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ABSTRACT

In todays fast paced global economy, the accuracy in forecasting the foreign exchange rate or predicting the trend is a critical key for any future business to come. The use of computational intelligence based techniques for forecasting has been proved to be successful for quite some time. This study presents a computational advance for forecasting the Foreign Exchange Rate in Kuala Lumpur for Ringgit Malaysia against US Dollar. A neural network based model has been used in forecasting the days ahead of exchange rate. The aims of this research are to make a prediction of Foreign Exchange Rate in Kuala Lumpur for Ringgit Malaysia against US Dollar using artificial neural network and determine practicality of the model. The Alyuda NeuroIntelligence software was utilized to analyse and to predict the data. After the data has been processed and the structural network compared to each other, the network of 2-4-1 has been chosen by outperforming other network. This network selection criteria is based on Akaike Information Criterion (AIC) value which shows the lowest of them all. The training algorithm that applied is Quasi-Netwon based on the lowest recorded absolute training error. This study come out with the daily future index for 90 days ahead and the index are quite similar with the past historical exchange rate. Hence, it is believed that experimental results demonstrate that Artificial Neural Network based model can closely predict the future exchange rate.

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