

## *Comparison of The Performance of Artificial Neural Network Models for Exchange Rate Prediction in Iran*

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### **Abstract**

Given the high exchange rate fluctuations in Iran, its prediction is one of the major issues and challenges for different groups in the country. This study investigates the performance of six different static and dynamic neural networks for forecasting exchange rates using fundamental, technical and hybrid approaches and using seasonal data over the period 2004(1)- 2018(4) for variables influencing exchange rate including inflation, Liquidity and GDP for the two countries, Iran and the United States. The findings show that the number of neurons did not have a regular effect on the performance of the networks and that the best results occurred at breaks of three and four. The results also show that the best performance of the static neural network is achieved by a technical approach with a structure of sixteen neurons and four interruptions which provides a relatively accurate exchange rate prediction despite the low number of input data. The second suitable function is related to the combined static network with the structure of ten neurons and two interruptions. With this in mind, policymakers can, given the greater and more up-to-date access to data affecting the exchange rate and by monitoring the instantaneous variables and entering them into the comprehensive model designed using this method, the rate of exchange rate deviation Examine the existing model and exchange rate and adopt appropriate policies based on this, so that the losses on the domestic and foreign sectors of the economy are due to the predicted rate gap and the current exchange rate is at a minimum.

**Keywords:** Time Series, Currency Forecasting, Artificial Neural Network, Artificial Intelligence.

**JEL Classification:** C22, C45, C53, F31, F37.

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