Predicting Exchange Rate by Neural Networks

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Predicting foreign exchange rates parity is a very important operation for financial managers, creditors and corporation tellers, so that in the future period it is to be certain preoccupation of scientific circles and financial institutions. The problem complexity did not make it possible to achieve satisfactory results by simple regressive analysis of time series, and that resulted in mass use of computers for all more complex models of exchange rates flows.

In this paper are given results of predicting foreign exchange rates in a short period of time by training pegged neural network over published exchange rates historical values. As examples, parities of the most significant world currencies are taken as values for learning the network. Predictions one day in advance are about 60%. Somewhat better results are got by previous data filtration using Kalman filters.

Possibilities of predicting exchange rates by neural networks practically enable bringing got results closer to real exchange rates flow. Successfulness in that extrapolishing is about 60%. Such results surely do not satisfy, but it is by improvements in neural network use that they are made better in this field. The most serious problem in the networks creation is finding out what factor is more important, namely estimating their specific weight in the given moment. In case the neural networks reach that level of perfection and predict exchange rates flow more precisely, there are always a lot of factors left which cannot be expressed quantitatively and where it is to start either with assumptions and low of profitability or free assumption concerning influence of given factor on observed phenomenon.

Predicting successfulness is to be one of the significant information for those who make decisions on buying or selling foreign currency, namely those who influence the structure of foreign trade and foreign debts in a certain way.