FORECASTING THE FOREIGN EXCHANGE USD – ALL

Viola Shtino[1], Rezarta Mersini[2], Oltiana Toshkollari[3], Laureta Hajderanj[4]

[1]University "Aleksander Moisiu" of Durres, Faculty of Information Technology,
Email: vf.sh@hotmail.com
[2]University "Aleksander Moisiu" of Durres, Faculty of Information Technology,
Email: rmersini@hotmail.com
[3]University "Aleksander Moisiu" of Durres, Faculty of Information Technology,
Email: o.toshkollari@gmail.com
[4]University "Aleksander Moisiu" of Durres, Faculty of Information Technology,
Email: laura.hajderanj@ gmail.com

Abstract

The foreign exchange is the external currency value of a country's compared to the currencies of its important partners. At the same time is the most indicators used in measuring of international competition. The foreign exchange of Lek (Albania Lek – ALL) is directly linked with the current market prices, considering that Albania is a country with small and externally open economy. The foreign exchange brings the frequent fluctuations in the economy, so this is one of the most present topics in the policy discussions. In this paper is studied the time series of exchange foreign currency (USD) opposed to ALL by months. The data are taken from the Bank of Albania and include the period 2005-2014 (monthly surveys in their average values). This paper aims at the study, identification, evaluation, diagnosis of the series through some techniques like Exponential Smoothing, Box - Jenkins (ARIMA models), Dickey-Fuller and her forecast. Three techniques give their contribution to obtain a stationary series. Exponential Smoothing use different transformations (difference, ln, sort ect.); Box – Jenkins defines the parameters of the model through same experiments or automatic simulation, and requires examinations of waste (if they are random, then the model is optimal); Dickey - Fuller used the construction of hypotheses for stationary of series. Finally we compare the three techniques and the technique which provides most efficient result, continue to forecast foreign exchange for the period 2015 - 2020. Software used for the implementation of Objective of this work is R language. Commercial models are used as diagnostic tools to assess the statistical properties of the foreign exchange. The accuracy in predicting of foreign exchange, or at least to predict accurately the trend is of crucial importance for any investment in the future.

Keywords: *foreign exchange, time series, forecasting technique, ARIMA, R – software*