

Random Walk Theory and Exchange Rate Dynamics in Transition Economies

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Keywords: Random walk, Forecasting, Exchange rates, Transition economies, Market efficiency, Artificial neural networks

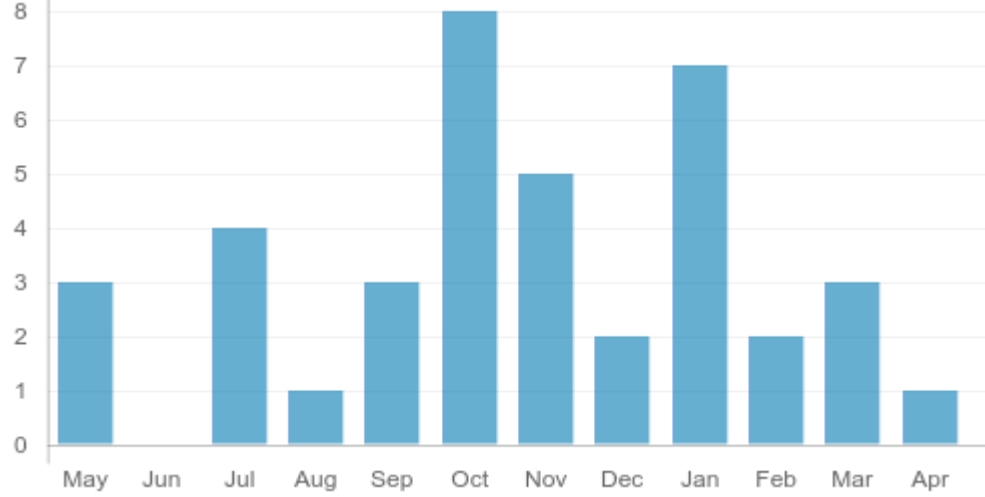
Abstract

This paper investigates the validity of the random walk theory in the Euro-Serbian dinar exchange rate market. We apply Andrew Lo and Archie MacKinlay's (1988) conventional variance ratio test and Jonathan Wright's (2000) non-parametric ranks and signs based variance ratio tests to the daily Euro/Serbian dinar exchange rate returns using the data from January 2005 - December 2008. Both types of variance ratio tests overwhelmingly reject the random walk hypothesis over the data span. To assess the robustness of our findings, we examine the forecasting performance of a non-linear, nonparametric model in the spirit of Francis Diebold and James Nason (1990) and find that it is able to significantly improve upon the random walk model, thus confirming the existence of foreign exchange market imperfections in a small transition economy such as Serbia. In the last part of the paper, we conduct a comparative study on how our results relate to those of other transition economies in the region.

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JEL: F31, G14, C53.

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