World Academy of Science, Engineering and Technology
International Journal of Economics and Management Engineering
Vol:8, No:03, 2014

The Ability of Forecasting the Term Structure of Interest Rates Based on Nelson-Siegel and Svensson Model

Authors : Tea Poklepović, Zdravka Aljinović, Branka Marasović

Abstract : Due to the importance of yield curve and its estimation it is inevitable to have valid methods for yield curve forecasting in cases when there are scarce issues of securities and/or week trade on a secondary market. Therefore in this paper, after the estimation of weekly yield curves on Croatian financial market from October 2011 to August 2012 using Nelson-Siegel and Svensson models, yield curves are forecasted using Vector auto-regressive model and Neural networks. In general, it can be concluded that both forecasting methods have good prediction abilities where forecasting of yield curves based on Nelson Siegel estimation model give better results in sense of lower Mean Squared Error than forecasting based on Svensson model Also, in this case Neural networks provide slightly better results. Finally, it can be concluded that most appropriate way of yield curve prediction is neural networks using Nelson-Siegel estimation of yield curves.

Keywords : Nelson-Siegel Model, neural networks, Svensson Model, vector autoregressive model, yield curve
Conference Title : ICBFEM 2014 : International Conference on Business, Finance, Economics and Management
Conference Location : Madrid, Spain
Conference Dates : March 27-28, 2014