Modeling and forecasting the default rate over 90 days in the presence of explanatory Variables

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Abstract

Nowadays, large _nancial institutes have been worried in investing more and more in default rate modeling. Predicting precisely the default rate can result in huge bene_ts for an institute. The comprehension of how and where explanatory time series inuence the default rate, allow a more pro_table and better control and management of the client base. In this research, the default rate (90-plus days) that represents the seriously delinquent category was investigated in the period from 2003 to 2014, two terms of the Lula government and the _rst term of Dilma Rousse_. SARIMA and SARIMAX methodologies were taken into account to built forecasting models, evaluating the improvement of including explanatory variables. The bene_t and concerns about the model building in the presence of explanatory variables are discussed. From the analysis,
SARIMAX model showed better forecasting results regarding to SARIMA model.

Keywords: SARIMAX; SARIMA; Default rate.