ABSTRACT

The purpose of this research was to develop the model of forecasting foreign exchange rate in Thailand in order to make the planning decisions for business sectors and country economic development. This research provided three techniques of Time Series Data Mining Analysis, namely Linear Regression, Multi-Layer Perceptron and Support Vector Machine for Regression. The data used for the study collected from the foreign exchange rate from 2009 to 2017 AD. totally 108 months. The research findings showed that the suitable forecasting models for foreign exchange rate are US Dollar, Pound Stering, Euro, Yen and Yuan Renminbi. The forecasting model for foreign exchange rate which had the most accuracy were as followed: 1) The forecasting model using Support Vector Machine for Regression was the most suitable for US Dollar, Euro and Yen, which had the highest accuracy rate of MMRE (Mean Magnitude of Relative Error) with the percentage of 2.43, 1.39, and 2.57, respectively. 2) The forecasting model using Linear Regression was the most suitable for Pound Stering, which had the highest accuracy rate of MMRE with the percentage of 0.64. 3) The forecasting model using Multi-Layer Perceptron was the most suitable for Yuan Renminbi, which had the highest accuracy rate of MMRE with the percentage of 0.97.

KEYWORDS: Forecasting, Time Series Analysis, Data Mining Technique, Foreign Exchange Rate