Abstract

Probabilistic Neural Networks (PNN) and Support vector machines (SVM) are employed to predict stock market daily trends: ups and downs. The purpose is to examine the
effect of macroeconomic information and technical analysis indicators on the accuracy of the classifiers. In addition, the study aims to study their joint effect on the classification performance when used together. First, Granger tests were performed to identify causal relationships between the input variables and the predicted stock returns. Then, lagged returns to be considered in the input space are identified by use of autocorrelation function. Finally, the hit ratio of predictions by PNN and SVM were compared. It is found that macroeconomic information is suitable to predict stock market trends than the use of technical indicators. In addition, the combination of the two sets of predictive inputs does not improve the forecasting accuracy. Furthermore, the prediction accuracy improves when trading strategies are considered.

Reference
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**Index Terms**

Computer Science
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**Key words**

Probabilistic Neural Networks
Support Vector Machines
A Comparison of PNN and SVM for Stock Market Trend Prediction using Economic and Technical Information

Classification

Stock Market