NEURO-ROUGH FOR PREDICTING THE KUALA LUMPUR STOCK EXCHANGE COMPOSITE INDEX RETURNS

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ABSTRAK

ABSTRACT

Stock market plays an important role in economy performance. It can be used to infer the economy situation of a particular country. Stock market prediction as though to predict the future economy performance is really difficult and challenging. Information of the market are incomplete, uncertain and vague. Therefore, granular information is very suitable to represent market information. In the recent years, many researches in stock market prediction are conducted using different artificial intelligence approaches. These artificial applications have shown promising results in the prediction. In this study, an enhancement approach is used to predict the Kuala Lumpur Stock Exchange Composite Index (KLCI) returns. This so called Neuro-Rough (NR) approach combined the high generality of artificial neural network (ANN) and rules extraction ability of rough sets theory (RST). It demonstrated how ANN could generalize the data and RST is able to deal with uncertainty. Features of stock market data are extracted and a set of decision attribute is presented for stock market prediction. The length of the stock market trend is used to help identifying the trading signals. A pilot experiment is conducted to find the best discretization algorithm and ANN configuration. NR approach is used in a trading simulation and its efficiency is verified by analyze the classifier output against information in KLSE annual report and compared its generated profit with stock market prediction software called SpriNN. Result shows that NR approach achieved 70% of classification accuracy and the generated annual profit in trading simulation is 74.33% for 10 years training and testing data, 20.04% for year 2003 and 14.82% for year 2004.
REFERENCES


