

Nasir Ganikhodjaev
Farrukh Mukhamedov
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VOLUME 1

$$x' = 2xy$$

$$y' = 2xz$$

INVESTIGATIONS ON PURE MATHEMATICS, FINANCE MATHEMATICS AND OPTICS

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$$\varphi_1(x, y, z) = z$$

$$\pi_1 = \begin{pmatrix} x & y & z \\ y & z & x \end{pmatrix}$$

$$z' = x^2 + y^2 + z^2 + 2yz$$

$$\pi_1 \nu_1 \pi_1 = \nu_{17}$$



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Investigations on Pure Mathematics, Finance Mathematics and Optics

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PREDICTION OF STOCK PRICE USING NEURAL NETWORK

Fatmawati Jalunis
Assist. Prof. Dr. Mohd Aminul Islam

Abstract. *This research paper aims to utilize the neural network as one of the techniques used to predict the future price of the stock. There are many methods that could be designed to predict the complex movement of stock price in the market. Instead of using a basic method like fundamental analysis or technical analysis, recently a lot of researchers are using artificial neural networks (ANNs) in the prediction of stock price movement. In this study the model is applied on a set of daily data from Kuala Lumpur Service Index (KLSER) over the period of May 13, 2008 until December 21, 2009. Different sets of input variables such as higher price, lower price and relative strength index have been used to predict the next day of closing price. The result shows that the future closing price of KLSER is best predicted by using higher price, lower price and opening price as input variables.*

1 Introduction

1.1 Data Sets

Historical data of KLSER are gathered from Bloomberg service for the period of May 13, 2008 until December 21, 2009 which is about 400 days. These data include daily opening price, higher price, lower price, simple moving average (SMAVG) and relative strength index (RSI). SMAVG in this study refers to the average of closing price over a period of 100 days. From these five input variables, the combination of three input variables will be created to predict the next day of closing price. The combinations are as follow;

Table 1.1: Different sets of input variables

Combination	Input Variables
1	Higher price, Lower price, Opening price
2	Higher price, Lower price, SMAVG
3	Higher price, Lower price, RSI
4	Higher price, SMAVG, Opening price
5	Higher price, RSI, Opening price
6	SMAVG, Lower price, Opening price
7	RSI, Lower price, Opening price
8	Higher price, SMAVG, RSI
9	SMAVG, Lower price, RSI
10	SMAVG, RSI, Opening price

1.2 Neural Network