Thesis Title	Forecasting the Effect of Stock Repurchase via an Artificial Neural Network
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ABSTRACT

A simple back-propagation artificial neural network (ANN) is utilized to forecast the effect of stock repurchase on the closing price of a company's common stocks. The input factors are composed of the present closing price, the index of the stock market and the amount of future-intended repurchase. A trend selection is created to group the repurchase days by selecting two records that are under the same conditions as the day before the next repurchase. The trend selection considers 5 parameters including the change of the closing price, the change of the volume, the change of the SET index, the relation of the change between the closing price and the SET index, and the relation of the change between the closing price and the volume. After training with several repurchase days having the same condition, the ANN-based prediction introduces higher accuracy than predicting with the classic accounting equation. This technique can provide more accuracy when there is the longer repurchase period for training because there will be more chance to select the most similar trends.

Keywords: ANN/ Backpropagation/ Stock repurchases/ Prediction.