Chuenjai Sukpan 2011: A Study of Fuel Price Forecasting in Thailand. Master of Science (Statistics), Major Field: Statistics, Department of Statistics. Thesis Advisor: Associate Professor Prasit Payakkapong, M.S. 108 pages.

This research aimed to study about the price prediction of 3 types of fuel in Thailand; diesel, gasoline 91 and gasohol 95. The data used in this research is daily and weekly. There are 2 analytical methods used in this research. The first method is technical analysis, which is composed of 3 methods; 1) Moving average composed of Simple Moving Average, Linear Weighted Moving Average, Exponential Moving Average, and Time Series Moving Average, 2) Indicators compposed of On Balance Volume, Relative Strength Index, and Linear Regression Indicator, and 3) Oscillator composed of Moving Average Convergence/Divergence, Fast Stochastic, Slow Stochastic and William%R. Followed by the comparison of the accuracy ratio of transmission of trend change. The second method is Back Propagation Artificial Neural Networks.

The result show that, from the analysis of prices of 3 types of fuel by using 3 techniques, which are Moving average, Indicators, and Oscillator; with the daily data in lengths of 10 days, 25 days and 75 days, with weekly data in lengths of 10 weeks and 20 weeks, found that the appropriate method used in practice can be summarized as follows. For daily data, the appropriate methods are EMA, RSI and Slow Stochastic, respectively. For weekly data, the appropriate methods are WMA, RSI and William%R, respectively. Moreover, the predicted result from Back Propagation Artificial Neural Networks found that the prediction period is suitable for predicting prices of 3 types of fuel when using daily data is 6 days and suitable for predicting when using weekly data of diesel, gasoline 91 and gasohol 95 is 1 week, 7 weeks and 2 weeks, respectively.

_____   _____   ____ / ____ / ____
Student's signature   Thesis Advisor's signature