A Study for Examining the Impact of a Chosen Stock ’s Share Price Forecasting Model Using the Macroeconomic Variables Vs

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ABSTRACT

As steered by liberation and global ization, wilh the entry of foreign capital and an increase to the weighing of trading volume by institutional investors that are driving the development of the local stock market to mature, there is a need for the investor to take to a more rational and professional judgment to manage their inveslment portfolios. The investor is able to gauge a company's operations and profitability through the aspects of me overall economic conditions, industry trends, company management and the like, in order to locate the true value where the stock lies. The rudimentary analysis and the design theory of depositary receipts, in theory, should have the pricing equal to that reflected in the common shares. Yet in practical implementation, the rudimentary analysis could provide the investor with fine investment assessment references, in that the depositary receipts and the common shares often bear an interrelated correlation. The study aims to examine the impact ofTSMC's issuing American Depositary Receipts, to TSMC's share prices in relation to the NASDAQ 100 Index, the Taiwan Weighed Stock Index, the exchange rates, and the interest rates by utilizing the Back Propagation Neural (BPN) Network and me Generalized Autoregressive Conditional Hetero-Skedastic Model to analyze TSMC's share price fluctuations, and to evaluate the forecasting capability of the two models in order to derive an optimal model. The study has focused on January 2002 to December 24 as the training period, and January. 2005 to March, 2005 as the forecast period. The study findings showed that when forecasting using the Generalized Autoregressive Conditional Hetero-Skedastic Model, it had validated that TSMC's issuing the American Depositary Receipts .bear an impact to TSMC's share prices, in that a conductive effect did existing, while the NASDAQ 100 Index, me Taiwan Weighed Stock Index also bear a direct impact to TSMC's share prices. The additions of the exchange rates and the interest rates to the overall economic variables showed no significant correlation to TSMC's share prices. In comparing the model's forecasting capability, the estimated median square variety derived from the forecast figure derived from the networking model and the actual figure was found to be smaller than the median square variation estimated from the Generalized Autoregressive Conditional Hetero-Skedastic Model, showing the Back Propagation Neural (BPN) Network is more capable of forecasting share prices.

Keywords : Back Propagation Neural (BPN) Network、American Depositary Receipts、 Generalized Autoregressive Conditional Hetero-Skedastic Model

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