A Study of stock price correlation - Use Upper Middle Lower Stream of Semiconductor Industry As Example

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ABSTRACT

Each Industry can be further checked into upper middle and lower streams, and the stock price of companies in certain stream can be affected by stock price of companies in often into streams. In these reason, we are trying to find out the correlation ship among stock price of companies in there three streams. And using semiconductors industry in our study is that. The integration structure of semiconductor industry have been developed completely in past few year. The research me the logies used in this study are Unit Root test、Cointergration test、Granger Causality、Polynomial Distributed model. Based on the specific industry structure of Semiconductor industry, we divided the industry into upper、middle and lower streams, and make weight index for each of them. There are 276 pieces of data collected from March 6, 1993 to March 31, 2000. The results empirical test are as follow: 1. By using Unit Root test to examine the time series of the upper、middle and lower streams of the semiconductor industry. We found that order both ADF? and ADF(T) models, the intergration level are I(1). 2. By applying Johansen cointergration test, we found that there an stable equibrium among upper、middle and lower streams of the semiconductor industry. This shows us that the stock price of companies in these three stream are moving at the same direction. 3. By applying Granger Causality test, we found that the stock price of companies in upper stream will affect the stock price of companies in middle stream and vise-versa. The stock pries of companies in middle stream will affect those of companies in lower stream; stock pries in lower stream will affect those in upper stream. 4. By applying Polynomial Distributed model, we found that the time lag of stock price in middle stream is 1.12 days of those in upper stream; and upper stream is 3.07 days in middle stream. And the time lag of stock price in upper stream is 2.5 days of those in lower stream; and lower stream is 6.5 days in middle stream.

Keywords : Semiconductor, stock price, Unit Root test, Cointergration test, Granger Causality, Polynomial Distributed model.

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