The Dynamic Relationships of Stock Returns on the International Steel Industry

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ABSTRACT

The objective of this research was to investigate the reward rate of the stock price for the international steel industry. The four steel enterprises in this research were China Steel, Nippon Steel, Arcelor, and Mittal. The daily closing information of each steel mill was used for this research. The period was from February 19, 2002 to December 31, 2005 and with the use of integrated and VAR model samples, and their long-term balanced relations and short-term interaction relations. The Exponential Generalized Autoregressive Conditionally Heteroscedasticity (EGARCH) Model was also used to see if there was a spillover effect. The results showed the main international steel enterprises were unable to achieve balanced relations in the long term. In the short term, there was an impulse difference because of regional factors and the off- and peak-seasons. The EGARCH Model was checked to see if there was a spillover effect. The conclusion showed the stock response of the steel enterprises was quite fast and some companies had the volatility clustering situation. The big (small) fluctuations would follow the big (small) fluctuations. To long-term investors, they could scatter their investment in different regions and different products to achieve the hedge objective; to short-term investors, as the stock response is quite fast, some companies had the volatility clustering situation. In terms of Impulse Response Function, when China Steel, Nippon Steel, and Arcelor were under impulse, there was a notable influence on other sample enterprises. Taking this as the premise, the short-term investors of the steel industry must seriously value this short-term trade relationship.

Keywords : Steel Industry, Unit Root Test, Co-integration Test, Exponential Generalized Autoregressive Conditionally Heteroscedasticity Model, Impulse Response Function.

Table of Contents

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