Stock Market’s Reactions to Industrial Accidents: Evidence from Chinese Listed Companies

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ABSTRACT

This study attempts to explore whether and how stock market responds to industrial accidents. We employ the event study method to look into the responses of stock markets to 83 accidents experienced by various listed companies in China, and explore how industrial accidents influence stock market in the different markets. Findings imply that the stock market shows negative reaction with respect to these accidents. However, as time goes by, the market reaction tapers off. In the bear market, the negative market reaction was highly significant. Small-sized companies, in comparison with other companies, have a most significant reaction to accidents and they also have the worst ability to recover from accidents. The findings of this study can help the investors to better understand how the stock market reacts to the industrial accidents in different market environments and under other conditions.

Keywords: Chinese, Corporate Responsibility, Industrial Accident, Listed Company, Market Reaction, Sustainability

INTRODUCTION

In the globalised world, sustainability of companies depends not only on financial attributes but also companies’ contribution to the welfare of society (Onar, 2012). Sustainable development can be restricted by major accidents which occur in some hazardous industries. Almost every major accident may have negative influence on the sustainable development. It is clearly that accidents are threats to the sustainability of communities, and often to the environmental resources that those communities depend on. Business (including industry), as the important role of society community, has a responsibility toward the whole of society to engage actively in the sustainability arena (Connor & Dovers, 2004; Vaidogas & Juocevičius, 2008; Brent, 2012).

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Erck & Labuschagne, 2006). Corporate responsibility amounts to taking consideration conditions and effects that are systematically linked to corporate action (Kamppinen et al., 2008). And studies on corporate responsibility and sustainable society in recent years become a popular topic (Xia et al., 2008; Kuepfer & Papula, 2010; Gorenak & Bobek, 2010; Del Baldo, 2010). However, high level of industrial accident frequency exposes the lack of corporate responsibility, especially in the high-speed economic development in China.

Since 1978, China has undergone dramatic transformations from a centrally planned economy to a market economy. Along with this process, there have been significant changes in the geography of China’s industrial activities (Lu & Tao, 2009). In recent years, China’s industrial growth has been extremely rapid. However, with the acceleration of industrial growth, the industrial accident frequency is still keeping at a high level. In China, every year the average number of accidents is 800,000, more than 130,000 people are dead. And the economic cost of accidents could top 25 billion Yuan, which are equivalent to 2% of GDP. Moreover, the cost of disasters extends beyond their immediate impact, and affects the value of companies (Knight & Pretty, 1997). The conflicts between economic growth and serious social issues make the studies on China’s capital market and industrial accident exciting and challenging.

Many scholars (see, for example Tietenberg, Cohen & Santhakumar) have suggested that the threat of a severe market penalty can complement government regulation by providing incentives to comply with safety and environment standards and /or to innovate in order to prevent accidents (Capelle & Laguna, 2010). The US financial crisis has underlined the fact that markets tend to be more dependent during the crisis than they are during the pre-crisis periods (Jayech & Zina, 2012). There are lots of studies about the factors which can cause the fluctuation of stock market. For example, Shi and Yu (2012) examine the direct impacts of pricing strategy on financial markets. Chao et al. (2011) study the impact of donations on stock market. In this study, we try to find out whether and how stock market responds to industrial accident. In particular, we analyze how it will be changed in different markets and company sizes. Section 2 presents relevant reviewed literatures on the impacts of accidents on stock market and the event study method is presented in section 3. Then, section 4 describes China’s 83 listed companies’ data and their analysis, and uses the event study method to calculate the abnormal return in order to discuss the outcomes. In the last section, we contain some conclusions.

LITERATURE REVIEW

A few studies have examined the financial implications of industrial accidents with environmental consequence. Cormier et al. (1993) show that a firm’s pollution performance is negatively related to its market valuation. Blachoniere and Patten (1994) examine the market reaction of chemical firms following the Union Carbide chemical leak in Bhopal during 1984. Their evidence indicates that a significant negative intra-industry reaction occurred for firms other than Union Carbide. Lorraine and Collison (2004) show a lagged market reaction to bad environmental news. They indicate that there is a stock market response to the bad news typically up to 1 week after news is published. Similar findings have been reached by others (see, e.g., Hill & Schneeweis, 1983; Fields & Janjigian, 1989; Halme & Niskanen, 2001; Xiao & Zhang, 2008), who point out that accident resulted in significant negative abnormal returns of the stock of firms.

Another strand of literature has examined the link between investor mood and stock returns. Gervais and Odean (2001) present a model in which investors learn to be overconfident because they experience a bull market. Thus, those investors who have been investing through a bull market are predicted to exhibit
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