

Chapter 2

LITERATURE REVIEW

2.1 Market Efficiency

An efficient capital market may be described in terms of the stock prices being valued fairly in the light of all available information, or equally that the purchase or sale of securities will give a zero expected NPV. A market would be inefficient if an investor in that market was able to predict earnings positive abnormal returns. A market might also be inefficient if a particular item of information could be used to earn abnormal returns in that market. Thus a market is considered as an efficient market if it rapidly reacts and incorporates in an unbiased manner to a specific category of information.

2.2 What is Event Study?

In finance, the term "event studies" is not strange at all to financial analysts. In fact, it has become one of the most popular statistical designs to see the market's reaction to particular news.

The cleanest evidence of market efficiency comes from event studies, especially event studies on daily returns. Event studies can give a clear picture of the speed and magnitude of adjustment of stock prices to specific information.

Event studies provide some insights of how the equities market reacts to new information, the extent to which shareholders gain abnormal returns during the event, and the extent to which bad news affects returns of the stock market.

Event study examines the stock returns for some specific firms before and after the announcement of a special event. News of a significant event could alter the pattern of the stock returns for a firm (or industry). Good news is expected to increase the stock price. On the other hand, bad news will be reflected in the depressed stock prices.

Event studies basically have two types. The first type is market efficiency studies to assess how quickly and correctly the market reacts to a particular type of information. And the other type is information usefulness to assess the value of the content of released news to company returns.

Fama e.t. al. (1969), and Ball and Brown (1968) introduced the event study methodology that is essentially the same as that which is in use today. The study by Fama e.t. al. can be categorized as an efficient market study, while Ball and Brown is an informational usefulness study. Fama e.t. al. examined the impact of stock splits on security prices. They found that abnormal returns dissipated rapidly following the news of stock splits. Ball and Brown examined the value of companies' s earnings announcements.

The event study is a popular chronological frame of reference for scholarly evaluation of financial events as well as non-financial events. According to Henderson (1990) event study is a classic design. It has become classic because it works, even the simplest versions of the event study design work.

Event study uses financial market data to measure the impact of a specific event on the value of a firm. The usefulness of such a study comes from the fact that the effects of an event will be reflected immediately in security prices.

2.3 Previous Studies

Enormous studies have been conducted to analyze the stock market reaction to a specific event. A review of some of these studies shows how much stock returns can change in response to new information about a group of firm or a particular industry.

Financial economists have studied the effect of single and multiple events, including dividends and earnings announcement, announcement of capital structure changes, mergers and acquisitions, natural catastrophes, nuclear power accidents, political events, etc.

Dividend and Earnings Announcement. Extensive studies have been carried out to examine the impact of dividend and earnings announcement on stock market. For example, Ball and Brown (1968) have conducted a study on how the stock prices respond to earnings announcement. They concluded that the information contained in the annual income number is useful in that if actual income differs from expected income the market typically has reacted in the same direction. Indeed, they calculated that earnings figures capture about half the net effects of all information available throughout the twelve months before their release. Apart from that they also found that the performance of the good news and bad news portfolios start to diverge from the moment, twelve months prior to disclosure. In fact, very little abnormal return is perceived after the announcement of earnings. Ball and Brown suggest that 80 percent is incorporated into the share prices prior to disclosure. Unlike Ball and Brown's study, Mansor and Subramaniam (2000) found that investors still earned significant abnormal returns even after the announcement week. Thus, they concluded that Malaysian stock market is inefficient. Similarly, the findings of the study of Mansor et al. (2000) indicate that stock prices seemed to correctly anticipate the information about earnings long before the actual announcement was made.

Aharony and Swary (1980) investigated whether quarterly dividend changes provide information beyond that already provided by quarterly earnings numbers.

They divided the sample into three groups: no change in dividends, increases in dividends, and decreases in dividends. The results indicate that there was no significant abnormal returns earned over twenty days surrounding the announcement date for firms that did not change its dividends. Stockholders of firms that increased their dividends earned, on average, positive abnormal returns over the event period. Firms that reduced their dividends experienced negative abnormal returns over twenty days surrounding the date of announcement.

These findings contradict the results of the study of Ball and Brown that dividend announcement does not provide useful information about the future prospect of

firms. The results indicate that the stock market adjusted in efficient manner to the new information.

Natural Catastrophes and Nuclear Incidents. Most of the previous literature on event studies dealt with economic and financial issues. In the past two decades, financial economists started looking at some issues that dealt with non-economic factors. Although not as much as work done on event studies on economic and financial issues, non economic events have grown their popularity. There are some studies that have been done on non economic issues such as nuclear power accidents: Hill and Schneeweis (1983), Fields and Janjigian (1989), Kalra e.t al. (1993), earthquake: Shelor e.t al. (1990), hurricanes: Lamb (1998).

Hill and Schneeweis investigated the effect on the stock returns of public utility companies of the Three Mile Island nuclear accident. The results indicate that the negative impact of the nuclear accident on non-nuclear utility firms was less than those of nuclear utility firms. However, the overall utility stock price decline was not significant.

Fields and Janjigian studied the public utility stock price reactions to the Chernobyl nuclear power accident. They found similar findings with those of Hill and Schneeweis that nuclear-based utility firms earned greater losses than did their counterparts of non nuclear-based firms. Fields and Janjigian also found that there was a significant decline of the overall returns of public utility firms' stock prices due to the accident, which contradicts Hill and Schneeweis' s findings. Although the accident affected the equity prices, there was no evidence of significant changes in the systematic risk or betas of the firms studied.

Similarly, Kalra e.t. al. concluded that Chernobyl nuclear power accident did affect the stock prices of utility firms. Mixed utility firms, however, experienced the most pronounced effects compared to both nuclear and non nuclear –based firms. For the latter two the impacts were small.

Shelor e.t. al. investigated the effect of California earthquake on stock value of firms involved in the real estate industry. They found that the stock prices of real estate firms immediately reacted to the accident. The results showed that the earthquake conveyed useful information that location was an important factor in real estate valuation and financing.

Lamb examined the impact of Hurricane Hugo and Andrew on property and casualty (P&C) firms. The results showed that P&C firms reacted differently to Hurricane Hugo and Andrew. There was no significant evidence that the industry was affected by both hurricanes, regardless their existence of exposure to the hurricanes. Firms were largely unaffected by Hurricane Hugo. However, Hurricane Andrew provided new and relevant information that had negative impact only on firms with exposure to it. Other firms were unaffected.

Political events. Although having no direct relationship with stock market, political events are believed to affect the stock market indexes movement, especially in emerging markets such as Indonesia.

Asri (1996) investigated the stock price reaction to host country's governmental change. His study dealt with event clustering where the event occurs at one time and affects a particular category of securities.

He concluded that the market condition seemed to be uncertain as could be described by the change sign of abnormal returns (positive-negative) from day to day. This pattern was consistent with the nature of political events although there was no significant abnormal return after the event. On the contrary, Suryawijaya and Setiawan (1996) found that the clash over a political party's headquarter did affect stock market. The results showed that the stock market was affected in the short period.

He (1999) concluded that political events do have a large impact on stock returns. He investigated the effect of the Sino-British negotiation and Tiannanmen incident

on daily Hang Seng Index. He found that the market responded positively to good news and negatively to bad news.

Sultan (1995) investigated the market reaction to both optimistic and pessimistic news about German reunification. Politically, German reunification had produced mixed responses from both the East and the West.

Sultan found that both optimistic and pessimistic news led to investors revising their expectations of the future returns from German related investments, albeit pessimistic news seemed to have a greater impact. He also found that shocks to the German economy were transmitted to the global equity portfolio, where country specific-risk becomes part of the global financial risk in the absence of the barriers to capital flows.

Shapiro and Switzer (1999) examined the response of a portfolio of defense contractors to war and peace-related events. They found that the outbreaks of war, or announcements that increase the probability of a war commencing or escalating, are accompanied by positive abnormal returns, and otherwise.