VIETNAM NATIONAL UNIVERSITY – HOCHIMINH CITY
INTERNATIONAL UNIVERSITY
SCHOOL OF BUSINESS

STOCK PRICE REACTION TO THE ANNOUNCEMENT OF "RAISING OWNERSHIP RATIOS OF FOREIGN STRATEGIC PARTNERS IN LOCAL BANKS"
EVIDENCE FROM VN-30

In Partial Fulfillment of the Requirements of the Degree of
BACHELOR OF ARTS in FINANCE & BANKING

Student's name: CHE HOANG KIM NGAN (BAFNIU10260)
Advisor: CAO MINH MAN, Ph.D.

Ho Chi Minh City, Vietnam
2014

STOCK PRICE REACTION TO THE ANNOUNCEMENT OF "RAISING OWNERSHIP RATIOS OF FOREIGN STRATEGIC PARTNERS IN LOCAL BANKS"
EVIDENCE FROM VN-30

APPROVED BY: Advisor   APPROVED BY: Committee,

_____ _____

Cao Minh Man, Ph.D.   Nguyễn Phương Anh, Ph.D

           _____

           Phan Ngọc Anh, MBA

           _____

           Michael Cain, Assoc. Prof

           _____

           Cao Minh Mẫn, Ph.D

           THESIS COMMITTEE

ACKNOWLEDGEMENTS

This is a pleasure for me to express my sincere gratitude to all people who help me to conduct this thesis. First of all, I want to give my thanks to my professional advisors, Mr. Cao Minh Man, who has always stayed by my side and supported me whenever I have difficulties. His encouragement gave me motivation to overcome my troubles during my time of doing thesis. You are the most wonderful advisors I have ever known. To you sir, I give you all of my sincere thanks and respects.

I also give my thanks and appreciation for my friends who always support and help me in my research work. Thanks you guys for all time and advice you gave me.

Last, I want to give thanks to my beloved family, who always support me and stay by my side during my time of thesis. If there were your advice and encouragement, I might not finish my research work. Thank you.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

In January 1st, 2014, the government issued a new decree relating to foreign ownership. This new announcement gave hope for both domestic and foreign investors because the government decided to raise the foreign ownership ratio for banks and credit unions. This research is conducted with the purpose of testing how stock's prices in Vietnam stock market react to this new announcement and whether there is existence of abnormal returns in the surrounding period of the announcement date. This research applies event study as the main methodology for conducting the test because it is the most suitable and appropriate method for this kinds of study. With the estimation period of about 100 days, the research continues to test the stock's prices reaction in the range of day -10 through day +10. Moreover, 30 companies from VN-30 are chosen to help conduct the test. Also, the VN-index is chosen to be standard to compute the total standardized abnormal returns and cumulative total standardized abnormal returns. After calculating both variables and computing their p-values, the result indicates that there is no significance of these values. Therefore, this research concludes that there is no impact of the changing foreign ownership announcement over the stock's prices of the chosen firms.

CHAPTER I

INTRODUCTION

This chapter first introduces briefly about the research's background and rationale; then, it mentions a little bit about the research problems which are purpose and research methodology in general. Last, this chapter will come up with the scope of research and research structure.

1.1. Research Background:

The Vietnam stock exchange was first introduced in 2000. Although it is not the only one channel for investing, stock market is the major investment of Vietnamese investors because it has captured much concern of many investors including financial institutions, individual and local or foreign investors. There are two kinds of factors that can affect the Vietnam stock market in negative or positive ways: internal factors and external factors. With the purpose of maximizing shareholders' value, some managers of corporations and firms are trying their best to put strategies which both maintain the profitability of corporation and earn more for shareholders. However, not always their strategies make sense in all case. Economic experts believe that beside internal such as strategies, firms' operation and management; external factors also play a key role in affecting stock prices' fluctuation.

First of all, Vietnam stock market is quite sensitive with signals from economy, regardless of positive or negative news. Vietnam stock market nowadays is following a positive trend with plenty of economy's optimistic signals. First of all, Vietnam stock market had achievement and success in 2013 such as raising capital reached to 179,000 billion, VN-index increased 22 percent and the market

capitalization reached to 964,000 billion. Although the QE cutting decreased the foreign investment, the foreign investment cash flow still increased by 54 percent in the whole year. On the other hand, the value of foreign investment portfolio reached 12 billion dollars, which rose up 3.3 billion dollars compared with the previous year. Based on these facts and figures, some experts have believed in the steadily growth of Vietnam stock market since the year 2013. In addition, overtime, Vietnam's inflation has been well controlled. Exports are expected to increase, which impulses the development of Vietnam economy and improves the trade balance. At the same time, investors expect the economy's credit growth will recover. VAMC is believed to be able to handle 100,000 billion VND of bad debts, which is good news to help local banks to promote their credit growth more 2 to 3 percent compared with the year 2013. This is implied through completion of restructuring of 9 weak banks in the previous year. Also, economic analysts have expected that the foreign investment inflows to Vietnam market will continue to rise because the market valuation of Vietnam is still low; therefore it is easier to attract foreign investors than other markets. According to analysts of Maybank Kim Eng, expectation to raising foreign ownership as well as boosting equitization of government enterprises will be one of the main reasons to increase FDI inflows to Vietnam.

Beside the signals from the economy, Vietnam stock market is also sensitive with rumors and public announcements such as dividend announcement, earning announcement, M&A announcement,... Take a look at the history, there were so many evidences proving that stock prices were fluctuated when rumors were spreading or announcements were published. Because stock market is semi-strong efficiency, such rumors and announcements do a significant effect on stock prices' fluctuation. From the end of year 2013, there were some rumors about raising "room" for foreign strategic partners among Vietnamese and foreign investors' community. The rumors implied that the Vietnam government would issue an announcement which allowed the foreign strategic investors to buy a majority of stake in banks and credit organizations. The rumors gave hope for a lot of investors on Vietnam stock

exchange because in such economy which actively seeks foreign investment inflow into domestic market, then the rumor once comes true, can become the very premise for the other announcements relating to foreign strategic ownership of the government.

Responding to optimistic signals from Vietnam economy and investors' expectation as well as optimistic rumors about raising "room" for foreign ownership, in fact, the government officially published a new announcement which allows banks and credit unions to raise ownership ratios of foreign strategic partners with the purpose of supporting weak banks and attracting foreign investment in January 3rd 2014. According to Decree 01/2014/ND-CP, Vietnam will allow foreign investors to have the bigger stakes in a certain domestic banking system. It means that the foreign banks can be allowed to buy a majority of stake in weak banks as well as a greater amount shares in strong banks. Specifically, since February 20th 2014 (the day the decree takes effect), foreign strategic investors can own at most 20 percent of stakes in local banks, 5 percent greater than the current ratio. In addition, foreign individual and foreign organization may not own exceed 5 percent and 15 percent of domestic credit institution, respectively, except for foreign strategic investors. And the special thing is that, in some cases, Prime Minister has right to loosen the limits of foreign ownership ratio to at most 30 percent in order to help weak credit institutions and organizations.

This is a very important announcement because it affects the development of Vietnam Banking System. This announcement was an in-time solution of the government that helps resolve one of difficult and urged problems relating to foreign ownership of Vietnam economy in recent years. The announcement satisfied not only Vietnamese but also foreign investors who are interested in Vietnam stock market.

1.2.   Rationale for the study:

Although Vietnam was officially joined World Trade Organization in 2007, which facilitated higher opportunity for our country as both an international trading partner and investing destination, Vietnam seems not to be really extroversive to foreign investment resources at all. However, in recent years, the Vietnam's enterprises and firms have started to recognize the important role of foreign investment resources to their development as well as national economy, despite the fact that the government still conducts policies in order to limit foreign ownership. Therefore, if there are a certain announcement relating to raising "room" for foreign strategic ownership, it will make the Vietnam stock market, in which, VN-30 are good representatives, fluctuate.

The publishing of new decree is an in-time solution for the Vietnam economy. Through this announcement, the government not only ensures the circulation of capital, but it also declines the unemployment rate by creating more job opportunities for the jobless, which helps the economy developed. As mentioned before, there was a rumor about raising "room" for foreign ownership existing among investors' community; hence, the coming out of this new announcement is considered as a good response to demand of the national economy and investors' expectation, which makes stock prices fluctuating as well. In addition, banks and credit organizations play an important role in Vietnam economic segmentation because they control and manage the cash inflows and outflows as well as hold the key of financing capital resources for other segment of the national economy. Therefore, although the announcement focuses only on banks and credit institutions, there may be a certain effect on other firms and corporations' stock prices.

On the other hand, when investing in stock market, the investors will be careful in putting their money on buying and selling securities. They will carefully consider factors affecting stocks' price, conduct some significant financial analysis on company they decides to invest in with the purpose of maximizing the abnormal

returns. The context of considering which factors affect the price movements of stocks are very important. If an investor gets insider information before the announcement is published, he or she will take the advantages and gain more profits than the others. When the announcement was issued, it would attract more and more foreign investors entering to Vietnam, which is a good chance to earn profit due to stock investment because the stock prices at that time will fluctuate sharply as rule of stock market: the big jump in price will result a great opportunity for profit as expected. When bank are allowed to raising the room for foreign investors, it means that the stock prices for these banks will increase with no doubt due to investors' psychology. As a result, the foreign investment flows into Vietnam market will increase, which leads to the development of Vietnam banking system. Because the banks and credit institutions play a key role in managing cash flow of the whole economy, once Vietnam banking system is strong enough, other corporations and firms are expected to be easier to access the huge capital from foreign investors which flows into the market. It will help these corporations to decline the burdens relating to money borrowing and loans. When these firms and corporations have enough money for managing and operating, they will be expected to develop as well, which leads to an increase in stock prices. Because, when the announcement issued, the investors would expect an increase in stock price in the future, then they would buy more securities with the purpose of gaining more profits. At the same time, when the market has a plenty of investors who are following and attracted by this information, this can push the stock price expectation exceeding the target price calculated from the acquirers. However, the overreaction of market causing stock price anomalies is observed not only in the period of announcement date, but also in the ex-event window and after the announcement date.

As a result, there is a need to come out a research about stock price reaction to the announcement of "raising ownership ratios of foreign strategic partners on local banks", in which VN-30 are chosen to test the affection. The reason for this research to choose the VN-30 companies is because they are the very representative

for Vietnam stock market. In this case, this research did not choose the HNX-30 due to the less representativeness of the observations. On the other hand, in world's economic history, there were some conducted studies in the same fields, which came out the result recognizing positive abnormal returns while in Vietnam, there has not any studies or researches relating to this kind of announcement. Therefore, this research is necessary because it helps find out how stocks of VN-30 companies react to this new announcement by testing figures and historical prices. This is one of the first steps to help investors who are interested in and looking for arbitrage opportunities can be smarter in their stock investment.

1.3. Purpose of the research:

With these above issues, the research implies two following purposes:

Identifying how stocks from VN-30 companies react to the announcement of "raising ownership ratios of foreign strategic partners in local banks" in the event period.

Identifying whether investors can make abnormal returns by replying the announcement of "raising ownership ratios of foreign strategic partners in local banks" in the event period or not.

1.4. Research questions:

There are two questions corresponding to two research's purpose above, which are:

How do stocks from VN-30 companies to the announcement of "raising ownership ratios of foreign strategic partners in local banks" in the event period?

Do investors make abnormal returns by replying the announcement of "raising ownership ratios of foreign strategic partners in local banks" in the event period?

1.5. Research title:

Stock price reaction to announcement of "Raising ownership ratios of foreign strategic partners in local banks": Evidence from VN-30.

1.6. Research Methodology:

1.6.1. Data collection:

The historical daily prices of stocks of VN-30 companies are collected and checked carefully from several prestigiously financial websites such as www.hsx.vn, www.cophieu68.vn, or www.vndirect.com.vn. Information relating to the announcement are collected and confirmed on the official website of State Security Commission of Vietnam www.ssc.gov.vn and Government's Documentary www.moj.gov.vn.

1.6.2. Research technique:

This research applies the event study as the main method to conduct the test about affecting of raising foreign ownership announcement over the stock prices from VN-30 companies. Back to the world's economic history, there were so many similar cases that adopted event study for testing their own observations. Event study is a very useful and unique technique in identify whether there exists a possibility to get an abnormal return in responding to the raising foreign ownership announcement or not, which the other technique cannot or have limitation. This research follow strictly the standard model of event study of which the secondary data is collect totally from website and from public articles. And the test statistics is also a good technique to define how quickly the market reacts to the announcement.

1.7. Scope and limitation:

1.7.1 Scope:

The research aims to investigate 30greatest companies listed in VN-30 (look at Table 1 - Appendices). And this research is conducted based on information from experts, public data and historical price of stocks from chosen companies in the period of surrounding event which will be mentioned in the next chapter.

1.7.2. Limitation:

Although there are some methods to filter data, they also have some limitation. First of all, this announcement was published in the January, 2014. As we all know, in the beginning of the year, the stock prices are often affected by signals and news from annual reports or earning announcement of corporations and firms, which calls "seasonal effect". It will easily lead to a bias result for the test of event study.

Secondly, there existed rumors about raising "room" for foreign strategic investors in the end of the year 2013. This might be a leak information case. In such economy where investors were eager to seek foreign investment resources, the market might fluctuate in the period before estimation window.

It can be said that there are some reasons that makes this research face with the bias and less accurate result.

1.8. Significance and implementation:

The result of study will contribute a small part and may become a useful reference for the government, investors or even researchers. For the government, if the result of the research is positive, it will imply that this decision of the government is the right one. Also, the research describes the Vietnam stock market as a whole, which helps the government to control and manage the stock market more efficiently.

For the investors, if the research's result reflects that the announcement take effect over the stock prices of VN-30, it leads to a good chance for investors in gaining profits from such events. For the researchers, whether the result is significant or not, the result will be a part to the information resources and become useful for people who are interested in this kind of announcement in Vietnam stock market.

1.9. Research framework:

The research paper will be divided to six main parts which are briefly reviewed as follow:

CHAPTER I   :   INTRODUCTION
CHAPTER II   :   LITERATURE REVIEWS
CHAPTER III :   METHODOLOGIES
CHAPTER IV :   RESULTS
CHAPTER V   :   DISCUSSION
CHAPTER VI :   CONCLUSIONS AND RECOMMENDATIONS

CHAPTER II

LITERATURE REVIEW

This part is involving conceptual framework and some theories, statistical model and hypotheses. First, the definitions of concepts and theories will give a general overview about how this announcement can affect stock price and how investors can get the arbitrages from this stock reaction. Then, the research will give its own statistical model base on event study. And last, all hypotheses will be constructed and formulated.

2.1. Efficiency Market Hypothesis:

2.1.1. Definitions of Market Efficiency:

Initially, the term efficiency involves a market in which there is an incorporation of relevant information into security prices. It can be said that any available information which could influence a company's stock performance should already be reflected in company's stock price. In efficient market, security prices should equal the security's investment value in which investment value is the discounted value of a security's future cash flows. In addition, new information plays a key role in affecting stock price because when a company's new information is published, it makes stock prices move immediately to reflect the information. If the new information can be predictable, it will cause share prices to change as a result.

This concept of market efficiency was developed for many years. In 1900, Bachelier, who submitted his PhD dissertation in mathematics, stated that "past, present and even discounted future events are reflected in market price, but often show no apparent relation to price change". This was the first time for the concept to

be coded and contributed a lot in the development of this theory so far. Until 1964, there were appearances of plenty of statistical journals and operation researches about theory of market efficiency. In 1964, a good description of market efficiency was published by Cootner, in which the price "changes that would occur are those that result from new information" and "the period-to-period price changes of a stock should be random movements". And then, in 1965, Samuelson asserted that "in competitive markets, […] if one can be sure that a price would rise, it would have been already risen" and according to him, these arguments are used to "deduce that competitive price must display price changes that perform a random walk with no predictable bias". Based on this, Eugene Fama developed an academic concept in his thesis called Efficient Market Hypothesis in 1970. This theory defines efficient market as "the one in which trading on available information fails to provide an abnormal gain". Famaalso discussed that "efficient market is a market where there are large numbers of rational, profit maximizes actively competing, with each trying to predict future market values on individual securities, and where important current information is almost freely available to all participants". It means that in an efficient market, everything is equal for everyone and it is not a good thing because in this case, the intrinsic value of a certain stock will equal to its current market price, investors will fail to get the abnormal gain. Therefore, it can be said that investors have to accept high risk if they want to get high return.

2.1.2. *The three forms of Market Efficiency:*

There are three forms of Market Efficient Hypothesis (EMH), which are weak-form EMH, strong-form EMH, and semi-strong-form EMH. The basis of this separation is what is meant by the term "all available information".

In weak form EMH, stock prices reflect trading data and information derived from it. Trading data can be seen to be easily available and reflected in current price. It means that when weak form efficiency holds, investors cannot forecast the stock prices in the future by using technical analysis, which bases on

historical prices and past information. Hence, it is hard for investors to predict the trend of stock prices and gain excess returns.

In semi strong form EMH, market reflects all publicly available information influencing company's value in stock prices immediately such as firm's products, operations, balance sheet, patents, etc. It means that if semi strong efficiency holds, investors who use trading rules based on any public information cannot receive above the average risk adjusted return. Semi-strong-form efficiency implies that neither fundamental nor technical analysis techniques will be reliable to predict the stock trends. So many researchers tried to test this model by using both event study and cross-sectional study.

In strong form EMH, stock prices reflect all relevant information, including information which is only known to company insiders. It states all the information in the market, public or even private one. Once the strong-form efficiency does hold, it means that all information will be available and free for everyone at the same time. Therefore, even insiders, who are privy to information before it is known to others, cannot earn any excess profits. It can be said that strong-form EMH is the most contested of the three models.

2.2.   Related Studies of Public Announcement:

Among three form of EMH that mentioned above, it can be seen that semi-strong form of EMH can be the most suitable model for testing and predicting the future returns based on historical price and public information. And event study is the most common method using for testing this by examining the fluctuation of stock prices surrounding certain announcements, such as stock split, dividend announcement, earning announcement, merger and acquisition announcement, changing foreign ownership announcement, etc. In 1969, Fama, Fisher, Jensen and Roll tested this form by identifying how stocks react to public announcement. In their research in 1995, Ederington and Lee discussed that stock prices react to unexpected events within fifteen minutes. In reality, there are some evidences implying that stock

price does not adjust immediately to public announcement; otherwise, it will not give an opportunity to gain excess profits.

Event study is a standard approach which is commonly used in testing whether market is efficient or not and studying public announcement. Event study was first conducted in 1933 by Dolly. Then it was used commonly in other researches and studies. Fama, Jensen, Roll and Fisher were very successfully in testing impact of new announcement to stock prices by using event study. After that, Mc. Williams and Siegel (1977) and Thaler (1985) in turn found out that stock price effect associated with unexpected events.

It can be seen that, in 1973, in this study of "Dividend announcements cash flow signaling versus free cash flow hypothesis", revealed that the market used dividend change announcement in pricing stocks. Similarly, Aharony and Swary in 1980 discussed that announcement implying an increase in cash dividend will lead to a positive abnormal return, but this return will be negative during 20 days surrounding the announcement date. In 2003, a researcher named Adelegan found out the impact of dividend announcement and capital market efficiency to stock prices by using standard event study methodology.

In Asian countries, there is appearance of related studies such as studies about earning announcement for Chinese equity markets of Kong and Taghavi (2006), or study of "Reactions of Japanese stock to the release environmental management ranking" conducted by Fumiko Takeda (2006), etc.

Up to now, event study has been more and more commonly used in finance and accounting areas. And for some reasons, event study can be seen as the most suitable method in testing the stocks' reaction to a certain new announcement.

2.3. Impact of "changing foreign ownership" announcement on stock prices:

2.3.1. Definition of "changing foreign ownership":

First, this research will explain what foreign ownership means. Foreign ownership is defined as the percent of outstanding voting securities of the firm owned by one or more foreign strategic investors. When the foreign investors hold a certain percentage of stakes in local banks, they will have rights to establish or direct the general policy or day-to-day operations of the firm. Firms with high foreign ownership realize huge, economically and statistically significant, positive excess returns. To contrast, firms with low foreign ownership realize huge, economically and statistically significant, negative excess returns.

Changing foreign ownership is the adjustment of stake percentage owned by foreign strategic investors. In the new decree 01/2014/ND-CP, Vietnamese government decided to raise the foreign ownership with the purpose of supporting weak system and attracting foreign investment sources. By this, foreign strategic investors can own at most 20 percent of stakes in local banks. In addition, foreign individual and foreign organization may not own exceed 5 percent and 15 percent of domestic credit institution, respectively, except for foreign strategic investors. In many cases, local weak banks have right to loosen the limits of foreign ownership ratio to at most 30 percent, even from 49 to 100 percent (in some special cases).

2.3.2.   Study of "changing foreign ownership" announcement:

Like the other public announcements, there are many researches related to changing foreign ownership announcement conducted all over the world. In 2002, Conyon et al used foreign ownership change to control for unobserved differences between firms in UK due to a specially constructed database for the period 1989 – 1994. Recent papers by Arnold and Javorcik (2005), Fukao et al (2006), and Petkova (2007), among others, address this issue using the propensity score matching technique to establish the control sample, combined with difference-in-differences estimation approach to isolate the impact of the change in foreign ownership. In the research about Canadian firm in 2008, Eric Santor stated that the changing foreign ownership announcement is less common, but should be expected to have a great

impact on firm characteristics by using event study approach. As mentioned above, changing foreign ownership announcement, like other public announcement, once issued, will cause a fluctuation on stock prices due to investors' psychology. And then, that fluctuation will lead to appearance of abnormal return. It can be said that event study methodology is the most appropriate method to test the impact of stock price reaction over the changing foreign ownership announcement because through using event study, this research can determine whether there are abnormal returns of stocks when the changing foreign ownership or not. Therefore, it is a need to employ event study methodology as the main method to conduct this research.

2.4. Event study methodology:

In the previous part, event study is appropriate and valid in estimating the quantity of corporate event. It's obviously that stock prices reflect relevant information that is known about firms' future. When new relevant information is published officially in the market, the price of stock should change accordingly. However, in semi-strong efficient market, sometimes, the information is leaked out several weeks before the official public announcement. Conversely, it might take more than one period for the market to fully interpret the news. With the purpose of measuring how a firm's stock price reacts to new information, an event study methodology is used. Hence, this research conducts an event study to evaluate and measure the effectiveness of market and test the reaction of stock prices when changing foreign ownership announcement is published.

There are so many event studies conducted by many researchers in the last two decades such as Jesen (1983), Warner (1988), Smith (1986), etc. Event study often uses econometric technique to measure the impact of certain event in stock prices and is performed with basic statistical methods. However, there are a few changes in methods of some event study.

2.4.1.   Announcement Date:

As mentioned above, announcement date plays a key role which needs to determine first when conducting event study. The event date is defined as the time when the market first learns of the relevant new information (the event). J.Brown and Warner (1985) stated that the result can be less precise and biased if the determined announcement date is incorrect. The less accurate you are in identifying the event date, the less powerful the test, and therefore, the less able researchers are to accurately measure the impact of the event on firms and corporations. According to Halpern (1983), the most suitable event date to measure impact of event is the first public announcement date. However, in many cases, sometimes investors can gain abnormal returns before the event date of published due to leaking information or market expecting.

Event study can be performed using any data frequency. It can be monthly, daily or even intraday. However, daily data are the most appropriate and so many studies in the past chose this level of frequency to perform the test. At first, monthly observations are too long to isolate the event from the period before and after the event. Second, intraday data allow researchers to better understand the stock prices' reaction to the event in case the event can be associated with an exact time of day. However, in reality, this is a quite rare case. Therefore, daily data becomes the best choice for this research to perform the test.

2.4.2.   Event window:

After identifying the announcement date on which the event occurred, the next step is identifying the number of trading periods preceding and following that day, which is usually called event window. Event window is the period used to determine the effect of events on stock prices. The period prior to event window which event window is begun to choose from the closing price of stock before announcement date (t = 0) and cover until the announcement date. It can be seen in Figure 1.

```
├──────────────────────────────┼──────────────────────────────┼───►
   T₁                           t = 0                          T₂
```
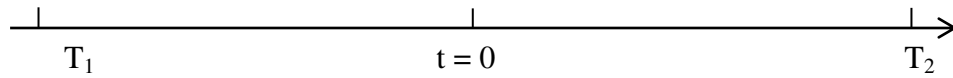
Figure 1: Event Window

In fact, if event window contains more unnecessary days, the test's result will make no sense. It means that the more certain the researchers are about the announcement date, the smaller the event window can be, which leads to the more significant of the test's result.

On the other hand, in Vietnam stock market's history, some studies in the past have implied that when testing the stock prices returns surrounding a certain announcement, there are some evidences proving that the price of target firms' stocks increases significantly in the period before the events occur. In other words, the information about events is "leaked" by insiders to someone who ultimate purchased these kinds of stocks. As the result, the price of target firms will increase in value before the official published announcements are available to justify the fluctuation of stocks price. Hence, it is very important to determine exactly the days including in event window in order to ensure the effect of leakages; otherwise, the full effect of event on stock prices cannot be measured.

Generally, researchers choose the certain period before and after the announcement date to test the impact of events to stock prices. This period can be in range of -10 through +10 in order to ensure little or no chance of leakage. In many cases, some studies choose the longer period with the window of -30 through +30 in case of less certain event dates and for events with substantially long period of suspected leakage. Depending on purposes and nature of each research, event window will be chosen carefully and it does not need to choose a long period because the market information will be processed instantaneously.

2.4.3. *Estimation window:*

Estimation window is the period before event window. Similarly, post event window is the period after event window (Figure 2). In other words, the estimation window and post event window are the periods of time over which no event has occurred. They are used to examine how the returns on the stock should react with the absence of event. Event window is not often included from the estimation period and post event window to avoid the bias for parameters by events. Parameters of normal returns are determined by the estimation window and post event window and not affected by the returns which are created by the event.
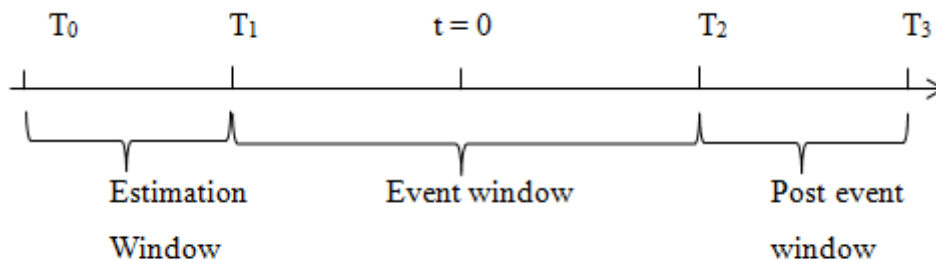
Figure 2: Periods in event study

It is possible to choose the period after the event window to examine the stock's prices reaction. In case the event window is -20 through +20, the estimation period might range from +21 through 100. The only reason for this researchers' choice is that sometimes the event is so dramatic that it changes the fundamental relationship between the behavior of stocks and the market.

Besides, in many studies, researchers seem to prefer to use the period before event window for their event studies. There are a few ways to choose which range of estimation period is the most suitable for the test. If the event window is -10 through +10, the estimation period might occur from -60 through -11. In other case, if the event window is -30 through +30, the estimation period might occur from -120

through -31. As mentioned above, these choices can help researcher ensure that the estimation period and event window do not overlap in order to prevent biased estimate of how the firm's stock prices react when the event is not present.

The estimation period and the post event window have no standard for all studies. In general, the researchers want to make the interval wide enough to capture the relationship between the stock prices and the market, but not so wide that the estimated relationship no longer applies to the firm.

2.4.4. Abnormal returns:

In previous researches and studies, daily return data is more commonly used than monthly return data in order to estimate abnormal returns accurately and ensure the result of the event study's test. The daily rate of return on a stock is an index which presents the gain or loss of stock prices in stock market.

Abnormal returns (AR) are the difference between actual return and expected return of stock price. The calculation for abnormal return can be shown in the formula below:

Abnormal return = Actual return – Expected return

Expected return, or normal return, is the returns on the sample of stocks in the absence of the event. The calculation of expected return is complicated. To calculate the existence of abnormal returns when significant events are given, Brown and Warner (1980) has shown three models based on expected returns of their event methodology: mean adjusted return, market adjusted return and market and risk adjusted return.

2.4.4.1.   Mean adjusted return:

The mean return approach assumes that the mean of the stock's return over the event window is expected to be the same as the mean over the estimation period. In mean adjusted return model, stocks' expected return for each of the day in the

event window is equal to the mean return on the stocks over the estimation period, which serves as a constant K_i. Although the expected returns between stocks are often different, in event study methodology, it is assumed that the expected return of stocks is constant and unchanged during in estimation period. This assumption about the constancy helps the test to create favorable conditions to evaluate the existence of abnormal return more easily.

The mean adjusted return methods for calculating expected returns for a stock over the event window works well in case the firms or corporation have event dates being spread far apart and when the stocks' return in the sample are relatively stable.

The formula to calculate abnormal returns for the security in significant events is:

$$AR_{it} = R_{it} - K_i$$

In which, AR_{it} denotes for abnormal return for security i in the period t

R_{it} denotes for expected return of security i in the period t

2.4.4.2. *Market adjusted return:*

The market return approach assumes that the mean of stock's return over the event window is expected to be the same as the mean of the market's return over the event window. This is the simplest of the three models. As such, there is no estimation period either before or after the event window. Therefore, the abnormal returns are defined as the difference between actual return and expected return, where the expected return for each of the days in the event window is equal to the return on the market each day. The "market" in this research is defined as the VN-index. This research assumes that all stocks have the same expected return in the same period.

The market return approach has been found to perform as well as more advanced methods unless event clustering exists. It means that if the announcement dates for the firms in the sample occur around the same calendar date, the result could be biased.

However, with the estimation of security beta and limit error, this model is used quite commonly. The abnormal return of this model can be calculated by the following formula:

$$AR_{it} = R_{it} - R_{mt}$$

Where, AR_{it} denotes for abnormal return for security i in the period t

R_{it} denotes for expected return of security i in the period t

R_{mt} denotes for expected return of market in the period t

2.4.4.3.   Market and risk adjusted return:

The market and risk return approach is the most commonly used method to generating expected returns over the event window. In this method, the abnormal returns are defined as the difference between the actual return and the expected return, where the expected return for each day in the event window is predicted using a regression.

In general, it is assumed that the single index model creates the normal return. This single index model uses only the returns on the market in which VN-index is the representative as the relevant benchmark. Normally, through the beta of stocks, the stocks' returns linearly associate in the returns of the market. The risk adjusted returns change over time through securities. The betas of stocks are calculated in the estimation period.

The abnormal return of this model can be calculating by the following formula:

$$AR_{it} = R_{it} - \beta_i * (R_{mt} - R_f)$$

In which, AR_{it} denotes for abnormal return for security i in the period t

R_{it} denotes for expected return of security i in the period t

R_{mt} denotes for expected return of market in the period t

β_i denotes for stock beta

R_f denotes for risk free rate

2.4.5. Suppositions in identifying abnormal returns:

Supposition 1: *Markets are efficient*

Relevant financial information will instantly be integrated into stock prices once it is disclosed to investors in efficient markets. Because of the new information, the stocks' price will fluctuate and therefore, it is appropriate to utilize the announcement day as event day. With the purpose of identifying a certain bank's daily returns and its impact on how market reacts to the announcement, short event windows are chosen giving that the supposition of market efficiency is not easy to be captured with the application of a long event window.

Supposition 2: *The event is unanticipated.*

Transactions are usually announced in the press and investors receive information from announcements where markets do not have previous knowledge. Therefore, these events will become new information to investors instantly. In

addition, since these announcements which are stocks' price related adjusts within fifteen minutes of the release of firm-specific information, the use of long event windows will become difficult to control for the confounding effects.

Supposition 3: *There were no confounding effects during event window.*

The reason for using short windows is to control for confounding effects and isolate the effects of other events. It is easily to see that with long windows, it is highly likely that events have experienced confounding effects. This research employs short event window, but they are long enough to avoid the other confounding effects.

2.4.6. Statistical Hypotheses:

After estimating average abnormal returns and average cumulative abnormal returns, this study continues with the statistical hypothesis testing. All hypotheses are formulated with the purpose of testing whether there is a positive impact of the changing foreign ownership announcement on stock prices. Like other hypothesis test, the statistical hypotheses consist of both null hypothesis (H_0) and alternative hypothesis (H_1).

H_1: There are positive average abnormal returns in the event observation.

H_2: There are positive cumulative average abnormal returns in the event observation.

Five steps in event study according to study of Campbell, Lo and Mackinlay in 1997

Step 1: Defining exactly the kind of event which is going to be estimated and establish the event window.

Step 2: Establishing standards for selection companies which need to do the test of the research.

23

Step 3: Calculating normal returns, abnormal returns, standardized abnormal returns and total standardized abnormal returns of stock's price on sample of collected stocks.

Step 4: Start testing by setting hypotheses to find the aggregate over time to get cumulative total standardized abnormal returns of securities during the event period and across stocks to get one test statistics for hypothesis. Then, estimate the significance of the tests.

Step 5: Present the findings and analysis of the research, explain the results, inferences and then conclusions.

CHAPTER III

METHODOLOGY

This section discuss about the methodology review, which includes research approach, data collection methods, sample size and event window. Moreover, it also shows the ways to achieve methods as well as the test performance. Then, the detailed hypotheses will be conducted to test the affection of changing foreign ownership announcement over the stock's prices.

3.1. Research approach:

With the purpose of evaluating the effectiveness of market and testing the reaction of stock prices when changing foreign ownership announcement is published, event study methodology is the most appropriate method for this study. In addition, the mathematic models and hypotheses will be developed and applied to estimate the effect of the announcement over the stock' prices in order to satisfy the research objectives and answer the research questions.

This research collects data from historical prices and public information of Vietnam stock market and the chosen firms in surrounding event period and then applies them to the formula in order to calculate actual daily returns of each stock as well as the betas for each changing foreign ownership announcement. Two hypotheses are conducted in order to test the existence of total standardized abnormal returns and cumulative total standardized abnormal returns of acquirer firms and corporations and test the significance of them during the announcement period. The statistical formulas are very useful to help calculate these variables based on collected data. And then, the result will be used to test whether the Hypotheses stated make

sense or not. This research uses quantitative method to fundamentally link the quantitative relationship between mathematical expression and empirical observation due to using mathematical and statistical models for data processing.

3.2. Data collection method:

This research collects data based on secondary method. The sources of secondary data may come from reports, newspapers, economic articles, journals or websites, etc. which are appended to enhance and supplement the findings. On the other hand, it is very essential to collect information about the announcement date of changing foreign ownership because this kind of information will be used to precisely assess the impact of the announcement. The data about historical prices of each stock will be got from prestige website related to stock market such as hsx.vn, cafef.vn, hnx.vn, bloomberg.vn, etc.

In detail, the secondary data will be collected in some following prestige website:

First, the announcement about changing foreign ownership's information as well as the announcement date will be found and confirm carefully at the official website of government such as the State Security Commission of Vietnam's website www.ssc.gov.vn and Government's Documentary website www.moj.gov.vn.

Second, the daily closes price of all stocks relating to raising "room" for foreign ownership announcement in VN-30 will be collected at www.cophieu68.com.

Last, the daily returns on market index are also collected at www.cophieu68.com.

3.3. Sample size:

This announcement is related to changing foreign ownership in Vietnam Banking System; however, as mentioned above, this announcement is a very

important one, which may take affect to not only banks and credit organizations but also the other companies in Vietnam stock market. To satisfy the purpose of this research, the samples are drawn from target companies from HOSE because firms and companies listed in HOSE are representatives for Vietnam stock market. Moreover, the chosen firms should have to trade in HOSE at least 101 days in order to observe the expected returns of stocks.

After checking in many sources with compare between companies, this research found out that the VN-30 are the most appropriate for testing the affection of changing ownership announcement over the stock's prices.

First, the VN-30 companies are the most representatives for the companies listed in Ho Chi Minh Stock Exchange. They are almost strong and great companies, which have stable development growth and strong finance.

Second, VN-30 companies all have the trading days more than 60 days, which satisfies the trading days of sample size's condition.

Therefore, the VN-30 companies are the suitable sample size for this research testing.

3.4.   Event Window and Announcement Date:

Most cross-border expansion studies employ short event windows in examining cumulative abnormal return from the two preceding days as well as the day of actual announcement. Actually, the period of an announcement is often blown up to multiple days, including at least the day of announcement and the day after announcement.   In stock market, event window is not estimated only on the announcement date, it should be covered a couple of days to check clearly the effect of market on announcement (Masulius, 1980). In addition, leaking information before announcement date also affects the stock returns (Leown&Pinkerton, 1981). Hence, this research is consistent with the previous work. This research employs 100-day

estimation period with 21-day event windows. It means that this event window counts from 10 trading days before announcement date to 10 trading days after announcement date. In other words, the event windows examine range from -10 to +10 in various intervals. There are some reasons to explain why this research chooses the range of (-10, +10) instead of (-20, +20) or (-5, +5) like the other studies. The event window should be maintained as short as possible. However, the period needs to be not too short or too long in order to ensure the impact of stock market around announcement date on stock price when events occur as well as limit the chance that other events influence the result of this research. Therefore the range of (-10, +10) is the most appropriate to conduct the test in event study. This research also considers 100 trading days (or (-110, +10)) before event window in estimation period. The reason for choosing the range of 100 trading days for estimation window is that it is not too long as well as not too short to examine the relationship between the stock's prices and the market. This time line for estimation window and event window is used not only for VN-30 companies but also VN-index in order to compute the returns of the market index.

In addition, this research chooses the announcement date on January 3rd2014.The reason is that this is the day the government issued the changing foreign ownership decree. When the decree was issue, there would be stocks' fluctuation surrounding the announcement date due to investors' psychology. Therefore that date is the most suitable day to test the impact of stocks' reaction over the announcement.
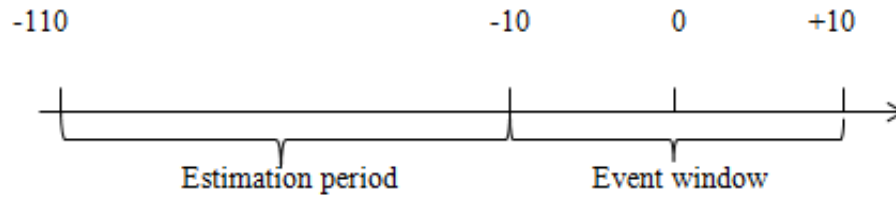
Figure 3: The event window and estimation period of event study

3.5. Performing Testing:

As mentioned above, the event study methodology is used to evaluate the impact of each expansion announcement on firm value and is inspired by the efficient market hypothesis. The investors in capital market oversee public information to assess the impact of firm activities on both current and future performance of that company.

After collecting historical closing price of individual stock and relative historical price of market, these data will be applied to formulas in order to calculate actual daily rate of return of stock and actual daily rate of return of stock market.

Actual daily rate of return of stock j on day t when an announcement is published:

$$Return = \frac{(Current\ day\ close\ price - Previous\ day\ close\ price)}{Previous\ day\ close\ price}$$

On the other hand, this research also has to calculate the actual rate of return of stock market on day t

$$R\ (VN\ index_t) = \frac{(VN\ index_t - VN\ index_{t-1})}{VN\ index_{t-1}}$$

Then, a number of intermediate calculations must be performed before event window ARs can be measured. Ultimately, this research is going to compute a SAR for each firm and for each day in the event window. In order to do that, we will need to follow the formula below:

$$SAR_{jt} = \frac{AR_{jt}}{\sqrt{S^2_{AR_{jt}}}}$$

Where, SAR_{jt} = standardized abnormal return for firm j at time t

AR_{jt} = abnormal return for firm j at time t

$\sqrt{S^2_{AR_{jt}}} = S_{AR_{jt}}$ = square root of the variance of the abnormal

return for firm j at time t

= standard deviation of the AR for firm j at time t

The calculation of abnormal return is quite straight forward. The following formula is used to calculating the variance $S^2_{AR_{jt}}$:

$$S^2_{AR_{jt}} = \left(\frac{\sum_{t=-110}^{-11}(AR_{jt(est.period)} - \overline{AR}_{j(est.period)})^2}{D_j - 2}\right)$$

$$* \left(1 + \frac{1}{D_j} + \frac{(R_{mt(evt.window)} - \overline{R}_{m(est.period)})^2}{\sum_{t=-110}^{-11}(R_{mt(est.period)} - \overline{R}_{m(est.period)})^2}\right)$$

In which,

$$s^2_{AR_{jt}}$$ = variance of the abnormal return for firm j at time t

$$AR_{jt(est.period)}$$ = abnormal return for firm j at time t over the estimation period

$$\overline{AR}_{j(est.period)}$$ = mean abnormal return for firm j over the estimation period

$$D_j$$ = number of observation trading day returns for firm j over the estimation period

$$R_{mt(evt.window)}$$ = return on the market (VN-index) at time t over the event window

$$R_{mt(est.period)}$$ = return on the market (VN-index) at time t over the estimation period

$$\overline{R}_{m(est.period)}$$ = mean return on the market (VN-index) over the estimation period

Now, the preliminary calculations are out of the way. The next step is computing abnormal returns for each stock over all days in the event window.

$$AR_{jt(evt.window)} = R_{jt(evt.window)} - \alpha_{j(est.period)}$$
$$-\beta_{j(est.period)} * R_{mt(evt.window)}$$

In which,

$$AR_{jt(evt.window)} =$$ abnormal return on stock j for each day in the event window

$$R_{jt(evt.window)} \quad = \quad \text{return on stock j for each day in the event window}$$

$$\alpha_{j(est.period)} \quad = \quad \text{intercept term for stock j measured over the estimation period}$$

$$\beta_{j(est.period)} \quad = \quad \text{slope term for stock j measured over the estimation period}$$

$$R_{mt(evt.window)} \quad = \quad \text{return on the market for each day in the event window}$$

The alpha and beta will be calculated through Excel by using statistical function of INTERCEPT and SLOPE in the range of -110 through -11

Then, it is a need to compute the total standardized abnormal returns $(TSAR_t)$ for each day in the event window by calculating the sum of SAR.

$$TSAR_t = \sum SAR_t$$

The next step is to determine whether the total standardized abnormal returns results are significant for each day in the event window or not. The formula for Z-statistic on the $TSAR_t$ is given by the equation below:

$$Z - statistic_t = \frac{TSAR_t}{\sqrt{\sum_{j=1}^{N} \frac{Dj-2}{Dj-4}}}$$

In which,

$$Z - statistic_t \quad = \quad \text{Z-statistic for each day in the event window}$$

$$TSAR_t \quad = \quad \text{total standardized abnormal returns for each day in the event window}$$

$$D_j \qquad = \quad \text{number of observed trading day returns}$$
$$\text{for firm j over the estimation period}$$
$$N \qquad = \quad \text{number of firms in the sample}$$

After calculating Z-statistic for TSARt, it's time for computing the cumulative TSAR. The formula for the cumulative TSAR is very straight forward. The test statistic that is used to measure the level of significance of the results is also performed in the following equations.

$$CumulativeTSAR_{T_1,T_2} = \sum_{t=T_1}^{T_2} TSAR_t$$

In which,

$CumulativeTSAR_{T_1,T_2}$ = cumulative TSAR for each day in the event window

$TSAR_t$ = TSAR for each day in the event window

T_1 = earliest date in the event window (-10)

T_2 = later date in the event window (range from -10 through +10)

$$Z_t = \left(\frac{1}{\sqrt{N}}\right)\left[\frac{\left(\sum_{T_1}^{T_2} SAR_{jt}\right)}{\sqrt{(T_2 - T_1 + 1)\left(\frac{D_j-2}{D_j-4}\right)}}\right]$$

Where, Z_t = the cumulative TSAR Z-statistic for each day in the event window

N = number of firms j for each day in the event window

SAR_{jt} = SAR for firm j for each day in the event

window

T_1 =   earliest date in the event window (-10)

T_2 =   later date in the event window (range from -10 through +10)

D_j =   number of observed trading day returns for firm j over estimation period

The next step is applying the results to hypotheses and testing the significance of the result. The hypotheses can be formed as below:

Null Hypothesis   : H_0: $\mu = 0$

Alternative Hypothesis   : H_1: $\mu \neq 0$

As mentioned above, this research chooses Z-test for testing each interval of $TSAR_t$ and $CumulativeTSAR_{T_1, T_2}$. P value will be obtained from test statistic. α is the smallest level of significance whether reject null hypothesis or not. If the P-value is below 0.05, the results are significant at the 95% level. Besides, if the P-value is below 0.01, the results are significant at the 99% level. This research decides to obtain $\alpha = 5\%$, corresponding to the meaning that 95% the null hypothesis is true. If P value is more than α, there is strong evidence to accept the null hypothesis, and vice versa.

The hypotheses testing:

H_{0a}: There are no significant total standardized abnormal returns in the event observation or there is no stock reaction on changing foreign ownership announcement.

H_{1a}: There are significant total standardized abnormal returns in the event observation or there is stock reaction on changing foreign ownership announcement.

H_{0b}: There are no significant cumulative total standardized abnormal returns in the event observation or there is no stock reaction on changing foreign ownership announcement.

H_{1b}: There are significant cumulative total standardized abnormal returns in the event observation or there is stock reaction on changing foreign ownership announcement.

Thus we test the hypothesis:

H_{0a}: $TSAR_t = 0$ $\qquad\qquad\qquad$ H_{0b}: $CumulativeTSAR_{T_1, T_2} = 0$

H_{1a}: $TSAR_t \neq 0$ $\qquad\qquad\qquad$ H_{1b}: $CumulativeTSAR_{T_1, T_2} \neq 0$

3.6. Conclusion:

This chapter briefly described the research approach, data collection, sample size. Then this research discussed about how to choose the event window period and announcement date. And last, all data collected would be applied to formula to calculate TSAR and Cumulative TSAR. After that, the result would be used to test the statistical hypothesis.

CHAPTER IV

RESULTS

This section will indicate how VN-30 companies react to the changing foreign ownership announcement through the results calculated based on formulas from the previous chapter. The test is conducted with total standard abnormal returns and cumulative total standard abnormal returns over 21 days.

4.1. Overview the data used to estimate the results:

In the previous chapter, this research performed some statistical formulas and conducted hypotheses as a preparation for testing the significance of both total standardized abnormal returns and cumulative total standardized abnormal returns of stock' prices when the announcement was issued. To estimate the appearance of abnormal returns surrounding the event window period and to find the evidence for proving whether the hypotheses stated make sense or not, the TSAR and the Cumulative TSAR of chosen firms are estimated in the event window of (-10,+10).

First, after collecting the data from the market and rearrange the data into suitable positions, the first step is calculating returns from each firm and market's returns in the range of -10 through +10. Because this research tests the affection of only one announcement, the VN-index returns' values from day -10 to day +10 are the same for each stock when calculating the abnormal returns in the later steps. Besides, the results of 30 firms' returns are performed clearly in the excel file. The table below shows the value of VN-index returns in the range of event window period.

Table 1: VN-index returns from day -10 to day +10

Days	VN-index returns
-10	0.002175
-9	-0.00376
-8	0.008489
-7	-0.00611
-6	-0.00238
-5	0.004352
-4	-0.00039
-3	-0.01192
-2	0.008358
-1	-0.0002
0	0.001782
1	0.007294
2	0.001962
3	0.007422
4	0.006014
5	0.003668
6	0.004231
7	0.0023
8	0.008389
9	0.012828

10	0.018755

According to the table 1, the VN-index returns are almost negative in the 10 days before the announcement is published. However, this numbers become positive in day 0 and the following days. The highest value is about 0.018755 in day 10, and the lowest value is about -0.01192 in day -3. The VN-index returns are also computed in the estimation period to get the estimation period firm residuals from day -110 to day -11.
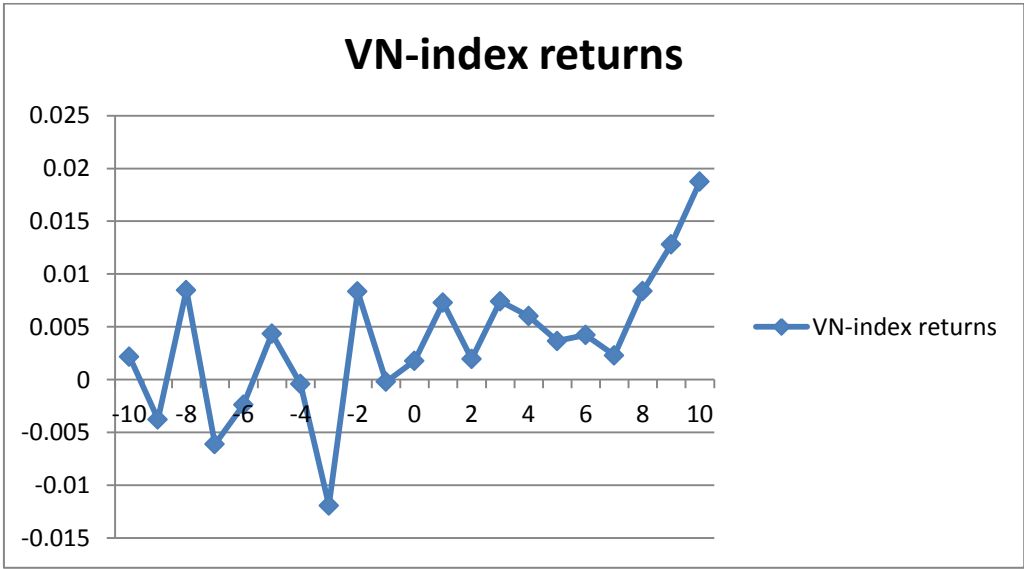
Figure 4: VN-index return from day -10 to day +10

The next important step is computing alpha, beta, variance in firm residuals and variance in market residuals. These calculations are conducted based on the estimation period, or the range of -110 through -11. This is an important step because the result is the intermediation in order to get the abnormal returns for each stock in day t. Also, the result of variance in firm residuals and variance in market residuals are very useful to help calculate the "maximum likelihood estimation of the

variance use in SAR". Besides, the variable Qt is also computed as the intermediate calculation to get Z-statistics on TSAR. (Table 2)

Table 2: Estimation Period Statistics and Intermediate Calculations to get Z-statistics on TSAR

Estimation Period Statistics:	
Alpha	-0.00145133
Beta	2.107444037
Variance in Firm Residuals	0.000129749
Variance in Market Residuals	0.004640819
Other: (intermediate calculations to get the Z-statistics on TSAR)	
Qt	1.020833333

The table 3 performs the result of event window market residuals and maximum likelihood estimation of the variance used in SAR from day -10 to day +10 by using variance in firm residuals, variance in market residuals and VN-index returns' value. According to the table 3, the maximum likelihood estimation of the variance used in SAR fluctuates between 0.073230155 and 0.000192572 in the event window period.

Table 3: Event Window Market Residuals and Maximum Likelihood Estimation of the Variance used in SAR from day -10 to day +10 relative to the announcement date

Days	Event Window Market Residuals	Maximum Likelihood Estimation of the Variance used in SAR
-10	3.38133E-06	0.000859653
-9	1.67766E-05	0.003746054
-8	6.64665E-05	0.014453193
-7	4.15865E-05	0.009092068
-6	7.35705E-06	0.001716338
-5	1.61281E-05	0.003606323
-4	5.34384E-07	0.000246195
-3	0.000150191	0.03249407
-2	6.43542E-05	0.013998043
-1	2.85525E-07	0.000192572
0	2.09151E-06	0.000581724
1	4.84154E-05	0.010563556
2	2.64444E-06	0.00070087
3	5.0208E-05	0.010949825
4	3.224E-05	0.007078105
5	1.11033E-05	0.002523579

6	1.51681E-05	0.00339946
7	3.85739E-06	0.000962234
8	6.48483E-05	0.014104498
9	0.000156045	0.033755485
10	0.00033924	0.073230155

Then, this research calculates the abnormal returns, standardized abnormal returns and then the total standardize abnormal returns by using statistical formulas mentioned in the previous chapter. Then the Z-test will be applied to compute the Z-statistic for total standardized abnormal returns in the event window period. The process of computing these values is shown in detail in Excel file.

4.2.   Total Standardized Abnormal Returns:

Table 4 below implies the result of calculation processing mentioned above. The table is a summary about the total standardized abnormal returns in the range of day -10 through day +10, with their P-values which indicate the significance of total standardized abnormal returns in companies during the event window.

Table 4: Total standardized abnormal returns and their P-value in event window period starting from day -10 to day +10 relative to the announcement date

Days	**(Total SAR)** **TSAR**	**TSAR** **p-value**
-10	0.575205195	0.9172166
-9	-1.255599492	0.8205102

-8	-0.0883862	0.9872571
-7	-0.028960757	0.9958245
-6	-1.063070541	0.847665
-5	-2.920033912	0.597739
-4	-6.054286319	0.2739466
-3	-0.458048416	0.9340344
-2	1.026152301	0.8528939
-1	-4.087819586	0.4601041
0	-3.287517642	0.5524722
1	0.609786078	0.9122592
2	-3.933947687	0.4771644
3	-0.043105861	0.9937851
4	0.88030974	0.8736111
5	-5.789428563	0.2954877
6	-3.40711039	0.5381122
7	5.120819081	0.354789

8	-1.455783065	0.7925026
9	-1.098304781	0.8426809
10	-1.190326719	0.8296941

According to the table 4, all of the total standardized abnormal returns are different from zero. Besides, the values of the total standardized abnormal returns fluctuate from -6.054286319 to 5.120819081 from day -10 to day +10 (lowest value in day -4 and highest value in day 7). The table implies that almost values of the total standardized abnormal returns are negative, except in day -10, day -2, day 1, day 4, day 7 and not stable at all. In addition, all the p-values seem to be more than 0.05, which do not support significance for values of the total standardized abnormal returns. It means that there is unfavorable behavior in VN-30 companies in the whole event window period. Even in the announcement date, there is still no signal about the significance of the total standardized abnormal returns.

The result of table gives no evidence about the existence of significant total standard abnormal returns in the period from 10 days before to 10 days after announcement date. The results seem not to support the alternative hypothesis H_{1a} but support the null one. As a result, this research should accept the null hypothesis H_{0a} or it can state: "There are no significant total standardized abnormal returns in the event observation or there is no stock reaction on changing foreign ownership announcement."
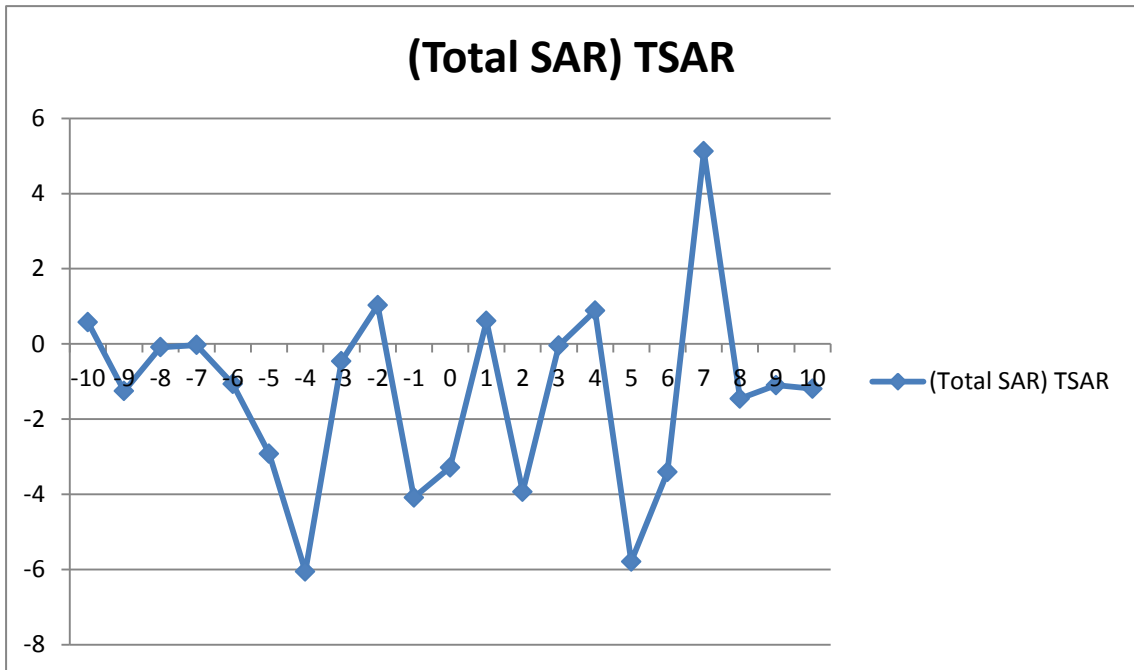
Figure 5: Total standardized abnormal returns starting from day -10 to day +10 in the event window

4.3. Cumulative Total Standardized Abnormal Returns:

After calculating the total standardized abnormal returns, the next step is calculating the cumulative total standardized abnormal returns. It is conducted by adding up the total standardized abnormal returns in the range of day -10 through day +10. Therefore, the cumulative total standardized abnormal returns in the day +10 is the sum of the total standardized abnormal returns gained in the whole period of event window. The table 5 below is a summary about the result of the cumulative total standardized abnormal returns and their p-values in each day of event window.

The table 5 shows that the cumulative total standardized abnormal returns in the range of day -10 through day +10 are not fluctuated as much as the value of total standardized abnormal returns and it has a down trend in value. It implies that in these days, investors cannot earn any returns at all.

Table 5: Cumulative total standardized abnormal returns and their P-value in event window period starting from day -10 to day +10 relative to the announcement date

Days	Cumulative TSAR	Cumulative TSAR p-value
-10	0.575205195	0.917216576
-9	-0.6803943	0.933402407
-8	-0.7687805	0.935665834
-7	-0.79774125	0.944362313
-6	-1.8608118	0.884104878
-5	-4.78084571	0.733843262
-4	-10.835132	0.4676593
-3	-11.2931804	0.508878388
-2	-10.2670281	0.577755855
-1	-14.3548477	0.443699318
0	-17.6423654	0.337663951

1	-17.0325793	0.383401072
2	-20.966527	0.302962415
3	-21.0096328	0.30444429
4	-20.1293231	0.343670031
5	-25.9187517	0.240485225
6	-29.3258621	0.200047513
7	-24.205043	0.304909589
8	-25.660826	0.290129128
9	-26.7591308	0.282728667
10	-27.9494575	0.275101333

Together with the cumulative total standardized abnormal returns, the p-values from Z-test confirm that all the values of cumulative total standardized abnormal returns in those days are insignificant. Therefore, the result of table gives no evidence about the existence of significant cumulative total standard abnormal returns in the period from 10 days before to 10 days after announcement date. The results seem not to support the alternative hypothesis H_{1b}; therefore, this research should accept the null hypothesis H_{0b} or it can state: "There are no significant cumulative total standardized abnormal returns in the event observation or there is no stock reaction on changing foreign ownership announcement."

Hence, this research concludes that stock's prices of the chosen firms seem not to have much response to the new announcement over the event window period.
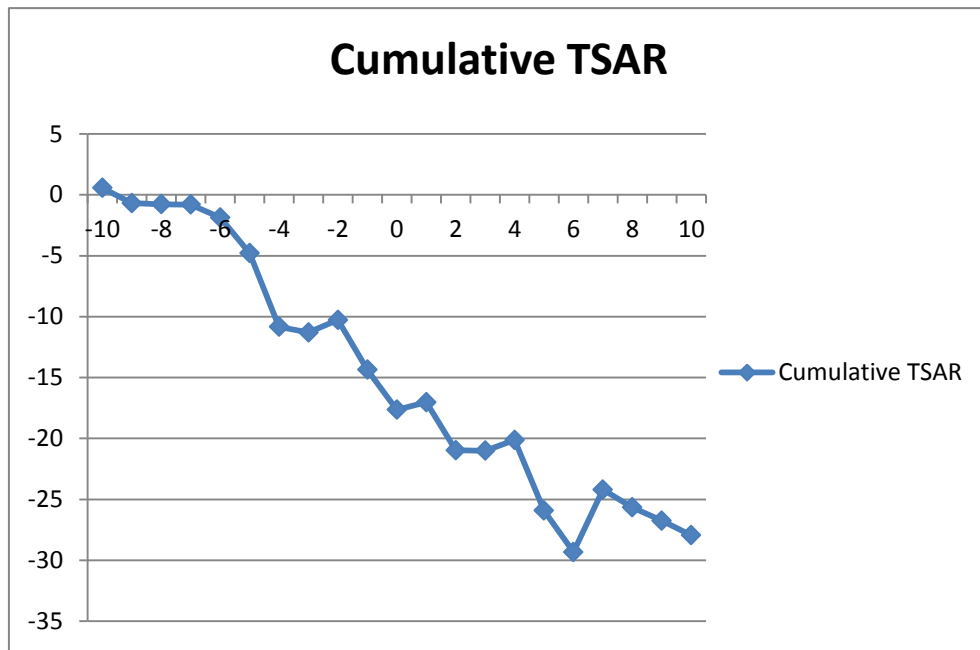
Figure 6: Cumulative total standardized abnormal returns starting from day -10 to day +10 in the event window

4.4. Performance of stock market during the event window:

Table 6 and table 7 show the cumulative total standardized abnormal returns in the range of day -1 to day +1and day -2 to day +2 in order to test whether there is existence of the abnormal returns surrounding the announcement dateor not.

According to the table 6, the cumulative total standardized abnormal returns values fluctuate a little bit from day -1 to day +1. It can be said that all of the results indicate negative values. The p-value from the test-statistics does not give any evidence to support the significance of total standardized abnormal returns in the whole intervals.

Table 6: Cumulative total standardized abnormal returns and their P-value in event window period starting from day -1 to day +1 relative to the announcement date

Days	Cumulative TSAR	Cumulative TSAR p-value
-1	-4.087819586	0.46010409
0	-7.375337228	0.345995041
1	-6.76555115	0.480289423

Besides, the results in table 7 indicate a negative cumulative total standardized abnormal return in the range of day -2 to day +2. Like the table 6, the p-value from the test-statistics does not give any evidence to support the significance of total standardized abnormal returns in testing intervals.

Table 7: Cumulative total standardized abnormal returns and their P-value in event window period starting from day -2 to day +2 relative to the announcement date

Days	Cumulative TSAR	Cumulative TSAR p-value
-2	1.026152301	0.852893864
-1	-3.061667285	0.695645346
0	-6.349184927	0.507715904

1	-5.739398849	0.604068152
2	-9.673346536	0.43437653

.

Generally, stock's prices often fluctuate sharply in the period surrounding day 0 of the event window. However, in this case, the results imply insignificant cumulative total standard abnormal returns in the event observation, which means there is no stock reaction on the announcement in testing period. Hence, it can be concluded that the investors cannot gain any excess returns that in the intervals surrounding the announcement date.

As mentioned above, in semi-strong efficient market, sometimes investors get leak information before the official day of the news, which can make stock's prices fluctuate in the period before the announcement is published. After examining some particular periods surrounding the day the government issued the announcement, this research continues testing some periods before the announcement date in order to exploring whether there are leak information in these periods or not. If the information is leaked before the announcement is issued, it will affect the stock's prices in the stock market.

Table 8 shows the results of cumulative total standardized abnormal returns and their p-value in period (-10, -1), (-5, -1) and (-3, -1). According to the table, the cumulative total standardized abnormal returns are negative with insignificant p-value for each period. Therefore, it can be concluded that there is no evidence about the information leakage as well as existence of significant abnormal returns in the period before the announcement date.

Table 8: Cumulative total standardized abnormal returns and their P-value in some periods before the announcement date

Period	Cumulative TSAR	Cumulative TSAR p-value
(-10, -1)	-14.35484773	0.412058208
(-5, -1)	-12.49403593	0.312653145
(-3, -1)	-3.519715701	0.713465906

Similarly, this research also examines some particular periods after the announcement date. Table 9 shows the results of cumulative total standardized abnormal returns and their p-value in period (0, 1), (0, 3), (0, 5) and (0, 10). The results from the table imply that the cumulative total standardized abnormal returns are negative for each period. Besides, the p-values from the test-statistics are also more than 0.05, which does not give any evidence to support the significance of total standardized abnormal returns in testing intervals.

Table 9: Cumulative total standardized abnormal returns and their P-value in some periods after the announcement date

Period	Cumulative TSAR	Cumulative TSAR p-value
(0,1)	-2.677731564	0.732239525
(0,3)	-6.654785112	0.547663435
(0,5)	-11.56390394	0.393613808

(0,10)	-13.59460981	0.458885691

In conclusion, there is no existence of both total standardized abnormal returns and cumulative total standardized abnormal returns in the event window period. The results indicate that the announcement has no impact on the stock's prices in VN-30 companies.

CHAPTER V

DISCUSSION

In the previous chapter, this research shows the results about the test with several possible implications. This chapter will give some reasonable explanations about the behavior of stock's prices in the surrounding period of announcement date.

5.1. Discussion about behavior of stocks market to the changing foreign ownership announcement:

After examining the event study analysis about how stock's prices fluctuate when the changing foreign ownership announcement is published, this research indicates some findings about stock's prices behavior in surrounding period of event window.

First, unlike the expectation, the results show that the market has no reaction to the new information on the announcement date, even though this is a quite important announcement from the government. As mentioned above, announcement date is the day the news is officially issued to the market; therefore, it is the most important day of event window. Generally, some previous studies have implied that the stock's prices often fluctuate sharply in announcement date. However, in this case, there is nothing unusual happened. The result does not give any evidence to support the significance of total standardized abnormal returns on this day. Therefore, it can be concluded that the investors also cannot gain any positive abnormal returns on the day announcement issued.

Besides, there is no evidence to prove about the significance of total standardized abnormal returns gained in 10 days before the announcement date. Also, the excess returns in 10 days after the announcement date also indicate that nothing is unusual in the stock market. Although the total standardized abnormal returns seem to be fluctuated in every single day, there are no statistical significant total standardized abnormal returns during these days of the event window period. P-value of both the total standardized abnormal returns and the cumulative total standardized abnormal returns in the range of day -10 to day +10 indicate that this research cannot reject the null hypotheses. After accepting two null hypotheses H_{0a} and H_{0b}, there is strong evidence to conclude that raising foreign ownership announcement has no impact on stock's prices or the investors cannot gain any abnormal returns in 10 days before and 10 days after the announcement date.

To sum up, this research concludes that stock's prices of the chosen firms seem not to have much response to the new announcement over the event window period, which fell short of research expectation. In the next part of this chapter, this research will give some explanations about the behavior of stock's prices in the surrounding period of announcement date.

5.2. Explanations for behaviors of stock's prices during the changing foreign ownership announcement:

The results of testing stock's prices reaction to the changing foreign ownership announcement have shown that the announcement take no affection over the stock's prices of VN-30 companies in surrounding period of event window. This finding is contrary to what this research expected from the beginning. The reason below will explain the behavior of stock's prices during the changing foreign ownership announcement.

As mentioned before, there was appearance of rumors about raising "room" for foreign ownership partners at the end of the year 2013. This leaked information

gave hope for a lot of investors on Vietnam stock exchange who actively seek foreign investment inflow into domestic market because in such economic demand, the rumor once comes true, can become the very premise for the other announcements relating to foreign strategic ownership of the government. Based on behavioral finance, once the good news which can help satisfy the investors' expectation appears in the market, it will make the stock market fluctuate. Apparently, in the moment the rumor appeared, it might have some certain affection to stock's prices in the market due to the investors' psychology. However, it took several months from the day which the rumor spread to the announcement date, which might affect the investors' enthusiasm to the changing foreign ownership announcement. Besides, the rumor made the information about raising foreign ownership not new to the investors, therefore, when the real announcement was published, it was not a sudden or surprise, just like a predictable appearance, which might also affect the interest of the investors to the announcement. Hence, the stock market does not have significant affection by the announcement in this case.

CHAPTER VI

CONCLUSION AND RECOMMENDATION

This is the last chapter of this research. At first, this chapter will conclude some assessment of the main findings and then discuss about the limitations and recommendations for the next studies.

6.1.   Conclusion of the research:

Changing foreign ownership announcement is a very important announcement of the government because it takes certain affections over Vietnam Banking System. This announcement is an in-time solution of the government that helps resolve one of difficult and urged problems relating to foreign ownership of Vietnam economy in recent years.

The research is conducted with the purpose of examining whether the stock's prices of VN-30 companies can make abnormal returns when the changing foreign ownership is published or not. To determine whether the investors can make excess returns from these listed companies' stock prices, this research use event study as a useful and appropriate method to test the existence of total standardized abnormal returns and cumulative total standardized abnormal returns in the range of day -10 through day +10 in the event window.

After conducting the event study analysis on the market reaction to the changing foreign ownership announcement, the findings imply that the market has no impact to the new information. It means that the changing foreign ownership may not be really attractive enough to force the investors to trade more surrounding the announcement period. The reason may come from the appearance of rumors in

several months before the day the government issued the new announcement. The existence of rumors in the long time might affect the enthusiasm and interest of investors to the stock market when the real announcement is issued officially.

6.2. Limitations and recommendations:

Like previous studies, this research has its own limitation. First, secondary data is another limitation of this research. It seems to be easy to make errors when collecting and processing data. Hence, the process of collecting data should be conducted carefully to prevent errors and mistakes. In addition, this research just focuses on VN-30 companies. It means this study just measures the reaction of stock's prices of companies listed in the HOSE.

From limitations above, this research suggest some recommendations for the following studies in the same interest. First, this research recommends that the future studies should expand the scope of research, may enlarge the number of companies or include the companies in HNX for the observations. Second, the next researches should expand the scale of the study to detect the strong evidence of other effects and insider trading if necessary.

6.3. Conclusion:

In conclusion, because this is the first research about the new announcement relating to changing foreign ownership of the government, it cannot avoid lack of experience. This research helps others understand more about the Vietnam stock market. Moreover, this research can be useful for investors who are interest in abnormal returns on stock investment. Also, for the government, the research can help to control and manage the stock market more efficiently. Finally, the result can contribute a part to the information resources and become useful for

other researchers who are interested in this kind of announcement in Vietnam stock market.

LIST OF REFERENCES

1. Adelegan O.J (2003) Capital Market Efficiency and the Effects of Dividend Announcements on Share Prices in Nigeria. *African Development Review,* 15, 218 − 236.

2. Agrawal A, Jaffe, J.F & Mandelker, G.N (1992). The Post-Merger Performance of Acquiring Firms: A Re-examination of Anomaly, *The Journal of Finance,* 16, pp1605 − 1621.

3. Asquith, P & Kim, H.E (1982), The Impact of Merger Rids on the Participating Firms Security Holders, *The Journal of Finance,* 37, pp 1209 − 1228.

4. Asquith, P and Paul Malatesta. (1983), Poison Pill Securities: Stockholder Wealth, Profitability and Ownership Structure. *Journal of Financial Economics* 15, pp 100 − 141.

5. Bachelier, Louis (1900) trans, James Noness, *"Theory of Speculation"* in Cootner (1964), pp 17 − 78.

6. Ball, Ray and Philip Brown (1968), "An Empirical Evaluation of Accounting Income Numbers"*, Journal of Accounting Research,* 6, pp159 − 178.

7. Bashir, M.R Sajid and F. Sheikh (2011), The impact of Merger and Acquisitions on Shareholders Wealth: Evidence from Pakistan. *Middle-East Journal of Scientific Research* 8(1): 261 − 264.

8. Bernstein, Peter (1992), *Capital Ideas: The Improbable Orgins of Modern Wall Street,* Free Press.

9. Brown & Warner (1980) and Fama (1991). Event Studies which Focus on Long − Horizons Following An Event Can Provide Key Evidence on Market Efficiency. *The Journal of Finance,* 46 (5), pp 1575 − 1617.

10. Brown J, B. Warner (1985), Using Daily Stock Returns: The Case of Event Studies. *Journal of Financial Economics,* 8, 105 – 138.

11. Chang, L. C. 2003. An examination of cross – cultural negotiation: Using Hofstede framework. *Journal of American Academy of Business,* Vol. 2, No. 2, pp. 567 – 570.

12. Chakraborty (2006), Ali and Akbar (2009). Reaction of stock prices to dividend announcements and market efficiency in Pakistan. *TheLahore Journal of Economics,* no 6 – 9.

13. Cootner, Paul (ed.) (1964). *The Random Character of Stock Market Prices,* MIT Press.

14. Debondt, Werner F.A and Richard Thaler, 1985, Does the stock overreact? *Journal of Finance* 42, 557 – 581.

15. Dimson, Rlroy and MassoudMussavian (eds) (2000a). *Foundations of Finance Volume I: Market Efficiency,* Dartmouth Publishing Company.

16. Dolley, James Clay, "Characteristics and Procedure of Common Stock Split-Ups". *Harvard Bus. Rew,* Apr 1933, 11, pp 316 – 326.

17. Dhillon and Jhonson (1994). Dividends and dividend policy.*Kolb series in Finance,* pp 168 – 465.

18. Dodd and Ruback (1977), Tender Offers and Stockholder Returns: An Empirical Analysis. *Journal of Financial Economics,* 5, pp 351 – 374.

19. Doms, M. E. and Jensen, J.N., 1995. Geography and Ownership as Bases for Economics Accounting. The University of Chicago Press, Ch. Comparing wages, skills, and productivity between domestically and foreign-owned manufacturing establishments in the United States, pp. 235-258.

20. Dmitry Krivin, Robert Patton, Rose and David Tabak (2003), Determination the Appropriate Event Window Length in Individual Stock Event Studies, URL: http://www.nera.com/image/6394.pdf (besucht am 28.03.2009).

21. Ederington and Lee (1995), The short-run dynamics of the price adjustment to new information, *Journal of Financial and Quantitative Analysis* 30: 117 – 134.

22. Ellert, J.C (1976), Merger, Anti-Trust Law Enforcement and Stockholder Returns *Journal of Finance* 31 (1976), pp715 – 732.

23. Eugene F. Fama& James D Macbeth (1973). "Risk, Return and Equilibrium: Empirical Test". *The Journal of Political Economy,* vol 81, no3, pp 607 – 636.

24. Fama, Eugene (1970). "Efficient Capital Markets: A Review of Theory and Empirical Work", *Journal of Finance,* 25, pp 383 – 417.

25. Fama, Eugene, Lawrence Fisher, Michael Jensen and Richard Roll (1969), "The Adjustment of Stock Prices to New Information", *International Economic Review,* 10, pp 1 – 21.

26. Foster and Vickery (1978). Prior Research on Stock Dividends and Splits.*Business & Economics.*Vol 28, pp 85 – 100.

27. Fumiko Takeda and TakanoriTomozawa (2006)."The reactions of Japanese stock to the Release Environmental Management Ranking", *Economics Bulleetin,* Vol 13, nô, pp 1 – 4.

28. Frank, J, Harris, R & Titman. S (1991), The Post-merger Share price Performance of Acquiring Firms. *Journal of Financial Economics,* 29, 81 – 96.

29.Froot, K, and Stein, J., 1991. Exchange Rates and Foreign Direct Investment: An Imperfect Capital Markets Approach. Quarterly Journal of Economics, 106:4, pp. 1191-1217.

30. Girma, S. and Goerg, H., 2007. Evaluating foreign ownership wage premium using a difference-indifferences matching approach. Journal of International Economics72, 97-112.

31. Harris, R. and Ravenscraft, D., 1990. The Role of Acquisitions in Foreign Direct Investment: Evidence from the U.S. Stock Market. The Journal of Finance, Vol. 46, No. 3, 825-844.

32. Jarrell GA, Poulsen AB (1989). The return to acquiring firms in tender offers: Evidence from three decades. *Financial Management* 18: 12 – 19.

33. Jensen, M.C &Ruback. R.S (1983).The Market for Corporate Control.*Journal of Financial Economics,* 11, pp 5 – 50.

34. IsfandiyarShaheen (2006). Stock Market Reaction to Acquisition Announcements using and Evvent Study Approach.*Department of Economics* ECO490, pp 2 – 50.

35. Kang J (1993). The international market for corporate control-mergers and acquisitions of US firms by Japanese firms. *Journal of Financial Economics* 34: 345 – 371.

36. Kong &Taghavi (2006). The Effect of Annual Earnings Announcements on the Chinese Stock Markets.*International Advances in Economic Research,* 12, 318 – 326.

37. K. Y. Cheung, TuenMun and Anson Wong (2009). The Effects of Merger and Acquisition Announcements on the Security Prices of Bidding Firms and Target Firms in Asia.*International Journal of Economics and Finance,* 1(2): 274 – 279.

38. Langetieg T.C (1978). An Application of a Three – Factor Performance Index to Measure Stockholder Gains from Merger.*Journal of Financial Economics,* 6, pp 365 – 384.

39. Lichtenberg, F.R., Siegel, D., 1987. Productivity and changes in ownership of manufacturing plants. Brookings Papers on Economic Activity 3, 643-683.

40. Mandelker (1974). Implied volatility. Financial Analysts Journal 51, 8 − 20.

41. Mackinlay, A.C (1997), Event Studies in Economics and Finance, *Journal of Economic Literature,* 35(1), pp 13 − 39.

42. Mc. Williams and Siegel. D (1977) "Event Studies in Management Research: Theoretical and Empirical issues". *Academy of Management Journal,* Vol 40, no 3, pp626 − 657.

43. Michell, Stafford * Pulvino (2004). Price pressure around mergers.*Journal of Finance* 59: 31 − 63.

44. Nick, G and Frank, B. 2007. U.S Mergers and Acquisitions: A Test of Market Efficiency. *Journal of Finance and Accountancy,* 2 − 9.

45. Pettit, R, 1972. Dividend announcements, security performances and capital market efficiency, *Journal of Finance,* 27 (5), 993 − 1007.

46. Panayides and Gong (2002). Meger control in Europe: the gap in the ECMR and national merger legislations. *Routlegde Research in Competition Law.*pp 3 − 264.

47. Ross, S.(2008). *Corporate Finance* (Stephen A. Ross, Randolph W. Westerfield, Jeffery Jaffe − 8[th]ed.) United States: McGraw − Hill Companies.

48. SanjaiBhagat and Roberta Romano (2007). Empirical Studies of Corporate Law, *For "Handbook of Law and Economics",* pp 2 − 108.

49. Sanjai, B and Roberta, R 2001. Event studies and the law. Yale ICF working paper, 00 − 33: Yale law & economics research paper, 259, 3 − 8.

50. Samuelson, Paul (1965), "Proof That Properly ANTICIPATED Prices Fluctuate Randomly". *Industrial Management Review,* 6, pp 41 – 49.

51. Scholes MS. (1972) The market for securities: substitution versus price pressure and the effect of information on share price. *Journal of Business.*45: 179 – 211.

52. S Easton and N.A Sinclair (1989). The Impact of Unexpected Earnings and Dividends on Abnormal Returns to Equity' Accounting and Finance, *Financial Accounting theory,* pp1 – 19.

53. Smiley, R (1976). Tender Offers, Transaction Costs and the Theory of the Firm, *Review of Economics and Statistics,* 58, 22 – 23.

APPENDIX

No.	Symbol	Company's name
1	BVH	Bao Viet Holdings
2	CII	Hochiminh City Infrastructure Investment Joint Stock Company
3	CSM	The Southern Rubber Industry Joint Stock Company
4	CTG	Viet Nam Joint Stock Commercial Bank For Industry And Trade
5	DPM	PETROVIETNAM FERTILIZER AND CHEMICALS CORPORATION
6	DRC	Danang Rubber Joint Stock Company
7	EIB	Vietnam Export Import Commercial Joint Stock Bank
8	FPT	FPT Corporation
9	GMD	Gemadept Corporation
10	HAG	HAGL Joint Stock Company
11	HPG	HoaPhat group Joint stock company
12	HSG	HoaSen Group
13	IJC	Becamex Infrastructure Development Joint Stock Company.
14	ITA	Tan Tao Investment and Industry Corporation
15	KDC	Kinh Do Corporation
16	MBB	Military Commercial Joint Stock Bank
17	MSN	Ma San Group Corporation
18	OGC	Ocean Group Joint Stock Company.
19	PET	Petrovietnam General Services Corporation
20	PGD	Petro Viet Nam Low Pressure GAS Distribution Joint Stock Company
21	PPC	Pha Lai Thermal Power Joint Stock Company

22	PVD	Petrovietnam Drilling & Well Service Corporation
23	PVT	PetroVietNam Transportation Corporation
24	REE	Refrigeration Electrical Engineering Corporation
25	SSI	SaiGon Securities Incorporation
26	STB	SaiGonThuong Tin Commercial Joint Stock Bank
27	VCB	Joint Stock Commercial Bank For Foreign Trade Of Viet Nam
28	VIC	VINGROUP Joint Stock Company
29	VNM	Viet Nam Dairy Products Joint Stock Company
30	VSH	Vinh Son – Song Hinh Hydropower Joint Stock Company

Appendix: List VN-30 companies listed on HOSE