THE ANNOUNCEMENT EFFECTS OF INSIDER TRADING

by

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80O728

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DECLARATION

I hereby declare that the project paper is based on my original work except for quotations and citations that have been duly acknowledge. I also declare it has not been previously or concurrently submitted for any other Master's programme at Universiti Utara Malaysia or other institutions.

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ABSTRACT

This paper examines the insider trading activity in Malaysia. It tries to examine the existence of the abnormal profit from this activity. While developed countries like United States and United Kingdom recently reported that the activity can no longer gives abnormal profit for long period due to laws imposed in those countries, attention now turns to emerging market like Malaysia. By using event study analysis, 200 cases of insider trading activity reported between January 2008 and March 2009 were closely examine and the result shows that while abnormal return do exist, it is mostly not significant. This paper also looks at the individuals and institutional insider and their performances respectively.

Keyword: Insider trading; Event study

ACKNOWLEDGEMENT

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LIST OF ABBREVIATIONS

CAAR   *:*   *Cumulative abnormal returns*

CMSA   *:*   *Capital Market and Service Act*

EMH   *:*   *Efficient market hypothesis*

ITSA   *:*   *Insider Trading Sanctions Act*

SIA   *:*   *Malaysian Securities Industry Act*

SICDA   *:*   *Securities Industry (Central Depositories) Act*

CHAPTER ONE

BACKGROUND OF STUDY

1.1   INTRODUCTION

The efficient-market hypothesis asserts that financial markets are "informationally efficient" in which prices on traded assets will reflect all known information, and instantly change to reflect new information. Therefore, according to theory, it is impossible to consistently outperform the market by using any information that the market already knows. When the market is said to be strong, it indicates no individual can have higher expected trading profits than others because of monopolistic access to information. However this conclusion does not hold in the existence of insider trading.

Insider trading is an activity of trading corporation's stock or any other securities by individuals with potential access to non-public information about the company. The study on insider trading can be categorized into two broad areas. The first area of studies emphasis on insider trading regulation and their reaction to its enforcement. The second topic on insider trading which also attracts reviewer is regarding the profit of the insider.

This study falls into the second category of study as it interested in determining the existence of insider trading activity in Malaysia with aim to prove whether there is a chance for insider dealer to gain abnormal profit.

1.2   PROBLEM STATEMENT

In order to gain abnormal return, insider will have to repeatedly beat the market. In doing so, they will have to pay some attention to the enforcement of laws in that certain country and several hallmarks that could be important in their efforts to beat the market.

In recent years, it is found that insider in developed market such as U.S, Japan and U.K cannot consistently outperform the market. The story is not similar in emerging market like Hong Kong and China as described by Huang (2004), Shen (2007) and Cheuk et.al (2006). Malaysia is also considered as emerging market. Thus, it is interesting to know whether insider can still gain abnormal return in Malaysia under the regulation and supervision of Capital Market and Service Act (CMSA) and Securities Commissions.

The study on insider trading activity in Malaysia is relatively scarce and hardly to be found. This might left one to wonders about the situation in Malaysia. This study will examine if there is insider trading activity in Malaysia and their performance against the market.

1.3   RESEARCH OBJECTIVE

- To investigate whether insider could earn above average return.

1.4   SIGNIFICANT OF STUDY

- <u>Investor</u>

    Helps investor to understand the behavior of insider trading and decide if they should follow the activity of insider.

- <u>Regulators</u>

    Regulators will be able to gauge if their laws and regulation are effective in preventing insider trading.

- <u>Researchers</u>

    Researchers will have an idea on insider trading in Malaysia and whether the situation is similar to other emerging countries.

1.5   CONCLUSIONS

Insider trading activity is viewed as opportunity to insiders to gain profit or at least avoid making losses. With the private information they have, they might decide to either acquire or dispose their shares in advance of expected price performances. Some might argue that this activity is illegal and unethical as it gives advantage to insider to increase their wealth whereas outsiders do not have the ability to do so. Others will endorse this activity by using the simple reason that outsiders can also gain profit by mimicking insider's activity.

This argument encouraged scholars to examined and investigate insider trading activity. This study will investigate whether insider could earn above average return by using the traditional event study analysis. It will also look into the effects of institutional and individual insider in this activity.

The next chapter will reviews literature on this subject. Chapter 3 will be discussing the methodology of this research. All the findings and analysis will be provided in Chapter 4. The last chapter will summarize the whole study.

CHAPTER 2

LITERATURE REVIEW

2.1   INTRODUCTION

This chapter discusses the theoretical and empirical literature on insider trading. The next section reviews some of previous studies done in this topic before. Section 2.3 concludes this chapter.

2.2   LITERATURE REVIEW

Efficient market hypothesis (EMH*)* is among the oldest theory in investment field. It was widely accepted up until the 1990s, when behavioral finance economists, who were a fringe element, became mainstream. The efficient-market hypothesis asserts that financial markets are "informationally efficient", or that prices on traded assets (*e.g.,* stocks, bonds, or property) already reflect all known information, and instantly change to reflect new information. Therefore, according to the theory, it is impossible to consistently outperform the market by using any information that the market already knows.

The theory describes three forms of market efficiency; weak, semi-strong and strong form market. A strong-form market efficient assumes all available public and private information is fully reflected in a security's market price. The strong form, in terms of market participants, also assumes that no individual can have higher expected trading profits than others because of monopolistic access to information. Overwhelming evidence shows that market is not strong form efficient. This is due to insider trading activity done by individuals inside the organization itself who have enough information to decide whether to acquire/dispose their stocks in relative to the 'private' information they have and thus gaining abnormal return.

The studies on insider trading activity have attracted a lot of attention from scholars all over the world. Basically, all studies done on these topics are interested in two broad areas. The first area emphasises on insider trading regulation and their reaction to its enforcement. The second category is regarding the profit from insider trading. Although it is extensively studied, numerous recent studies still try to find new evidence to prove the existence of a strong-form market efficiency while others try to explain the factors allowing insider trading activity of having abnormal profit.

This study falls into the second category of study as it interested in determining the existence of insider trading activity in Malaysia with the objective of investigating whether there is a chance for insider dealer to gain abnormal profit. The compilation and remarks on finding by previous researchers will next be documented in three sections. The first section will give some basic understanding on insider trading and person

involved with it. Second section will give some insight on effect of regulation on insider trading. The discussion on Malaysian Securities Industry Act 1983 (SIA) and the Securities Industry (Central Depositories) Act 1991 (SICDA) will also be covered in this section. The third section of this literature will present the findings by previous scholars regarding the abnormal return and several insiders trading behavior. It is the main motive for this study to correlate the studies and findings from other country and prove whether the situation is identical in Malaysia.

2.2.1 Insider trading

Jaffe (1982) define insider trading as trading done by corporate officers, directors and large stockholder who possess special information about the company. The information they have will assist them in making decision that shall help them in achieving abnormal profit. To sum it all, insider trading is an activity of trading corporation's stock or any other securities by individuals with potential access to non-public information about the company.

Many scholars argue about the correct definition of insider. A definition, however, emerges from activities that are prohibited under the insider-trading provisions and regulation. In recent years, most countries have amended their regulation in defining insider trading with special attention given to broaden the definition of insider.

Insiders in this study are defined by Securities Industry Act 1983 (SIA) as persons who have in their possession information that is not generally available. Basically, it includes persons with fiduciary duties such as CEOs or directors, a member of a director's family, a body corporate which is associated with that director, or a substantial shareholder. In addition, a person who communicates inside information to enable another person to use it for his advantage, the second-mentioned person, known as a "tippee", can also be considered as an insider.

The definition of insider is almost similar in other countries. In the United States and Germany, for mandatory reporting purposes, corporate insiders are defined as a company's officers, directors and any beneficial owners of more than ten percent of a class of the company's equity securities.

Several authors make some classifications in determining insider trading. Arshadi (1998) differentiate insider into three types of which are registered insider, temporary insider and tippees and tippers. Registered insiders are the officers, directors and beneficial owners of 10% or more of a class of registered equity shares. This is also parallel with U.S's Section 16 of the Exchange Act. Temporary insiders are individuals and firms that are not employed by the firm but are temporarily retained for a specific purpose, such as investment bankers, attorneys, and accountants. A tippee is not an insider of the firm but receives material non-public information from either a registered or a temporary insider (the tipper) who passes the information to enable that party to

trade on it. This style of classifying an insider is also supported and being used by other authors like Ohara (2001) and McGee (2007) among others.

The classification also conforms to the list of identified insider trading groups as listed by Beams et.al (2003) with assist from Securities Exchange Commissions (SEC) website. The first group is corporate officers, directors, and employees who traded the corporation's securities after learning of significant, confidential corporate developments. The second group consists of friends, business associates, family members, and other "tippees" of such officers, directors, and employees, who traded the securities after receiving such information. The third group comprises of employees of law, banking, brokerage, and printing firms who are given such information to provide services to the corporation whose securities they traded. Government employees who learned of such information because of their employment by the government are categorized as fourth group while the last group is the other persons who misappropriated and took advantage of confidential information from their employers.

The next step after examining the definition of insider trading and insider is to decide the form of transaction to be selected in the study. Kara and Denning (1998) and Seyhun (1990) excludes any insider trading transaction if it includes any exercise of options, shares acquired from a compensation plan and private transactions. They only considered open market purchases and sales as their variable. Open-market sales and purchases occur more frequently for information reasons as proven by Seyhun. The same method as used by Kara and Denning (1998) and Seyhun (1990) will be employed in this

study. Meanwhile, in terms of insider trading group selected as samples for study, this study will try to cover all five classes of group suggested by Beams et.al (2003) although it will depend a lot on the availability of the data.

2.2.2 Regulation on insider trading activity

Before we discuss about the regulation of insider trading, we must first understand the motives and rationale of insider trading activity. Beams et.al (2003) in their study suggests that guilt had the greatest effect on intent to trade based on insider information. Expected gain, cynicism, and perceptions of the fairness of laws were also significantly associated with the intent to trade based on insider information. Another finding on reasons for insider trading as found by Ma and Sun *(1998)* are as follows; first it is due to the portfolio diversification and liquidity adjustment. Firm managers often acquire stock through a plan or an exercise of options. They may later sell it to diversify their portfolios. Managers may also sell their stock due to financial need. This is why insiders have normally made more sales than purchases of their firm's stock. The second reason is the corporate control. Managers purchase their firm's stock to increase their share of total stockholding and enhance their voting power in the firm. Another reason could be based on private information. This falls into two subcategories. First, insiders may purchase the firm's stock because they genuinely believe the stock is a good investment. Second, insiders may trade prior to announcements that will generate abnormal returns for themselves.

With such motives of insider, there is nothing can stop them but the boundary set by law and regulation. Regulation and laws of insider trading are made in order to prevent any manipulation of stock by insider. Rules for insider trading fall into two categories. The first one, namely called corporate insider rule is the rules that prohibit corporate insiders—officers, directors, and major beneficial shareholders—from certain kinds of trading activity in the securities of their own company. These forbid short sales by insiders and allow the company to recover any profits realized on purchase/sales cycles completed within a six-month period (short-swing profits). The second rules prohibit trading on material, inside (nonpublic) information. These forbid anyone, insider or not, from trading profitably on inside information. These can be termed the inside information rules.

McGee (2007) reckons the first country to have a law regarding insider trading are the United States followed by France. This is followed by other developed market like U.K., Australia, Japan, and Korea with help by United States' law as model. This is followed suits by emerging markets like Malaysia, China and Hong Kong. McGee also shows the slow establishment of laws on insider trading. As of 1990, only thirty-four countries had laws restricting or prohibiting insider trading, and only nine of them had prosecuted anyone for insider trading. By 2000, the numbers increased. By that time, eighty-seven countries had passed insider trading laws and 38 had prosecuted at least one insider trading case.

Bhattacharya and Daouk (2002) provide additional information on passing ofinsider trading laws and years taken for person to be charged in violate the rules. The result seems to indicate that countries are not enforcing or perhaps do not strictly prosecuted the traders involve. Median for the developed countries is 1989 while the first reported case is in 1993. For emerging countries the median years on law creation is 1992 and only 5 years later the first case was brought to justice.

Question arises then on why it takes too long for the regulators to establish the law pertaining to insider trading. Among the answers that could appear as excuses are the effectiveness of the law itself and the perception on insider trading activity. Although it is widely accepted that insider trading is unethical, there are also several groups strongly disagree with the rules and restriction on insider trading.

There are at least three theories against the enforcement of a ban on insider trading. The first one, victimless crime was developed by Herzel and Katz (1987) which states that insider trading has no victim. This is because transactions carried out by the insider moves the stock price in the same direction as preferential information and consequently the counterpart of the insider also takes advantage of the insider's transactions. The second theory is based on the concept that the only effective way to compensate managers is through the exploitation of preferential information. This is because of the fact that bonus and stock options are not flexible enough and financially viable for the company. This concept was brought forward by Manne in 1966. The latest theory against the regulation of the crime exploits the concept of market efficiency in its

strong form, i.e. the stock price reflects all available information, preferential included. Hence, by carrying out his strategy, the insider pushes the stock price faster towards the value which better reflects the fundamentals of the company. A comprehensive study on pros and contras of insider trading is documented by Minenna (2003).

There are also numerous studies done with aim to establish the effect of regulation on insider trading. Arguably, the most studied is the Insider Trading Sanctions Act 1984 (ITSA). Eyssell and Reburn (1993) found evidence that ITSA can significantly reduce insider trading activity. In their study on seasoned equity, they found that there is significant reduction in abnormal selling prior to SEO announcement for the post-ITSA as compare to pre-ITSA era. Their finding is supported by Garfinkel (1997), Arshadi and Eyssell (1991) and Seyhun (1990). Masson and Madhavan (1991) also agree with the theory and claim current regulations tend to discourage insider trading activity. A study in New Zealand by Pinfold et.al (2007) shows that since the amendment made on Regulation of 1988, insider could not achieve abnormal profits anymore. The study on the same country by Gilbert and Tourani-Rad (2008) also found identical result.

Insider trading regulations are intended to keep insider from using non-public information to the disadvantage of others. Unfortunately, some studies found that the laws have been largely ineffective. Jaffe (1974) and Lin & Hoe (1990) are among scholars to prove this. Studies in China by Cheng (2008) also prove that laws are not sufficient with most insider trading activities there are done by high-ranking government and party officials. Another study was done in Spain by Brio et.al (2003) suggesting the

changes of law in Spain could not prevent insider trading; ironically Spain is one of the few countries where insider trading is still considered legal.

The different findings by previous scholars are explained by Eyssell and Reburn (1993) as a result of different test on various countries which have different laws. Another reason for the different findings is the degree of enforcement in different time and places. Khan and Lamba (2001) claim that insider trading still gains despite ITSA because insider do not suffer high penalty and will only have to pay penalty on the profit earned on their trades. They later suggest that regulation need to be enforced to the fullest extend.

In Malaysia, insider trading is governed by Capital Market and Service Act (CMSA). Section 188 (2) of the CMSA prohibits an insider in possession of certain information, as described in Section 183, Section 184 and Section 185 from acquiring, disposing or procuring, directly or indirectly, an acquisition or disposal of, or the entering into an agreement for or with a view to the acquisition or disposal of such securities. By virtue of Sections 190 and 191 of the CMSA, the prohibition of insider trading also extends to secrecy arrangements by corporations and partnerships.

As a hub for Islamic finance and banking, it would also be interesting to study view of Islam towards insider trading activity. Islamic law also disallows and prohibits insider trading as it is against several basic principles in Islam. It breaches the principles of fairness and justice as it creates an unfair advantage for one party against another

individual in the market. Allah says in the Holy Quran concerning justice and fairness,"
Be fair and just, that is nearer to piety (Taqwa). In another verse Allah says, "And act
justly. Truly God loves those who are just." Besides, insider trading is also against the
principle of trustworthiness. The insider who has accessed to the privileged information
is considered as a trustee of that information until such information is made to public.
Until such time, he is prohibited from dealing with the securities. In the Holy Quran,
Allah states, "Ye that believe! Betray not that trust of Allah and the Messenger, nor
misappropriate knowingly things entrusted to you."

2.2.3 Abnormal returns

Arguably the main objective for insider trading is to gain abnormal return.
Abnormal return and its behavior have been documented in most of the study done
previously. What actually creates this return? Givoly and Palmon (1982) observed and
found that major part of insider trading return is likely due to price changes arising from
the information revealed through the trades themselves.

The classic study by Finnerty (1976) was to be one of the first to discover the
abnormal return. His study on insider trading and efficient market hypothesis concludes
by summarizing that insiders are able to outperform the market. Insiders can and do
identify profitable as well as unprofitable situations within their corporations. This
finding tends to refute the strong-form of the efficient market hypothesis.

Lamba and Khan (1999) prove that traders earn positive abnormal return around the listing announcement date. They also claim insiders are net seller over the months leading up to delisting month. The most important findings though are that investor can use insider as gauge to purchase/buy securities.

Ramirez and Yung (2001) focus their study on insider trading and investment bank reputation. They found that cumulative abnormal returns are positive after insiders of investment banking industry have purchased stocks of their own firm. The authors also suggest not to compile together studies of banking/financial industry firms with non banking/financial firms as biased will likely affect the result. Thus in this study, I will not be considering companies from the financial sector.

An important part of insider trading will be the timing. Lin and Howe (1990) found evidence demonstrating that insiders sell stock following periods of positive abnormal returns and buy after periods of negative abnormal returns. Further, the transactions of insiders have predictive content. Thus, insiders who have already decided to trade appear to be able to profit from using their information to time their transactions.

Heinkel and Kraus (1987) and Chakravarty and McConnell (1999) went further to study if there is any significant different between insider and non insider (outsider). Surprisingly, insider do not outperform outsider significantly which lead to their conclusion that effect of insider trading and non insider trading is no different.

2.3   CONCLUSION

In recent years, it is found that insider in developed market such as U.S, Japan and U.K cannot consistently outperform the market. The story is not similar in emerging market like Hong Kong and China as described by Huang (2004), Shen (2007) and Cheuk et.al (2006). Malaysia is also considered as emerging market. Thus, it is interesting to know whether insider can still gain abnormal return in Malaysia under the regulation and supervision of Capital Market and Service Act (CMSA) and Securities Commissions.

CHAPTER THREE

RESEARCH METHOD

3.1 INTRODUCTION

This chapter describes the process of the study and its methodology. The next section will explain the process of collecting and screening the data which helps explain the selection of the sample. Section 3.3 explains the methodology used in this study while Section 3.4 concludes this chapter.

3.2 DATA COLLECTION

This study will consider 100 cases of insider's selling activity and another 100 are insider's buying activity recorded during the period of January 2007 until March 2009. The total numbers of insider trading activity during these periods are actually 4,782 cases excluding any activities in MESDAQ market. The company data were taken from the Bursa Malaysia website (www.bursamalaysia.com) while the price movements were collected from DataStream.

Certain criteria are listed down before selecting the sample. First of all, this study will only be considering those companies in the Main Board of Bursa Malaysia. To avoid

any bias, companies from the finance sector are not selected for further analysis. The sample is then randomly selected after the names of the company have been alphabetically sorted. Another criterion is that only changes of more than 100,000 shares exchanges will be considered. The analysis will also be focusing on open-market purchases and sales by officers and directors with exclusion of options exercises, private transactions, and all transactions by beneficial owners.

Furthermore, this study will also divide the sales and purchase by institutional and individual insider. From the 200 cases selected as sample, it will then be divided into four groups; sales by individuals, sales by institutional, purchase by individuals and purchase by institutional. Appendix A summarizes the sample used in this study.

As explain by M.-Y. Cheuk et. al (2006), there are many possible motivations exist behind an insider transaction. The activity of insider's disposal could be down to liquidity reasons and diversification of investment risk. Insiders also acquire shares as a result of exercising options. However, the general public and researchers tend to think that the more likely and intriguing reason behind insider transactions is private information. These groups of people are likely to react by purchasing or selling their ownership in response to the potentially good or bad news surrounding the company.

3.3   METHODOLOGY

This study will be done by using the traditional event-study analysis. The event-study analysis, which estimates the effect on stock returns towards any event that could give an impact on the company. It is important to mention that this type of studies is the most often used to test the existence and also the degree of insider trading.

The process of event study begins by determine the date upon which the market would have received the news. The date selected has to reflect when the public reasonably expected the news.The event date will be vital as for the next step, the return for the individual companies prior and post the event date will be examine. Researchers are interested in the price reaction before (t=-1, t=-2, etc), during event date (t=0) and after (t=+1, t=+2, etc) a specific event occurs. This event window might consider daily, weekly, monthly and even yearly data in the empirical setting.

The next step is to measure the difference between observed returns and 'no-news" returns for each firm which is abnormal returns. The abnormal returns will later be aggregated across companies and across time. Subsequently, the aggregated return will be tested statistically to determine the result.

There are several approaches of event study although only two will be used in this study which is market model and market adjusted return model.

3.3.1   Market Model

Most of the literatures recommend using standard market model to estimate abnormal returns associated to insider activities. These have been done previously by Finnerty (1976), Seyhun (1986 and 1998) and Damodaran & Liu (1993) among others. The single market model is

$$r_{it} = \alpha + \beta r_{tm} + \varepsilon \quad (1)$$

where r_i is the return on firm i, r_m is the return on the market proxy, and ε is the Gaussian error term. α and β are parameters to be estimated. In this study, prior event date from day -75 to day -6 are used to estimates both α and β.

The returns are measured as

$$r_{it} = \frac{P_t}{P_{t-1}} - 1 \quad (2)$$

where P_t is the price at time t, P_{t-1} is the price the day before, and D_t is the dividend payment, if any, on date t. The market return (r_m) will also be compute in a similar manner

The abnormal return to firm j on day t, AR_{it}, is then calculated from day-5 to day +20 for each day as follows:

$$AR_{it} = R_{it} - R_{mt} \quad (3)$$

with AR_{it} is an abnormal return of security i during period t, R_{it} is rate of return on security i during period t and R_{mt} is the rate of return on a market index during period t.

The average abnormal return (AAR) across firms for each day is:

$$tAAR_t = \sum_{k=t-T}^{t} AR_t \quad (4)$$

where N is the number of firms with insider trading on day t.

The significance of the average abnormal return is tested by the statistic

$$\text{t- stat }_{AARt} = \frac{AAR_t}{\sigma AAR_t \times \sqrt{N}_t} \quad (5)$$

The cumulative average abnormal return (CAAR) to the insider trading firms from day-D to day D is the sum of the average abnormal returns between day-D and day D. The

formula is:

$$CAAR_t = \sum_{k=t-T}^{t} AAR_t \qquad (6)$$

To assess the performance of stocks traded by insiders and the degree of market efficiency in the stock market, we will examine the cumulative average abnormal returns associated with insider purchases and sales for various post-event periods. The CAARs of the transactions will be analyzed as a whole and if we find persistent abnormal returns after the day on which the public is informed of any insider trading, it implies that the market reacts to the dissemination of such information. Also, if such abnormal returns exist, then it is likely that outsiders can actually earn abnormal profits by mimicking the trades of insiders.

3.3.2   Market Adjusted Return Model

Another approach is the market-adjusted return. This method is easier than market model and actually have same similarities in calculating the variables. First is the step to define an abnormal return for individual stock. Researchers typically assumed that the individual stock should experience returns equal to the aggregate stock market. This assumption meant that the market-adjustment process simply entailed subtracting the market return from the return for the individual securities to derive an abnormal return.

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

Where AR_{it} is an abnormal return of stock i on event day t, R_{it} is rate of return on stock i on event day t and R_{mt} is the rate of return on a market index on event day t

Next, the average abnormal return (AAR$_t$) return for each time period t is calculated.

$$AAR_t = \sum_{i=1}^{N} AR_{i,t} \,/\, N_t$$

N_t = The number of valid observations on event day t

Next, cumulative abnormal returns (CAAR) on a specified event period t will be tested.

$$CAAR_t = \sum_{k=t-T}^{t} AAR_t$$

Where T = some number of event days prior to day t. Tests of significance are similar to those of market model.

3.3.3. Test for individuals and institutions

This study will examine the behavior of the individual and institutional on the event period. Two tests are used in this study which is parametric and non-parametric tests. The event window selected will be the same from the above event window (t=0 to t=3, t=0 to t=5,. t=0 to t=10,. t=0 to t=15,. t=0 to t=20).

In this analysis, abnormal returns accrued to institutional are compared to those of individuals.

3.4   CONCLUSIONS

This chapter explains the data collection and methodology used in this study. Briefly, there are two methodologies used in achieving the objective of the study. Event study analysis is used to prove the existence of abnormal profit gain by insider trading in Malaysia. Under this study, two models are used. The first one is the market model and the second one is the market adjusted return model.

A different tool was used to distinguish between the individuals and institutional investor. Parametric and non-parametric tests are used to compare abnormal returns between these two groups.

CHAPTER FOUR

ANALYSIS AND FINDINGS

4.1   INTRODUCTION

Analysis and results are discussed in this chapter. Section 4.2 discloses the result of selling and purchasing activity via market model analysis. Section 4.3 will provide result and analysis of trading activity as analyzed by market adjusted return. Section 4.4 will explain the findings from individuals and institutional trading activity while the last section will conclude this chapter.

4.2   RESULT FROM MARKET MODEL ANALYSIS

As shown by Figure 4.1, selling activities lead to constant drop in returns. The graph proves that by selling their stocks, insiders are able to predict future price performances and manage to avoid losses.

Figure 4.1: The cumulative average abnormal return for selling activity using market model
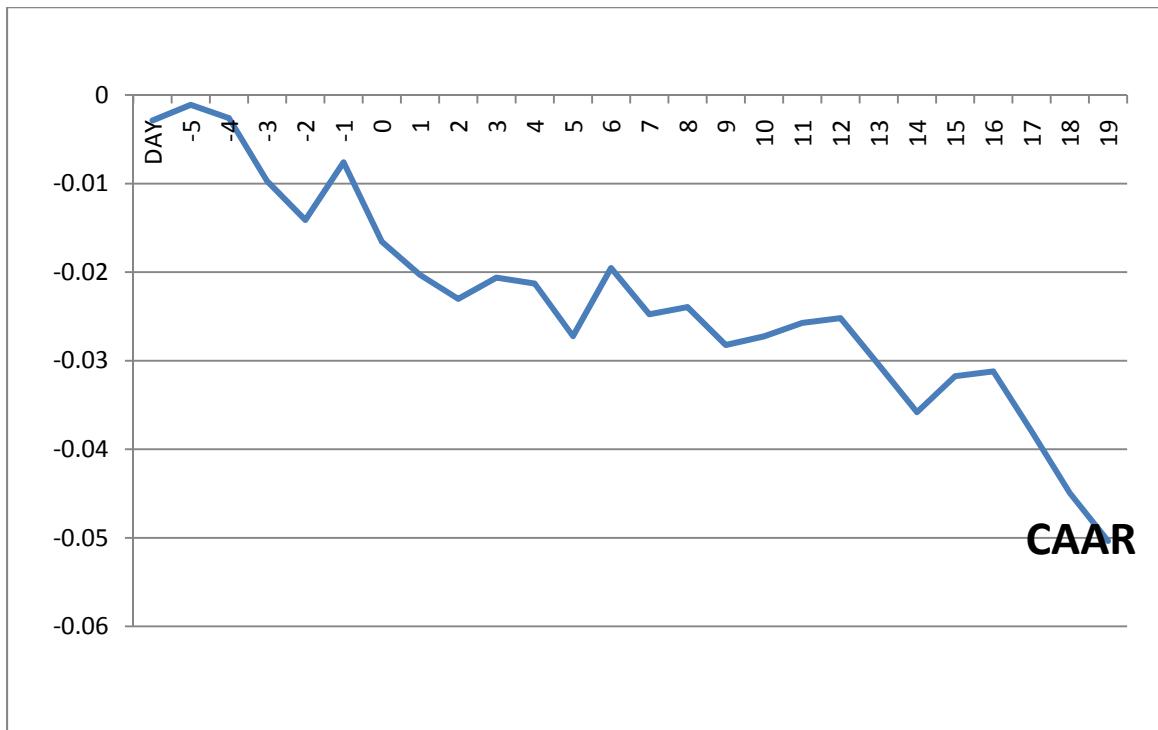
In the case of purchasing, the trends are bullish as CAAR increase over time after the event date. CAAR is always above than zero (0). This is represented by Figure 4.2 below.

Figure 4.2: The cumulative average abnormal return for purchasing activity using market model
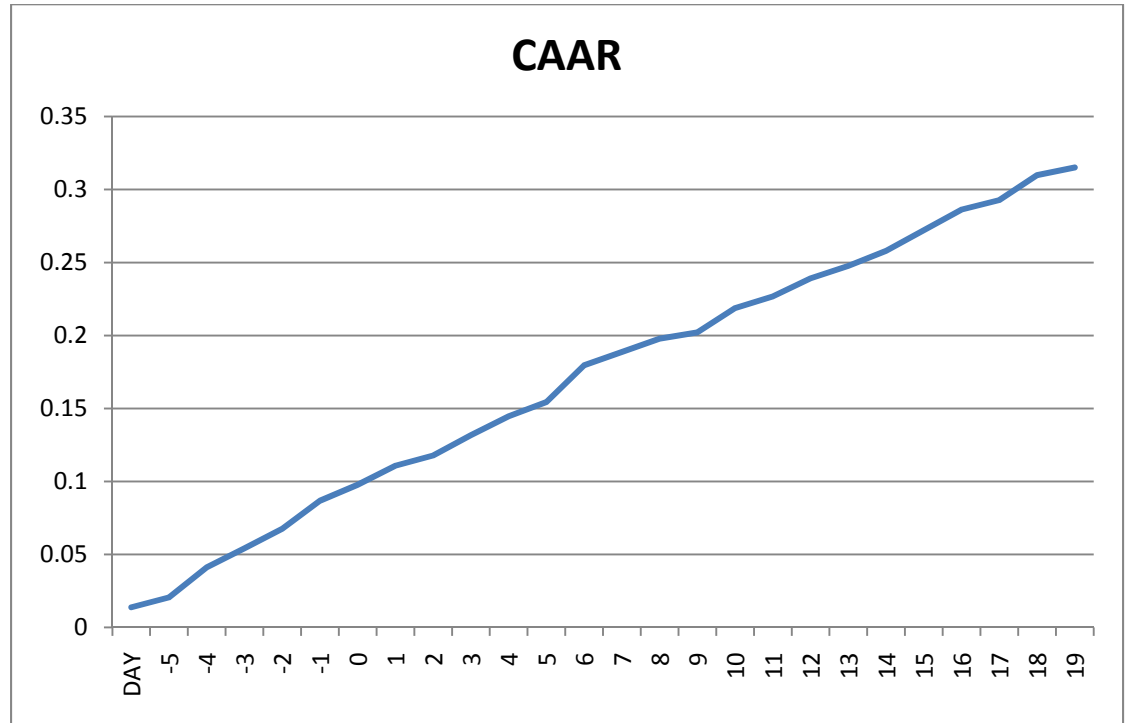
In addition, Table 4.1 shows the daily average abnormal return for the whole event windows ranging from t=-5 to t= 20. The table proves that AAR is always positive for insider purchase which indicates that insider has private information of the company. It also provides evidence that on every day, the abnormal return from purchasing is greater than abnormal return from selling.

Table 4.1: Average abnormal return for insider purchases and sales

DAY	INSIDER PURCHASE		INSIDER SALES	
	AAR	T-STAT	AAR	T-STAT
-5	1.38%	0.981	-0.29%	-0.641
-4	0.68%	0.485	0.18%	0.389
-3	2.06%	1.349	-0.15%	-0.284
-2	1.30%	0.878	-0.71%	-1.560
-1	1.35%	0.901	-0.44%	-1.112
0	1.92%	1.294	0.65%	0.849
1	1.10%	0.774	-0.90%	-1.875
2	1.30%	0.950	-0.38%	-1.074
3	0.70%	0.478	-0.27%	-0.712
4	1.39%	0.942	0.24%	0.398
5	1.29%	0.873	-0.07%	-0.130
6	0.98%	0.602	-0.60%	-0.913
7	2.52%	1.264	0.77%	0.563
8	0.92%	0.641	-0.52%	-2.021
9	0.90%	0.730	0.08%	0.200
10	0.43%	0.346	-0.43%	-0.891
11	1.66%	1.176	0.10%	0.324
12	0.80%	0.649	0.15%	0.271
13	1.24%	0.996	0.06%	0.123
14	0.86%	0.751	-0.53%	-0.990
15	1.02%	0.832	-0.53%	-0.978
16	1.42%	1.105	0.41%	0.857
17	1.41%	1.110	0.05%	0.144
18	0.65%	0.512	-0.68%	-1.085
19	1.71%	1.345	-0.70%	-1.296
20	0.53%	0.421	-0.00543	-1.198

Table 4.2 shows the cumulative average abnormal returns surrounding insider purchases (acquire) and sales (dispose). For insider purchases, it is proven that stocks purchased by insider will perform well and give profit to insider. However none of the event window is significant at 5% level. The findings are similar to previous research by Cheuk et.al (2007) who find that in Hong Kong, insiders are able to make abnormal profits from insider purchases. Furthermore, as the CAARs are positive within the 20-

days period after the transaction, it will also encourage outsiders to purchase the stocks. Such a long period could also enable them to get the profit.

The situation is totally different in discussing insider sales. Table 4.2 indicates that insider sales will have a negative CAAR. This could be related to an expected poor operating performance in the future. The CAAR for the insider sales is negative for each period after event date with four out of five is not significant at 5% significant level or 1.96. Only period from t=0 to t=20 is significant with CAAR of 3.67%. The performance also indicates that the insiders are doing the right things by selling their own stocks although they have to give up a bit part of their ownership. While investors who bought their shares will suffer losses, insider sales and those mimicking their activity are able to make profit, or at least avoid losses.

Similar to previous findings by Finnerty (1976) and Seyhun (1998), the result suggests that corporate insiders are making more profit from their purchasing activity rather than their selling activity. The result shows that in the aggregate, although insiders are able to earn abnormal profits from both buying and selling, the magnitude of short-run abnormal profits associated with insider purchase is considerably larger than that associated with insider selling.

Table 4.2: Cumulative daily abnormal returns for insider trading events

EVENT WINDOW	INSIDER PURCHASE		INSIDER SALES	
	CAAR	t-stat	CAAR	t-stat
T=0 to T=3	5.02%	0.890	-0.92%	-1.324
T=0 to T=5	7.70%	0.903	-0.72%	-0.730
T=0 to T=10	13.44%	0.903	-1.43%	-1.1123
T=0 to T=15	19.03%	0.878	-2.21%	-1.462
T=0 to T=20	24.75%	0.893	-3.67%	-2.013

4.3   RESULT FROM MARKET ADJUSTED RETURN ANALYSIS

The graph of CAAR for insider selling activity using market adjusted return is significantly different from the graph derived by market model. Figure 4.3 shows that the return moves in both ways.

Figure 4.3: The cumulative average abnormal return for selling activity using market adjusted return
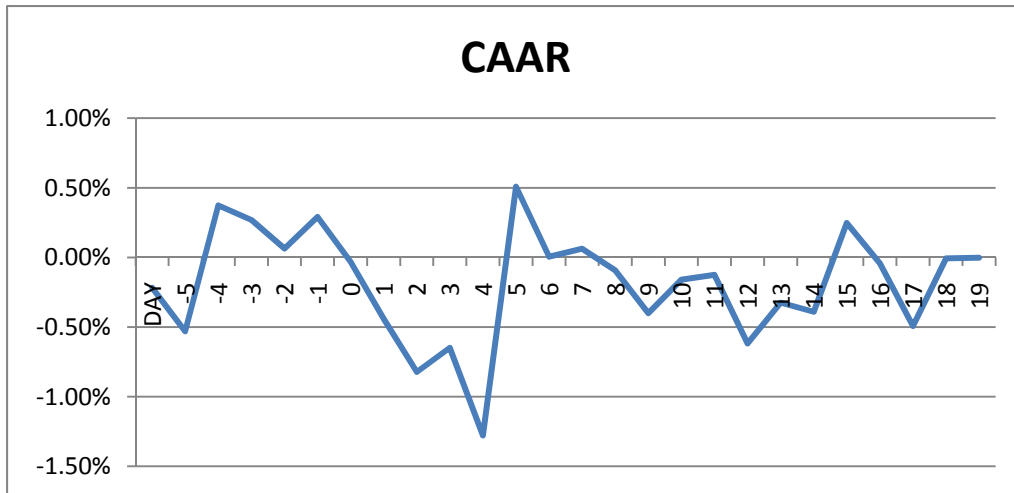
For the insider purchase using market adjusted return, the graphs are almost similar to the one derived using market model. The different however occurs between day t=-5 until t=4 as CAAR recorded a negative return. After that, CAAR is always higher than zero. This is shown by Figure 4.4.

Figure 4.4: The cumulative average abnormal return for purchasing activity using market adjusted return
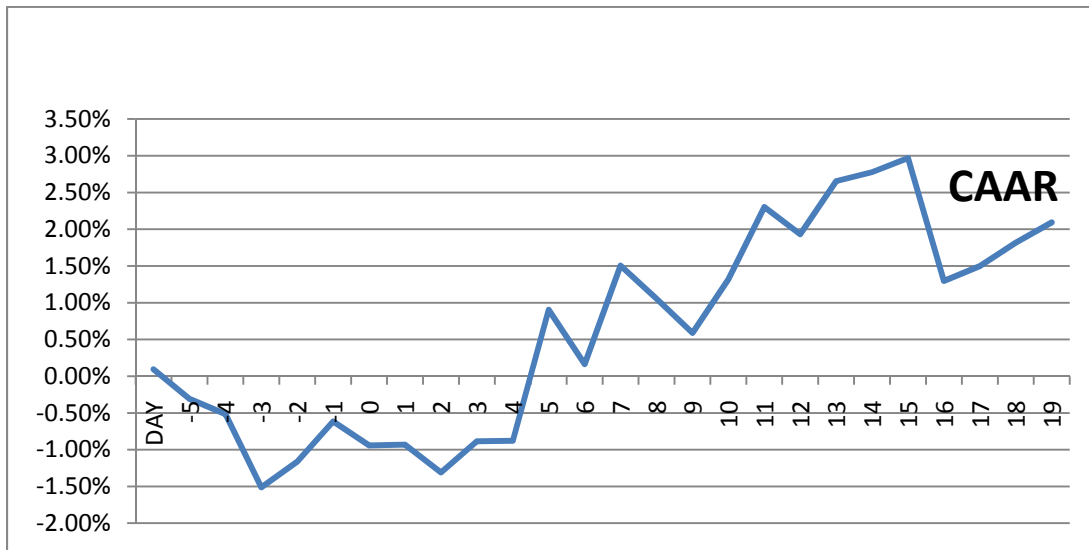
In table 4.3, the average abnormal return is provided. It seems that the AAR for both purchase and sales are not constantly positive or negative. The situation in day t=6 is interesting to be discussed. As the AAR for insider purchase is at its peak of 1.78%, the selling activity for insider gives a positive return of 1.79%. Thus, while any purchases on that day will bring wealth to the insiders, activity of sales will be a loss for them although both are insignificant at 5% significant level.

Table 4.3 Average daily abnormal return for insider trading events using market adjusted

DAY	INSIDER PURCHASE		INSIDER SALES	
	AAR	T-STAT	AAR	T-STAT
-5	0.09%	0.208	-0.22%	-0.487
-4	-0.40%	-1.071	-0.31%	-0.876
-3	-0.21%	-0.357	0.90%	2.508
-2	-1.00%	-1.838	-0.10%	-0.272
-1	0.35%	0.788	-0.21%	-0.499
0	0.55%	0.735	0.23%	0.589
1	-0.33%	-0.633	-0.32%	-1.024
2	0.01%	0.018	-0.41%	-1.372
3	-0.38%	-0.758	-0.38%	-1.294
4	0.42%	0.703	0.17%	0.509
5	0.01%	0.007	-0.63%	-1.027
6	1.78%	1.252	1.79%	1.310
7	-0.74%	-1.866	-0.50%	-1.700
8	1.34%	1.442	0.06%	0.151
9	-0.45%	-0.798	-0.16%	-0.416
10	-0.47%	-0.846	-0.31%	-0.821
11	0.73%	1.616	0.24%	0.530
12	0.98%	1.095	0.03%	0.088
13	-0.37%	-0.543	-0.49%	-1.411
14	0.72%	0.495	0.29%	0.989
15	0.12%	0.242	-0.07%	-0.216
16	0.19%	0.360	0.64%	1.632
17	-1.67%	-1.397	-0.29%	-0.623
18	0.20%	0.424	-0.45%	-0.953
19	0.32%	0.496	0.49%	1.142
20	0.28%	0.476	0.01%	0.013

As shown in Figure 4.3 and Figure 4.4, by using market adjusted return, the AAR for selling activity are more volatile than AAR for purchasing activity during the period of the study. Table 4.4 shows that except for t=0 to t=3, all other insider purchase is positive. However only for window period of t=0 to t=15 that CAAR is significant at 5% level of significant. It again proves that besides insiders, outsiders also can take profit from the market by following the step of insiders.

For insider sales, while all the CAAR are negative which could indicate that insider are doing the right things to let go off their ownership, the t-stat proves that it is not significant. In fact, none of the event has a significant level of 5%.

Table 4.4: Cumulative daily abnormal returns for insider trading events using market adjusted

EVENT WINDOW	INSIDER PURCHASE		INSIDER SALES	
	CAAR	t-stat	CAAR	t-stat
T=0 to T=3	-0.15%	-0.187	-0.97%	-1.653
T=0 to T=5	0.28%	0.257	-1.40%	-1.447
T=0 to T=10	1.75%	1.375	-0.51%	-0.483
T=0 to T=15	3.94%	2.087	-0.47%	-0.400
T=0 to T=20	3.26%	1.312	0.01%	0.009

4.4   TESTS FOR INDIVIDUAL AND INSTITUTIONAL INSIDER

4.4.1   Parametric and non-parametric test for selling activity

Table 4.5 shows the means and t-statistic of institutional and individuals insider selling activity. Most of the activity are not significant except for institutional sales for event window of t=0 to t=5 with a mean 0f -1.61%. The institutional sales always have negative mean while individuals selling activity turns positive in the last three event windows tested. It means that for outsiders interested to avoid losses, they can learn from institutional activity.

Table 4.5: Mean test and t-test for individuals and institutional selling activity.

Event window	Types	N	Mean	t-test
t=0 to t=3	Institutional	65	-1.07%	-1.573
	Individuals	34	-0.16%	-0.179
t=0 to t=5	Institutional	65	-1.61%	-2.174
	Individuals	34	-0.64%	-0.615
t=0 to t=10	Institutional	65	-1.17%	-1.176
	Individuals	34	1.17%	0.490
t=0 to t=15	Institutional	65	-1.80%	-1.656
	Individuals	34	0.25%	0.107
t=0 to t=20	Institutional	65	-2.55%	-1.624
	Individuals	34	2.26%	0.894

By using parametric and non-parametric test for selling activity, the next table is derived. Table 4.6 shows that selling by institutional insiders lead to greater price decline. However none of the differences either by parametric, as measured by t-test of difference in means, and non-parametric tests, as measured by Mann-Whitney, is different from zero.

Table 4.6: Results for parametric and non-parametric test for sales activity

Event day	Types	N	Mean	T-test of difference in means	Mann Whitney test
t=0 to t=3	Institutional	65	-1.07%	p=0.422	p=0.353
	Individuals	34	-0.16%		
t=0 to t=5	Institutional	65	-1.61%	p=0.453	p=0.275
	Individuals	34	-0.64%		
t=0 to t=10	Institutional	65	-1.17%	p=0.370	p=0.489
	Individuals	34	1.17%		
t=0 to t=25	Institutional	65	-1.80%	p=0.425	p=0.279
	Individuals	34	0.25%		
t=0 to t=20	Institutional	65	-2.55%	p=0.111	p=0.092
	Individuals	34	2.26%		

4.4.2   Parametric and non-parametric test for purchasing activity

Table 4.7 shows that individual insiders have a positive mean in the last three event windows (t=0 to t=10, t=0 to t=15 and t=0 to t=20). Event t=0 to t=10 and t=0 to t=15 are significant at 10% significant while t=0 to t=20 is significant at 5% significant level. The purchases by the institutional insiders lead to negative returns but they are not significant. It indicates that unlike selling activity, outsiders interested with insider behavior should focus on individual rather than institutional insiders as they have private information to gain abnormal profit

Table 4.7: Mean and t-test for individuals and institutional purchasing activity

Event day	Types	N	Mean	t-test
t=0 to t=3	Institutional	65	-0.12%	-0.147
	Individuals	35	-0.99%	-0.597
t=0 to t=5	Institutional	65	-0.39%	-0.440
	Individuals	35	-1.54%	-0.788
t=0 to t=10	Institutional	65	-0.51%	-0.456
	Individuals	35	6.72%	1.717
t=0 to t=15	Institutional	65	-0.36%	-0.302
	Individuals	35	7.67%	1.785
t=0 to t=20	Institutional	65	-2.67%	-1.330
	Individuals	35	10.71%	2.320

Table 4.8 provides the result for t-test of difference in means and Mann Whitney test. The result suggests that purchases by individual insiders lead to price increases and the difference is significant for event window 0 to 20.

Table 4.8: Results for parametric and non-parametric test for purchasing activity

Event day	Types	N	Mean	T-test of difference in means	Mann Whitney test
t=0 to t=3	Institutional	65	-0.12%	p=0.642	p=0.504
	Individuals	35	-0.99%		
t=0 to t=5	Institutional	65	-0.39%	p=0.596	p=0.683
	Individuals	35	-1.54%		
t=0 to t=10	Institutional	65	-0.51%	p=0.083	p=0.207
	Individuals	35	6.72%		
t=0 to t=15	Institutional	65	-0.36%	p=0.080	p=0.235
	Individuals	35	7.67%		
t=0 to t=20	Institutional	65	-2.67%	p=0.011	p=0.04
	Individuals	35	10.71%		

4.5   CONCLUSION

This chapter analyzes insider trading activity using event study analysis. By using the market model, we find that the purchasing activity gives better return as compare to selling activity. However, most of the results are not significant. Furthermore, by using the parametric and non-parametric test, the study finds that individual purchases and institutional sales should be monitored by outsiders interested to gain abnormal profit or to cut losses.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1   INTRODUCTION

The final chapter of this study will be divided into six sections which will assist to summarize the whole research process. The next section will bring back the processed done in the research from its very first step. Subsequently, Section 5.3 will again give detail on all the findings and analysis from the previous chapter. The implication of the study will be discussed in Section 5.4 while suggestion for any further studies on this topic will be disclosed in Section 5.5. The conclusion for this particular chapter will be done in Section 5.6

5.2   OVERVIEW OF THE RESEARCH PROCESS

This study is done regarding insider trading activity in Malaysia. Previous studies done on similar topic in other countries such as U.S, U.K, China and Hong Kong have been reviewed to get the general idea. Studies in those countries are limitless and can be further divided into two major topics; the abnormal return and the effectiveness of laws in preventing the activity. This study is done to examine the existence of abnormal profit from insider trading activities in Malaysia.

The first step of this study is to compiles all activities of changes in shareholding structures of all companies in Bursa Malaysia Main Market, excluding only those from financial sector, between January 2007 and March 2009. Next, the list is shortened by selecting only those companies who had substantial shareholders change their hold by more than 100,00 shares. The analysis will also be focusing on open-market purchases and sales by officers and directors with exclusion of options exercises, private transactions, and all transactions by beneficial owners. With these criteria, we are left with only 556 cases to be considered. Only 200 cases were selected as samples with 100 each for purchases and sales.

The event study analysis will then be employed to examine the effects of insider trading announcement on stock prices of the company. With data from DataStream, all the stock prices for the samples are retrieved. The prices of 5-days before announcement (-5) until 20-day post announcement were used (+20). The price performances after the announcement of changes in shareholders will help us to determine the abnormal return gain by insider trading. Besides that, the study will also try to determine any effects of individual and institutional insider trading.

5.3 SUMMARY OF FINDINGS

From the analysis and findings in Chapter 4, we can conclude that although there is an insider trading activity in Malaysia that could give abnormal profit to insiders, most of it is insignificant. The study also implies that purchasing activity could give more reward than selling activities, a conclusion that is agreed by scholars like Finnerty (1976) and Seyhun (1998) among others. Furthermore there is evidence that individual insiders give more impact than institutional insider for purchases.

5.4 IMPLICATION OF THE STUDY

The main objective for this study is to investigate whether insider in Malaysia could earn abnormal average return. By selecting 200 cases of insider acquire and dispose between January 2008 and March 2009 in Malaysian stock market , the event studies analysis were adopted to prove the objective.

It is important to notice that while the studies have been done in most countries all around the world, this topic is not so well discovered in Malaysia. Thus, before this study, no major findings from Malaysia can be brought forward.

In Chapter 4 of this study however, the existence of insider trading are well proven. It is shown that insider can gain abnormal average return from the announcement to 20 days after.

5.5   DIRECTION FOR FURTHER STUDIES

As mentioned earlier, the works on insider trading activity in Malaysia are scarce. It is highly recommended for any researcher to continue this study with several improvements. Future research could also consider the effect of law and regulation in Malaysia and how well can it curb insider trading activity. Several studies have been done in this topic and the result seems to be towards indicating that the laws are not enough to prevent insider trading (Beny, 2007).

It is also interesting to consider the performance and effects of insider trading in relation to their industry/sector. Researchers could also study about the relationship between insider trading activity according to the firm characteristic and size as

5.6   CONCLUSIONS

This chapter provides a brief summary of the overall study. The research procedure and the results from the analysis were discussed. Besides, the consequences of study and the recommendation for future research are also presented.

REFERENCES

Ahmet Kara, Karen Craft Denning (1998), "A model and empirical test of the strong form efficiency of US capital markets: More evidence of insider trading profitability", *Applied Financial Economics*.

Cheuk, M.Y, Dennis K. Fan, Raymond W. So (2006), "Insider trading in Hong Kong: Some stylized facts", Pacific-Basin Finance Journal 14 (2006) 73– 90

Eckbo, B.E., Smith, D.C., (1998), "The conditional performance of insider trades", *Journal of Finance 53, 467–498.*

Fama, E., French, K., (1992),"The cross-section of expected returns." *Journal of Finance 47, 427– 466.*

Fama, E., French, K., (1995), "Size and book-to-market factors in earnings and returns. *Journal of Finance 50", 131–155.*

Finnerty, J., (1976), "Insiders and market efficiency." *Journal of Finance 31, 1141– 1148.*

Grinblatt, M., Keloharju, M.(2001), "What makes investors trade?" *Journal of Finance 56, 589–616.*

Jaffe, J.F., (1974), "Special information and insider trading", *Journal of Business 47, 410–428.*

Jeng, L., Metrick, A., Zeckhauser, R., (2003)," Estimating the returns to insider trading: a performance-evaluation perspective", *Review of Economics and Statistics 85, 453–471.*

Joseph D. Beams, Robert M. Brown and Larry N. Killough (2003), "An Experiment Testing the Determinants of Non-Compliance with Insider Trading Laws", *Journal of Business Ethics* 45, pp 309-323, 2003.

Juha-Pekka Kallunki, Henrik Nilsson and Jorgen Hellstrom (2009), "Why do insiders trade? Evidence based on unique data on Swedish insiders", *Journal of Accounting and Economics.*

Lakonishok, J., Lee, I., (2001) "Are insider trades informative?", *Review of Financial Studies 14, 79–111.*

Lin, J., Howe, J., (1990), "Insider trading in the OTC market*, Journal of Finance 45, 1273–1284.*

Louis Cheng, Michael Firth, T.Y. Leung and Oliver Rui (2006), "The effects of insider trading on liquidity", *Pacific-Basin Finance Journal* 14 (2006) 467–483

Nasser Arshadi (1998), "Insider Trading Liability and Enforcement Strategy", *Financial Management, Vol. 27, No. 2,* Summer 1998, pages 70 – 84.

Philip Anthony Ohara (2001), "Insider trading in financial market", *International Journal of Social Economics Vol. 28*, pp 1046-1062.

Pope, P.F., Morris, R.C., Peel, D.A., (1990), " Insider trading: some evidence on market efficiency and director' share dealings in Great Britain", *Journal of Business, Finance, and Accounting 17, 359–380.*

Rozeff, M., Zaman, M., (1988), " Market efficiency and insider trading: new evidence" *Journal of Business 61,25–44*

Seyhun, N., (1988), "The information content of aggregate insider trading", *Journal of Business 61, 1– 23.*