

**FINANCIAL CRIME: INSIDER TRADING IN MALAYSIA PRIOR TO ACQUISITION  
ANNOUNCEMENT**

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***ABSTRACT***

Insider trading considered as one of the most deceitful financial crimes, as people who are placed in position of trust steal from those who they were supposed to protect. The current research investigated insider trading activities prior to acquisition announcements by examining the traded volumes of KLSE listed companies that announced receiving of acquisition offers between 2008 and 2011. 30 companies with acquisition announcement were analyzed to examine their average daily cumulative abnormal return (ACAVT) to identify possible insider trading activities. Results indicated that possible insider trading existed in 12 studied companies. Obviously, the result of this study does not confirm a sound financial market as 40% of observed samples are suspected to have insider trading activity. Stronger laws, effective rules and regulations are the most efficient approach to control insider trading.

## 1.0 INTRODUCTION

Financial crime usually involves fraud and has various forms such as corporate fraud and may occur in public or commercial sectors. It is believed that as long as weakness exists to be exploited, individuals or companies looking to gain illegal advantage out of it and this illustrates the importance of a powerful law to protect powerless or uninformed individuals.

Insider trading as a financial crime is a threat to market efficiency and discussed heavily in law and economic literatures. Insider trading is a term that refers to unlawful trading of a corporation's information, stock or other type of securities by individuals with potential access to information that is non-public or non-published yet. Market efficiency hypothesis argues that one cannot consistently obtain return higher than average market return on a risk-adjusted basis when public information that are available to market used at the time of investment and insider trading violates this hypothesis. Insiders have informational advantage to other financial market players. This leads to asymmetric distribution of information between investors; therefore, market will be inefficient and some (insider traders) have potential to gain abnormal return on their investments in expense of normal investors. Counterparty of this deal is in danger of huge personal loss. By increasing the number of insider traders in the market, number of normal investors that lose out and leave the market will increase and it leads to moral hazard and decrease of investors' confidence in market.

Insider trading not only affects the financial market but also has impacts on corporations as well. Insider trading discourages the corporation from positive investment, while insiders (e.g. managers) are allowed to get profit from corporation's changing fortune. Managers that practice insider trading are more willing to choose risky investments to benefit from violent fluctuations in firm's stock price and shareholders who are aware of this situation would be less supportive for further capital expenditure of firm, which leads to fall in firm direct investment below its optimal level (Schafer & Ott, 1992).

Insider trading has been in existence in financial markets for as long as stock markets have been on operation (Herzel & Katz, 1987), but Insider trading laws did not exist prior to Black Tuesday and the Great Depression in United States. Insider trading became a globally concerned topic and to ban this practice, countries developed laws to prohibit this activity. Level of this concern is clear by rapid regulation of insider trading laws. Number of countries that adopted this law before 1990 was only 34 and by 2000 this number rose to 87. Nowadays, insider-trading law is well developed in some countries like United States, which is believed to have the most effective insider trading regulation in the world.

Insider trading law governance in Malaysia dates back to 1965, when in section 132A and 132B of Companies Act this practice prohibited. Part H, chapter 9 of Listing Requirements of Bursa Malaysia Securities Berhad also mentions insider trading as an illegal action. Most recent amendment

on insider trading law is in Division 2, Section 89-89P, part IX of securities of Securities Industry Act 1983 (SIA).

Under division 2 (Section 89-89P) in part IX of the Malaysian Securities industries Act 1983, insider trading in its unlawful meaning is prohibited, considered as a crime and an insider defined as:

- 89E: A person is an insider if that person;

- a) Possesses information that is not generally available which on becoming generally available a reasonable person would expect it to have a material effect on the price or the value of securities; and
- b) Knows or ought reasonably to know that the information is not generally available.

Although insider-trading laws prohibited this action but the evidences of ongoing insider trading is troubling the investors mind. Current Malaysian law is generally considered as adequate in prohibiting insider-trading activities but the enforcement is not quite as satisfactory. Consequently, the prohibiting nature of insider trading laws demand more power and intention to implement them in order to reach and maintain a highly reliable and sound financial market.

Insider trading usually occurs prior to price sensitive announcements such as merger and acquisition. Merger and acquisition are offensive or defensive strategies in order to achieve competitive advantages. This strategy by any initial reason affect the stock price of companies, especially stock price of target Company. With the knowledge that stock price of target firm will increase by announcement, insiders may engage in purchasing stock of target company secretly. Therefore, insider trading may increase the cost of takeover for Bidder Company in shareholders expense.

In current research only target companies studied to find possible insider activities. Bender & Ward (2005) point out importance and sensitivity of target Company's stock in acquisition process. They mentioned that target company shareholders obtain a better deal in the time of merger or acquisition than acquiring shareholders. They highlighted that acquirer overpaying assumption, only because the bid price is higher than pre-existing price is a misconception. There are two reasons for this outcome. First, market capitalization of a company (number of outstanding shares multiply by value of share) is not representing real value of a company. Current stock price of a company is not the price that tempts most of the shareholders to sell their stock and only a tiny fraction of share is traded by that price. If, the price was overvalued, most of the shareholders were willing to sell their shares but only a small number of companies' shares are available for trade in the daily market. Thus, Acquirer Company should definitely pay premium to existing shareholders in order to encourage them to sell their shares. Second reason is understanding of shareholders from the market. Acquisition of a company and purchasing total share of a company, represent a situation, where demand exceeds supply, thus share price obviously rises to reflect this phenomena. Existing shareholders understand

this situation and they know that acquiring 100% of Company by acquirer puts the acquirer company in a powerful and valuable situation. Shareholders accordingly make the bidder pay for this value.

Event study is the method that used to analyze the collected data. This method averages cumulative performance of stocks within the study period, while time (period) before and after event has to be specified. The actual announcement day of acquisition was used to design an event window and the average cumulative abnormal volume traded (ACAVT) was calculated to reveal possible insider trading activity in studied samples. We found possibility of insider trading and high ACAVT in 12 target companies of 30 studied samples.

Reminder of the paper is structured as follows. Section 2 provides an over view of insider trading literature. Section 3 is about methodology of research and section 4 provides analysis and results. Section 5 concludes.

## **2.0 LITERATURE**

Debate over insider trading has a long history and there is still no agreement between researchers on whether insider trading harms financial markets and shareholders or it is beneficial. Generally, two views taking fundamental debates on insider trading, which are impact of insider trading over economy such as information quality and legal theories on insider trading like the soundness and fairness of financial market.

Manne (1966) opened the debate over insider trading when he suggested that agency problems that shareholders and managers' face will be diminished if insiders were permitted to trade and profit from their own financial activities. Jensen and Meckling (1976) argued that deregulation of insider trading will lead to improvement in corporate decision-making; therefore, increase of firm value. Additionally, other researchers argued that insider trading increased efficiency in market information by releasing inside information [(Jhon & Lang, 1991);(Chau & Vayanos, 2008)]. Insider trading advocates believe that trades by insiders give signals to the market to prove or disprove rumors or information through corporation's public announcements (Chau & Vayanos, 2008). McGee (2009) also argued that there is no need for insider trading regulation, as there is contract laws to protect rights in contracts and laws that protect property right, what needs to be done is clearly defined in information on property rights.

Advocates of Insider trading regulation generally question fundamental arguments of deregulators. Regulators argue that there is no empirical evidence to show that deregulation of insider trading is the most efficient method of compensation for managers (Bainbridge, 1986). Regulators claim that the ability of managers to purchase stock limit managers compensation; therefore, compensation does not depend on value of information or contribution of information but on wealth. Thus, managers' ability to plan their own compensation is limited.

In addition, regulators believe that the compensation completely depends on external factors like structure of capital market, the level of risk for specific firm and the amount of outsider sale in average (Schafer & Ott, 1992). In addition, it cannot be ensured that the only producer of valuable information will be the only one who uses or takes advantage of it. For example, the manager, who creates news in favor of the corporation, is not the only person who might benefit from that news (Bainbridge, 1986). This issue leads to free-rider problem in unregulated insider trading. If a manager wants to use the information in his own benefit, he should keep it from his colleagues until he has done the transaction in the stock market. Profitable insider trading requires a small number of informed insiders. If number of insiders increase, possible gainers may forgo their profit by completion arise between insiders (Schafer & Ott, 1992).

Schafer and Ott (1992) also argued that insider trading caused conflict of interest between shareholders and managers. They believed that insider trading is harmful for corporation since it motivates managers to give priority to their own profit upon profit maximization for shareholders. An insider trader might not work for the corporation's best interests. Insider trading also harms confidence of investors, which leads to drop in liquidity of security market, thus decreasing market efficiency (Fishman & Hagerty, 1992).

Read (2009) argued that for several reasons insider trading is an insidious activity and must be prohibited. A simple analysis of insider trading shows that early information receivers (insiders) have more rewards on their trading. However, four additional outcome of insider trading can be mentioned that damages the market place or reduces the economic welfare. First reason is the riskiness that creates insider trading, which is opposed to innate uncertainty that is typically priced into the stocks for any investment. Second outcome of insider trading that can bring loss for non-insider is the profit that insiders have from unrevealed information. Third reason is due to the unfair nature of insider trading. With ongoing insider trading activity, profits are higher for insiders and normal investors gain less profit, thus it depresses the rate of return in average for all investors in stock market and makes it costly and difficult to raise capital for other investments. Finally, insider-trading activity in a market leads to flight of good money from this market to a market with more transparency. This flight of investment and capital deters market to make capital for other legal purposes.

Researchers also focused on insider trading pattern prior to price sensitive announcements such as merger and acquisition. Keowen and Pinkerton (1981) found in their study that market reaction to upcoming mergers occur earlier than the first public announcement. This reaction of market is based on insider information. They showed that what could have been considered as a secret is traded in the market. However, their findings support semi strong form of market efficiency hypothesis, as majority of market reaction to merger completes a day after public announcement.

Olmo, Pilbeam, and Pouliot (2011) showed that a majority of possible insider trading appeared about 25 days earlier than public announcement. They also mentioned that defiantly all price

movements before announcements of price sensitive information are not due to insider activities and other factors such as market manipulation and large position taking before the announcement influenced them.

Abnormal increase in volume turnover could be a sign for insider trading. Keowen and Pinkerton (1981) found that volume turnover increased as they approached the merger announcement. They mentioned that this increase in the amount of trading volume could be due to information leaked out. Meulbroek (1992) found that the volume turnover on days with insider trading was higher than was expected. Another finding of Meulbroek was the responsibility of insiders for most of the abnormal trading volume. Asciglu, McInish, and Wood (2002) found noticeable increase in volume turnover 4 days prior to merger announcement. In another research, Clements and Singh (2011) examined the effect of takeover announcements on the trading patterns of targeted firms in United States. They found a positive cumulative abnormal return (CAR) and positive abnormal trading volume prior to investigated cases of successful takeover announcements. The combination of these findings leads them to conclude that informational asymmetry is likely to be occurring earlier than the official announcement. Clements and Singh mentioned that insider trading prior to successful takeover announcement exists in the market.

Effective law and efficient practice of insider trading law considered as the most creditable method to control this crime. Kabir and Vermaelen (1996) found in their research that after introduction of restriction laws on insider trading, which bans insiders from trading two months earlier than earning announcements, trading volume decreased while value of specific companies did not change. Frijns, Gilbert, and Tourani-Rad (2007) found in their research that stronger laws lead to lower cost of insider trading. In particular, they found broader laws; laws that employ financial damage instead of criminal damage and laws that practiced stronger public regulation achieved the best results in controlling insider trading. Osaki (2009) believed that effective enforcement by government is mandatory and critical to regulation of insider trading. Barnes (2011) argued that insider trading and market abuse are not even eliminated after insider trading law enforcement, but it continues with high rate in UK even though more provision and supervision on market imposed through Financial Services and Market Act 2000 (FSMA). Another issue that Barnes mentioned in his study is lack of insider trading convictions in UK. From 2005 till 2011, only 12 cases have been convicted in UK while within this period, this rate for US was 534 cases. This comparison magnifies the importance of enforcement in law execution and not just regulation of law. Thevenot (2012) mentions decrease of insider trading, as managers perceived risk and punishment associated with detection of their illegal insider activity.

Variety of studies conducted on insider trading from different angles of this criminal activity. Although researchers were not unanimous on every single debated issue but collective wisdom and

majority of literatures discussed that insider trading is a deceitful activity. Effective regulation of this activity is highly recommended by researchers to control insider trading.

### 3.0 METHODOLOGY

The aim of this research was to reveal probable insider trading in listed companies of Malaysia (KLSE) prior to acquisition announcements by investigation the trading volumes of targeted companies. Quantitative method applied in this research, and entailed information was secondary data from KLSE listed companies such as daily trading volume and number of outstanding shares.

Method of study in this research project was event study. Event study is founded on analysis of data and information around an event that in this particular research the event was acquisition announcements. Fama, Fisher, Jensen, and Roll (1969) were pioneers of event study methodology. According to Gilson and Black (1995), event study is a statistical method to measure effect of an event on value of the firm. Basic concept in event studies is to find abnormal return due to event being studied.

Literature provided a clue that insider trading has a positive relation with increase in trading volume. On the other hand, earlier researches stated that possibility of insider trading by approaching announcement day increase [(Keowen & Pinkerton, 1981),(Olmo et al., 2011)]. As abnormal volume turnover could be indicator of possible insider trading activity, we test whether there was a significant abnormal volume turnover in the samples prior to merger and acquisition announcement.

If positive average daily abnormal volume turnover (ACAVT) in 21 working days of stock market prior to acquisition announcement was above 0, it could be a confirmation of the existence of insider trading activity or leaked information by insiders in the studied sample.

Sample selection procedure consisted of three phases. In the first phase, all announcements of listed companies in KLSE reviewed to sort out the companies that had merger and acquisition announcement between 2008 and 2011 and as number of mergers within the period was so low, we only focused on acquisition cases. These companies were the companies that have been the target of acquisition. In the next phase, these companies are sorted based on relevance to this study and availability of trading volume per day prior to acquisition announcement. Sorted out companies are analyzed in the third phase to determine possible insider trading.

Unit of Analysis for this study in the first phase was all companies listed in KLSE on 30 November 2011. For second phase, unit of analysis was companies with merger and acquisition announcement within the research period, which were 71 companies. Unit of analysis in the third phase was companies with acquisition announcement and available data of their daily trading volume and 30 companies were chosen in this phase for further analysis. These 30 announcements took place between 01 April 2008 and 17 October 2011. Data and information used in current study are

secondary data that publically available. These data and information obtained from online data sources and databases that have been available such as Thomson Reuters data stream.

The actual announcement day of merger and acquisition was used to design an event window and the average cumulative abnormal volume traded (ACAVT) calculated. Designed window for this study was 21 working days. The model that Chae (2005) proposed was applied in this study to measure traded volume and obtain trading days with abnormal trading volume.

- The day of merger and acquisition announcement considered as day 0
- Trading day after announcement is day 1 and consequently a trading day before is day -1
- The Log Turnover was a logarithmic measure of traded volume per day divided to number of outstanding share
- The Log Expected Turnover (EVT) was the mean of log turnover calculated for trading days t -84 to t -22 (It was 63 working days)
- Abnormal Volume Turnover (AVT) calculated from subtracting log expected turnover (EVT) from the log turnover.

To calculate average daily cumulative abnormal volume turnover (ACAVT), pre-announcement day designed from day t-21 to t-1. ACAVT generated by averaging AVT over the designed period. 21 working days considered as 1 month, which was consistent with other studies that used event study method. Total event designed window is 84 working days

Log Turnover:

$$\tau_{i,t} = \ln\left(\frac{\text{Trading Volume } i,t}{\text{Outstanding Shares } i,t}\right) \quad (\text{Equation 1})$$

Log Expected Turnover:

$$\bar{\tau}_{i,t} = \left(\frac{\sum_{t=-84}^{t=-22} \tau_{i,t}}{63}\right) \quad (\text{Equation 2})$$

Abnormal Turnover ( $\xi_{i,t}$ ) = Log turnover – Log Expected turnover

$$\xi_{i,t} = \tau_{i,t} - \bar{\tau}_{i,t} \quad (\text{Equation 3})$$

Average Daily Cumulative Abnormal Volume Turnover (ACAVT)

$$ACAVT = \left(\frac{\sum_{t=-21}^{t=-1} \xi_{i,t}}{21}\right) \quad (\text{Equation 4})$$

i = the share of a under study company

t =time of event (day)

The equations were assessed to analyze the collected data of companies for each announcement separately. The goal of tests was to measure ACAVT and to find whether ACAVT for each studied company is significantly more than zero. If calculated ACAVT was significantly more than zero, there is a possible insider trading activity and vise versa.

#### 4.0 DATA ANALYSIS AND RESULTS

The analysis performed was to evaluate probable insider trading activity prior to acquisition announcements in KLSE. The main analysis for this research is following the analysis formulated by Chae (2005) to get cumulative abnormal trading volume traded (ACAVT) of collected data.

Besides calculation of abnormal turnover of samples to identify probable insider trading, graphs of trading volume for 84 working days prior to announcement day and abnormal turnover for 21 days prior to announcement prepared for each sample to have better understanding of trading pattern. 21 working days were considered as a month and 84 days consequently as 4 months for the current study. The Trading volume graph illustrates the trading pattern of the studied companies prior to announcement and it helps to have a vision of how the upcoming announcement influenced trading. High traded volume days in trading volume graphs also investigated to identify the motive or reason behind presence of that high volume in that particular day. This investigation was conducted to identify any kind of news or announcement that could drive investors to increase their volume of trades. Abnormal volume graph also showed abnormal returns, this graph clarified how many days within a working month prior to announcement abnormal turnover (possible insider trading) occurred.

As current study is only an academic research to investigate in level of probable insider trading in KLSE and due to legal obligations, the identity of studied companies kept closet. To illustrate method of the analysis, we only describe trading volume (figure 1), abnormal turnover graph (figure 2) and calculated ACAVT for only one of the studied sample.

Trading volume event window for t-84 days and one day prior to announcement designed as t-1, which is displayed in figure 1. The vertical axis represents the daily volume traded in thousands and the horizontal axis represents the trading days. By a visual inspection, the graph indicates of large trading volumes in day's t-4, t-14 and t-19. For these three high volume days, databases such as emerging market information service (EMIS), Bursa Malaysia's website and company's website have been searched and there was no evidence of an important news or any kind of announcement prior these three days.

Figure 2 illustrated abnormal volume turnover (AVT) between day's t-21 and t-1 for studied sample. Vertical axis represented level of abnormal turn over and it driven out from difference between log turn over and log expected turn over. Horizontal axis represented focus days of study (one month window). The AVT graph shows that there were consistent abnormal traded volumes existed for designed study period. Visually inspection of AVT graph indicates increased appetite for stocks of studied sample.

Investigation in high traded volume days information wise, did not brought any specific reason behind that abnormal increase of trading and Consistent abnormal trading volume for designed window and points a strong possibility of insider trading activity in stocks of studied Company prior to investigated acquisition announcement. However, it should be reminded that increase in trading

volume of particular stock, encourage other investors to increase their deal on that particular stock; thus, high trading volume could also be due to this phenomena and market perception of investors. Calculated cumulative abnormal trading volume traded (ACAVT) calculated for this particular sample and it was significantly above zero (3.040706156). Overall, The results drove out from investigations convinced researchers to be doubtful and highly suspicious to presence of possible insider trading in studied sample.

The sum of ACAVT results for studied samples presented in table 1. According to results, 40 percent of analyzed acquisition that announced between 2008 and 2011 in KLSE have ACAVT significantly above zero and suspicious to have fraud and financial crime hidden inside. These companies with ACAVT significantly higher than zero were companies with possible insider trading activity and must be closely monitored by officials.

## 5.0 CONCLUSION

This study investigated traded volumes of Kula Lumpur Stock Exchange's (KLSE) companies with acquisition announcement to identify possible insider trading activities prior to official announcement between 2008 and 2011. This research contributes to financial market players, investors, auditors and researchers who are interested in financial fraud and insider trading. The objective of this research was to determine efficiency and confidence of KLSE by investigation on presence of one subset of financial crime (insider trading) prior to acquisition announcements. For this purpose, 30 companies with published acquisition have been chosen to conduct sets of analysis on them.

The results from calculation of ACAVT indicated that in about 40 percent of studied samples, elements of insider trading activity or information leaking by insiders presents. The calculated ACAVT were ranged from lowest at - 1.4701 to highest at 3.0407. Besides calculated ACAVT, observation of traded volume and investigation to recover announcements from databases and information sources raised suspicion to existence of financial fraud in samples with high ACAVT. The fact that 40 % of acquisitions in KLSE were suspected to have possibility of financial crime raises doubts about efficiency and confidence of KLSE.

Insider trading activity decreases the efficiency of the market, confidence of investors and considered as a value destroyer activity; therefore, close observation of market and monitoring insiders' activity prior to merger or acquisition by Malaysian authorities required.

As this study mainly focused on volume turnover, other researchers should be reminded that increase in trading volume of particular stock in stock market encourage other investors to increase their deal on that particular stock respectively; thus, high trading volume could also be due to this phenomena and not only insider trading.

## References

- Ascioglu, N. A., McInish, T. H., & Wood, R. A. (2002). Merger Announcements and Trading. *Journal of Financial Research*, 25(2), 263-278.
- Bainbridge, s. M. (1986). The Insider Trading Prohibition: A Legal and Economic Enigma. *Florida Law Review*, 38, 35-68.
- Barnes, P. (2011). Insider Dealing and Market Abuse: The UK's Record on Enforcement. *International Journal of Law, Crime and Justice*, 39, 174-189.
- Chae, J. (2005). Trading Volume, Information Asymmetry, and Timing Information. *Journal of Finance*, 60, 413-442.
- Chau, M., & Vayanos, D. (2008). Strong-form efficiency with monopolistic insiders. *The Review of Financial Studies*, 21(5), 2275-2306.
- Clements, M., & Singh, H. (2011). An analysis of trading in target stocks before successful takeover announcements. *Journal of Multinational Financial Management*, 21, 1-17.
- Fama, E. F., Fisher, L., Jensen, M., & Roll, R. (1969). The Adjustment of Stock Prices to New Information. *International Economic Review*, 10, 1-27.
- Fishman, M. J., & Hagerty, K. M. (1992). Insider trading and the efficiency of stock prices. *RAND Journal of Economics*, 23(1), 106-122.
- Frijns, B., Gilbert, A., & Tourani-Rad, A. (2007). *Elements of Effective Insider Trading Laws*. Auckland University of Technology. Auckland, New Zealand.
- Gilson, R. J., & Black, B. S. (1995). *The law and finance of corporate acquisitions* (2nd ed.). New York: Foundation Press.
- Herzel, L., & Katz, L. (1987). Insider trading: who loses? *Lloyds Bank Review*, July, 15-26.
- Jensen, M., & Meckling, W. (1976). Theory of the firm: Managerial behaviour, agency costs and ownership structure. *Journal of Financial Economics*, 3, 305-360.
- Jhon, K., & Lang, L. (1991). Insider trading around dividend announcements: Theory and evidence. *Journal of Finance*, 46, 1361-1390.
- Kabir, R., & Vermaelen, T. (1996). Insider trading restrictions and the stock market: Evidence from Amsterdam Stock Exchange. *European Economic Review*, 40, 1951-1603.
- Keowen, A. J., & Pinkerton, J. M. (1981). Merger Announcements and Insider Trading Activity: An Imperical Investigation. *Journal of Finance*, 36, 855-869.
- Manne, H. (1966). *Insider trading and the stock market*. New York: Free Press.
- McGee, R. W. (2009). An Economic and Ethical Look at Insider Trading. In P. U. Ali & G. N. Gregoriou (Eds.), *Insider Trading, Global Development and Analysis* (pp. 35-48). Florida, United States: Taylor & Francis Group, LLC.
- Meulbroek, L. K. (1992). An Empirical Analysis of Illegal Insider Trading. *Journal of Finance*, 47(5), 1661-1699.
- Olmo, J., Pilbeam, K., & Pouliot, W. (2011). Detecting the presence of insider trading via structural break tests. *Journal of Banking and Finance*, 35, 2820-2828.
- Osaki, S. (2009). The Evolution of Insider Trading Regulations in Japan. In P. U. Ali & G. N. Gregoriou (Eds.), *INSIDER TRADING*

- Read, C. (2009). Market Inefficiencies and Inequities of Insider Trading—An Economic Analysis. In P. U. Ali & G. N. Gregoriou (Eds.), *INSIDER TRADING*
- Schafer, H.-B., & Ott, C. (1992). Economic Effects of EEC Insider Trading Regulation Applied to Germany. *International Review of law and Economic*, 12(3), 357-375.
- Thevenot, M. (2012). The factors affecting illegal insider trading in firms with violations of GAAP. *Journal of Accounting and Economics*, 53, 375-390.

**Figures and Tables**

Figure 1: Trading Volume

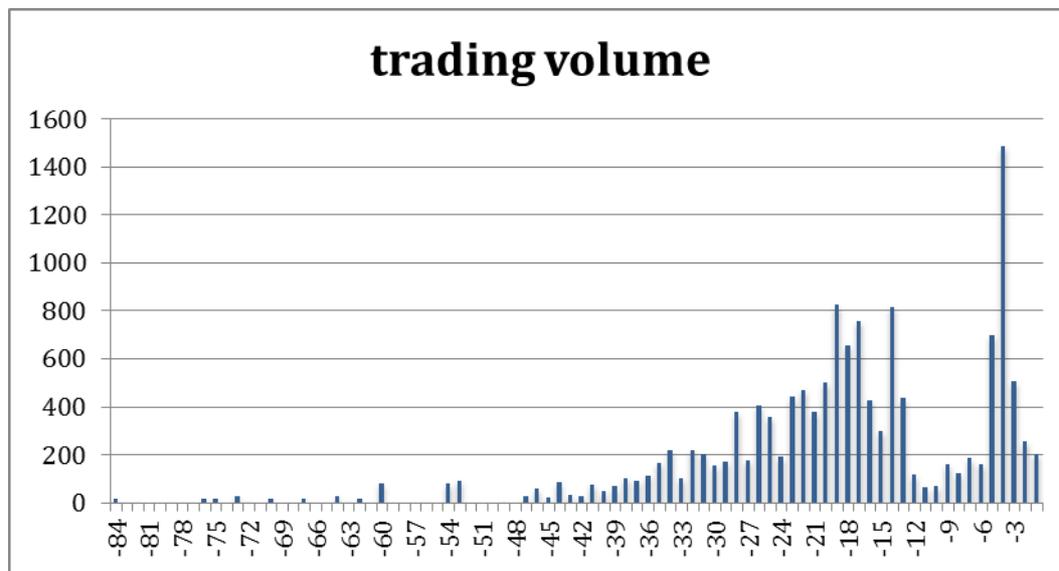


Figure 2: Abnormal Turnover

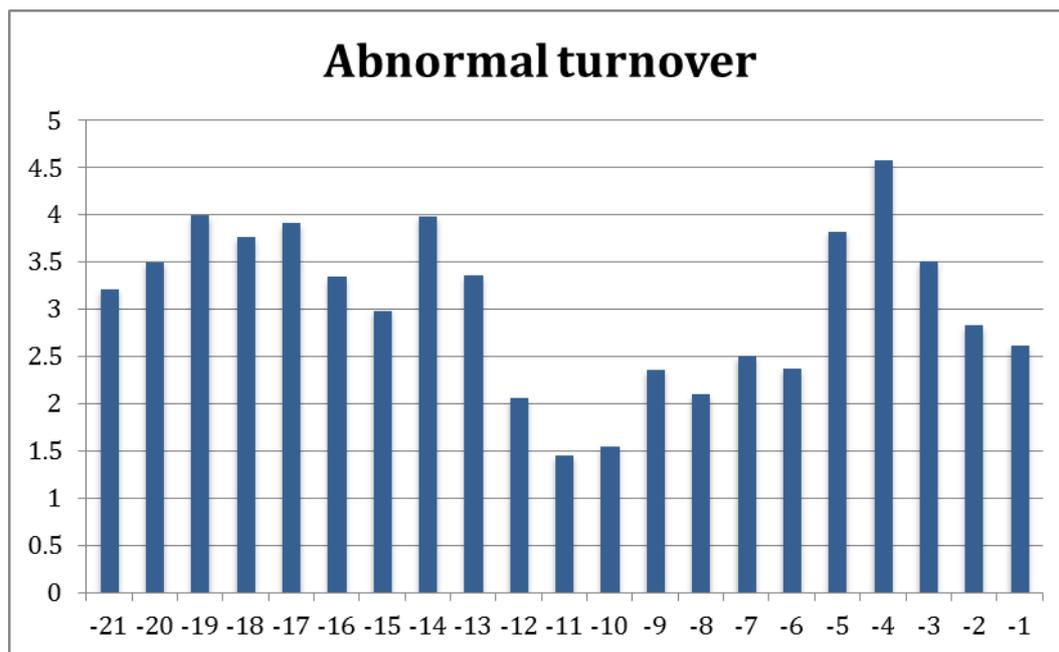


Table 1: Results Summary

Significant ACAVT above zero (Observed)	Significant ACAVT above zero (Percentage)	Mean ACAVT	SD
12	40 %	0.194557584	1.01801518