Corporate Governance and Ownership Structure on Illegal Insider Trading Activities in Malaysian Public Listed Companies

Suhaily Hasnan[1,2♣], Nor Azlina A. Rahman[3], Alfiatul Rohmah Mohamed Hussain[1] and Mazurina Mohd Ali[1]

[1]Faculty of Accountancy, Universiti Teknologi MARA, Selangor Branch, Puncak Alam Campus, Malaysia
[2]International School, Vietnam National University, Hanoi, Vietnam
[3]Jabatan Akauntan Negara Malaysia Negeri Melaka, Melaka, Malaysia

ABSTRACT

This study examined the effect of corporate governance and ownership structure on illegal insider trading activities in public listed companies in Malaysia. Specifically, this study examined the effect of board independence, audit quality, family ownership, managerial ownership and institutional ownership on illegal insider trading activities in public listed companies in Malaysia. This study used content analysis on the annual reports over a 16-year period from 2000 to 2015 of 112 Malaysian public listed companies. Out of the 112 public listed companies, 22 public listed companies were involved in illegal insider trading activities, whilst the remaining 90 were not. This study showed that audit quality and managerial ownership significantly influence illegal insider trading activities, whilst board independence, family ownership and institutional ownership do not have a significant influence on illegal insider trading activities in public listed companies in Malaysia. These findings may assist the relevant authorities in strengthening enforcement to minimise illegal trading activities in the Malaysian securities market.

Keywords: Corporate Governance, Ownership Structure, Illegal Insider Trading.

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♣ Corresponding Author: Suhaily Hasnan, Faculty of Accountancy, Aras 1 & 2 Bangunan FPN Puncak Alam Campus, Universiti Teknologi MARA, Selangor Branch, 40450 Shah Alam Selangor, Malaysia; Email: suhailyhasnan@uitm.edu.my ; No. Tel: 6012-5217037

INTRODUCTION

In recent years, the Securities Commission (SC) of Malaysia has been continuously reporting a significant increase in illegal trading activities in public listed companies (PLCs) in Malaysia. Illegal insider trading involves intentionally creating unfairness between insiders who are generally the managers and outsiders who are generally investors involved in the securities market (Mohamed Sadique, Roudaki, Clark, & Alias, 2010). The term, 'insider trading' is synonymous with illegal conduct by the managers in a company. According to the Securities and Exchange Commission (SEC) in the United States, an illegal insider trading activity involves an infringement of the trading of shares by revealing information about the shares. This illegal trading includes the act of 'tipping' material and non-public information, trading of the shares by the individual 'tipped' with the non-public material information, and trading of securities by individuals who have misappropriated such information.

Amongst the most controversial insider trading cases in Malaysia include Worldwide Holdings Bhd. in 2006, PacificMas Bhd. in 2007, Axis Incorporation Bhd. in 2008 and Three-A Resources Bhd. in 2009 (Securities Commissions, 2014, 2017; The Edge Markets, 2020; The Star, 2021). As with other fraudulent activities, these illegal insider trading cases took years to be charged. For instance, in the case of Worldwide Holdings Bhd. (which was privatised on 23 August 2006), the possession of material non-public information was used by Datuk Sreesanthan Eliathamby between 7th June 2006 and 11th July 2006, but he was only sentenced on 4 November 2020 (The Edge Markets, 2020). In the said case, Sreesanthan was not a manager in the company; he was a senior partner in a law firm that had served as the legal adviser for the proposed privatisation of Worldwide. The information was made generally available in August 2006 through an article in The Star and detailed out by a Bursa Malaysia announcement. Sreesanthan had acquired 600,000 shares of Worldwide in June and July 2006, and recorded a gain when he sold the shares in September 2006. Thus, he was deemed as an insider and charged under section 89E(2)(a) of the Securities Industry Act (SIA) 1983 for the use of material non-public information that he obtained while serving as an agent of Worldwide.

In the case of Three-A Resources Bhd., former executive director, Fang Siew Yee, acquired 2.72 million units of Three-A shares between 27 August 2009 and 5 October 2009 through Tan Bee Geok's account who was in possession of insider information. She communicated this information to her uncle, Fong Chiew Hean, who had also acquired 891,000 shares on 5 September 2009. The inside information related to the proposed venture between Three-A and Wilmar International Ltd., where Siew Yee had represented Three-A in a series of meetings and negotiations. In 2016, Fang together with her father, who was the founder cum managing director of Three-A, were charged under section 188(2)(a) of the Capital Market and Services Act (CMSA) 2007 for acquiring the shares, and under section 188(3)(a) of the same Act for communicating material non-public information. Meanwhile, Tan, and two other OSK Investment Bank Bhd. dealers, were charged for abetting Fang under section 370(c) of the CMSA 2007 (The Star, 2021).

The above-mentioned cases were charged under different Acts because of the different material years. Before 2007, insider trading in Malaysia was mainly governed by Division 2 (Section 89-89P), Part IX of the SIA 1983, sections 132A and 132B of the Companies Act 1965 and Part H, Chapter 9 of the Listing Requirements of Bursa Malaysia Securities Bhd. (Bursa Malaysia). However, in 2007, the CMSA was enforced to regulate the securities industry, whereby the Act consolidated SIA 1983 and Future Industry Act 1993. Currently, the CMSA is primarily administered by the SC, while Bursa Malaysia plays the role of regulator of the Malaysian capital market. Nonetheless, when there is evidence of market manipulation, both the SC and/or Bursa Malaysia may investigate and take appropriate enforcement action against individuals or organisations. With regard to the enforcement action for illegal insider trading offences, the CMSA states that any breach of Sections 188(2) and (3), the accused shall be punished upon conviction for a term not exceeding 10 years and fined not less than RM1,000,000. In addition, the convicted individual may be liable to pay for the loss or damages and civil penalty. For example, in the case of Worldwide, Sreesanthan was barred from becoming a director for any public listed company for a period of 10 years, and was ordered to pay RM1,989,402 for the losses, as well as a civil penalty of RM1,000,000 (Nathan, 2021).

Gilbert (2007) noted that illegal insider trading can lead to many disadvantages in the international market. It can reduce investors' confidence, thus reducing liquidity, postponing share offering and eventually, increasing the cost of capital. It is necessary for companies to increase investors' confidence in order to safeguard the securities market environment. Illegal trading activities can reduce the number of potential investors, thus affecting national economic growth and performance. Very few studies have examined the factors that influence illegal trading activities, particularly in the Malaysian context. Focusing on board independence of Malaysian public listed companies (PLCs) to examine private information-based trading, Khong, Hooy, and Lye (2021) found a negative association between these variables, with the effect being strengthened by firms' disclosure quality. Thus, they concluded that firm's disclosure quality compliments board independence in preventing illegal insider trading. Wasiuzzaman and Lim (2016) who examined the effect of institutional investors in the case of insider trading in Malaysia, found that a higher level of asymmetric information promotes the occurrence of insider trading, thus leading them to conclude that institutional investors take advantage of the information asymmetry faced by individual investors for their own benefit.

Taken together, this study examined the effect of corporate governance and ownership structure on illegal insider trading activities in Malaysian PLCs. The findings of this study could shed some light on the factors that can contribute to illegal insider trading activities in the PLCs. In addition, the findings of this study can enable the relevant authorities to better understand and strategize the ways to take appropriate action to strengthen enforcement so as to minimise illegal insider trading activities. The following sections present the literature review, the research design, results and discussion, and finally, the conclusion of this study.

LITERATURE REVIEW

Insider Trading

The term, 'insider trading' or 'insider information' has received much attention from academics, practitioners and the relevant authorities. Antoniadis, Gkasis, and Sormas (2015) described insider trading as the act of buying or selling shares by an individual who has access to non-public information about a company. The concern with insider trading is indeed worrying since it reduces shareholders' wealth due to information asymmetry. Information asymmetry occurs when insiders obtain additional information regarding the company that was not disclosed to the outsiders, such as the investors and the public (Antoniadis et al., 2015). This additional information may affect the share prices as the insiders would use the undisclosed information to earn abnormal returns from the share market (Fishman & Hagerty, 1992). There are two types of insider trading, namely, legal insider trading and illegal insider trading. Legal insider trading is common in the sense that it occurs on a regular basis and it is legal as long as it does not violate insider trading regulations. On the other hand, illegal insider trading is trading based on non-public information and a breach of fiduciary duty to the company (Antoniadis et al., 2015).

Based on the Agency Theory, Jensen and Meckling (1976) suggested that ownership structure could prevent the agency problem. In their study, they highlighted that they prefer the use of the term, 'ownership structure' rather than 'capital structure' due to the fact that the crucial aspect to be determined is not only the amount of debt and equity, but also the fraction of the equity being held. La Porta, Lopez-de Silanes, and Shleifer (1998, 2000) suggested that ownership structure is a key determinant of the well-being of the companies. However, most studies in the emerging markets have focused only on the effect of institutional ownership (i.e., Wasiuzzaman & Lim, 2016; Aziz, Mohamed, Hasnan, Sulaiman, & Abdul Aziz, 2017; Wang, 2020; Li & Ji, 2021) rather than the ownership structure as a whole. Jensen (1993) argued that the ineffective and inefficient governance system is a major contributor to the agency problem in most corporate failures. Hasnan, Rahman, and Mahenthiran (2013), in their study, mentioned that the effectiveness of corporate governance can reduce illegal activities in companies. A group of studies on insider trading has examined corporate governance as a factor that may influence illegal trading activities. Many of these studies have only included internal governance, such as board independence (Wu & Li, 2015; Khong et al., 2021; Zhao, Zhang, Xiong, & Zou, 2021) and CEO duality (Khong et al., 2021; Zhao et al., 2021).

However, studies on the factors influencing illegal insider trading activities are limited, particularly in Malaysia. Therefore, this study simultaneously examined the effect of corporate governance and ownership structure on illegal insider trading activities in PLCs in Malaysia. Under corporate governance, the study included internal and external elements, such as board independence and audit quality, whereas under ownership structure, the study incorporated individual and organisational elements, namely family ownership, managerial ownership and institutional ownership. Worthy of note is that the selection of variables included in the study were based on the findings from prior literature and the uniqueness of the Malaysian environment. The following sub-sections discuss each variable included in this study as well as hypotheses development.

Corporate Governance

Several corporate governance studies have suggested that illegal insider trading is related to the quality of corporate governance as it can negatively affect the systematic stability and integrity of financial disclosure (Wong, Fatt, & Yap, 2010). Shleifer and Vishny (1997) noted that good corporate governance can minimise the agency problem and prevent shareholders from being victimised by insiders in a company. One of the ways to practice good corporate governance and prevent illegal insider trading activities is by providing high transparency and disclosure (Wong et al., 2010).

According to Sharma (2004), increases in the proportion of independent directors can reduce fraud, particularly illegal insider trading activities. She further explained that when independent directors constitute the majority, corporate governance practices in the company will be more effective (Boone, Field, Karpoff, & Raheja, 2007; Coles, Daniel, & Naveen, 2008; Linck, Netter, & Yang, 2008). In other words, a company that has good corporate governance can protect minority shareholders from being victimised by the insiders in the company (Chauhan, Kumar, & Chaturvedula, 2016). Arguably, the greater proportion of independent directors on the board is important especially in the case where the majority of the shareholders of the company has an absolute advantage over the minority shareholders. In addition, more independent directors in a company can reduce the occurrence of cumulative abnormal returns of insider trading (Wu & Li, 2015). Therefore, this study developed the following research hypothesis:

H1: There is a negative association between board independence and illegal insider trading activities.

Another mechanism of corporate governance is audit quality. Audit quality is important towards detecting fraud committed by the insiders. Illegal trading activities by insiders are classified as one of the types of securities market fraud; thus, there is a need for an external monitoring mechanism to reduce illegal trading activities (Clincha, Stokes, & Zhu, 2011). Choi, Kim, Liu and Simunic (2008) defined audit quality as the joint probability of detecting and reporting financial statement errors. Dopuch and Simunic (1982) suggested that external audit can reduce information asymmetry between managers and shareholders by providing reliable financial statements. Moreover, external auditors can be regarded as information intermediation between the controlling shareholders and the minority shareholders (Gul, Kim, & Qiu, 2010). Hence, the following research hypothesis was developed:

H2: There is a negative association between audit quality, measured using BIG4 auditors, and illegal insider trading activities.

Ownership Structure

Previous studies have stated that there is no guarantee that the directors of a company would provide full commitment in monitoring even though they have the highest amount of ownership. In other words, the directors may still snip from the company regardless of the position and ownership that they have (Gedajlovic & Shapiro, 1998; Miguel, Pindado, & La Torre, 2004). Ownership structure can give rise to self-dealing, insider trading or other forms of mistreatment of the minority shareholders. Since majority shareholders play a significant role in monitoring a company, they must play their role accordingly to prevent illegal trading activities (Morck, 1996).

Concentrated controlling ownership can be considered as an important factor in determining the information content of insider trading (Chauhan et al., 2016). In some cases, an increase in ownership concentration may create opportunities for majority shareholders to manipulate the activities in a company and expropriate the minority shareholders (Ma & Tian, 2014). Chauhan et al. (2016), stated that controlling ownership could influence information asymmetry through two channels which can result in more information content of insider trading. The first channel is through a combination of concentrated ownership and active participation in the company. Such combination can escalate the precision of insiders' private information. The second channel is through the release of company-specific information that can reduce uncertainty of company value. This is due to the camouflaged behaviour of the controlling shareholders. Therefore, this study developed the following research hypotheses:

H3: There is a positive association between family ownership and illegal insider trading activities.

H4: There is a positive association between managerial ownership and illegal insider trading activities.

Higher institutional ownership can improve price information efficiency; institutional investors then have the incentive to monitor the management, leading to more positive effects on the company (Boehmer & Kelley, 2009). Lin and Fu (2017) posited that institutional investors can limit the controlling power of insiders when formulating their investment strategies and play an "active monitoring" role. However, prior studies have provided evidence that in some circumstances, higher ownership by institutional investors has failed to prevent insider trading activities. Instead, institutional investors might have collaborated with managers to exploit minority shareholders by choosing to overlook management fraud and benefit from managers' actions (Elyasiani & Jia, 2010). Furthermore, in a situation where institutional investors play a passive monitoring role, trading of shares to earn speculative short-term trading profits based on informational advantage (David & Kochhar, 1996) or to content individual needs, can arise (Elyasiani & Jia, 2010). Therefore, this study developed the following research hypothesis:

H5: There is positive association between institutional ownership and illegal insider trading activities.

RESEARCH METHODOLOGY

Sample Description

The sample of the study consisted of companies listed on the Main and ACE Markets of Bursa Malaysia over a period of 16 years from 2000 to 2015. The period of study included the prior year that the insider trading activities occurred. The sample consisted of insider trading cases obtained from the SC's litigation press releases, criminal prosecution, civil actions and regulatory settlements that fell within the period of this study. Since there were no insider trading activities listed in the Bursa Malaysia website, the list of companies was manually extracted from the SC website. As of December 2015, a total of 1,145 samples were available in both the Main and ACE markets of Bursa Malaysia. However, following Huang, Hou and Cheng (2012), the study adopted a match-paired procedure based on industry and firm size in the selection of the sample. Initially, one treatment sample was matched with five control samples. But, 20 out of 110 control samples were excluded as outliers during the analysis. Thus, the final sample comprised of 112 PLCs, i.e., 22 illegal insider trading samples and 90 control samples. Companies in the financial sector, funds and insurance, and Initial Public Offerings (IPOs) were excluded from this study as Wu and Li (2016) suggested that these companies are subjected to specific laws and regulations.

Research Instrument

This study used content analysis to achieve the research objectives. The data on illegal insider trading activities were obtained by performing a content analysis of the annual reports of the 112 PLCs. This study collected data related to the presence of illegal insider trading activities, corporate governance and ownership structure.

Variables Measurement

In this study, illegal insider trading was the dependent variable measured dichotomously. If the annual report of a company showed the presence of illegal insider trading activities, then the company was coded as '1', and otherwise, '0'. This method is similar to the method used in Huang et al. (2012). Each company that was involved in insider trading activities was matched with a corresponding non-insider trading company on the basis of size, industry and the same period.

Corporate governance and ownership structure were the independent variables in this study. For corporate governance, two measurements were used. The first measurement was used to measure board independence based on the ratio of the number of independent directors on the board. The second measurement was used to measure audit quality based on whether the company was audited by Big4 auditors or otherwise. For ownership structure, this study used three measurements. The first was used to measure family ownership based on the percentage of shares held by family owners. The second was used to measure managerial ownership based on the percentage of shares held by the managers. The last measurement was institutional ownership based on the percentage of shares held by institutional investors.

This study also employed control variables represented by company-characteristics. Three company-characteristics were employed, namely, company performance, age and leverage. Table 1 provides the summary of the measurement for each variable:

Table 1: Summary of Variables Measurement

Variables		Measurements
Dependent variable	Insider Trading (INSIDER)	A dummy variable with the value of 1 if the company was involved in illegal insider trading activities, and otherwise, 0
Independent variables	**1. Corporate Governance**	
	i. Board Independence (BODIND)	The ratio of the number of independent directors to board size.
	ii. Audit Quality (BIG4)	A dummy variable that equals 1 if the audit company is one of the biggest four audit companies, and otherwise, 2.
	2. Ownership Structure	
	i. Family Ownership (FAMOWN)	Ratio of family owners to the total shares outstanding (shares owned by family members/shares outstanding).
	ii. Managerial Ownership (MANOWN)	Ratio of managerial owners to the total shares outstanding (shares owned by managers/shares outstanding).
	iii. Institutional Ownership (INSTOWN)	Ratio of institutional owners to the total shares outstanding (shares owned by institutions/shares outstanding).

Control variables	Company's Characteristics:	
	Company Performance (ROA)	Return on assets ratio (Operating profits/total assets).
	Company Age (AGE)	A record of company age since incorporation measured in number of years.
	Company Leverage (LEV)	Leverage ratio (total debts/total assets)

In order to achieve the research objectives of this study, the following logistic regression model was developed to analyse the relationship between corporate governance and ownership structure, and the occurrence of insider trading activities. In more detail, the logistic regression model was used to examine the influence of each factor on the incidence of illegal insider trading for year t and t-1.

Model

$$INSIDER = \beta0 + \beta1BODIND + \beta2BIG4 + \beta3FAMOWN + \beta4MANOWN + \beta5INSTOWN + \beta6ROA + \beta7AGE + \beta8LEV + \mathcal{E}i \quad (1)$$

Where:

INSIDER = Illegal Insider Trading
BODIND = Board independence
BIG4 = Audit quality
FAMOWN = Family ownership
MANOWN = Managerial ownership
INSTOWN = Institutional ownership
ROA = Return on Assets Ratio
AGE = Company Age
LEV = Leverage Ratio

RESULTS AND DISCUSSION

Descriptive Statistics

Table 2 provides the descriptive statistics of this study. Table 2, Panel A provides the statistical data of each variable, i.e., minimum, maximum and mean values as well as the standard deviation for the continuous variables, analysed using the independent t-test. Table 2, Panel B on the other hand, provides the cross-tabulation of the dichotomous variable, namely audit quality, proxied by BIG4, analysed using the Chi-square test.

The results showed that none of the continuous variables showed significant differences in both insider year (t) and prior year (t-1) between the insider trading companies and the control companies. These results suggest that the characteristics of the insider trading companies and the control companies are comparable. It is worth mentioning that there were slightly higher maximum and mean values reported for managerial ownership in the insider year as compared to the prior year. Such result suggests that managerial ownership is higher during the insider year than the prior year. Interestingly, the minimum value for board independence in both years was 25 percent. This indicated that there were companies that did not fulfil the minimum number of independent directors as required by the Listing Requirements of Bursa Malaysia under paragraph 15.02(1), i.e., ‘A listed issuer must ensure that at least 2 directors or 1/3 of the board of directors of a listed issuer, whichever is the higher, are independent directors.’. However, the mean values showed 44 percent in the insider year and 42 percent in the prior year. This result suggests that on average, most companies had met the minimum requirement under paragraph 15.02(1) of the Listing Requirements.

In relation to BIG4, this study showed that there was a significant difference between the insider trading companies and the control companies in the insider year. Out of the 22 insider trading companies, 19 companies engaged BIG4, representing 86 percent of the total companies. However, out of the 90 control companies, only 56 companies engaged BIG4 (62 percent). This result suggests that insider trading companies are more likely to engage BIG4 auditors compared to the control companies. However, the difference was not statistically significant in the prior year.

Table 2: Descriptive Statistics of Variables
Panel A – Continuous Variables

	t					t-1				
	Min.	Max.	Mean	Std. Dev.	t-test	Min.	Max.	Mean	Std. Dev.	t-test
BODIND	0.25	0.71	0.44	0.12	-0.154	0.25	0.83	0.42	0.11	-0.240
FAMOWN	0.00	66.68	11.16	19.96	-0.329	0.00	71.26	11.56	20.28	-0.626
MANOWN	0.00	79.21	21.27	23.56	1.406	0.00	74.99	18.16	21.65	1.011
INSTOWN	0.00	69.10	7.14	16.25	-0.485	0.00	77.14	7.56	17.12	-0.550
ROA	-0.12	0.21	0.05	0.62	0.797	-0.41	0.44	0.06	0.09	-0.152
AGE	2	69	22.13	14.24	-1.102	1	68	21.13	14.24	-1.102
LEV	0.12	0.90	0.44	0.21	0.173	0.07	0.96	0.44	0.20	-0.380

Panel B – Dichotomous Variable

	t				t-1			
	BIG4	Non-BIG4	Total	Chi-Square	BIG4	Non-BIG4	Total	Chi-Square
INSIDER	19	3	22	3.630**	18	4	22	1.959
NON-INSIDER	56	34	90		57	33	90	
TOTAL	75	37	112		75	37	112	

Logistic Regression Results

This study used binary logistic regression to test the relationship between the variables since the dependent variable used a dichotomous value (Pallant, 2010). This study performed two sets of logistic regression that represented the period between the insiders conducting illegal insider trading activities in their companies and their being indicted for fraud (Huang et al., 2012). Table 3, Panel A and Panel B present the results of multivariate analyses for insider year and prior year that support the hypotheses in this study.

With regard to the corporate governance mechanisms, the regression results showed that only BIG4 is negatively and significantly associated with the occurrence of illegal insider trading activities. Therefore, Hypothesis H2 was supported. Nonetheless, the negative sign of coefficient in both Panel A and Panel B should be carefully interpreted since data in Table 2, Panel B provided evidence that the proportion of BIG4 was higher in the insider trading companies (19/22 = 86.36 percent) than in the control companies (56/90 = 62.22 percent). Although this study predicted a negative association between audit quality and the occurrence of insider trading activities, it was expected that the insider companies would have engaged more non-Big4 that are deemed to possess lower audit quality. However, the result showed otherwise. If the Big4 auditors truly possessed higher audit quality, the negative association between BIG4 and the occurrence of illegal insider trading activities suggested that the Big4 auditors of insider trading companies had failed to appropriately assess the audit risk of these companies. The result in this study is inconsistent with Clincha et al. (2011) who found Big4 auditors who possessed more expertise play a role in distributing reliable and specific information of the company to the market and reveal lower information asymmetry among the traders, thus reducing the possibility of illegal trading activities. The result however, is consistent with Hasnan et al. (2013) who found a significantly positive association between audit quality proxied by audit fees and the occurrence of fraudulent financial reporting in Malaysian companies. Perhaps, the audit market in Malaysia is different from the audit market in developed countries.

With regard to board independence, the results of this study showed an insignificant finding. Independent directors are seen as a company's protectors who can help to mitigate abnormal returns arising from illegal insider trading activities (Wu & Li, 2016; Chen, Firth, Gao, & Rui, 2006). Although it can be argued that board independence may counteract illegal insider trading activities in companies, this study showed that directors' independence cannot prevent the occurrence of illegal insider trading activities. Thus, there was no support for Hypothesis H1. This finding is consistent with the result of Cappelli, Singh, Singh and Useem (2010), and Fidrmuc, Korczak and Korczak (2013). In their study, they found that independent directors did not perform a good monitoring role on behalf of shareholders. The result is also consistent with Huang et al. (2012) who found that independent directors have no significant influence on the occurrence of illegal insider trading activities. Hasnan, Rahman and Mahenthiran (2014) argued that high level of board independence in the Malaysian PLCs is simply to meet the requirements of the authorities instead of representing the actual corporate governance level of the companies. This argument was also highlighted by Abdullah, Mohamad Yusof and Mohamad Nor (2010) that the appointment of independent directors in Malaysian companies is essentially to comply with the strict regulations, and not to facilitate corporate oversight.

This study showed a significant association between managerial ownership and the occurrence of illegal insider trading activities at 10 percent. Moreover, this significant result was reported in the insider year. This finding suggested that managerial ownership was higher in the insider companies, particularly in the insider year. Thus, Hypothesis H4 was supported. This result is consistent with Tang, Chen and Chang (2013) that higher managerial ownership encourages entrenchment and has more power to expropriate the minority shareholders, subsequently leading to higher incidences of insider illegal trading activities. As argued by Stanley, Todd De Zoort and Taylor (2009), auditors usually would have discussed the financial reports with company managers prior to issuance. Thus, the insiders may have possessed the undisclosed information before the external shareholders thus leading to illegal insider trading activities. As reported in Table 3, Panel A and Panel B, there was a significantly positive correlation between managerial ownership and audit quality. Perhaps, the low quality of audits by the Big4 auditors in the insider trading companies was influenced by the managers who are also the owners of the company. As the company owners, managers may have negatively affected company governance, subsequently leading to illegal insider trading activities (Tang et al., 2013). However, this study showed that family ownership and institutional ownership did not influence illegal insider trading activities. Thus, there was no evidence to support Hypotheses H3 and H5.

The shown in Table 3, Panel A, the Rsquared value was 0.110 (Nagelkerke R- squared: 0.175). This result indicated that 11 percent of the amount of variation in the illegal insider trading incidence can be explained by all the independent variables. A shown in Table 3, Panel B the R-squared value was 0.063 (Nagelkerke R-squared: 0.101), indicating that the model fit was higher in the insider year as compared to the prior year. Perhaps, since insider trading activities require the most recent information, the explanatory variables to predict its occurrence were more relevant in the insider year than in the prior year.

Table 3: Logistic Regression of Illegal Insider Trading
Panel A – Insider Year (t)

	B	S.E.	Wald	Sig.
BODIND	0.501	2.337	0.046	0.830
BIG4	-1.966***	0.737	7.122	0.008
FAMOWN	0.008	0.018	0.222	0.637
MANOWN	0.026*	0.015	2.811	0.094
INSTOWN	0.005	0.022	0.046	0.830
ROA	4.440	4.840	0.842	0.359
AGE	-0.027	0.021	1.665	0.197
LEV	1.375	1.508	0.831	0.362
Constant	-2.155	1.357	2.521	0.112
Cox & Snell R^2				0.110
Nagelkerke R^2				0.175
n				112

Notes:

1. $INSIDER = \beta_{0(t)} + \beta_1\ BODIND_{(t)} + \beta_2\ FAMOWN_{(t)} + \beta_3\ MANOWN_{(t)} + \beta_4\ INSTOWN_{(t)} + \beta_5\ BIG4_{(t)} + \beta_6\ ROA_{(t)} + \beta_7\ AGE_{(t)} + \beta_8\ LEV_{(t)} + \varepsilon i_{(t)}$
2. *, ** and *** denote significance at the 0.1, 0.05 and 0.01 levels, respectively, two-tailed tests

Panel B – Prior Year (t-1)

	B	S.E.	Wald	Sig.
BODIND	0.093	2.261	0.002	0.967
BIG4	-1.349**	0.643	4.399	0.036
FAMOWN	-0.008	0.017	0.245	0.621
MANOWN	0.008	0.016	0.231	0.631
INSTOWN	-0.011	0.019	0.306	0.580
ROA	-0.134	3.134	0.002	0.966
AGE	-0.025	0.020	1.583	0.208
LEV	-0.278	1.357	0.042	0.838
Constant	-0.442	1.240	0.127	0.722
Cox & Snell R^2				0.063
Nagelkerke R^2				0.101
n				112

Notes:

1. INSIDER = β0(t-1) + β1BODIND(t-1) + β2FAMOWN(t-1) + β3MANOWN(t-1) + β4INSTOWN(t-1) + β5BIG4(t-1) + β6ROA(t-1) + β7AGE(t-1) + β8LEV(t-1) + Ɛi(t-1)
2. *, ** and *** denote significance at the 0.1, 0.05 and 0.01 levels, respectively, two-tailed tests

CONCLUSION

This study examined the effect of corporate governance and ownership structure on the illegal insider trading activities in PLCs in Malaysia. Specifically, this study examined the effect of board independence, audit quality, family ownership, managerial ownership and institutional ownership on illegal insider trading activities in PLCs in Malaysia. The finding showed that audit quality, proxied by Big4 auditors, had a negative and significant association with the occurrence of illegal insider trading activities, indicating that low audit quality is a contributing factor for the occurrence of illegal insider trading activities in Malaysian PLCs. The Big4 auditors are seen as an external governance mechanism that is supposed to provide better monitoring towards ensuring high quality of financial reports. Since the quality of financial reports represents managers' trustworthiness and competence in disclosing a company's financial performance and position, the truth and fairness of its disclosure should be appropriately monitored to enhance investors' confidence. Failure of a company's external auditors to monitor will lead to higher incidences of insider trading activities. Audit quality should be improved to attain investors' confidence to invest in the market.

In addition, there was a positive and significant association between managerial ownership and the occurrence of illegal insider trading activities. In contrast to the Agency Theory, the result suggested that ownership by managers supports the entrenchment effect more than the alignment effect. Probably, the failure of Big4 auditors to act as a company's external corporate governance mechanism is influenced by managerial ownership of a company. The findings in this study highlight the areas that need improvement and further attention by the regulatory bodies. Although insider trading is not a new problem in Malaysia, the issue continues to exist due to the lack of concrete evidence that restrains the SC from taking enforcement action against the perpetrator. Unfortunately, in most cases, the response of the regulatory bodies has been reactive rather than proactive, as they come into the picture when the damage has been done. Thus, findings from this study highlight the important aspects that need to be scrutinised in order to mitigate and prevent the occurrence of illegal insider trading activities. Perhaps, the regulatory bodies should consider raising awareness to curb illegal insider trading activities.

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