

Ownership Structure, Capital Regulation and Bank Risk Taking

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Abstract: This paper provides new empirical evidence on the association of ownership structure and bank risk taking, and the effects of capital regulation on the association. The empirical analysis of this study is confined to Malaysian commercial banks during the periods of 1995–2008. Overall, it is found that ownership structure of Malaysian banks exerts positive impacts to the banking institutions; indicating that the existence of large shareholders in Malaysian banks reduces bank risk taking and increases bank stability. The findings also show that capital regulation plays an important role in influencing the impact of ownership on bank risk taking. However, higher capital regulation has unintended effects whereby banks might respond to the regulation by increasing their risk taking. The empirical findings thus, suggest that agency hypothesis associated with expropriation of banks creditors' interest by large shareholders and the role of high capital regulation in reducing bank risk taking is not applicable to Malaysian banks.

Key words: ownership structure; capital regulation; bank risk taking

JEL codes: G3, G32

1. Introduction

In the last two decades, Malaysian banks had experienced two financial crises which were in 1985–1986 and 1997–1998 (Bank Negara Malaysia, 1999). The 1997–1998 financial crisis which is also known as Asian financial crisis has been found to be more severe and left a bigger impact to Malaysian banking industry than the 1985–1986 crisis. The 1997–1998 crisis has resulted in huge erosion of capital of the domestic banks, whereby the banks' capital decreased close to 40 percent compared to only about 17 percent in 1985–1986 crisis (Ito and Hashimoto, 2007). The financial crises revealed high risk taking behavior of Malaysian banks. Malaysian banks were found to be saddled with high non-performing loans and high variations of bank returns. Non-performing loans, which is the most important indicator for bank risk taking, increased steadily from 5.50 percent in 1995 to 5.93 percent in 1997. In 1998, the non-performing loans increased sharply to 13.57 percent and escalated to 14.36 percent in 1999. In 2009, non-performing loans of Malaysian banks increased from 4.05 percent in 2008 to 4.62 percent. As for bank returns, return on equity (ROE) and return on assets (ROA) which indicates the overall return of the banking sectors experienced high volatility. ROE and ROA of Malaysian banks was 27 percent and 2 percent in 1996, decreased to 9.8 percent and 0.7 percent respectively in 1999, and increased to 20.4 percent and

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1.8 percent respectively in 2000. However, in the year 2005, ROE and ROA of Malaysian banks decreased to 16.9 percent and 1.6 percent, and decreased again in 2008 to 14.9 percent and 1.4 percent respectively.

High risk taking behavior of Malaysian banks has been associated with the existence of large shareholders in the banks (i.e., Thillainathan, 1999; Laeven, 1999). The authority to control and make decisions are claimed to induce large shareholders to behave in a self serving behavior by making decisions that could maximize their own benefits, and in the case of banking, this could be done by increasing bank risk taking. Furthermore, high leverage characteristics of banks where shareholders equity is only about 10 percent of the overall capital of banks is claimed to make high risk taking attractive to large shareholders. However, despite arguments that relate large ownership of banks with high risk taking behavior, there is no empirical evidence to verify the relationship. Yet, large shareholders still prevail in Malaysian banks. The situation thus, creates question on the relationship between ownership structures with risk taking of Malaysian banks.

The importance of banks in the economy and their capability to create systemic risks generate needs for regulation. Among the regulations imposed is capital regulation. Capital is essential as it reflects the value of the organization, its financial strength and capacity to absorb unforeseen losses in the business. Regulation of bank capital derives from the importance of capital in banking in terms of bank soundness, bank risk taking incentives, the inability of depositors to monitor bank activities and risk management (Dionne, 2003). Furthermore, Heid, Porath and Stolz (2003) argued that capital regulation is often motivated by the assumption of opportunistic behavior of banks. The characteristics of banks such as high leverage, asymmetric information, weak monitoring by the depositors and limited liability prompted large shareholders to increase bank risk taking. However, John, Saunders and Senbet (2000) and John, Litov and Yeung (2008) found that the relationship between bank risk taking and ownership structure will vary with capital regulations.

Similar to other Asian countries, Malaysian banks complied with capital regulation set by Basel agreement and maintained 8 percent as the minimum requirement for capital. However, the percentage is found to be lower as compared to the minimum requirement used by other Asian countries such as Singapore (12%), Korea (10%), Philippines (10%) and Thailand (8.5%). As the objective of capital regulation is to manage and reduce bank risk taking, low percentage of capital requirement of Malaysian banks raises questions on its moderating effects on the relationship between ownership structure and bank risk taking and also whether higher minimum capital adequacy requirement is needed to reduce bank risk taking

Although there is an increasing study on bank risk taking, but most of the studies were done on developed countries and very few on the developing countries. As developing countries are characterized with different characteristics as the developed countries, it creates concern whether the results of these studies on developed countries could be generalized or applicable to the developing countries. The situation create research gaps on the study of bank risk taking in developing countries and raised needs to increase studies on risk taking of banks in developing countries. Hence, the aim of this paper is to assess the effects of large ownership on bank risk taking and the role of capital regulation in moderating the impacts based on Malaysian case. The outline of this paper is as follows; Section 2 discusses literature review related to ownership structure, capital regulation and bank risk taking. Section 3 describes the methodology used, while Section 4 presents the findings. Section 5 concludes the paper.

2. Literature Review

Prior studies evidenced that large shareholders may impose high costs on companies through preferential treatment and pursuit of personal objectives, and may be harmful to a company as the interest of the large shareholders might not align with the minority shareholders. In the case of banking, previous studies found that the existence of large shareholders increases bank risk taking (Claessens et al., 1999; Ciancanelli and Gonzalez, 2000; Pinteris, 2002; Fan & Wiwattanakantang, 2005; Iannota, Nocera & Sironi, 2007; John, Litov & Yeung, 2008).

Malaysian banks are categorized as highly concentrated ownership. Soon and Koh (2005) found that ownership structure in Malaysian banks in 2002–2003 are highly dominated by family and government ownerships with shareholdings of up to 60.9 percent, and 64.4 percent respectively. Fan and Wiwattanakantang (2005) reported that government shareholdings in Malaysian banks for the year 2000–2003 is 40 percent. They found this to be the highest percentage of government controlled banks compared to Thailand (30%), Republic of Korea (28%) and Indonesia (26%). They also found that Malaysia has the highest percentage of family shareholding in banks which is 30 percent, followed by Thailand (17%) and Indonesia (9%). Even though several measures have been taken by the central banks after the financial crises such as consolidation of the whole domestic banks in 1999, it does not change the basic ownership structure of the Malaysian banks. Large shareholdings continue to exist in Malaysian banking institutions. Table 1 presents the ownership structure and shareholdings of Malaysian banks over 1995–2008 periods.

Table 1 Ownership Structure of the Domestic Banks and Its Shareholdings over 1995–2008

Banks	Mean	Maximum
Family owned banks	0.499836	0.7740
AmBank	0.466600	0.7700
Hong Leong	0.652571	0.7170
Public Bank	0.366643	0.4680
RHB Bank	0.557417	0.6490
Government owned banks	0.473952	1.0000
Affin Bank Berhad	0.474571	0.6210
CIMB Bank Berhad	0.479143	1.0000
Maybank Berhad	0.567857	0.6170
Institutional owned banks	0.607679	1.0000
Alliance Bank Berhad	0.972000	1.0000
EON Bank Berhad	0.243357	0.3370

Source: Annual reports of individual banks; Note: shareholdings is shares of shareholders to total capital.

John, Saunders and Senbet (2000) and John, Litov and Yeung (2008) noted that the relations between bank risk and ownership structure will vary with capital regulations. Jeitschko and Jeung (2005) noted that capital regulation could serve as an instrument to align the shareholder's risk preference with banks' creditors. By enforcing higher capital adequacy regulation, the banks shareholders could induce a choice of safer assets that carry a smaller probability of failure. Rime (2001) argues that capital regulations can reduce moral hazard incentives by forcing bank shareholders to absorb a larger part of the losses. The finding is consistent with Rochet (1992), who found that capital adequacy requirements affect the incentives for gambling by bank owners.

Saunders, Strock and Travlos (1990) found a significant relationship between regulation and the effect of ownership structure on risk taking while, Dionne (2003) found that capital requirements would force shareholders to put more of their participation at risk, and hence take fewer high-risk positions or to reduce moral hazard.

3. Methodology

This study uses secondary data comprising financial ratios extracted from the annual reports of commercial banks in Malaysia over the year 1990–2008. The commercial banks in Malaysia as at 2008 consist of 9 domestic banks and 13 foreign banks. However, due to problems of data availability, one of the foreign banks (China Bank Limited) had been dropped and this has left the study with 9 domestic and 12 foreign banks. All the sample banks have been operated in Malaysia since 1990.

In collecting ownership data, the ultimate owner of the sample banks as stated in their annual report under ‘Ultimate Holding Company’ title are examined. Claessens et al. (2000); Fan and Wong (2001) and Lins (2003) in their studies on ownership found that corporate ownership structures in Malaysia are associated with indirect/ultimate ownership. Therefore, data on direct or immediate ownership of Malaysian companies are insufficient for determining control (Zuaini, 2004). Based on that reason, this study focuses on ultimate ownership to reflect the specific situation in Malaysia and as an attempt to provide further insight into how corporate risk taking is contingent upon the presence of the ultimate owner’s shares and their types. In determining substantial shareholders or owner of the company, this study examines all shareholders that own at least 5 percent of the votes. This ratio is accordance to the definition of substantial shareholders under Securities Industry Act 1983. The ratio is smaller compared to La Porta et al. (1999) and Laeven and Levine (2009), who used 10 percent, and Fan and Wong (2002) and Claessens et al. (1999, 2000), who focus on shareholders with 50 percent of direct voting rights. However, Demsetz and Lehn (1985) contend that ownership position of 5 percent is sufficient to influence corporate outcomes. After the names of the substantial shareholders and their percentage of shares were collected, we separate the information into different types of ownership according to the largest holding of shares. The ownership type is separated to family ownership, government ownership, institutional ownership and foreign ownership.

Bank risk taking, which refers to the level of risks in banks, is measured by insolvency risk (Barry, Lepetit and Tarazi, 2010). Banks insolvency problem reveal the degree of exposure to losses or failure, which will reduce bank capital reserves that could be used to offset adverse shocks. Insolvency risk indicates banks’ distance from failure and is measured by using Z-Score whereby, a lower (negative) Z implies a riskier bank and a higher (positive) Z implies a safer bank or a more stable bank. Z-SCORE is measured as ROA (pretax return on assets) plus CAP (equity capital to asset ratio) and divided by s (the standard deviation of ROA). In computing standard deviation of ROA, five years of data are used. For example, standard deviation of ROA for 2008 is computed by taking data from 2004–2008; standard deviation of ROA for 2007, data taken from 2003–2007 and so on. The five years of data is used in computing standard deviation as it is expected that five years is enough to reflect changes or variance in bank return (Nash and Sinkey, 1997). Given the sample period of 1990 to 2008, the time series approach limits the analysis to 1994 to 2008. However, due to problems of data availability for capital adequacy, data for 1994 have to be omitted, and this limit the empirical analysis to 1995 to 2008. Data for risk weighted regulatory capital of individual financial institution are only publicly available from 1995 onwards (Nor Hayati, 2003). Table 2 present the summary of the variables used and the measurements.

Table 2 Summary of Variables and Their Measurements

Dependent Variable	Measurements
Z-SCORE	$Z = (ROA + CAP)/S$ ROA = Pretax return on assets (earnings before taxes and securities gains/losses divided by average assets) CAP = Equity capital to asset ratio S = Standard deviation of ROA
Independent Variable	Measurements
INSIDER	Total number of shares held by board of directors in period t/total number of shares in period t
FAMOWN	Total number of shares held by family in period t/total number of shares in period t
GOVOWN	Total number of shares held by government in period t/total number of shares in period t
INSTOWN	Total number of shares held by institution in period t/total number of shares in period t
FOROWN	Total number of shares held by foreigner in period t/total number of shares in period t
CAR	Total capital/risk weighted assets

4. Hypothesis

Following are the hypothesis on the relationship between ownership structure and bank risk taking and also the moderating effects of capital regulation.

4.1 Insider Ownership

The different goals and objectives of managers and shareholders as suggested by agency theory, creates agency problem where managers may not act in the best interest of the shareholders. One way to align the interests of the managers with those of the shareholders is by allowing top management or inside directors to hold shares in the company. As shareholding of managers in a company increased, there is an incentive for them to align their interests with those of the shareholders (Jensen and Meckling, 1976). Anderson and Fraser (2000), Lee (2004), Belkhir (2005) and Sullivan and Spong (2007) found that insider ownership increase bank risk taking. Thus, this study hypothesized the relationship between insider ownership and risk taking as follows:

H1: There is a negative relationship between insider ownership and Z-SCORE

4.2 Family Ownership

Family-owned banks is normally managed by either a family member or a manager who has close ties with the family, and thus causes an alignment of interests between managers and owners of the firm which could reduce agency conflicts. In addition, family-owned banks also have high interest in the long-term survival and the reputation of the firm. Large wealth tied up in the firm and a direct impact of their decision and behavior cause family-owned banks to behave in a risk averse manner, indicating that family ownership reduce bank risk taking (Gursoy and Aydogan, 2002; Marco and Fernandez, 2007; Paligorova, 2010). Thus, the second hypothesis of this study is as follows:

H2a: There is a positive relationship between family ownership and Z-SCORE.

4.3 Government Ownership

In general, the government's role as bank owner and regulator will increase agency problem in a bank (Barth, Caprio & Levine, 2004), as their decision might not only be based on a commercial basis but also on its development and political agenda. La Porta, Silanes and Shleifer (2002); Barth, Caprio and Levine (2004) argue that government-owned banks are highly associated with inefficiency and low performance. They contend that

under “development view”, government-owned bank is associated with developing agendas. Government ownership of banks is seen as a platform for the government to finance government related projects even though the returns from the projects are uncertain. On the other hand, under “political view”, government ownership is associated with political agendas. Government acquired control of banks in order to finance projects that would not get privately financed, provide employment, subsidies and other benefits to supporters, who return the favor in the form of votes, political contributions and bribes. Gursoy and Aydogan (2002) found that government ownership increase bank risks, while Fan and Wiwattanakantang (2005) and Micco, Panizza and Yanez (2007) found a positive relationship between government ownership and non-performing loans which is an important contributor to risk. Thus, the third hypothesis would be as follows:

H3: There is a negative relationship between government ownership and Z-SCORE.

4.4 Institutional Ownership

Large shareholding of institutional ownership might induce self interest behavior, whereby controlling shareholders tend to use bank resources to finance their own businesses or related businesses. Mikkelsen and Ruback (1991) indicate that institutional investors tend to promote shareholder-driven corporate strategies, which is enlarging their benefits even though it means transferring risks to the creditors. Wright et al. (1996) found that institutional ownership increase bank risk taking. They argue that institutional owners increased firm value through the promotion of high risk taking activities such as investing in a high risk project. Thus, the fourth hypothesis is proposed as follows:

H4: There is a negative relationship between institutional ownership and Z-SCORE.

4.5 Foreign Ownership

Foreign banks operating in developing countries tend to be characterized by superior management practices, good management of risks, advance technology, high operational efficiency and large profitability (Mico, Panizza and Yanez, 2007). Foreign banks are also associated with high bank capital and better regulation and supervision from their parent company. These characteristics and the ability to raise capital or liquid funds from international markets and supports from their parent bank in terms of financial, management, skills and expertise increased the stability and soundness of the foreign banks and reduced their risks. Leightner and Lovell (1998) in their study of Thai banks found that foreign banks are more productive than Thai owned banks. Laeven (1999) in a cross-countries study of Asian banks found foreign banks are relatively risks averse and took little risk compared to family owned and institutional owned banks, while Micco, Panizza and Yanez (2007) found that foreign ownership is highly associated with high returns and lower financial fragility. Thus, the fifth hypothesis is stated as follows:

H5: There is a positive relationship between foreign ownership and Z-SCORE.

4.6 Capital Regulation

Among the regulations imposed on banks, capital regulation is the most prominent regulation and highly associated with risk taking incentives (Santos, 2000). Capital regulation requires banks to increase their capital in relations to the increased in their risk exposure. The high capital is expected to increase the ability of banks to absorb losses and to reduce bank risk taking incentives by large shareholders. Ciancanelli and Gonzalez (2000) argue that higher capital requirements avoid expropriation problems between shareholders and bank creditors. Capital requirements reduce incentives for high risk taking in banking as shareholders are forced to absorb a larger part of the losses (La Porta, Silanes and Shleifer, 1999; Rime, 2001). Supporting the findings, Mendez and Willey

(1995) noted that high capital requirement is essential as low capital would encourage shareholders to engage in high risk activities. Konishi and Yasuda (2004) found that the implementation of high capital requirement reduced bank risk by 0.28 percent, indicating a negative significant relationship between high capital requirement and bank risk taking. This suggests that the implementation of high capital requirement is important in reducing bank risk. Thus, the following hypothesis is proposed:

H6: The impact of ownership structure (insider, family, government, institutional and foreign) on Z-SCORE is higher when CAR is higher.

5. Data Analysis

Multiple regression is used to test the relationship between ownership structure and bank risk taking while hierarchical moderated multiple regression is used to test the moderating effects of capital regulation on the relationship of ownership structure and bank risk taking. The regression models to be tested are as follows:

Multiple Regression Model

$$Z\text{-SCORE}_{it} = \alpha_0 + \beta_1 \text{INSIDER}_{it} + \beta_2 \text{FAMOWN}_{it} + \beta_3 \text{GOVOWN}_{it} + \beta_4 \text{INSTOWN}_{it} + \beta_5 \text{FOROWN}_{it} + e_{it}$$

Hierarchical Moderated Multiple Regression

$$Z\text{-SCORE} = \alpha_0 + \beta_1 \text{INSIDER}_{it} + \beta_2 \text{FAMOWN}_{it} + \beta_3 \text{GOVOWN}_{it} + \beta_4 \text{INSTOWN}_{it} + \beta_5 \text{FOROWN}_{it} + \beta_6 \text{CAR}_{it} + \beta_7 \text{INSIDER} * \text{CAR}_{it} + \beta_8 \text{FAMOWN} * \text{CAR}_{it} + \beta_9 \text{GOVOWN} * \text{CAR}_{it} + \beta_{10} \text{INSTOWN} * \text{CAR}_{it} + \beta_{11} \text{FOROWN} * \text{CAR}_{it} + e_{it}$$

Where

$$\left. \begin{array}{l} \text{INSIDER} * \text{CAR}, \text{FAMOWN} * \text{CAR}, \\ \text{GOVOWN} * \text{CAR}, \text{INSTOWN} * \text{CAR}, \\ \text{FOROWN} * \text{CAR} \end{array} \right\} \text{ Interaction terms}$$

Taking into account heteroscedasticity and auto correlation problem in the data and to achieve best linear unbiased estimator (BLUE), general least square (GLS) and first difference method are used to run the regression analysis. Heteroscedasticity problems are detected using Breush-Pagan-Godfrey (BPG) test, while auto correlation problems are detected using Lagrange Multiplier (LM) test. Panel data test using fixed effects model and random effects model are run, and Hausmann test is used to select the most appropriate model for testing hierarchical moderated multiple regression for the study. Hausman test result shows that fixed effects model is more appropriate for the study.

6. Empirical Findings

It is observed from Table 3 that Z-SCORE has the highest mean, which is 23.89; indicating a lower insolvency risk or probability of failure of Malaysian banks over the 1995–2008 period. As for the ownership results, it is found that on average 59.0 (0.5899) percent of shares in Malaysian banking industry are controlled by foreign banks (FOROWN). The percentage is higher compared to Goldstein and Turner (1996) who reported 15.9 percent of foreign ownership in Malaysia as at 1995. The large foreign ownership in Malaysian banking industry could be due to the influence of large number of foreign banks in Malaysia (12) as compared to the local banks (9 banks). The results also show that the mean of FAMOWN is 0.094, GOVOWN is 0.109, INSTOWN is 0.083 and INSIDER is 0.144. The results indicate that government owned the highest ownership of banks, which is 10.9

percent, followed by family ownership (9.4%) and institutional ownership (8.3%). The results also show that insider ownership, which refers to directors who holds shares in the bank is 14.4 percent, which is considered as low (Gorton and Rosen, 1995).

Table 3 Descriptive Statistics

Variables	Mean	Median	Standard Deviation	Min	Max
Z-SCORE	23.8976	17.3465	22.5956	-1.7670	180.224
INSIDER	0.1441	0.00002	0.2668	0.0000	0.9650
FAMOWN	0.0935	0.00001	0.2079	0.0000	0.7740
GOVOWN	0.1094	0.00003	0.2101	0.0000	1.0000
INSTOWN	0.0832	0.00001	0.2214	0.0000	1.0000
FOROWN	0.5899	1.00000	0.4774	0.0000	1.0000
CAR	0.1943	0.13200	0.1886	0.0360	1.4100

6.1 Regression Results

Table 4 presents the regression results on the relationships between ownership structure and bank risk taking of Malaysian banks.

Table 4 Relationship between Ownership Structure and Bank Risk Taking

Independent Variables	Expected signs	Z-SCORE
INSIDER	-	3.9737** (0.6386)
FAMOWN	+	-2.5159** (0.7877)
GOVOWN	-	39.7174** (8.9580)
INSTOWN	-	3.8236** (1.2069)
FOROWN	+	-26.3309** (7.1828)
AR(1)		0.7041
R ²	0.6525	
Adjusted R ²	0.6111	
F-statistics	57.046	
Sig F-statistics	0.0000	
Durbin Watson	1.7543	
N	273	

Note: *p<0.05, **p<0.01.

Table 4 shows that all ownership variables have significant impact to bank risk taking. However, surprisingly, it is found that none of the variables support the hypothesis or meet the expected sign. Insider, government and institutional ownership are found to decrease bank risk taking or increased bank stability, while family and foreign ownership is found to increase bank risk taking.

6.2 Hierarchical Moderated Multiple Regression Analysis

Table 5 presents the moderating effects of CAR on the relations of ownership variables and bank risk taking.

Table 5 The Moderating Effect of CAR on Ownership Structure and Z-SCORE

Variables	Model 1		Model 2		Model 3	
	β	p-value	β	p-value	β	p-value
INSIDER	2.6541	0.0000**	2.5408	0.0000**	25.5323	0.0000**
FAMOWN	-3.2110	0.0000**	-3.2748	0.0000**	-34.1418	0.0000**
GOVOWN	43.4135	0.0000**	43.7668	0.0000**	35.7296	0.0000**
INSTOWN	3.8726	0.0004**	3.9801	0.0003**	-11.6552	0.0975
FOROWN	-35.5508	0.0000**	-34.9980	0.0000**	0.4862	0.9475
CAR			5.0519	0.0544	59.6875	0.0004**
INSIDER*CAR					-173.498	0.0000**
FAMOWN*CAR					296.357	0.0000**
GOVOWN*CAR					132.720	0.0635
INSTOWN*CAR					142.846	0.0184*
FOROWN*CAR					-53.501	0.0005**
AR(1)	0.7249	0.0000	0.7245	0.0000	0.7065	0.0000
R ²	0.6592		0.6612		0.7324	
Adjusted R ²	0.6232		0.6238		0.6967	
R ² Change			0.0002		0.0712	
F statistic	95.1721		79.6790		59.7089	

Note: * p<0.05, ** p<0.01.

Table 5 shows that CAR moderates the relationship between insider, family, institutional and foreign ownership with bank risk taking. The moderating effects of CAR on these relationships are best shown by the following figures:

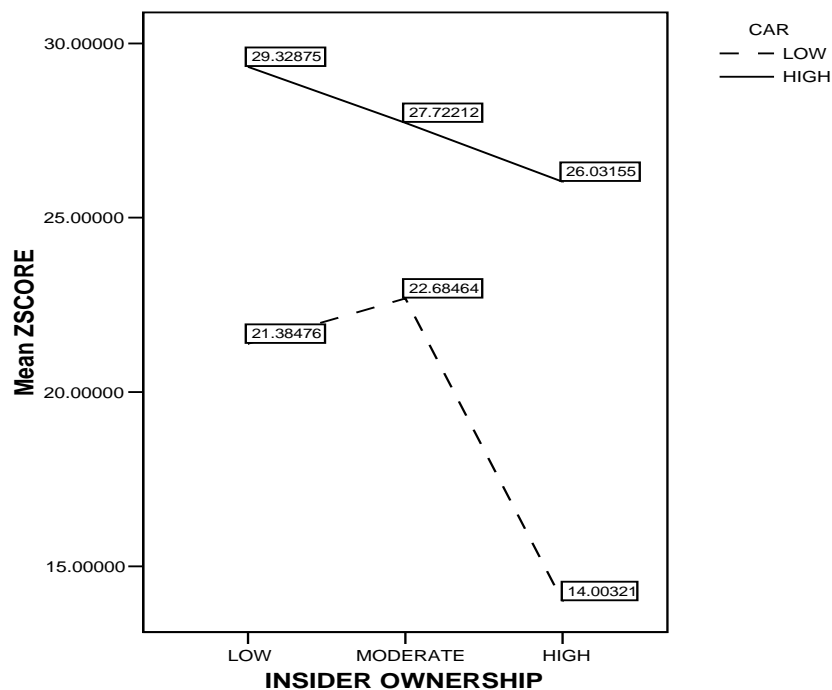


Figure 1 Insider Ownership and Z-SCORE

In a low CAR condition, Z-SCORE of banks increased at lower insider ownership but decreased as the insider ownership increases to higher levels. In contrast, in a high CAR conditions, the relationship between insider ownership and Z-SCORE is found to be negative; indicating that the higher the insider ownership, the higher is the insolvency risks of banks. Hence, hypothesis 1 is not supported.

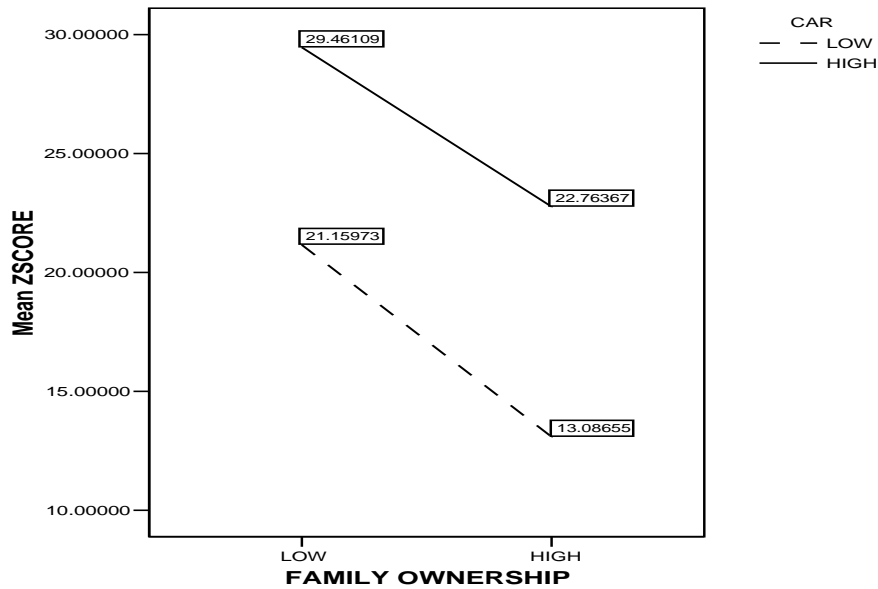


Figure 2 Family Ownership and Z-SCORE

The implementation of CAR is found to increase risk taking in family ownership. This is evidenced by negative relationships between family ownership and Z-SCORE in both low and high CAR conditions; indicating that higher family ownership would increase insolvency risks or probability of failure of banks. As such, hypothesis 2 is not supported.

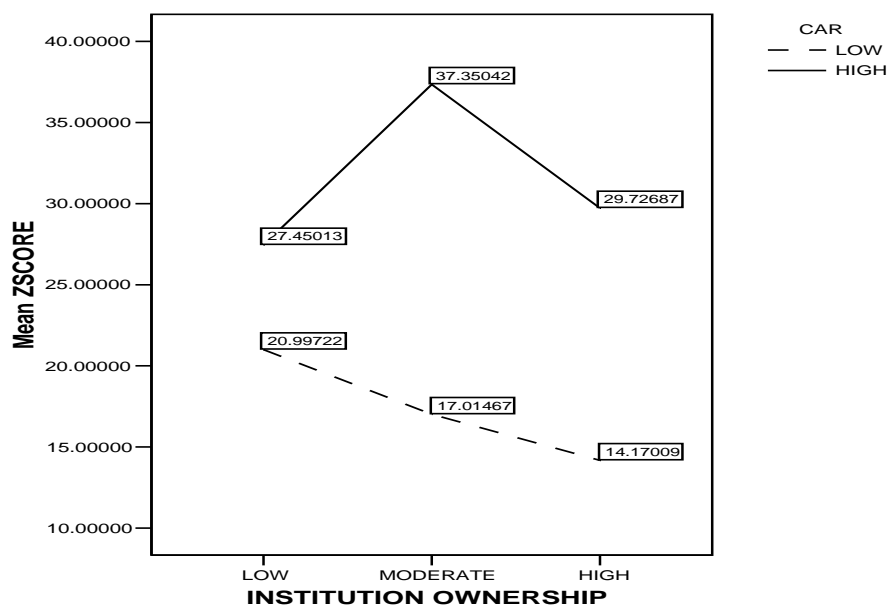


Figure 3 Institutional Ownership and Z-SCORE

A negative relationship between institutional ownership with Z-SCORE in a low CAR condition implies that higher institutional ownership would increase insolvency risks or probability of failure of banks. However, in contrast to the low CAR, high CAR condition shows that Z-SCORE of banks increased at low level of institutional ownership but decreased as the ownership level increases. Therefore, hypothesis 3 is not supported.

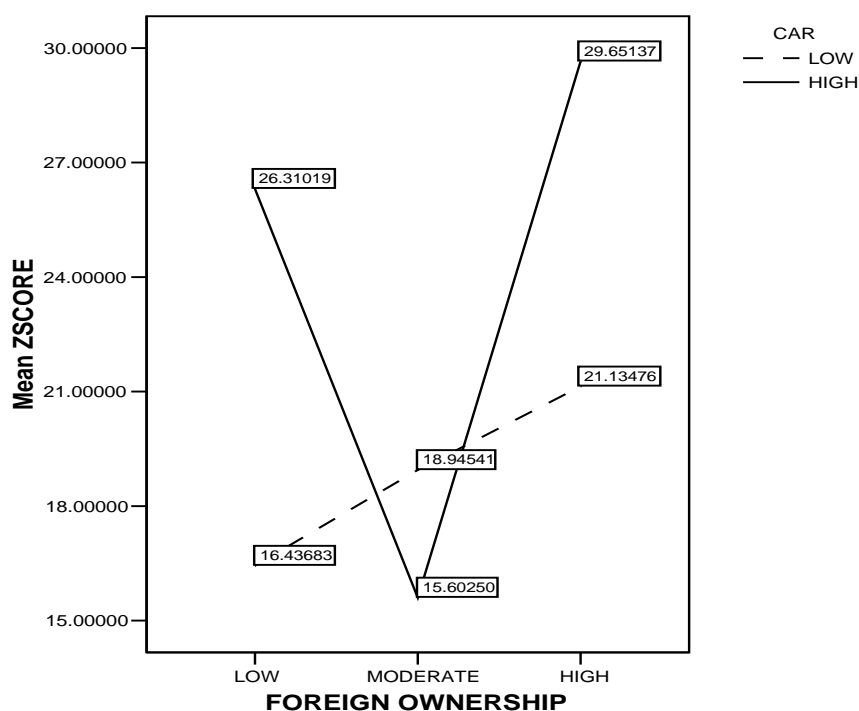


Figure 4 Foreign Ownership and Z-SCORE

The positive relationship between foreign ownership and Z-SCORE in a low CAR condition indicates that the higher the foreign ownership, the higher is the Z-SCORE (low insolvency risk) of the banks. However, in a high CAR condition, Z-SCORE of banks increased only in a high foreign ownership whereas at low foreign ownership, the Z-SCORE of banks decreased. As such, hypothesis 5 is not supported.

7. Conclusion

The regression results show that the existence of large shareholders in Malaysian banks does not necessarily increase bank risk taking. Different type of ownership in Malaysian banks is found to have different impact or preferences for risk taking. Family ownership and foreign ownership are found to increase bank risk through high insolvency risks whereas insider, government and institutional ownership reduced bank risk and increased stability of banks. Further, capital regulation is found to have moderating effects on the relationship between ownership structure and bank risk taking of Malaysian banks. However, high capital regulation has unintended effects whereby it will induce banks to increase their risk taking in order to compensate for the higher capital provided. Overall, the results show that agency theory which suggests that large shareholders impose high costs to banks through high preferential to risk is not applicable to Malaysian banks and capital adequacy requirement of Malaysian banks are appropriate as higher capital requirement will result in banks increase their risk taking.

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