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Does board capital affect the corporate financial distress level? A study from Malaysia

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Abstract

This study examined the relationship between board capital and the financial distress level for a sample of listed banks in Malaysia from 2003 to 2013. Using robust panel regression with 88 pooled firm-year observations, we found that board capital and leverage are statistically significant with banking financial distress in Malaysia. The results imply that the knowledge of directors such as experience, education, and networking can improve the firm's management and avoid the firm facing a financial distress problem. Lastly, this study provides useful information to assist shareholders in choosing board directors regarding reducing the risk of financial distress.

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Introduction

The 1997 monetary crisis and the 2007 global crisis were moments when many corporates and financial institutions faced financial distress and bankruptcy. There were 11 of the largest cases of bankrupt corporations in the USA, and the largest bankruptcy was USD 691 billion being Lehman Brothers Holdings (Howe, 2011). Such corporations are administrated or managed by educated and experienced boards of directors with extensive networks.

Theoretically, the capabilities of a director are a very important factor to deal with financial distress since capable directors should be able to determine the financial distress level of the banking industry (Klein, 2002). The high level of directors' education, experience, and networking supposedly induce capability in problem solving and management of the business. The director is the main player in companies and manages and helps to solve the financial distress of firms (Halliday & Carruthers, 2009). For instance, the board of directors is responsible for the hiring and dismissal of management and to provide strategic planning to management (Roberts, McNulty, & Stiles, 2005; Ung, Brahmana, & Puah,

2016). Bad staffing will lead to organizational disturbance and end with a financial distress crisis (Hillman & Dalziel, 2003).

The board of directors is not only the highest level of management in a corporation, but it is also the most valuable asset of the firm. Board capital is defined as the capability of the board of directors and is one the useful tools used to help the firm to increase shareholder wealth. Khan (2014) states that the capability of the shareholders is very limited and therefore, they need directors who have high capability not only high ability to manage the business's operating activities but also high capacity to manage the business investing and financing activities.

Board capital was first conceptualized by Hillman and Dalziel (2003) as the sum of the human and social capital of the board of directors, and as a proxy for the board's ability to provide resources to the firm. Hillman and Dalziel (2003) asserted that board capital, or the sum of individual director's human and social capital, represents the ability of a board to engage in such activities. An individual's expertise, experience, knowledge, reputation, and skills are defined by Coleman (1988) as 'human capital' whereas an individual's 'social capital' is "the sum of the actual and potential resources embedded within, available through, and derived from, the network of relationships possessed by an individual". Later, Reeb and Zhao (2013) made the proxy of this board capital as the combination of intellectual capital, networking, and experience. The tenet is grounded in agency theory whereby if the board capital is high, there is a possibility of better governance and performance.

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The starting point of board capital is the educational background of directors. This is in line with Khan (2014), who stated that education is fundamental to gain a basic knowledge about business. Gilson (1990) stated that not only the firm's credit and outside block holders are important to avoid a firm's confrontation with financial problems, but the directors also play a notable role in managing the business. Gilson (1990) considered the ability of the board to monitor the business effectively and make optimal decisions is affected by the directors' background.

The results presented by Elloumi and Gueyie (2001) were consistent with Gilson (1990) that the capability of the board to monitor and manage the operational activities and strategic decision-making during the period of financial crisis is significantly related to the level of education and experience of the board members. They stated that a board that does not have sufficient capability to administer the operating activity and lacks participation in strategic decision-making may be in great trouble regarding the financial performance of the firm, especially during a financial crisis.

Hillman and Dalziel (2003) empirically investigated the statistical relationship between board capital and financial distress. Their evidence showed that the provision of resources and monitoring of the business operation were directly related to board capital. The elements of experience, expertise, and networking determine the efficiency and effectiveness in facilitating the provision of resources and facilitate the monitoring. Carcello, Hollingsworth, Klein, and Neal (2006) found that educational background was important in the quality of earnings. Using accounting and non-accounting expertise as the dimension of the education, they found that human capital has a positive and significant association with earnings quality.

Furthermore, according to Haynes and Hillman (2010), business performance depends on the board capital. The use of a right or wrong strategy relies on the education, experience and how professional the board members are. Iskandar, Noor, and Omar (2012) also presented a consistent result with other researchers from their empirical investigation of financial distress and the characteristics of the board of directors. They stated there was a strong relation between the board member's level of education and experience and a firm's financial distress due to the lack of monitoring and independent control over the management and weak financial literacy of the board of directors.

Moreover, the capability for problem-solving has a significant relationship to the level of qualification of the board members. According to Cox and Blake (1991), boards that are highly qualified, especially those at the doctorate level are able to use their broad knowledge to enhance problem-solving progress suggesting that the financial distress of the firms might arise from having a smaller number of board members holding high qualifications, as the lower qualifications of members may not be sufficient to manage the critical problems because of inadequate knowledge.

Reeb and Zhao (2013) argued that the experience, education, and networking of directors are significantly associated with the financial disclosure of company. They showed that PhD qualifications with a few years' experience

and networking were more efficacious on management compared to those who had PhDs but without any experience and networking. Based on these findings, this research hypothesized that there is a significant association between board capital and financial distress for Malaysian-listed banks.

Malaysia offers a unique research background for this research area. First, the human development index in Malaysia is considered high compared to its peers in the Southeast Asian region. The Malaysian Human Development Index (HDI) level has increased from 0.563 in 1980 to 0.769 in 2012. HDI automatically implies a good education level in Malaysia, and it is consistent with the higher number of board directors having a high education level in current years compared to in previous years, especially in the past 10 years or more.

The anecdotal evidence of Malaysia shows an inconsistent correlation between board capital and financial performance, and this leads to the interesting setting of the study. For instance, Tan Sri Dato' Sri Dr. Teh Hong Piow (Chairman) and Tan Sri Dato' Sri Tay Ah Lek are directors of the Public Bank holding a doctoral degree and master's degree, respectively, with more than half-century of experience in the banking and finance industry. It is noteworthy that the Public Bank was the 60th largest bank in 2013 in the banking industry in the Asia-Pacific region. Tan Sri Azman Hashim is Chairman for the AmBank and he is a fellow of the Institute of Chartered Accountants and a fellow of the Institute of Chartered Secretaries and Administrators, but he does not have a doctorate degree, and the AmBank was the 142nd largest bank among its Asia-Pacific banking peers in 2013. The performance of Malaysian banking as a sector is consistent with the level of education, experience, and networking. For instance, the Public Bank had MYR 4,105.64 million net profit and 116.1 cents earnings per share (EPS), while the AmBank had MYR 1,693.2 million net profit and 54.5 cents of EPS, in 2013. The net profit and EPS of the Public Bank were considerably greater than for AmBank. Hence, the Public Bank administrated by Tan Sri Dato' Sri Dr. Teh Hong Piow with a doctoral degree and Tan Sri Dato' Sri Tay Ah Lek with a master's degree performed well compared to AmBank administrated by Tan Sri Azman Hashim with no Ph.D.

According to Bathula (2008), the focus on the influence of board capital on the financial distress level is accentuated since the economy worsened in Malaysia, Thailand, and Indonesia during the East Asian Financial Crisis in 1997 because that East Asian Financial Crisis in 1997 revealed the incapability of directors to solve that economic disaster. In addition, the scandals of big companies such as HIH insurance, WorldCom, and Enron clearly showed that the directors failed to play their role in solving financial distress problems because of their deficiency in corporate governance ability (France & Carney, 2002). Therefore, managerial incompetence is a main factor affecting the financial distress level of firms. In Malaysia, the cases of bankruptcy because of financial distress have increased since 1990 (Sori & Karbhari, 2006). Based on the statistical data provided by Trading Economics (2014), the total number of bankrupt companies in Malaysia increased gradually from 1998 until 2014. The highest and lowest numbers of bankrupt companies were 2,366 in July 2013 and 503 in February 1999, respectively (Trading Economics, 2014). Based on the report

from the Central Bank of Malaysia, on average, 1,228 Malaysian companies went bankrupt each year from 1998 until 2014 (Trading Economics, 2014). Interestingly, highly educated and experienced directors with extensive networks also had led some of those bankrupt companies.

In sum, this research aimed to investigate the association between board capital and the financial distress level for a sample of listed banks in Malaysia from 2003 to 2013. We used and modified the method used by Reeb and Zhao (2013) by changing the dependent variable from corporate disclosure to financial distress and using robust panel regression with 88 pooled firm-year observations.

The contribution of this research is threefold. First, we contribute to the literature by exploring the association between board capital and financial distress level; yet the general theoretical literature on this topic is rare, especially in the Malaysian context. Second, this research contributes to the theory of human capital and knowledge transfer theory. It is proven that the accuracy of the knowledge transfer theory might be used to improve firm management and avoid financial distress. Lastly, this study provides useful information to help investors reduce the risk of losing their invested funds by analyzing the level of board capital needed by certain financial institutions.

The rest of this paper is organized in the following manner: Section 2 describes the sample data and methodology. Section 3 reports the empirical results of the study and discusses the results. Section 4 concludes the research.

Methods

Financial Distress

Financial distress is a dependent variable in this research study. The financial distress is defined as a situation where the company is incapable of dealing with its financial obligations (Beaver, Correia, & McNichols, 2011). In order to measure the financial distress level of the banking institution, the Altman Z-Score is used. Several researchers have used the Altman Z-Score to evaluate the financial distress level, such as Anjum (2012), Muminović (2013), and Soon, Mohammed, and Mostafa (2014). The Altman Z-Score model uses four financial ratios to predict the financial distress level of the company (Sulaiman, Jili, & Sanda, 2001). The formula to measure the financial distress level via the Altman Z-Score is:

$$Z = 6.56X_1 + 3.26X_2 + 6.72X_3 + 1.05X_4$$

where X_1 refers to the working capital to total assets, X_2 refers to the retained earnings to total assets, X_3 refers to the earnings before interest and taxes to total assets, and X_4 refers to the market value of equity to book value of total liabilities. According to Altman (1968), there are three classifications for overall Z-score index; if the Z-score is more than 2.6, between 1.1 and 2.6, and less than 1.1, the classification zone is considered as safe, gray and distress, respectively (Altman as cited in Sulaiman et al., 2001).

The Altman Z-Score is by far the best method to predict the financial distress of a firm (Altman, 2000; Eidleman, 1995). The method is straightforward and based on estimations from the real distressed firm. Note that this research does not focus

on choosing the best prediction model as was done by Altman (2000), Hussain, Nassir, Mohamad, and Hasan (2005) Low, Nor, and Yatim (2001), or Alifiah, Salamudin, and Ahmad (2011). We have left prediction of the best model for other and future research. This current research focuses on the association between board capital and financial distress. This research also uses the conventional Altman Z-Score rather than using other prediction models. It is noteworthy that there are hundreds of prediction models offered by prior research within or outside the context of financial distress in Malaysian companies. Yet, as stated by Altman (2000), the different prediction models will not result in huge differences, but rather produce the same conclusion with different prediction power. Moreover, those prior research prediction models have not yet been tested rigorously compared to conventional Altman Z-Score; hence, the current research used the conventional one.

Baseline Model

The dependent variable for the study was financial distress and there were six independent variables—board capital, non-performing loans (NPL), loan to deposit ratio (LTD), leverage, firm's age, and the firm's size. A multiple regression model was used in this study as it was necessary to include more than one independent variable. Our baseline model was:

$$\text{Financial Distress} = f(\text{Board Capital, Non-Performing Loans, Loan to Deposit Ratio, Leverage, Firm's Age, Firm's Size})$$

By using the above function, the following regression model can be estimated:

$$\text{Financial Distress}_{it} = \alpha + \beta_1 \text{Board Capital}_{it} + \beta_2 \text{Non-Performing Loans}_{it} + \beta_3 \text{Loan to Deposit Ratio}_{it} + \beta_4 \text{Leverage}_{it} + \beta_5 \text{Firm's Age} + \beta_6 \text{Firm's Size}_{it} + \varepsilon_{it}$$

where "i" and "t" in the multiple regression model indicate the cross sectional and time series data, respectively, " α " indicates the expected y-intercept when all independent variables are equal to zero, and " β_1 ", " β_2 ", " β_3 ", " β_4 ", " β_5 " and " β_6 " indicate the expected slope or parameters to measure the change of y of each change in X_1 , X_2 , X_3 , X_4 , X_5 and X_6 , respectively. The cross sectional data and time series data combined develop into the panel data and it was used to conduct this research study.

Board Capital

We followed the method of Reeb and Zhao (2013) in constructing the board capital. First, we scored each dimension of board capital. The scoring items are shown in Table 1. Note that there are three dimensions in board capital: networking, education, and experience. After scoring each dimension, we ranked all firms using the total score of each proxy and then divided the firms into 20 percentiles, (firms were scored from 1 to 20 according to their ranking percentile for each individual proxy variable). Then, we summed the scores again to get the aggregate board capital index. For example, there are six dimensions of networking; we score first the total of the director. Then, we rank it based on quartile and assign a ranking number. Finally, we sum up all the ranking scores of all six dimensions.

Table 1 Measurement of total board capital

Developed indices to form a composite measure of total board capital		
Networking or socializing of the board	Education of the board	Experience capital of the board
1. Total current number of boards a director sits on during a given year.	1. Total number of director that obtain bachelor's degree, master's degree, law degree or medical degree, as well as a doctoral degree.	1. Working history: the number of directors who have been a partner in a law firm; have investment bank/venture capital firm expertise; management consulting experience; accounting firm expertise; academic experience.
2. Total current number of nonprofit boards a director sits on		2. Director information on professional certification such as CPA, CFA or certified fraud examiner.
3. Total number of corporate board memberships / the total number of commissioners		3. Number of positions higher than vice president (Chemmanur & Paeglis, 2005) that directors have held during their lifetime.
4. Number of non-profit boards that a director has served on in the past but is no longer a current member / the total number of independent commissioners		4. Count of the number of firms with which the directors have worked during their lifetime.
5. Any current or prior government position		5. Others potential director characteristic such as national-level honors and awards and membership in professional or industrial association affiliations.
6. Capture director information on government board service which is nominated by government agents.		

The same approach was applied to the education index. Based on the Reeb and Zhao (2013) study, every education level was represented by a number from 1 to 7, while the current study used 1 to 9 to represent the level of education of the board. The higher the education level, the higher the number. The categorical variables method was applied to represent the level of education as: 1. Below bachelor's degree; 2. Bachelor degree; 3. MBA degree; 4. Master degree; 5. Doctoral degree; 6. Top 200 bachelor degrees, according to QS University ranking; 7. Top 200 master degrees, according to QS University ranking; and 8. Top 200 doctoral degrees, according to QS University ranking. The process of ranking was the same as stated earlier. Lastly, we applied the same approach with experience. The total board capital was the sum of the score of networking, education, and experience.

Non-performing loans (NPL)

Non-performing loans (NPL) is one of the independent variables in this research study. According to Grier (2007), the NPL is defined as a situation where a banking institution suffers the loss of loans because of the failure of debtors to pay their loan and associated interest in the given period of time. Loans and interest not settled within 90 days or more are classified as NPL (Grier, 2007). The non-performing loan ratio (NPL ratio) has been used by several researchers such as Fukuda, Kasuya, and Akashi (2009), Lu and Whidbee (2013), and Zaki, Bah, and Rao (2011). The management of the banking institution needs more funds to maintain the banking operation when the NPL ratio is higher. The quality level of the NPL ratio is below 1.5 percent (Grier, 2007). The formula for the NPL ratio is:

$$\text{Non-Performing Loan Ratio} = \frac{\text{Non-Performing Loans (NPLs)}}{\text{Total Assets}}$$

Loan to deposit ratio (LTD)

The loan to deposit ratio (LTD) was one of the independent

variables in this research study. According to Koch and MacDonald (2009), the LTD ratio measures the liquidity of the banking institution. Researchers such as Ikpefan, Kazeem and Oyero (2013), Kumbirai and Webb (2010), and Najjar (2013) used the LTD ratio as a measurement of the liquidity of the banking institution in their studies. A high LTD ratio might cause a firm to be unable to obtain a sufficient amount of funds to deal with unexpected fund requirements, especially during an economic recession. The formula of LTD ratio is:

$$\text{Loan to Deposit Ratio} = \frac{\text{Net Loans}}{\text{Total Deposits}}$$

Leverage

Leverage was one of the independent variables in this research study. Leverage is defined as a method to stimulate the firm's performance by using debt financing (Greuning & Bratanovic, 2009). A higher leverage ratio is dangerous because a firm may be unable to meet a high debt obligation and may be at risk of bankruptcy. Several researchers have used leverage to measure bank risk, such as Fok, Chang, and Lee (2004) and Fukuda et al. (2009). The higher the leverage ratio, the higher the firm's risk and return as well because of the tradeoff between risk and return. The formula to measure the leverage of the firm is:

Firm's age

The firm's age was one of the independent variables in this research study. The age of the bank depends on the number of years that the bank has operated. The variable of firm's age has been used by several researchers as an independent variable to estimate the financial distress level and firm performance. Hendrickson, Nichols, and Fairchild (2014), Sheppard (1995), and Thanh and Ha (2013) use the formula below to measure the firm's age. Based on Thanh and Ha (2013), the higher the firm's age, the greater the economic experience. The formula for the age of the firm is:

Firm's age = Current year bank operating - Year bank established

Firm's size

The firm's size was one of the independent variables in this research study. The firm's size is defined as the number of total assets currently held by the firm in order to do business operation. The total assets formula has been used by Carter, Simkins, and Simpson (2003), Coles, McWilliams, and Sen (2001), Iskandar et al. (2012), Lu and Whidbee (2013), Thanh and Ha (2013), and Wang (2006). to measure the firm's size in their studies. When the total equity and total liabilities increase, the total assets will also increase. The higher the total assets held by the firm, the greater the firm's size. The formula to calculate the total assets is:

$$\text{Total Assets} = \text{Total Equity} + \text{Total Liabilities}$$

Data Collection

There are 27 commercial banks in Malaysia based on the web page of Bank Negara Malaysia, yet, not all of those banks are listed on the stock exchange and could provide the

information needed. This study used only listed banks with complete annual reports covering 2003 to 2013. Islamic banking was omitted from the sample because it has different characteristics of organizational performance measurement and different regulation in terms of staffing procedures. In the end, there were 88 observations of pooled data. It is noteworthy that the information on financial data and board capital was taken from annual reports.

Results

Descriptive Statistics

Table 2 describes the summary statistic for our sample of 27 commercial banks in Malaysia. The mean, median, standard deviation, maximum, and minimum were calculated for every variable. Table 3 present the results of the descriptive statistics of the independent variables (board capital, non-performing loans, loan to deposit ratio, leverage, firm's age, and firm's size). Table 4 shows the correlation matrix between the dependent variable (financial distress) with the independent variables.

Table 2 Summary of descriptive statistics of raw data

Variable	Mean (MYR)	Median (MYR)	Standard Deviation	Maximum (MYR)	Minimum (MYR)
Working capital	32,560,236	22,735,621	8722362.69	4,105,928	133,419,635
Retained earnings	3,243,380	1,582,675	759781.252	-195,236	12,215,358
Earnings before interest and taxes	2,326,556	1,642,243	788065.309	-166,847	9,681,304
Market value of equity	20,631,707	10,036,227	6893516.01	947,510	88,089,066
Total liabilities	124,412,227	85,872,996	40398079	18,642,159	511,038,696
Non-performing loans	2,635,604	2,638,575	296197.555	432,629	7,419,930
Net Loans	92,985,210	68,684,315	29899754.4	14,152,417	362,774,276
Total deposits	97,860,320	68,255,086	32539016.8	15,217,115	395,610,810
Long-term debt	5,803,837	3,923,700	3659395.07	0	31,972,981
Total assets	135,418,290	93,420,439	43938818.4	20,204,172	558,781,295
Age (years)	64	54	7.45E-15	28	110

Note: Number of observation, N = 88, Number of sample, n = 8, Number of years, T = 11

Table 3 Summary of descriptive statistics of each variable

Variable	Mean	Standard Deviation	Maximum	Minimum
Financial distress	1.9521	0.21758	1.4358	2.3181
Non-performing loans (NPL)	0.0254	0.0144	0.0058	0.0587
Loan to deposit (LTD)	0.9742	0.1236	0.7093	1.404
Leverage	0.0355	0.0209	0	0.1042
Firm's Age (years)	63.5	28.3529	28	110
Firm's Size	18.4054	0.8199	16.8214	20.1412

Note: Number of observation, N = 88, Number of sample, n = 8, Number of years, T = 11

Table 4 Summary of correlation matrix

	Financial distress	Board capital	Non-performing loans (NPL)	Loan to deposits (LTD)	Leverage	Firm's age	Firm's size
Financial distress	1.0000						
Board capital	0.2155	1.0000					
Non-performing loans	-0.0804	-0.1456	1.0000				
Loan to deposits	-0.1723	0.3082	0.0416	1.0000			
Leverage	-0.2243	0.0814	-0.1853	0.3369	1.0000		
Firm's age	0.1398	-0.5712	0.2601	-0.3491	0.0454	1.0000	
Firm's size	0.0709	-0.1189	-0.5125	-0.0923	0.4201	0.1611	1.0000

Panel Data Regression

Table 5 reports the estimates of financial distress with director capital and the control variables. Board capital had a statistically significant and positive relationship with the financial distress. The result was consistent with Gilson (1990), Elloumi and Gueyie (2001), Haynes and Hillman (2010), Hillman and Dalziel (2003), and Iskandar et al. (2012). The higher the financial distress index, the lower the financial distress level of the banking institution. This study identified that the independent variable of non-performing loans (NPL) in this study was not statistically significant and had a negative relationship with the financial distress index. The independent variable of the loan-to-deposits ratio (LTD) in this study was not statistically significant and had a negative relationship to the financial distress. There was a negative and statistically significant effect of leverage on the financial distress index. The results were consistent with Al-Musalli and Ismail (2012), Anderson and Reeb (2003), Fok et al. (2004), Laeven and Levine (2009), and Sharpe and Stadnik (2007) were as expected. Increasing leverage will increase the financial distress level of the Malaysian banking institution. In addition, a firm's age and size, had no significant contribution with financial distress.

Discussion

This research investigated the role of board capital with regard to financial distress in Malaysian Banking companies. Our results showed that board capital has a significant contribution on the banking financial distress in Malaysia due

to the ability of the boards of directors to manage the banking institutions. The ability of the boards of directors was highly correlated with their education level and how well they used their knowledge to assist the banking institution in solving and even avoiding their bank's financial distress. This was in line with prior research such as Elloumi and Gueyie (2001), Gilson (1990), Haynes and Hillman (2010), Hillman and Dalziel (2003), and Iskandar et al. (2012).

Thus, the board of directors must know when to increase loanable funds to consumers. The knowledge of the economy "the economy crisis will come every 10 years" is crucial for the board of director to be able to take appropriate care. They should know when to increase and decrease loanable funds to consumers in order to avoid a higher default risk when there is an increase in non-performing loans which could increase the financial distress level of the banking institution.

Board capital covers the network, education, and experience of the board of directors. A healthy relationship between the company and various corporates and non-governmental bodies would help to support a company in adversity. For instance, a good rapport with a financial institution would provide an additional financial resource to a company facing difficulties. Similarly, a company would have more market opportunities provided by peers in the industry. Likewise, the board of directors with a proven track record and high educational background would steer a company toward greater heights. Competency in corporate governance and vast experience ensure cost efficiency in an organization. Therefore, board capital contributes in every single way to reduce financial distress.

Table 5 Overall result of panel data analysis dependent variable: financial distress

Item	Pooled GLS (heteroskedasticity and autocorrelation controlled)
Observation	96
Constant	0.9053 (0.8687)
Board capital	0.3305 (0.1293)**
Non-performing loans (NPL)	-1.594 (2.7713)
Loan to deposit (LTD)	-0.0671 (0.2515)
Leverage	-3.7131 (1.3204)**
Firm's age	0.0033 (0.0018)
Firm's size	0.0407 (0.0439)
R ²	0.2764
Adj. R ²	0.2228
MSE	0.1918
F-Value	7.98***
Breusch-Pagan LM test	1.75 (0.1857)
Hausman test	F/E
Normality test (Jarque-Bera)	1.3 (0.523)
Multicollinearity (vif)	1.64

The value reported is the coefficient value, with standard error in parentheses. The regression estimated the relationship between board capital and corporate financial distress.

Note: *, **, *** denote statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively.

Only leverage had a significant effect on financial distress; the other control variables were not significant. First, non-performing loans did not have any significant impact on financial distress due to the nature of the banking business. Banks have a regulated NPL level set up by the central bank. This NPL level is a threshold and acts as an early warning system. To avoid financial distress and to generate income via loans, banks use their own portfolio strategy to diversify their risk. Therefore, NPL did not significantly influence the financial distress level of the listed commercial banking institutions in Malaysia.

The loan to deposit (LTD) ratio was also not significant toward financial distress because of regulation and the theory of portfolio which is the same reason as for NPL. The commercial banking institutions do not wholly depend on earnings from their loan business. As we know, banking institutions are also involved in buying and selling currencies of all nations. The banking institutions tend to take advantage of the arbitrage or other investing opportunities. Therefore, the LTD does not have a significant effect on Malaysian banks' financial distress.

Leverage had a significant contribution to financial distress due to the financing method really reflecting the level of financial distress. Financing is the core business of a bank. With high leverage, banks perhaps lose capability to repay debt. If the banking institution were unable to deal with its debt obligation, it might be sued by creditors or be confronted with the risk of bankruptcy. The financial position of the banking institution will become worse or enter the distress zone if they need to deal with a higher debt obligation. Therefore, a banking institution using too much debt will increase its financial distress level and at worst be confronted with bankruptcy.

Additionally, the firm's age did not have a significant effect on financial distress as regardless of age, financial distress may hit any bank. There have been several old firms such as Lehman Brothers Inc., General Motors Company, CIT group and Chrysler; yet, those firms have all faced severe financial distress. Lastly, this study found there was no significant relationship between the firm's size and financial distress. Large or small-sized banks are the same as both can be hit by financial distress. It is not about the economies of scale of the bank, but rather about how well the bank performs, manages, and controls its business operations and not to the assets of the company. As long as the board of directors and management have a higher education, experience, and networking and also seldom make the wrong decision, the company will be able to keep away from financial distress and even bankruptcy.

Conclusion and Recommendation

This study examined the relationship between board capital and the financial distress level. The scope of this study was Malaysian banking listed companies in the period 2003 to 2013. The study used several control variables in the model for better estimation: NPL, LTD, leverage, firm's age, and firm's size. The general theoretical literature on this topic rarely considered the Malaysian context. Based on the research findings, board capital and leverage were statistically significant with the commercial banking financial distress level in Malaysia. There

were four independent variables that were not statistically significant with the financial distress level.

This research study contributed to the theory of human capital since the findings of the research documents indicated that there were negative and significant effects of board capital on the firm's financial distress level. This study found that human capital is strongly related to the firm's financial performance and financial distress level. The human capital theory states that a firm's ability to perform well and be capable of avoiding financial distress problems depends on how much expertise, education, and experience its staff possesses. If the employees have insufficient human capital to deal with the problem, the firm will be confronted with the risk of failure. This study examined the education level and found that it can have a significant impact on the firm's financial distress level and therefore, the accuracy of the human capital theory was verified by this research.

Furthermore, this study also contributed to knowledge transfer theory since the findings of the research documented that there is a negative significant effect of board capital on the firm's financial distress level. This study found that knowledge transfer theory is strongly related with the firm's financial distress. Based on this study, the knowledge transfer theory was defined as a boards' ability to transfer its knowledge to subordinates in order to settle business problems in the future. This theory states that if the top management (the board) does not have sufficient knowledge to transfer to subordinates, the firm might not perform well and may even face financial problems. Since the study examined whether there was a significant relationship between board capital and financial distress, the accuracy of the knowledge transfer theory was proved so that where this can be achieved, it improves the firm's future management and avoids facing financial distress problems in the future.

The government should consider an awareness campaign to awaken the banking industry regarding the impact of board capital and leverage on the banking financial distress level. Through an awareness program, the government will not be confronted with excessive problems such as bankruptcy in the banking industry and even in other industries as well. Moreover, the Bursa Malaysia can make a modification regarding the listing requirement in Bursa Malaysia as the stock market participants will gradually increase because of the good management in reducing PN17-listed companies.

Lastly, this study provided useful information to investors regarding how to choose a good company to invest in. This research can help investors reduce the risk of losing their invested funds by analyzing how much board capital and leverage a certain financial institution has. Higher board capital will increase the company's profitability and reduce the risk of financial distress so that investors can enjoy a high payout dividend and lower the default risk.

Conflict of Interest

There is no conflict of interest.

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