Board of Directors and Risk-taking Behavior of Islamic Banks in South East Asia

Faaza Fakhrunnas[a], *Zulkufly Ramly*[b]

[a)]Department of Economics, Faculty of Economics Islamic University of Indonesia, Email : fakhrunnasfaaza@uii.ac.id
[b)]Department of Finance, Kulliyah Economics and Management Science International Islamic University of Malaysia,

Abstract

Objectives - Board of Directors (BODs) and Shariah Supervisory Board (SSB) have a pivotal role to manage Islamic banks in Southeast Asia. The decision made by the BODs and SSB will directly affect to the risk-taking behavior performed by Islamic bank. This study aims to investigate the relationship among BODs, SSB and risk-taking behavior of Islamic banks in Southeast Asia.
Method - Adopting random effect model, unbalanced panel data, this research utilizes 24 Islamic banks in Southeast Asia which observe over six periods from 2009 to 2014.
Results - the study reveals that independent director influences the risk-taking behavior positively, while Shariah Supervisory Board (SSB) affects it negatively. In addition, Board size has a positive effect on the credit risk but negative on z-score.
Conclusion - Islamic bank industry in Southeast Asia has to consider to increase the number of SSB to oversee the Islamic bank operation appropriately. In addition, independent director composition in the board of directors has to be considered precisely in terms of the number to have a good performance in organizing the Islamic banks in Southeast Asia.

Keywords: BODs, Independent director, SSB, Risk-taking behavior

Abstrak

Tujuan - *Board of Directors* (BODs) dan Dewan Pengawas Syariah (DPS) mempunyai peran penting dalam mengatur perbankan syariah di Asia Tenggara. Keputusan yang diambil oleh BODs dan DPS akan memberikan dampak secara langsung terhadap perilaku resiko yang dialami oleh perbankan syariah. Penelitian ini bertujuan untuk melakukan investigasi terhadap hubungan antara BODs, DPS dan perilaku resiko perbankan syariah di Asia Tenggara.
Metodologi – Dengan menggunakan *random effect model*, menggunakan panel data yang tidak seimbang, penelitian ini menggunakan 24 perbankan syariah di Asia Tenggara yang diobservasi selama enam periode yakni pada tahun 2009-2014
Hasil – Penelitian ini menemukan bahwa *independent directors* mempengaruhi perilaku resiko secara positif sementara itu DPS mempunyai hubungan yang negatif. Kemudian, jumlah BODs memiliki pengaruh positif terhadap resiko kredit tetapi berpengaruh negatif terhadap z-score.
Kesimpulan – Industri perbankan syariah di Asia Tenggara sebaiknya harus mempertimbangkan kenaikan jumlah DPS untuk mengawasi kinerja perbankan syariah dengan baik. Selanjutnya, komposisi jumlah *independent directors* dalam BODs harus dipertimbangkan dengan tepat demi tercapainya kinerja yang optimal dalam mengatur perbankan syariah di Asia Tenggara.

Kata Kunci : BODs, *Independent Directors,* DPS, Perilaku Resiko

1. Introduction

Corporate governance issue becomes an important discussion in Islamic banking operation. One of the popular example is in Ihlas Finans House (IFH) which experienced financial distress during Turkey's financial crisis in 2000-2001. The bank was liquidated due to a failure in corporate governance (Ali, 2007). This particular problem can be seen from the lack of internal checks and balances. It made the IFH had many shortcomings at motivating the board members, the decision making was too centralized, and the staff did not have a proper background in the industry. Moreover, it was also weakened by the board members which did not implement an appropriate policy based on financial and economic fact had by IFH, and the company failed to create system of internal control precisely.

Then, multiplier effect happened as well due to the lack of corporate governance such as wrong decision in selecting the top management where senior executive was chosen from collapsed bank. That condition induced many mistakes in determining company strategy which was facing the financial crisis. At the end, IFH underwent financial difficulty like liquidity shortage, increase in non-performing loan, no efficient in management expense, having too higher asset usage ration and etc (Ali, 2007 ; Kanten & Ulker, 2013). The condition experienced by IFH illustrated that the bank did not have an appropriate risk management strategy in which there was no coordination to control the risk due to the worst financial and corporate governance performance.

In another case, Bank Islam in Malaysia also had corporate governance issue in 2005 when the bank suffered from huge losses due to unexpected provision for non-performing financing. It makes the banks lost amounting to RM2.2 billion which 35% of the loss came from bank's Labuan branch (Thajudeen, 2013). This situation occurred because Bank Islam was too generous at giving financing before calculating the risks, such as country risk and project risk. Moreover, internal control became main attention due to any ignorance at lending money to the companies which were no longer exist. The adversity faced by Bank Islam was caused by separation board and the management in headquarter office and Labuan Branch. What was happening to Bank Islam is barely tantamount to IFH which has higher risk creating financial difficulty caused by a lack of corporate governance. The mismatch management experienced by Bank Islam in Malaysia as well as IFH in Turkey give a big picture that corporate governance will relate to the Islamic bank performance directly. Based on the many circumstances confronted by the companies, it can be considered that

corporate governance is an urgency for the bank, especially Islamic bank, to manage the institution appropriately.

Learning from those experience, ideally, Islamic banks must commit to perform profit loss sharing which eliminates *riba, gharar* and *maysir* (Sufian, 2007: Obaidullah, 2005). However, it has to be acknowledged that Islamic banks face the same risk as conventional banks. This situation is caused by the ecosystem of Islamic finance which remains to have strong relationship to conventional financial industry. For instance is inherent risk that consist of credit risk due to Islamic banks benchmark to profit still adopt interest rate such as KLIBOR in Malaysian case (Khan & Ahmed, 2001). Another risk owned by Islamic bank are liquidity risk which relates to Islamic bank's capability to fulfill their liability.

Then, to perform Islamic bank properly, the bank needs a strong governance to manage the risks and to gain high return. A strong governance can be formed by putting the right people in the right position which can benefit to reduce agency cost as well. However, there are some issues which exist in corporate governance. First issue is about the different orientation between shareholder and agent's goal (Eisenhardt, 1989). The different goal between two parties may occur when the shareholders feel that what is being done by the board does not reflect the shareholder's interest due to any different priority of the bank's goal within each party. Second issue is about the difficulty to recognize what is actually the agent doing (Eisenhardt, 1989). Sometimes, the shareholders do not know about the activity done by the agent due to the complexity in the business process. Moreover, the possible discussion arising in that issue may be caused by moral hazard and lack of expertise performed by the agent.

In Islamic banks' governance, Board of Directors (BODs) composition consist of independent directors, non-independent directors and Shariah Supervisory Board (SSB). Both of directors' type are appointed by shareholders in general meeting. Especially for independent directors, this kind of directors comes from outsiders which have expertise in certain field needed by the company. It may be based on their experience or knowledge. The independent directors will have a role as guardians for the company to make it performs better. they can also be a buffer for non-independent directors when they discuss with shareholders (Pass, 2004). Moreover, independent directors will give more value to the company due to a symbol of professionalism and transparency. In addition, board size may also affect to risk taking behavior of Islamic banks. Theoretically, by having too much board, the performance of the board will not perform well (Belkhir, 2009).

Furthermore, SSB is responsible to manage the Islamic bank to comply with shariah. SSB also deserves to consider the acceptance of Islamic products' structure in terms of shariah view before the product is issued to the market. In reviewing the products, SSB as a representative of Islamic banks must have forward-looking basis to determine the decision (IFSB, 2014). Eventually, after reviewing the product before issued to the customers, SSB will make some recommendations to the Islamic banks independently (Hamza, 2013).

Focusing to the relationship between good corporate governance and its influence to risk-taking behavior as well as the performance of Islamic banks, there are several studies which discuss that related issues. In the conventional perspective, Rachdi, Trabalesi and Trad (2013) studied about the banking governance related to the risk owned by the banks in Tunisian banks context by using Generalized Least Square (GLS) random effect. The finding of the research is that the board size and bank size are negatively significant to the z-score and credit risk respectively. It means that the small banks and duality board are attributed to have more insolvency risk in business activity performed by the banks. In addition, global risk increases while independent board exists in the BODs.

Wang (2011), Suu and Lee (2012) conducted the research in the same issue which concluded that the structure of BODs affects to risk-taking behavior and the company performance. In terms of banking performance, Belkir (2009) found that independent directors do not have significant relationship to the performance. Then bank size is negatively significant to the performance as well while the total asset negatively significant to all samples (Belkhir, 2009). However, the board size has positive relationship to the performance especially in saving-and-loan. Furthermore, pertaining with risk-taking done by board of directors conducted by Pathan (2009), it is found that there is a relationship between board of directors and the bank decision in terms of risk-taking behavior (Pathan, 2009)

Narrowing to the Islamic bank context, Bukhair and Rahman (2015) tried to examine the the relationship between BODs mechanism, investment account holder and social contribution on the banks performance during 2008-2011. Furthermore, the study showed that bank size is negatively significant to the perfomance as well as non executive board. In addition, separation between CEO and the chairman has negatively significant as well. It is different from non-executive chairman that has positively significant effect to the performance of Islamic banks. Other variables such as investment account holders and zakat do not have significant effect to the performance of Islamic

banks. Based on the result of the analysis, it can be seen that Islamic banks have different type from conventional banks where it can be concluded that corporate mechanism of BODs, ownership structure and social contribution do not influence Islamic banks performance (Bukhair & Rahman, 2015).

Study conducted by Mollah and Zaman (2015) tried to specify the shariah supervision towards Islamic banks' performance. This study attempt to delineate the role of shariah supervision, board structure and CEO-power in affecting banks' performance. By having 1204 bank-year observation, it results that shariah supervisory board coefficient positively affects the bank performance even though it is not significant. Like the previous research, independent board, CEO power and the board composition evidance to have negatively significant to the performance. Afterwards, the role of SSB as supervisory board has positive relationship that is different from when SSB funcionates as advisory board which is negatively insignificant (Mollah & Zaman, 2015)

Based on the existing previous researches, it is able to be captured that most of the researchers apply conventional institutions as the object of the study. Although Bukhair and Rahman (2015) and Mollah and Zaman (2015) utilized Islamic banks as the object of their study, they only concern on investigating the impact of board structure and its mechanism to Islamic banks' return. The performance of Shariah Supervisory Board (SSB) is also portrayed in Mollah and Zaman's study but it is only descriptive explanation which does not statistically relate to Islamic banks' return. Therefore, to the best of our knowledge, the empirical research about the relationship between Islamic banks performance and the risk-taking behavior do not exist yet and then it is necessary to be given a serious attention to capture comprehensive condition in regard to what is happening in current Islamic banks.

Hence, it will be interesting to analyze board of directors, SSB and the risk-taking behavior of Islamic banks which it will give the new point of view in this area due to the lack of literature discussing about this topic. This paper will explore the recommendation to the stakeholders of Islamic banks to improve its business operation. Regarding to the structure of this paper, the second part of this paper will shed light methodology. Thirdly, it will explain about result and finding where the conclusion and recommendation will be the last part of this paper.

2. Methodology

2.1. Data and Variable

This study attempts to investigate the relationship among BODs, SSB and risk-taking behavior of Islamic banks in Southeast Asia. Based on the Ernest and Young Report (2016), it delineates that Southeast Asia is one of the regions that have the highest Islamic banks' market share in the world as well as the highest asset and growth. Thus, this research concerns in that regions which are considered as the central of Islamic banking in the world. Moreover, all Islamic banks in Southeast Asia are taken as the sample of the study for each region. The reason of taking all Islamic banks as the sample of the study is to reveal the finding of the study holistically. However, only Islamic banks which have a good disclosure in their financial report will be taken as the sample of the study.

The openness of the financial report comprises of several data needed in this research such as the board of director's size, the independent directors, shariah board, non-performing loan, equity ratio and total asset. Then, by having total sample amounting 24 Islamic banks consisting 140 Islamic bank-year observation period, this research collects the data from Bank-scope Bureau Van Dijk and Islamic bank's websites to yield the financial reports in detail. Moreover, the data use sixth year period starting from 2009-2014 which the consideration to take that period is that the data or financial performance of Islamic banks are more stable after financial crisis in 2008.

2.2. Variable Definition

In terms of variable used, this research uses several variables which consist of dependent variable, independent variable and control variable. Bank risk-taking is utilized as dependent variable that has proxy of bankruptcy risk (Z-Score) and credit risk (CR). The Z-score delineates the risk to bankrupt whereby the higher the score of z-score, the less exposure owned by the Islamic bank towards bankruptcy risk. Then, the credit risk assesses the capability of the bank to manage its financing process. Moreover, board size (Bodsize), board independence (Ind) and size of shariah committee (SizeSSB) are taken as the independent variable. All of the variables mentioned before as the proxy of shariah governance of Islamic bank. Shariah governance captures the system owned by the bank to manage its operation. Then, capital ratio (ETA) and the company size (TA) are used as the control variable. The measurement of the variable is explained in the Tabel 1.

Table 1. Variable Measurement

Variable Name	Measurement
Bankruptcy Risk (Z-Score)	The mean return on assets plus the capital asset ratio (equity/total assets) divided by the standard deviation of asset return
Credit risk (CR)	The ratio of non-performing financing and advances to total financing and advances
Board Size (Bodsize)	The number of directors on the board
Independent Director (Ind)	The number of independent director on the board
Size of shariah committee (SizeSSB)	The number of Shariah Supervisory Board
Capital Ratio (ETA)	The ratio between equity and total asset (Equity Ratio = E/TS)
Company Size (TA)	The number of total asset

2.3. Method

Panel data comprises of time and place which are able to measure some quantity of the phenomenon in certain period of time (Brooks, 2008). Panel data allows the study to have heterogeneity explicitly to pool the data. In this view, the data actually may consist of firm, states, countries and etc. which is treated as an individual in panel data (Gujarati, 2004) because it has an assumption that every individual have the similar response when it faces the same condition. Those assumption affects the sample size which increase bigger and there is no issue to have bias data in single individual regression (Asteriou and Hall, 2011). Second, panel data will give more comprehensive view about the data because it can capture dynamic of change of the study's object. Third, if there is poor cross section and time series data, panel data can be used to assess the research condition which may not be able to be conducted by the other types of data. Fourth, panel data can reduce the bias when it has thousand units of data which create broad aggregate among or between the firms or individual that is being observed (Gujarati, 2004).

The methodology used to analyze the data in this study is random-effect Generalize Least Square (GLS). Conceptually, random effect method is different from fixed effect method where random effect does not treat the dummy variable to be constant but let it moves randomly (Asteriou and Hall, 2011). Due to that concept, the variability comes from:

$$a_1 = a + v_1$$

v_1 can be defined as zero mean in standard random variable. Thus, in the random effect equation, it is able to make some adjustment based on the equation abovementioned which is from

$$Y_{it} = (a_i + v_1) + \beta_1 X_{1it} + \beta_2 X_{2it} + \cdots + \beta_K X_{Kit} + \mathrm{u}_{it}$$

It is adjusted into

$$Y_{it} = a_i + \beta_1 X_{1it} + \beta_2 X_{2it} + \cdots + \beta_K X_{Kit} + (v_1 + \mathrm{u}_{it})$$

In addition, there are several reasons why it is chosen which is *first*, Ordinary Least Square (OLS) does not consider panel data structure. Second, it is the nature of the data such as independent director and board size which do not have high variation which will make massive degree of the freedom's losses if fixed effect method is applied in the model (Mollah & Zaman, 2015). Moreover, GLS random effect also applied by Pathan (2009) where the robustness of the method will address cross-sectional correlation and heteroskedasticity especially for unbalanced data.

Furthermore, in this paper, the main model consists of one dependent variable. The model performed in this paper is formulated as a follow;

$$Risk_{i,t} = \propto + \beta_1 \ln(\mathrm{Bodsize})_{i,t} + \beta_2 \mathrm{Ind}_{i,t} + \beta_3 \mathrm{SizeSSB}_{i,t} + \beta_4 \ln(\mathrm{TA})_{i,t} + \beta_5 ETA_{i,t} + \beta_6 Year_t + \beta_7 Country_i + \varepsilon_{i,t}$$

In this model, *i* denotes for Islamic banks where *i* = 2009, 2010, 2011. . . 2014 and *t* portrays as period which is *t* = 1, 2, 3. . . 140.

3. Result and Finding

3.1. Descriptive Data

Table 2. Descriptive Data of Islamic Banks in Southeast Asia

	Mean	Std.Dev	Min	Max
Zscore	46.44501	49.44223	5.312904	349.1389
CR	2.822429	2.97659	0	23.23
Bodsize	5.728571	2.281748	2	10
Ind	3.028571	1.174935	1	6
SizeSSB	3.807143	1.382816	2	9
TA	4012.138	6109.311	17.16019	41838.05
ETA	12.1503	11.93117	3.19	93.13884

According to the Table 2, it explains the description of the data in the variables used in this research. In the credit risk view, the lowest number is 0% meaning that the Islamic banks do not have risk when they give financing to the customers in the certain time within the period of study. On the other hand, the highest number of credit risk reaches 23.23% which it explains that the related Islamic banks in Southeast Asia suffers high loss in financing activity. Averagely, the credit risk of Islamic banks is quite low which only reach 2.823%. Then, z-score describing the bankruptcy risk reveals that the maximum and minimum value are 349.1389 and 5.312904 respectively.

In the board of directors' nature, the number of board size in Islamic banks is actually not the same. The number of BODs is 5 which consists 3 independent directors and the the others are non-independent directors. In terms of BODs' structure, commonly the number of independent director is more than 3 people. In addition, the number of independent director is at least one person in each Islamic bank where the maximum number of independent director is 6 people. Afterwards, the SSB Size reveals that actually Islamic bank has at least 2 people in shariah committee, vice versa. Islamic bank has large number of SSB amounting to 9 members although commonly the number of SSB in the bank is around 4 shariah scholars. The number of board size, independent director and SSB also sheds light the Islamic bank condition in performing corporate governance.

Surprisingly, there is a big gap amongst Islamic bank in terms of the number of the asset. It is evidenced by the minimum amount of asset reaching USD 17.16 million owning by the smallest Islamic bank based on asset in this sample of the study. Afterwards, the asset number had by the biggest Islamic bank touches USD 41,838.05 million where the average of the bank size is USD 4,012.138 million. It also portrays that the different scale of bank size also emerges in Islamic bank. Then, the equity ratio of Islamic bank which explains the percentage of the equity on the total asset averagely has 12.15%. Moreover, the smallest number of equity ratio reaches 3.19 while the highest number is 93.14%. The different number of the equity ratio surely makes the different risk that Islamic bank will face.

3.2. Correlation in the variable

Table 3. Correlation Test

	Zscore	CR	Ind	Lnbodsize	SizeSSB	LnTA	ETA
Zscore	1.0000						
CR	-0.1646	1.0000					
Ind	0.0398	0.1593	1.0000				
LnBodsize	-0.1870	0.1464	0.7155	1.0000			
SizeSSB	-0.2190	-0.0201	0.4861	0.5909	1.0000		
LnTA	-0.2529	0.1087	0.4490	0.4788	0.6967	1.0000	
ETA	0.2492	-0.0489	-0.3459	-0.3671	-0.4064	-0.6611	1.0000

Correlation test aims to understand the relationship between one variable to another variable at which it is determined by the number of correlation based one the result of test conducted in the Table 3. Table 3 shows that the independent director has positive correlation to the z-score which is the same as the correlation to the credit risk. It can be interpreted that if the number of independent director increases, the risk faced by the company also increases. On the other hands, the board size has different correlation to each proxy of risk-taking behavior owned by the Islamic bank. For z-score variable, the board size negatively correlates to the risk although it has positive correlation to the credit risk. It represents that if the number of the board is higher, the z-score value will be lower, conversely the credit risk will be higher following the positive direction between the variables.

The correlation owned by the number Shariah Supervisory Board (Size SSB) is the same as z-score and credit risk which is negatively correlated. This direction implies that when the number of SSB is high, the risk faced by the company will be less than having less number of shariah scholar sitting in the board. Furthermore, the larger Islamic bank based on total asset will tend to have higher credit risk even though the z-score seems to be lower. This circumstance is indicated by the negative and positive correlation had by total asset variable to z-score and credit risk respectively. The inverse correlation is owned by capital ratio of Islamic bank that is measured by using equity divided by total asset. According to the correlation's in the Table 3, it exhibits that capital ratio will affect the z-score negatively while the credit ratio will be influenced conversely. It connotes that while Islamic bank has the higher number of equity used as capital, it will decrease the credit risk

but increase z-score. The latter, it also explains that there is no multicollinearity issue evidenced by all correlation values which do not exceed 0.8.

3.3. Random Effect Analysis

To determine the random effect analysis, Hausman-test has to be applied to decide whether the random effect analysis is appropriate or not. Then in the Hausman-test, the z-score as dependent variable appoints that the number of p-value is more than 0.05 which represents that H_o is accepted. While, the credit risk is applied as dependent variable, the p-value of Hausman-test also portrays the same result which is more than 0.05. Thus, the conclusion of the result decides to accept random effect analysis (H_O) as the method to be used in this test.

Tabel 4. Random Effect Test (Z-Score)

Z-score	1	2	3	4	5
Ind	1.900942		1.683207	1.925893	
	(0.359)		(0.346)	(0.352)	
InBodsize	-1.819334	2.634635		-2.244996	2.275095
	(0.847)	(0.747)		(0.811)	(0.779)
SizeSSB	-.7497405	-.7444717	-.7728109		
	(0.691)	(0.689)	(0.678)		
LnTA	-5.75843	-5.162653	-5.717073	-6.417626***	-5.814829***
	(0.134)	(0.171)	(0.135)	(0.064)	(0.087)
ETA	.8673277*	.9006307*	.8754319*	.841337*	.8750681*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
C	80.28142**	73.78719	77.62061*	83.31371*	76.7479**
	(0.014)	(0.021)**	(0.009)	(0.008)	(0.014)
Pooled					
Observation	140	140	140	140	140
R square	0.0904	0.0745	0.0874	0.0892	0.0733
Wald Chi2	38.88*	38.83*	39.44*	38.79*	38.75

Robustness standard is in 1%(*), 5%(**) and 10%(***)

Table 4 shows the result of random effect analysis which test all variables. It displays the number of observations in the model one to five which has 140 bank-year observation. Afterwards, R-square

explains that the independent variable is able to explain 9.04% of dependent variable in the model one at which the number of percentage will be less than it for other models beside model one. In terms of Wald Chi2, all models exhibit that it is significant at 1% level. It also shows that the provided model in this analysis is good. From the result of the analysis partially, the board size affects negatively to the z-score value. This result is in line with the study conducted by Wang (2011) who confirms that the higher number of people sitting in the board, the lower the risk will be.This relationship is also had by the SSB size which represents that SSB does not have significant effect to the Islamic banks which is also supported by Mollah and Zaman (2015).

In the SSB variable, the number of coefficient reaches -0.7497505 which indicates that if the SSB variable increase 1%, the z-score will decrease 0.7497505%. However, the independent director has positive relationship to the risk-taking behavior in all conditions in the five various models in the Table 3. It also explains that independent director tends to be risk-taker in operating Islamic banks. Then, in terms of coefficient value, it can be interpreted that if the value of independent director increase amounting 1%, the z-score will increase 1.900942%. Uniquely, the board size changes to affect the risk positively if the independent director is not included in the model. It may be a signal to the corporate governance management where the BODs tend to be risk averse in managing the risk when the independent director is in the risk taker position to maximize the stakeholders wealth. Moreover, board of directors prefers to take more risk when there is no independent director even though in the same time, SSB may commit not to take more risk consistently in all models.

Furthermore, there is no significant effect from the board of directors' element at all models. Otherwise, only capital ratio influences z-score positively significant. It connotes that if the percentage of equity to total asset is higher, the Islamic bank tends to engage in the riskier business activity. The size of Islamic bank influences negatively to the risk but only significant while the SSB is not included in the model. It indicates that SSB has a pivotal role in manage the Islamic bank's risk where the banks have higher size opts to have less risk in operating the Islamic bank's business activity.

Tabel 5. Random Effect Test (Credit Risk)

CR	1	2	3	4	5
Ind	.2145033		.2364956	.2151646	
	(0.382)		(0.263)	(0.384)	
InBodsize	.1705669	.6313548		-.0771203	.379951
	(0.866)	(0.466)		(0.939)	(0.659)
SizeSSB	-.402823***	-.4050127***	-.3984113***		
	(0.071)	(0.070)	(0.071)		
LnTA	-.0036302	.0550038	.004839	-.3269155	-.2690963
	(0.993)	(0.886)	(0.990)	(0.350)	(0.433)
ETA	-.0238185	-.0207093	-.0240775	-.0358171	-.0327196
	(0.389)	(0.451)	(0.378)	(0.186)	(0.224)
C	3.713954	3.132167	3.85229	5.158355***	4.582618
	(0.227)	(0.297)	(0.172)	(0.084)	(0.116)
Pooled					
Observation	140	140	140	140	140
R-square	0.0239	0.0261	0.0205	0.0003	0.0086
Wald Chi2	5.84	5.07	5.83	2.53	1.13

Robustness standard is in 1%(*), 5%(**) and 10%(***)

In the Table 5, generally, some variables have different influence when the dependent is changed by credit risk. In this particular model, independent director has the same influence as the prior model which affects positively to the risk. It can be interpreted that the higher number of independent director will make the Islamic bank tends to engage in higher risk activity (Pathan, 2009). The influence of independent director can also be seen from the value of coefficient which is equal to 0.2145033 meaning that when the independent director increases its influence worth of 1%, the credit risk will rise to 0.2145033%. After that, SSB also has a consistent direction to the dependent variable which is negatively significant to the risk-taking behavior done by the Islamic banks. It also delineates the same reason at which SBB opts not to engage in excess risk business activity.

The significant influence had by SSB also argued by Mollah and Zaman's (2015) opinion which stated that SSB does not have significant influence. Nonetheless, inconsistent relationship is exhibited by board size that will affect differently in different condition. The board of directors will

have to select high risk activity when the independent director and SSB are involved in the model. Moreover, this condition also occurs when the board of directors only governs the Islamic bank by itself. Conversely, board of directors tends to be risk averse when the board's member only collaborates with independent director and SSB does not engage in corporate governance management.

This phenomenon indicates that the higher number of board of directors' behavior will depend on the condition of the governance structure while the independent director and SBB is in the same role consistently in every model of governance. In addition, the big size of Islamic bank will take less risk than the smaller one. It is displayed by the negative effect had by the total asset to the credit risk. For the equity ratio variable, generally it will have negative effect to the risk which means that Islamic bank which owns the higher number of equity will have less credit risk in operating business activity. Nevertheless, from all influences had by the variables explained above, only SSB that has significant effect to the credit risk.

4. Conclusion and Recommendation

This article reveals the influence of board of directors' nature in terms of size, independent director and Shariah Supervisory Board (SSB) to the risk-taking behavior owned by Islamic Banks in Southeast Asia. From the finding, it explains that independent director will affect positively to the risk-taking behavior. It also sheds light that independent director becomes risk-taker in the board director's composition. Inversely, SSB is consistent to supervise the Islamic bank operation which is not to have excess risk in managing the bank as displayed by the negative relationship to the risk in the analysis's result mentioned above. This particular condition also delineates that the more shariah scholar sitting in the SSB, the more strict supervision role will be. However, the board size gives different direction in terms of the relation amongst variables in the model where it has positive effect to the credit risk and negative influence to z-score. It exhibits that if the board of directors has a big number, the credit risk will be higher, while it will reduce the z-score value. It means that the bank tends to have more exposure to the credit risk and bankruptcy risk. Based on the finding, this study suggests that the Islamic bank industry in Southeast Asia has to consider to increase the number of SSB to oversee the Islamic bank operation appropriately. In addition, independent director composition in the board of directors has to be considered precisely in terms of the number to have a good performance in organizing the Islamic banks in Southeast Asia.

References

Ali, S. S. (2007). Financial Distress and Bank Failure: Lessons from Closure of Ihlas Finans in Turkey. *Islamic Economic Studies*, *14*(1), 1–52.

Asteriou, D and Hall, S.G. (2011). *Applied Econometrics*. United Kingdom : Palgrave Macmillan

Azhar Rosly, S., & Ashadi Mohd. Zaini, M. (2008). Risk-return analysis of Islamic banks' investment deposits and shareholders' fund. *Managerial Finance*, *34*(10), 695–707. http://doi.org/10.1108/03074350810891010

Belkhir, M. (2009). Board of directors' size and performance in the banking industry. *International Journal of Managerial Finance*, *5*, 201–221. http://doi.org/10.1108/17439130910947903

Bhagat, S., & Black, B. (2001). The Non-Correlation Between Board Independence and Long Term Firm Performance. *Journal of Corporation Law*, *1*(1), 231–274. http://doi.org/10.2139/ssrn.133808

Brooks, C. (2008). *Introductory Econometrics for Finance*. United Kingdom : Cambridge University Press.

Ferrero-Ferrero, I., Fernández-Izquierdo, M. Á., & Muñoz-Torres, M. J. (2012). The impact of the board of directors characteristics on corporate performance and risk-taking before and during the global financial crisis. *Review of Managerial Science*, *6*(3), 207–226. http://doi.org/10.1007/s11846-012-0085-x

Gujarati, D.N. (2004). *Basic Econometrics*. New York : Mc Graw Hill.

Hamza, H. (2013). Sharia governance in Islamic banks: effectiveness and supervision model. *International Journal of Islamic and Middle Eastern Finance and Management*, *6*(3), 226–237. http://doi.org/10.1108/IMEFM-02-2013-0021

IFSB. (2014). Revised Guidance on Key Elements in the Supervisory Review Process. *Islamic Financial Service Board*, 1–58.

Kanten, P., & Ulker, F. (2013). The Macrotheme Review. *A Multidisciplinary Journal of Global Macro Trends*, *2*(4), 144–160.

Khan, T., & Ahmed, H. (2001). Risk Management : An Analysis of Issue in Islamic Financial Industry. *Occasional Paper*, *5*, 1–192.

L'Huillier, B. M. (2014). What does "corporate governance" actually mean? *Corporate Governance*, *14*(3), 300–319. http://doi.org/10.1108/CG-10-2012-0073

Mollah, S., & Zaman, M. (2015). Shari'ah supervision, corporate governance and performance:

Conventional vs. Islamic banks. *Journal of Banking & Finance*, *58*, 418–435. http://doi.org/10.1016/j.jbankfin.2015.04.030

Mostovicz, E., Kakabadse, N., & Kakabadse, a. (2011). Corporate governance: quo vadis? *Corporate Governance*, *11*(5), 613–626. http://doi.org/10.1108/14720701111177019

Obaidullah, M. (2005). *Islamic Financial Service*. Jeddah: King Abdul Aziz University.

Pass, C. (2004). Corporate governance and the role of non-executive directors in large UK companies: an empirical study. *Corporate Governance*, *4*, 52–63. http://doi.org/10.1108/14720700410534976

Pathan, S. (2009). Strong boards, CEO power and bank risk-taking. *Journal of Banking and Finance*, *33*(7), 1340–1350. http://doi.org/10.1016/j.jbankfin.2009.02.001

Srairi, S. (2013). Ownership structure and risk-taking behavior in conventional and Islamic banks: Evidence for MENA countries. *Borsa Istanbul Review*, *13*(4), 115–127. http://doi.org/10.1016/j.bir.2013.10.010

Su, W., & Lee, C.-Y. (2012). Effects of corporate governance on risk taking in Taiwanese family firms during institutional reform. *Asia Pacific Journal of Management*, (1), 809–828. http://doi.org/10.1007/s10490-012-9292-x

Sufian, F. (2007). The efficiency of Islamic banking industry in Malaysia. *Humanomics*, *23*(3), 174–192. http://doi.org/10.1108/08288660710779399

Thajudeen, K. S. (2013). Issues in Corporate Governance in Islamic Financial Institutions : A case study on Bank Islam. *INCEIF Working Paper*, 1–15.

Wang, C. J. (2012). Board size and firm risk-taking. *Review of Quantitative Finance and Accounting*, *38*(4), 519–542. http://doi.org/10.1007/s11156-011-0241-4