## THE EVIDENCE OF INTELLECTUAL CAPITAL

(A Study of Indonesia Banking Sector Dealing with ASEAN Economic Community in Year of 2015-2017)

## **Emy Charisma**

emycharisma@gmail.com

Faculty of Economics and Business, Universitas Muhammadiyah Yogyakarta

### Abstract

This study aimed to analyze the influence of intellectual capital towards firm value and risk of financial distress in ASEAN Countries such as Indonesia, Malaysia, Philippines, and Thailand. The subject of this research was 36 banking companies listed in Indonesia Stock Exchange (BEI), 30 banking companies listed in Bursa Malaysia (BM), 27 banking companies listed in Philippines Stock Exchange (PSE), and 30 banking companies listed in Stock Exchange of Thailand (SET) in year period of 2015 – 2017. The sampling method used in this research is purposive sampling. The data obtained from the annual reports in Indonesia Stock Exchange, Bursa Malaysia, Philippines Stock Exchange, and Stock Exchange of Thailand. Independent variable in this research is intellectual capital that is measured with VAIC (Value Added Intellectual Capital). The dependent variable are firm value that is measured by Market to Book (M/B) and risk of financial distress that is measured with 7-Score Index.

Keywords: Intellectual Capital, Firm Value, and Risk of Financial Distress.

## INTRODUCTION

Along with the times and increasing competition in the business world, it encourages companies to compete for competitive advantage. One way that is taken by the company is to manage asset or corporate wealth maximally. One of the most important sources of assets in a company is intangible assets. According to Pablos (2002), with the rise of the knowledge-based economy, the traditional bases sources of competitive advantage that depends on tangible assets in creating firm value and sustaining competitive advantage began to erode. The management of intangible assets has increased over the past few years.

Gutherie et al. (2012) have shown Intellectual capital (IC) and intangible assets (IA) performance increase the overall performance of the enterprise. Organization starts to invest in intangible assets such as intellectual capital. Intellectual capital is one of the approaches used in the assessment and measurement of intangible assets that are now being the focus of attention in various fields, such as management, information technology, sociology, and accounting (Petty and Guthrie, 2000).

Around the year 2015, the Association of Southeast Asian Nations (ASEAN) brought into being the ASEAN Economic Community (AEC). The competition between firms in the ASEAN region becomes increasingly competitive. The resources management of firms has to utilize more effectively and efficiently because is needed to add the value of firms so they can face and compete in the ASEAN Economic Community. In developing countries like Indonesia, the existence of a bank becomes very important in the process of economic development. The banking sector is considered as the knowledge-intensive sector (intellectual capital intensive industry sector) and this sector mostly offers services orientated products to their customers. In addition, the banking sector is included in the service sector where customer service is highly dependent on intellectual/human capital intelligence. Banking is an industry that falls into the category of knowledge-based industries that utilize the innovations it creates to provide value for the products and services produced for consumers (Ambar, 2004).

It is important to measure the intellectual capital of the company actually after the ASEAN Economic Community which began in 2015 until now. Therefore,

the companies know how the level of intellectual capital affects the firm performance. This research measure the level of intellectual capital in Indonesia and the developing countries in ASEAN region with the highest human capital in Year 2015 they are Philippines Malaysia, and Thailand (ASEAN Human Capital Outlook, 2015).

### **METHOD**

Objects used in this research are banking sector companies in Indonesia, Malaysia, Philippines, and Thailand. The banking should be listed in Bursa Efek Indonesia (BEI or IDX), Bursa Malaysia (BM), Philippines Stock Exchange (PSE), and Stock Exchange of Thailand (SET) with the period of the time year 2015 until 2017. Sampling technique used in this research is purposive sampling. The samples used in this research consist of 36 companies in Indonesia, 30 companies in Malaysia, 27 companies in Phillippines, and 30 companies in Thailand.

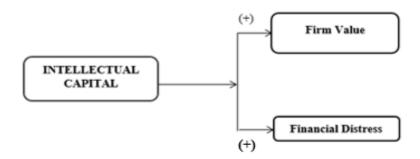
Independent variable used in this research is Intellectual Capital (IC). VAIC (Value Added Intellectual Capital) is a model developed by Pulic (2000) to measure Intellectual Capital. Based on the developed Value Added in Intellectual Capital, it consists of three components: Value-Added Human Capital (VAHU), Value Added Capital Employee (VACA), and Structural Capital Value Added (STVA). Dependent variable is a variable that is affected by the free variable (independent variable). In this research, it is measured with Market to Book Value (M/B) and Z-Score Index.

Regression model used in this research is:

 $\mathbf{MV} = \alpha + \beta_1 VAIC + \varepsilon$ 

# **ZSCORE** = $\alpha + \beta_2 VAIC + \varepsilon$

Explanation: MV is Firm Value (M/B), ZCORE is Risk of Financial Distress (Z-Score Index), VAIC is Intellectual Capital, and  $\varepsilon$  is error.



## **RESULT AND ANALYSIS**

Hypotheses in this research are:

H<sub>1a</sub>: Intellectual Capital positively influences Firm Value in Indonesia.

H<sub>1b</sub>: Intellectual Capital positively influences Firm Value in Malaysia.

H<sub>1c</sub>: Intellectual Capital positively influences Firm Value in Phillippines.

H<sub>1d</sub>: Intellectual Capital positively influences Firm Value in Thailand.

H<sub>2a</sub>: Intellectual Capital negatively influences the risk of financial distress in Indonesia.

 $H_{2b}$ : Intellectual Capital negatively influences the risk of financial distress in Malaysia.

 $H_{2c}$ : Intellectual Capital negatively influences the risk of financial distress in Phillippines.

 $H_{2d}$ : Intellectual Capital negatively influences the risk of financial distress in Thailand.

Table 1
Normality Test Result
Firm Value and Risk of Financial Distress Dependent Variable
Indonesia, Malaysia, Phillippines, and Thailand

Variables	Asymp. Sig. (2-tailed)
MV - Indonesia	,132
ZSCORE - Indonesia	,299
MV - Malaysia	,065
ZSCORE - Malaysia	,326
MV - Philippines	,106
ZSCORE - Philippines	,662
MV - Thailand	,470
ZSCORE - Thailand	,470

Source: SPSS' Output

The table 1 is the result of the normality test for MV (Firm Value) and ZCORE (Risk of Financial Distress) dependent variable in Indonesia, Malaysia, Philippines, and Thailand. Based on the table, the test of Indonesia MV variable which uses the Kolmogorov-Smirnov (K-S) Test shows that the data is normally distributed. It is strengthened by Asymp. Sig. (2-tailed) that reached 0,132. The value is greater than the alpha value (0,05). For ZSCORE (Risk of Financial Distress) dependent variable in Indonesia has Asymp. Sig. (2-tailed) in the amount of 0,299. The value is greater than the alpha value (0,05). Meanwhile, the test result for MV (Firm Value) and ZSCORE (Risk of Financial Distress) dependent Variable in Malaysia. The Asymp. Sig. (2-tailed) values of MV and ZSCORE are 0,065 and 0,326. For Phillippines, the Asymp. Sig. (2-tailed) value of MV and ZSCORE are 0,106 and 0,662 which means that greater than the alpha value (0,05). The MV and ZSCORE in Thailand have the Asymp. Sig. (2-tailed) in the amount of 0,470 and 0,470 which means that greater than the alpha value (0,05). Thus, based on the test

it can be concluded that the regression model for Indonesia, Malaysia, Philippines, and Thailand complies the normality assumption. Based on the test, it can be concluded that the regression model for Indonesia complies the normality assumption.

Table 2
Autocorrelation Test Result
Firm Value and Risk of Financial Distress Dependent Variable
Indonesia, Malaysia, Phillippines, and Thailand

Model	Testing Method	Result
MV - Indonesia	Lag	DW = 1,995
ZSCORE - Indonesia	Durbin Watson	DW = 1,850
MV - Malaysia	Durbin Watson	DW: 1,664
ZSCORE - Malaysia	Durbin Watson	DW = 1,621
MV - Philippines	Runs Test	Asymp. Sig. $(2\text{-tailed}) = 0.118$
ZSCORE - Philippines	Durbin Watson	DW = 1.808
MV - Thailand	Runs Test	Asymp. Sig. $(2\text{-tailed}) = 0.193$
ZSCORE - Thailand	Durbin Watson	DW = 2,077

In Table 2 for MV (Firm Value) dependent variable in Indonesia uses Lag Test to test the autocorrelation and get the value of Durbin Watson (DW) is 1,995. The provisions of the test are dU<DW<4-dU which means that the Durbin Watson Value must be greater than the value of dU and must be smaller than the 4-dU value. Based on the Durbin Watson table for 36 samples with 1 variable, the dU value is 1,5245. Then, it makes the 4-dU value for this research is 2,4755. The test result shows there is no autocorrelation in this regression model because of dU<DW<4-dU or 1,5245<1,995<2,4755.

The used testing method for ZSCORE (Risk of Financial Distress) dependent variable in Indonesia is the Durbin Watson Test (D-W Test). The provisions of the test are dU<DW<4-dU which means that the Durbin Watson

Value must be greater than the value of dU and must be smaller than the 4-dU value. The value of Durbin Watson (DW) for ZSCORE dependent variable in Indonesia is 1,850. Based on the Durbin Watson table for 36 samples with 1 variable, the dU value is1,5245. Then, it makes the 4-dU value for this research is 2,4755. The test result indicates there is no autocorrelation in this regression model because of dU<DW<4-dU or 1,5245<1,850<2,4755.

MV (Firm Value) and ZSCORE (Risk of Financial Distress) dependent variable in Malaysia used Durbin Watson Test and get the value of Durbin Watson (DW) of both dependent variable are 1,664 and 1,621. Based on the Durbin Watson table for 30 samples with 1 variable, the dU is 1,4894. Then, it makes the 4-dU value for this research is 2,5106. For the MV (Firm Value), the test result indicates that there is no autocorrelation in regression model because of dU<DW<4-dU or 1,4894<1,664<2,5106. The test result ZSCORE (Risk of Financial Distress) also indicates that there is no autocorrelation in this regression model because of dU<DW<4-dU or 1,4894<1,621<2,5106.

For the MV (Firm Value) dependent variable in Phillippines used Runs Test. The requirement of this testing method is the value of Asymp. Sig. (2-tailed) should be greater than the alpha value (0,05). From the test result shows that Asymp. Sig. (2-tailed) of MV is 0,118 which means greater than the alpha value (0,05). Thus, it can be concluded that there is no autocorrelation in this regression model.

The used testing method for ZSCORE (Risk of Financial Distress) dependent variable in Phillippines is the Durbin Watson Test (D-W Test). Based on

the Durbin Watson table for 27 samples with 1 variable, the dU value is 1,4688. Then, it makes the 4-dU value for this research is 2,5312. The test result indicates there is no autocorrelation in this regression model because of dU<DW<4-dU or 1,4688<1,808<2,5312.

For the MV (Firm Value) dependent variable in Thailand used Runs Test. The requirement of this testing method is the value of Asymp. Sig. (2-tailed) should be greater than the alpha value (0,05). From the test result shows that Asymp. Sig. (2-tailed) of MV is 0,193 which means greater than the alpha value (0,05). Thus, it can be concluded that there is no autocorrelation in this regression model.

The ZSCORE (Risk of Financial Distress) dependent variable in Thailand used Durbin Watson Test (D-W Test). Based on the Durbin Watson table for 30 samples with 1 variable, the dU value is 1,4894. Then, it makes the 4-dU value for this research is 2,5106. The test result indicates that there is no autocorrelation in this regression model because of dU<DW<4-dU or 1,4894<2,077<2,5106.

Table 3
Heteroscedasticity Test Result
Firm Value and Risk of Financial Distress Dependent Variable
Indonesia, Malaysia, Phillippines, and Thailand

Model	Method	Result
MV – Indonesia	Spearman Test	Sig. (2-tailed) = ,057
ZSCORE – Indonesia	Glejser Test	,896
MV – Malaysia	Glejser Test	,264
ZSCORE – Malaysia	White Test	R square = ,415
MV – Philippines	Spearman's rho Test	Sig. (2-tailed) = ,066
ZSCORE – Philippines	Glejser Test	,243
MV – Thailand	Park Test	,114
ZSCORE – Thailand	Park Test	,114

Source: SPSS' Output

Table 3 shows the result of heteroscedasticity test for MV (Firm Value) dependent variable in Indonesia. The heteroscedasticity test is using Spearman rho which the provision is the sig. (2-tailed) should more than alpha (0,05). From the table can be seen that sig. (2-tailed) shows the amount of 0,057 which is greater than the alpha value (0,05). From the result, it can be concluded that there is no heteroscedasticity in this regression.

The heteroscedasticity test for ZSCORE (Risk of Financial Distress) dependent variable in Indonesia is using Glejser Test with the provision significance value should be more than alpha (0,05). The significance value of VAIC shows 0,896 which is greater than alpha (0,05). Thus, it can be concluded that there is no heteroscedasticity found in this regression.

Then Glejser Test is also used to test the heteroscedasticity of MV (Firm Value) dependent variable in Malaysia. The provision of the test is the significance value should more than alpha (0,05). Based on the table, the significance value of VAIC shows 0,264 which is greater than the alpha value (0,05). From the test result, it can be concluded that there is no heteroscedasticity found in this regression. For the ZSCORE, the test is using White Test with the provision the value of Rsquare\*N > the probability value (chi-square). The result shows value of R square is 0,415 which is R square\*N = 0,415\*30 = 12,45. The probability value of the data is 5,991465 which is lower than 12,45. Therefore, it can be concluded that there is no heteroscedasticity found in the data.

The result of heteroscedasticity test for MV (Firm Value) dependent variable in Phillippines. The heteroscedasticity test is using Spearman rho which the provision is the sig. (2-tailed) should be more than alpha (0,05). From the table can be seen that sig. (2-tailed) shows the amount of 0,066 which is greater than the alpha value (0,05). From the result, it can be concluded that there is no heteroscedasticity in this regression.

The heteroscedasticity test for ZSCORE (Risk of Financial Distress) dependent variable in Phillippines is using Glejser Test. The provision of the test is the significance value should be more than alpha (0,05). From the table, it shows that the significance value of VAIC shows 0,243 which is greater than alpha (0,05). Thus, it can be concluded that there is no heteroscedasticity found in this regression.

For MV (Firm Value) and ZSCORE (Risk of Financial Distress), the dependent variable in Thailand used Park Test which the requirement is the significance should be more than alpha (0,05). The park test was used by squaring the residual values then transformed into natural logarithm which was then regression. From the table, it can be seen that the significance value of MV (Firm Value) and ZSCORE (Risk of Financial Distress) are 0,144 and 0,144. Thus, from the result, it can be concluded that there is no heteroscedasticity in this regression.

Table 4
Multicollinearity Test Result
Firm Value and Risk of Financial Distress Dependent Variable
Indonesia, Malaysia, Phillippines, and Thailand

Model	VIF	Tolerance
MV - Indonesia	1,000	1,000
ZSCORE - Indonesia	1,000	1,000
MV - Malaysia	1,000	1,000
ZSCORE - Malaysia	1,000	1,000
MV - Philippines	1,000	1,000
ZSCORE - Philippines	1,000	1,000
MV - Thailand	1,000	1,000
ZSCORE - Thailand	1,000	1,000

Source: SPSS' Output

From the Table 4, the result shows that all the variable MV (Firm Value) and ZSCORE (Risk of Financial Distress) dependent variable in Indonesia, Malaysia, Philippines, and Thailand have VIF in the amount of 1,000 which is lower than 10 and the tolerance value is 1,000 which is higher than 0,1. Thus, it can be concluded that in the regression model there is no multicollinearity found.

# a) First Hypothesis

Table 5
T-Test Result
Firm Value Dependent Variable
Indonesia

	В	Beta	Sig.
(Constant)	697,943		
VAIC	835,430	,347	,038

Source: SPSS' Output

Table 5.above is the result of the T-Test for banking companies in Indonesia. VAIC variable has coefficient beta value 0,347 with significance 0,038 < alpha (0,05). The significance of the variable is lesser than the alpha

value and beta value have a positive direction. Thus, it can be concluded that hypotheses  $H_{1a}$  is accepted.

$$MV = 697,943 + 0,347 VAIC$$

Table 6 T Test Result Firm Value Dependent Variable Malaysia

	В	Beta	Sig.
(Constant)	42,740		
VAIC	-,484	-,116	,542

Source: SPSS' Output

Table 6 above is the result of the T-Test for banking companies in Malaysia. The table shows that VAIC variable has coefficient beta value - 0.116 with significance 0.542 alpha (0.05). The significance of the variable is higher than the alpha value. Thus, it can be concluded that hypotheses  $\mathbf{H_{1b}}$  is rejected.

$$MV = 42,740 - 0,116 VAIC$$

Table 7 T Test Result Firm Value Dependent Variable

**Philippines** 

	В	Beta	Sig.
(Constant)	176,510		
VAIC	-,268	-,171	,394

Source: SPSS' Output

Table 7 above is the result of the T-Test for banking companies in Phillippines. VAIC variable has coefficient beta value -0,171 with

significance 0,394> alpha (0,05). The significance of the variable is higher than the alpha value. Thus, it can be concluded that hypotheses  $\mathbf{H}_{1c}$  is rejected.

$$MV = 176,510 - 0,171 VAIC$$

Table 8 T Test Result Firm Value Dependent Variable

## **Thailand**

	В	Beta	Sig.
(Constant)	142,089		
VAIC	-31,292	-,882	,000

Source: SPSS' Output

Table 8 above is the result of the T-Test for banking companies in Thailand. VAIC variable has coefficient beta value -0,882 with significance 0,000< alpha (0,05). Even though significance is lower than alpha, beta value has a negative direction. Thus, it can be concluded that hypotheses  $\mathbf{H}_{1d}$  is rejected.

$$MV = 142,089 - 0,882 VAIC$$

# b) Second Hypothesis

Table 9
T-Test Result
Risk of Financial Distress Dependent Variable

### Indonesia

	В	Beta	Sig.
(Constant)	6,766		
VAIC	-,176	-,222	,194

Source: SPSS' Output

Table 9 above is the result of the T-Test with the risk of financial distress as the dependent variable for banking companies in Indonesia. VAIC variable has coefficient beta value -0,222 with significance 0,194> alpha (0,05). The significance value is higher than alpha. Thus, it can be concluded that hypotheses  $\mathbf{H}_{2a}$  is rejected.

**ZSCORE** = 
$$6,766 - 0,222$$
 *VAIC*

Table 10 T Test Result Risk of Financial Distress Dependent Variable Malaysia

	В	Beta	Sig.
(Constant)	3,098		
VAIC	1,302	,899	,000

Source: SPSS' Output

Table 4.19 above is the result of the T-Test with the risk of financial distress as the dependent variable for banking companies in Malaysia. VAIC variable has coefficient beta value 0.899 with significance 0,000< alpha (0,05). The significance value. It means that hypotheses **H**<sub>2b</sub> is rejected.

$$ZSCORE = 3,089 + 0,899 \ VAIC$$

Table 11 T Test Result Risk of Financial Distress Dependent Variable Philippines

	В	Beta	Sig.
(Constant)	12,774		
VAIC	,010	,250	,208

Source: SPSS' Output

The table above is the result of the T-Test with the risk of financial distress as the dependent variable for banking companies in Phillippines. The coefficient beta value of VAIC is 0,250 and significance 0,208> alpha (0,05). The significance value is higher than alpha. It means that hypotheses  $\mathbf{H}_{2c}$  is rejected.

 $ZSCORE = 12,774 + 0,250 \ VAIC$ 

Table 12 T-Test Result Risk of Financial Distress Dependent Variable Thailand

	В	Beta	Sig.
(Constant)	24,461		
VAIC	-4,699	-,827	,000

Source: SPSS' Output

The result of the T-Test with the risk of financial distress as the dependent variable for banking companies in Thailand is showed by Table 12 above. VAIC variable has coefficient beta value -0.827 with significance 0,000< alpha (0,05). The significance value is lower than alpha. It means that hypotheses  $\mathbf{H}_{2d}$  is accepted.

$$ZSCORE = 24,461 - 0,827 VAIC$$

## **Discussion**

First hypothesis (H1) is Intellectual Capital positively influences Firm Value in Indonesia, Malaysia, Philippines, and Thailand. The results of this research show that the effect of intellectual capital toward firm value is different in Indonesia, Malaysia, Philippines, and Thailand.

Based on the test results, the relation of intellectual capital has a positive effect on firm value in Indonesia. When the Intellectual Capital is high, it can lead the high of firm value. It means the company has the ability to use the intellectual capital properly. Thus, the hypothesis (**H**<sub>1a</sub>) is accepted. This result is in line with the research conducted by Nikmah and Irsyahma (2016). They found that intellectual capital has a positive influence toward firm value in a company. Based on the result, it is also in line with the Resources-Based Theory that stated better human resource which is apart of Intellectual Capital will lead to higher company's productivity. Then, it will increase the firm value of the company. The management of Intellectual Capital plays a role in increasing the value of the company so that the company can continue to grow and increase the company's added value to compete.

Different from the result of Malaysia and Phillippines that shows intellectual capital does not significantly influence firm value. Firm Value of the company cannot directly be influenced by Intellectual Capital. It means that the company does not have the ability to use the intellectual capital properly. The results of the research in contrast with the hypothesis ( $\mathbf{H_{1b}}$ ) and ( $\mathbf{H_{1c}}$ ) stated that intellectual capital positively influences firm value in Malaysia and Phillippines. Thus, the result makes ( $\mathbf{H_{1b}}$ ) and ( $\mathbf{H_{1c}}$ ) rejected.

This result is in line with the research conducted by Khasanah (2016) that states intellectual capital owned by a company may not affect in creating fine points in stakeholder's point of view. While Iranmahd et.al (2014) found that intellectual capital does not affect firm value because the company may not be very flexible

adapt to the changes in the economic condition where Intellectual Capital is in. This is also consistent with the previous research that was done by Sunarsih and Mendra (2012), Khanqah et. al. (2012), and Suhendra (2015).

For Thailand, the result shows that Intellectual has a negative effect on firm value. Investors allegedly did not respond to information about intellectual capital because investors believed that the value of the company was influenced by factors outside of intellectual capital. Meanwhile, the company management considers that it does not really consider the importance of Intellectual Capital in increasing the value of the company. The management of the company views investment more physically than intellectual capital investment because the management of the company considers intellectual capital as an investment that is abstract, management does not want to bear the risk due to the large investment in intellectual capital (Lestari, 2017). Thus, makes (**H**<sub>1d</sub>) **rejected**.

Second hypothesis (H2) is Intellectual Capital positively influences the Risk of Financial Distress in Indonesia, Malaysia, Philippines. The results of this research show that the effect of intellectual capital towards risk of financial distress is different in Indonesia, Malaysia, Philippines, and Thailand.

## a.) Intellectual Capital and Risk of Financial Distress in Indonesia

According to the hypothesis testing, the hypothesis ( $H_{2a}$ ) is rejected. It means that Intellectual Capital has no influence on the risk of financial distress of companies in Indonesia. Intellectual capital cannot directly influence the risk of financial distress of a company. The high number of

Intellectual Capital does not mean that bank far from the risk of financial distress. This condition can happen because Intellectual Capital is not the only factor which affects the risk of financial distress. The other factor such as tangible asset may have an effect on the risk of financial distress of the company.

The result of this research is in line with the research that were done by Maditonos et. al. (2011) and Mehralian et. al. (2012) that presents various findings showing that financial performance is not affected by intellectual capital so that it cannot predict the condition of the company in the future. There are indications that the use of physical and financial assets still dominate in contribute to the financial performance of the company.

## b.) Intellectual Capital and Risk of Financial Distress in Malaysia

According to the hypothesis testing, the result shows that Intellectual Capital positively influences risk of financial distress banking companies in Malaysia where the higher value of intellectual capital leads to the high risk of financial distress. This indicates that the use of intangible assets in banking companies in Malaysia has not been used effectively and efficiently so as to give influence on company performance which can predict the condition of companies in the future to be at high risk of financial distress. Thus, hypothesis (H<sub>2b</sub>) is rejected. The result of this research is in line with the research conducted by Andriana (2014).

The result of this research is in contrast with the research that conducted by Ardalan and Askarian (2014) that found the increase of intellectual capital lead to a lower risk of financial distress.

## c.) Intellectual Capital and Risk of Financial Distress in Phillippines

According to the hypothesis testing, the hypothesis ( $\mathbf{H}_{2c}$ ) is rejected. It means that Intellectual Capital has no influence on the risk of financial distress of companies in Phillippines. Intellectual capital cannot directly influence the risk of financial distress of a company. The high number of Intellectual Capital does not mean that bank far from the risk of financial distress. This condition can happen because Intellectual Capital is not the only factor which affects the risk of financial distress. The other factor such as tangible asset may have an effect on the risk of financial distress of the company.

The result of this research is in line with the research that were done by Maditonos et. al. (2011) and Mehralian et. al. (2012) that presents various findings showing that financial performance is not affected by intellectual capital so that it cannot predict the condition of the company in the future. There are indications that the use of physical and financial assets still dominate in contribute to the financial performance of the company.

# d.) Intellectual Capital and Risk of Financial Distress in Thailand

According to the hypothesis testing, the result shows that Intellectual Capital negatively influences the risk of financial distress banking companies

in Thailand. The higher the value of the Intellectual Capital variable, the bank is further away from the risk of financial distress. Therefore, it can be concluded, the higher the value of Intellectual Capital, the less likely the bank will experience bankruptcy. Intellectual Capital owned by the company is able to keep the company away from the condition of Financial Distress. It is the evidence if the development of a company is not only influenced by tangible capital owned by the company but also greatly influenced by the intangible capacity such as system, management, management, enthusiasm, and other intellectual capital. Thus, hypothesis  $(\mathbf{H}_{2d})$  is accepted.

The result is in line with the research conducted with Ardalan and Askarian (2014), Pour et al (2014), Ulum (2008), and Belkaoli (2003). They found that the higher the Intellectual Capital value, the less likely the bank will experience bankruptcy.

## CONCLUSION AND SUGGESTIONS

This research is investigating the effect of intellectual capital on financial performance and firm value. The samples used are banking companies in Indonesia, Malaysia, Philippines, and Thailand from 2015 until 2017. Independent variable in this research is intellectual capital that is measured with VAIC (Value Added Intellectual Capital). The dependent variable are the firm value that is measured by Market to Book (M/B) and the risk of financial distress that is measured with the Z-Score Index. The result of the research shows that Intellectual Capital positively influences firm value in banking companies in Indonesia and negatively influences on risk of financial distress banking companies in Thailand.

Based on the results of this study there are several suggestions that can be given for similar research in the future such as add up the other variables that are thought to have an influence on firm value and risk of financial distress, add up the control variable such as profitability and leverage to measure the influence on firm value and risk of financial distress, and add up the number of samples to be broader by adding the period of the study year and the company sector like all companies listed on the stock exchange in several other ASEAN Countries through comparative study.

### REFERENCES

- Aida, R. N., & Rahmawati, E. (2015). Pengaruh Modal Intelektual dan Pengungkapannya Terhadap Nilai Perusahaan: Efek Intervening Kinerja Perusahaan. *Jurnal Akuntansi dan Investasi*, 16(2), 96-109.
- Altman, Edward I. (1968): Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy. In: The Journal of Finance, 22(4), 589-609.
- Andriana, Denny. (2014). Pengaruh Intellectual Capital Terhadap Kinerja Keuangan Perusahaan. Jurnal Riset Akuntansi dan Keuangan, 2(1), 2014, 251-260.
- Bontis, N., W. C. C. Keow., S. Richardson. 2000. Metodologi Penelitian. Jakarta: Rineka Cipta.
- Chen, M.C., S. J. Cheng, and Y. Hwang. (2005). Intellectual Capital and Its Effect on Financial Performance of Banks: Evidence from Saudi Arabia. *International Conference on Accounting Studies* 2014, ICAS 2014. 18 19 August 2014. Kuala Lumpur, Malaysia.
- Fitri, H. (2014). Corporate Governance, Charter Value, Tipe Kepemilikan, Dan Pengambilan Risiko Perbankan Di Indonesia. *Jurnal Siasat Bisnis*, 18(1), 81-99.
- Ghozali, Imam. (2011). *Aplikasi Analisis Multivariate Dengan Program SPSS*. Semarang: Badan Penerbit Universitas Diponegoro.
- Guthrie, J., & Petty, R. (2000). Intellectual capital: Australian annual reporting practices. *Journal of intellectual capital*, *1*(3), 241-251.
- Harahap, S.S. (2009). Analisis Kritis Atas Laporan Keuangan. Jakarta : Rajagrafindo: Persada.

- Iranmahd, Mohsen et al. (2014). The Effect of Intellectual Capital on Cost of Finance and Firm Value. International Journal of Academic Research in Accounting, Finance and Management Sciences, Vol. 4, No.2, April 2014, pp. 1-8.
- Kasmir. (2009). Analisis Laporan Keuangan. Jakarta: Grafindo.
- Khanqah, V. V. Taghizadeh., M. Khosroshahi and E. Ghanavati. (2012). An Empirical Investigation of the Impact of Intellectual Capital on Firms' Market' Value and Financial Performance: Evidence from Iranian Companies. International Journal of Management and Business Research, 2 (1), 1-12, Winter 2012.
- Khasanah, Putri D. A. N. (2016). Analisis Pengaruh Intellectual Capital terhadap Kinerja Keuangan dan Nilai Pasar dengan Struktur Kepemilikan Institusional sebagai Variabel Moderasi (Studi pada Perusahaan Perbankan yang terdaftar di BEI Tahun 2012-2015). Skripsi. Universitas Muhammadiyah Yoguakarta, Yogyakarta.
- Laeven, L., & Levine, R. (2009). Bank governance, regulation and risk taking. *Journal of financial economics*, 93(2), 259-275.
- Lapteacru, I. (2016). On the consistency of the Z-score to measure the bank risk.
- Lestari, L., & Munandar, A. (2017). Pengaruh Intellectual Capital & Kepemilikan Institusional Terhadap Nilai Perusahaan. *Jurnal Dinamika Ekonomi & Bisnis*, 14(1).
- Li, X., Tripe, D. W., & Malone, C. B. (2017). Measuring bank risk: An exploration of z-score.
- Maditinos, D., Chatzoudes, D., Tsairidis, C., & Theriou, G. (2011). The Impact of Intellectual Capital on Firms' Market Value and Financial Performance. Journal of Intellectual Capital, 12(1), 132-151.
- Mehralian G., Rajabzadeh, A., Sadeh M. R., Rasekh, H. R. (2012). Intellectual Capital and Corporate Performance in Iranian Pharmaceutical Industry. *Journal of Intellectual Capital*, 13(1), 138-158.
- Munawir, S. (2002). Analisis Informasi Keuangan. *Yogyakarta: Liberty Yogyakarta*.
- Nazzarudin, I., and A. T. Basuki (2017). Analisis Statistik Dengan SPSS. Yogyakarta: Danisa Media.
- Nikmah and Aida Irsyahma. (2016). Intellectual Capital, Firm Value, and Financial Performance. Malaysia Indonesia International Conference on Economic Management and Accounting (MIICEMA). Jambi, 24-25.
- Ordonez de Pablos, P. (2002). Knowledge management and organizational learning: typologies of knowledge strategies in the Spanish manufacturing

- industry from 1995 to 1999. *Journal of Knowledge Management*, 6(1), 52-62.
- Pathan, S. (2009). Strong boards, CEO power and bank risk-taking. *Journal of Banking & Finance*, 33(7), 1340-1350.
- Pulic, A. (2000). VAIC<sup>TM</sup>—an accounting tool for IC management. *International journal of technology management*, 20(5-8), 702-714.
- Pulic, A. 1998. "Measuring the performance of intellectual potential in knowledge economy." Paper presented at the 2<sup>nd</sup> McMaster Word Congress on Measuring and Managing Intellectual Capital by the Austrian Team for Intellectual Potential.
- Solikhah, Badingatus. (2010). Pengaruh Intellectual Capital terhadap Kinerja Keuangan Perusahaan, Pertumbuhan dan Nilai Pasar pada Perusahaan yang Tercatat di Bursa Efek Indonesia. Tesis. Universitas Diponegoro, Semarang.
- Suhendra, Eupharasia Susy. (2015) The Influence of Intellectual Capital on Firm Value towards Manufacturing Performance in Indonesia. *International Conference on Eurasian Economies 2015*.
- Sunarsih, Ni Made., and N. Mendra. (2012). Pengaruh Modal Intelektual terhadap Nilai Perusahaan Dengan Kinerja Keuangan sebagai Variabel Intervening pada Perusahaan yang Terdaftar di Bursa Efek Indonesia. Simposium Nasional Akuntansi XV. Banjarmasin: 20 23 September.
- Ulum, Ihyahul. (2009). Intellectual Capital: Konsep dan Kajian Empiris.
- World Economic Forum. 2015. Human Capita Outlook Association of Southeast Asian Nations. Malaysia.

www.idx.co.id (Accessed on October 15<sup>th</sup>, 2018)

www.bursamalaysia.com (Accessed on October 27<sup>th</sup>,2018)

www.pse.com.ph (Accessed on November 2<sup>nd</sup>, 2018)

www.set.or.th (Accessed on November 10<sup>th</sup>, 2018)

https://finance.yahoo.com (Accessed on November 7th, 2018)

www.bi.go.id (Accessed on July 13th, 2018)