THE EFFECT OF INTELLECTUAL CAPITAL TOWARDS FINANCIAL PERFORMANCE AND FIRM VALUE IN BANKING INDUSTRY

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Abstract: This study aimed to analyze the influence of intellectual capital towards financial performance and firm value in Indonesia and Malaysia. The subject of this research was 44 banking companies listed in Indonesia Stock Exchange (BEI) and 32 banking companies listed in Bursa Malaysia (BM) from 2013-2016. The sampling method used in this research is purposive sampling. The data obtained from the annual reports in Indonesia Stock Exchange and Bursa Malaysia. The data analysis used the descriptive statistics test, classical assumption test, and test of hypotheses. The result showed that; intellectual capital positively influences the financial performance in Indonesian and Malaysian banking companies, intellectual capital did not influence firm value in banking companies, and there was a difference financial performance and firm value of banking companies in Indonesia and Malaysia.

Keywords: Intellectual Capital, Financial Performance, and Firm Value

INTRODUCTION

Intangible asset is one of the factors which has significant effect in developing the business sector nowadays. Radianto (2011) explains that a company and its competitive advantages are evaluated by the investors with intangible assets as the guidance. Another form of intangible asset that is human capital is playing a relevant lead in several countries. Human capital is a substantial aspect since it affects the increase of Human Development Index (HDI) in the countries all over the world. It is a commixture index which measures the country's achievement in the three essential aspects of human development especially life expectancy, education and income. HDI shows that income is not the only key to achieve better human development, but also health

and education. It underlines the importance of human capital which is a part of intangible assets.

The country starts to realize that human capital or intangible assets are very important to increase the country's development. In practical, the realization is done with investing in the human capital. The higher national input in human capital (life expectancy and education) will make a direct result on the increase of workers earnings (GNI). If the individuals are supported in acquiring education, it will increase the individuals' productivity as a result of the skill and knowledge obtained. Companies in the world start to compete in increasing their intangible assets. It has very important lead in obtaining profit and turnover for organizations.

One of the approaches used in assessing and measuring intangible assets is Intellectual Capital (IC). IC has a great role in determining company's value and performance level. The good management of IC is suggested as a strategy that make the company's future brighter. This convince the crucial role of IC. Moreover, according to Khasanah (2016) company nowadays must change its business strategy to knowledge-based business. The knowledge-based company has ingenious and proficient employee to develop its product quality. Company that applies the knowledge-based business will experience changes in its firm value. Besides, knowlegde-based business strategy increases the intangible assets. Higher intangible assets will make the company realize the importance of intellectual capital. High intellectual capital leads to better performance. With the advantage, company is expected to increase its firm value and to increase the investment in the company. The research about IC has been done before by Chen et al (2005), Sunarsih and Mendra (2012), Khasanah (2016), and Nikmah and Irsyahma (2016).

This research is comparing 2 countries which are related to the HDI, Summary Economy in 2013 and the banking industry condition in both countries. From the HDI point of view, Malaysia is classified to high human development country. On the other hand, Indonesia is classified as medium human

development country. But, Indonesia's real GDP growth rate on 2013 was 5.8%. It was higher than Malaysia's 4.7%. Then, Indonesian banking companies possessed the highest average net interest margin globally (Rimbo et al, 2015). While Malaysian banking companies, are collaborating with the FinTech companies to increase the innovation. These include the creation of accelerator programs to improve access to financial products and better support customer relationships.

METHOD

Object used in this research are banking companies listed in Indonesia Stock Exchange (IDX) and Bursa Malaysia (BM) in 2013-2016. Banking sector is one of the most active companies which utilizes intellectual capital. Banking sector companies also apply the knowledge-based system in order to increase company's value. The sample used is all banking companies with intellectual intensive, a company which gives good service to the customer with their knowledge, skill, and human resource ability intellectually. Sampling technique used in this research is purposive sampling with 44 sample companies in Indonesia and 32 sample companies in Malaysia.

Independent variable used in this research is Intellectual Capital (IC) that is measured using Value Added Intellectual Coefficient (VAIC) model. Based on the developed Value Added in IC, it consists of three components: Value Added Human Capital (VAHU) which shows how much cost disbursed for labor investment in creating value for the company, Value Added Capital Employee (VACA) which shows the contribution of everyone in the unit Capital Employed towards organization value added, and Structural Capital Value Added (STVA) which is measuring the company' success in creates value for the company.

There are two dependent variables. The first one is Financial Performance and Firm Value. Financial Perfromance is measured by Return on Assets (ROA). While Firm Value, is measured by Market to Book Value (M/B).

This research is using secondary data. Secondary data is obtained and collected from the existing resources. The secondary data in this research is financial statements of banking companies listed in Indonesia Stock Exchange (IDX) and Bursa Malaysia (BM). Regression model used in this research is:

PER : $\alpha + \beta_1 VAIC + \varepsilon$ ……. (1)

MV : $\alpha + \beta_1 VAIC + \varepsilon$…….. (2)

Explanation: PER is Financial Performance (ROA), MV is Firm Value (M/B), VAIC is Intellectual Capital, and E is error.

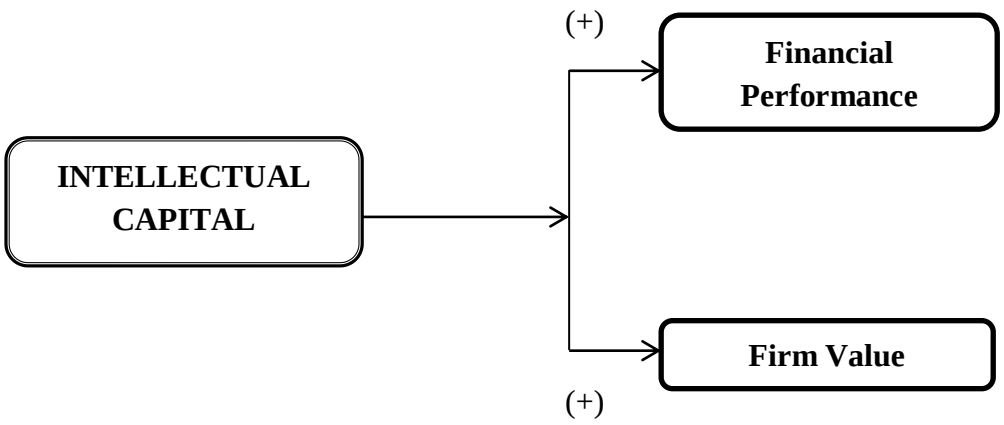

Figure 2.1 Model Indonesia and Malaysia

RESULT AND ANALYSIS

Hypotheses in this research are:

H_{1a}: Intellectual Capital positively influences Financial Performance in Indonesia.

H_{1b}: Intellectual Capital positively influences Financial Performance in Malaysia.

H_{2a}: Intellectual Capital positively influences Firm Value in Indonesia.

H_{2b}: Intellectual Capital positively influences Firm Value in Malaysia.

H_3: There is a difference of banking companies' financial performance in Indonesia and Malaysia.

H_4: There is a difference of banking companies' firm value in Indonesia and Malaysia.

Table 3.1
Descriptive Statistics
Indonesia

	N	Minimum	Maximum	Mean	Std. Deviation
VAIC	44	,35	4,07	2,0389	,82361
PER	44	,02	,34	,1060	,05066
MV	44	,77	8,11	3,4976	1,76665
Valid N (listwise)	44				

Table 3.1 shows that there are 44 companies used as sample in Indonesia. VAIC as the measurement of Intellectual Capital has minimum value 0,35 and its maximum value 4,07. The average of the variable is 2,0389 while its standard deviation is 0,82361. PER variable that is obtained from ROA has the minimum value 0,02 while its maximum value is 0,34. The mean or the average of PER variable is 0,1060 and the standard deviation is 0,05066. MV variable that uses the M/B measurement on market value has minimum value 0,77 with the maximum reaches 8,11. The average of this variable is 3,4976 and the standard deviation is 1,76665.

Table 3.2
Descriptive Statistics
Malaysia

	N	Minimum	Maximum	Mean	Std. Deviation
VAIC	32	1,24260	86,67730	11,02385	17,32960
PER	32	-,00087	,07286	,0225551	,01521493
MV	32	1,15891	66,56410	28,60035	16,58790
Valid N (listwise)	32				

Table 3.2 shows that the sample in Malaysia consists of 32 companies. The gauge of Intellectual Capital –VAIC has the minimum value 1,24260 and the maximum value is 86,67730. The average of the variable is 11,02385 with standard deviation 17,32960. For the PER variable which is measured with the

ROA, it has minimum value -0,00087 while the maximum value is 0,07286. For the average, PER variable has 0,0225551 and the standard deviation is 0,01521493. For the MV variable that is measured by M/B on market value, it has 1,15891 in minimum and 66,56410 in maximum value. The mean of MV variable is 28,60035 and the standard deviation is 16,58790.

Table 3.3
Normality Test

Variables	Asymp. Sig. (2-tailed)
PER – Indonesia	,169
MV – Indonesia	,958
PER – Malaysia	,062
MV – Malaysia	,558

The test of Indonesian PER variable has *Asymp. Sig.* (2-tailed) that reached 0,169. For MV (Firm Value) dependent variable in Indonesia, the result shows that the *Asymp. Sig.* (2-tailed) for this variable is 0,958. Meanwhile, the result of normality test for PER (Financial Performance) dependent variable in Malaysia, the *Asymp. Sig.* (2-tailed) has 0,062 in value. Then, the result of MV (Firm Value) dependent variable in Malaysia has 0,558 for *Asymp. Sig.* (2-tailed) value. All of the value is greater than alpha value (0,05). Based on the test, it can be concluded that the regression models fulfill the normality assumption.

Table 3.4
Autocorrelation Test

Variables	Durbin Watson
PER – Indonesia	2,048
MV – Indonesia	2,145
PER – Malaysia	1,958
MV – Malaysia	2,318

PER (Financial Performance) dependent variable in Indonesia, has 2,048 as its Durbin Watson (DW) value. The MV (Firm Value) dependent variable in Indonesia' Durbin Watson is 2,145. Based on Durbin Watson table for 44 samples with 1 variable, the du value is 1,562. Then, it makes the 4-du value for this

research is 2,438. The test result reveals that there is no autocorrelation in this regression model because du < dw < 4-du or 1,562 < 2,145 < 2,438.

For the PER (Financial Performance) dependent variable in Malaysia, the value for Durbin Watson (DW) is 1,958. Then, the MV (Firm Value) dependent variable in Malaysia has 2,318 for its Durbin Watson (DW) value. Based on Durbin Watson table for 32 samples with 1 variable, the du value is 1,502. Then, it makes the 4-du value for this research 2,498. The test result shows there is no autocorrelation in this regression model because du < dw < 4-du or 1,502 < 2,318 < 2,498.

Table 3.5
Heteroskedastisity Test

Variables	Sig.
PER – Indonesia	1,000
MV – Indonesia	1,000
PER – Malaysia	,816
MV – Malaysia	,510

The significance value of PER variable in Indonesia shows 1,000. The significance value of MV variable in Indonesia is 1,000. For PER dependent variable in Malaysia, the significance value is 0,816. Meanwhile, the MV dependent variable in Malaysia has significance value of 0,510 which is greater than the alpha value (0,05). From the result, it can be concluded that there is no heteroskedastisity found in this regression.

Table 3.6
Multicolinearity Test

Variables	VIF	Tolerance
PER – Indonesia	1,000	1,000
MV – Indonesia	1,000	1,000
PER – Malaysia	1,000	1,000
MV – Malaysia	1,000	1,000

Table 3.6 shows the result of multicolinearity test for PER (Financial Performance) and MV (Firm Value) dependent variable in Indonesia and Malaysia. This test reveals that each variable's tolerance and VIF value for VAIC

is 1,000 > 0,10 for tolerance and 1,000 < 10. From this result it can be concluded that there is no multicolinearity found in the regression.

Table 3.7
T Test Result
First Hypotheses

	B	Beta	Sig.
(Constant)	,062		
PER - INA	,022	,353	,019
(Constant)	,015		
PER - MY	,001	,749	,000

Table 3.7 is the result of T Test for Financial Performance in banking companies in Indonesia and Malaysia. VAIC – INA variable has coefficient beta value 0,353 with significance 0,019 < alpha (0,05). The significance of the variable is lesser than alpha value. Thus, it can be concluded that hypothesis **($H_{1a)}$ is accepted**. VAIC - MY variable has coefficient beta value 0,749 with significance 0,000 < alpha (0,05). The significance of the variable is lesser than alpha value. Thus, it can be concluded that hypothesis **($H_{1b)}$ is accepted**. The result shows that Intellectual Capital positively influences Financial Performance in Indonesia and Malaysia.

$$\text{PER - INA} = 0{,}062 + 0{,}353 \text{ VAIC}$$

$$\text{PER - MY} = 0{,}015 + 0{,}749 \text{ VAIC}$$

The result of this research shows that intellectual capital significantly influenced financial performance. It can be concluded that the higher intellectual capital is, the higher the financial performance is. It also synchronizes with intellectual capital theory which states that intellectual capital will offer a robust contribution towards the stakeholder theory which emphasizes accounting profit. This result is consistent with the research undertaken by Chen (2005), Ulum (2009), Sholikhah et al (2010), Sunarsih and Mendra (2012), Al Musali and Ismail (2014), Kamath (2015), Nikmah and Irsyahma (2016) and Kamal et al (2016).

Table 3.8
T Test Result
Second Hypotheses

	B	Beta	Sig.
(Constant)	4,520		
MV - INA	-,502	-,234	,127
(Constant)	28,813		
MV - MY	-,019	-,020	,913

Table 3.8 is the result of T Test for Firm Value in banking companies in Indonesia and Malaysia. VAIC - INA variable has coefficient beta value -0,234 with significance 0,127 > alpha (0,05). The significance of the variable is greater than alpha value. Thus, it can be concluded that hypothesis **($H_{2a)}$ is rejected.** VAIC - MY variable has coefficient beta value -0,020 with significance 0,913 > alpha (0,05). The significance of the variable is greater than alpha value. Thus, it can be concluded that hypothesis **($H_{2b)}$ is rejected**. The result shows that Intellectual Capital doesn't significantly influence Firm Value in Indonesia and Malaysia.

MV - INA = 4,520 – 0,234 VAIC

MV - MY = 28,813 – 0,020 VAIC

Iranmahd et. al. (2014) states that intellectual capital does not affect firm value because company may not be very flexible to adapt to the changes in economy condition where IC is in. While Khasanah (2016) opines that intellectual capital owned by a company may not affect in creating fine points in stakeholder's point of view. This result is consistent with the research that has been done before by Sunarsih and Mendra (2012), Khanqah et. al. (2012), Suhendra (2015) and Khasanah (2016). But it is not consistent with the research undertaken by Nikmah and Irsyahma (2016).

Table 3.9
Independent Sample T Test Result
Third Hypothesis

Equal Variances Assumed	F	Sig.	Sig. (2-tailed)	Mean	
PER	9,301	,003	,000	**Indonesia**	,1060
				Malaysia	,0226

From Table 3.9, the result of F value in Levene's test for equality of variance is 9,301 with significance value 0,000. Because of the significance value 0,000 < alpha (0,05), it can be concluded that Indonesia and Malaysia do not have the same financial performance value. The table presents the mean of PER (Financial Performance) variable for both countries. The mean for Indonesia' PER variable is 0,1060 while for Malaysia is 0,0226. Indonesian mean is greater than the one Malaysia had. The result shows that banking companies' financial performance in Indonesia is better than in Malaysia. Thus, it can be conformed that there is a different financial performance in Indonesia and Malaysia. Therefore the hypothesis **(H_3) is accepted**.

The result shows that Indonesian banking companies has better financial performance than Malaysian banking companies. It is likely caused by the high of Indonesian average net interest margin (NIM), which is the highest even in global (Rimbo et al, 2016). NIM itself is a performance metric that examines how successful a firm's investment decision compared to its debt situation. A positive value of NIM means that company makes an optimal decision because the return of investment is greater than the interest expense. The condition reflects that Indonesian banking companies tend to make an optimal decision in increasing the investment return.

Table 3.10
Independent Sample T Test Result
Fourth Hypothesis

Equal Variances Assumed	F	Sig.	Sig. (2-tailed)	Mean	
MV	77,650	,000	,000	**Indonesia**	3,4976
				Malaysia	28,6003

From Table 3.10, the result of F value in Levene's test for equality of variance is 77,650 with significance value 0,000. Because of the significance value 0,000 < alpha (0,05), it can be concluded that Indonesia and Malaysia do not have the same firm value. The mean for Indonesia' MV variable is 3,4976 while for Malaysia is 28,6003. Malaysia has much higher firm value mean than Indonesia had. The result shows that Malaysian banking companies' firm value is better than Indonesian. Thus, it can be conformed that there is a different firm value in Indonesia and Malaysia. Therefore the hypothesis **(H_4) is accepted**.

In Malaysia, banking companies collaborated with FinTech companies in order to make innovations. Banking companies in Malaysia use program accelerator to support customer relationships. They make customer easier to reach their service. This, indeed, catches stakeholder's attention because the great future is arisen already. The market value of the banking companies will increase because of the innovations they made.

CONCLUSION AND SUGGESTION

This research is investigating the effect of intellectual capital towards financial performance and firm value. The sample used is banking companies in Indonesia and Malaysia on 2013-2016. Independent variable in this research is intellectual capital that is measured with VAIC. The dependent variables are financial performance that is measured by Return on Assets (ROA) and firm value that is measured with Market to Book (M/B). The result of the research shows that Intellectual Capital positively influenced financial performance, Intellectual Capital did not influence firm value and there is a difference of banking

companies' financial performance in Indonesia and Malaysia. There is a difference of banking companies' firm value in Indonesia and Malaysia.

There are several suggestions that can be given for the researcher in the future. Next researcher can add research variable, use other sample that can be used for the researcher in the future such as manufacturing company and merchandising company, add up the research period, use other measurement for independent and/or dependent variable and use other compare sample such as Singapore, and Thailand, or the other Southeast Asia countries.

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