Islamic Banking - Value Added Intellectual Coeficient (IB-VAIC) as an Intellectual Capital Proxy Indonesian Islamic Banking

[1] Ema Pratiwi, [2] Rahmad Kadry

[1,2] UIN Sunan Kalijaga, Yogyakarta
Jln. Bimokurdno No 546 Rt 23 Rw 007 Sapen Yogyakarta
Email : rahmadagara92@gmail.com

Abstract : The main idea of this research is to make the concept of intellectual capital as the most valuable intangible assets for the company. Basically, tangible assets which is owned by the company is also controlled by humans. This study offers Islamic Banking-Value Added Intellectual Coefficient (IB-VAICTM) modified the model pulic by Ulum (2013) as a performance measurement of intellectual capital of Islamic banking in Indonesia. This study also makes Islamic banks rank in term of Best Performance Index (BPI) which is measured using IB-VAIC™. The data used are annual reports, particularly financial performance and balance sheet, obtained either through the official website of each bank as well as from BI website. This study finds that during the study period (2010-2014), the overall performance of Islamic banking in Indonesia in the category of "*good performers*" with a score of VAIC 2.57. The results also indicates that individual banks that including into the category of "top performers" are three (3) banks, "good performers" 4 (four) Bank and "common performers" 4 (four) Bank. The limitations of this study is that the data used only 11 (eleven) Commercial Bank (BUS) in Indonesia, while the overall number of banks per January 2015 was 197.

Keywords *: intellectual capital, Islamic Banking, intangible asset, Islamic Banking- Value Added Intellectual Coefficient (IB-VAIC^{TM})*

Introduction

Acceleration of the unstable global economy require Islamic banking to be more intelligent and innovative in maintaining and improving its existence. In the assessment of the Global Islamic Financial Report (GIFR) in 2011, Indonesia ranks at the level four countries which have the potential and conducive to the development of the Islamic finance industry after Iran, Malaysia and Saudi Arabia. The optimism the pace of institutional expansion and accelerated growth of Islamic banking assets are very high, Indonesia is projected to rank first in the next few years. However, various strategies improvement and development of Islamic banking needs to be done in order to improve the quality of growth and maintain continuous acceleration. These improvements should not (only) oriented on increasing tangible assets but also intangible knowledge assets or intellectual assets.

In the 1990s in fact this has been a vexed issue, which some economists have confirmed that the management and reporting systems so far has lost its relevance because it is not able to present information that is essential for executives in terms of process management based on knowledge and intangible resources (Bornemann, M. and Leitner, K.H., 2002). Many people believe that knowledge is the most valuable intangible assets in a enterprise particularly intellectual capital. Since, basically tangible assets owned by the company are also controlled by humans. But the drawback, the financial statements have not been able to provide representative information about the company's Intellectual Capital (Harahap, S.S., 2005).

In 1999 Pulic propose a measure to assess the efficiency of the value added as a result of the company's intellectual abilities (Value Added Intellectual Coefficient -VAIC ™). The main components of VAIC can be seen from the resources of the company-physical capital, human capital and structural capital. Lately measurement model VAIC ™ Pulic is getting underway in both the business and academic world practice. As empirical research by Firer and Williams examines the relationship VAIC ™ with the financial performance of public companies in South Africa (Firer, S. and Williams, S.M., 2003). Mavridis and Kamath (2007) select special respective banking sectors in Japan and India as a sample. Recently, Tan et al. (2007) using the 150 companies listed on the Singapore stock exchange as the study sample.

In Indonesia, Ihyaul Ulum in research together with experts in the field of financial accounting and public accounting pulic modify models and formulate an intellectual capital measurement that is useful to measure the performance of intellectual capital of Islamic banking were named Islamic Banking-Value Added Intellectual coeficient (IB-VAICTM). According to Ulum (2013) difference from previous models is located on the accounts that are used to develop a formula Value Added. If the value added Pulic models constructed of total revenues, in the model IB-VAIC value added activities are constructed of Shari'ah

Unfortunately, this model is still in the theoretical and there is no direct measurement on the object of Islamic banking. Therefore, based on the performance evaluation which is also has an important role for intellectual capital that can be developed by Islamic banks, the researchers are interested in measuring the extent to which performance of intellectual capital of Islamic banks in Indonesia. This study offers Islamic Banking- Value Added Intellectual Coefficient (IB-VAIC) modified the model pulic by Ulum (2013) as a measure of the performance of intellectual capital of Islamic banks in Indonesia. This study also makes Islamic banks ranked by Best Performance Index (BPI) is measured using IB-VAIC ™ (Kubo, I., and A. Saka., 2002)

Islamic banks become the ideal object in this study because (1) the data of financial statements (balance sheet, profit / loss) can be accessed at any time; (2) the business of Islamic banking sector is "intellectually intensive" and (3) overall employees in the banking sector, Islamic banks are "intellectually" more homogeneous compared to other economic sectors

Research Methods

Sample

The object of this study is the entire Islamic Banks (BUS) which operates in Indonesia from 2010 to 2014 and regularly report their financial statement to Bank Indonesia (BI). Based on BI data, the number of banks Sharia in Indonesia until December 2014 was eleven banks consisting of Maybank Islamic, Sharia Victoria, Mega Syariah, Mandiri Syariah, Mu'amallat Bank Indonesia, BCA Syariah Bukopin Syariah, Panin Syariah, Islamic BJB, BRI Sharia and BNI Syariah

Data

The data used in this research is secondary data from the financial statements of each bank, both published each bank and Bank Indonesia. Statements used in this study is an annual financial statement period in December 2010, 2011, 2012, 2013 and 2014. The financial statements were obtained through the official website of BI (www.bi.go.id) as well as the official website of each bank. This justification is confirmed by Sekaran (2003) and Cooper&Emory (1995) that the secondary data, one of which can be obtained via the internet

Methods

This study uses Islamic Banking Value Added Intellectual Coefficient (IB-VAIC) Pulic models modified by Ulum (2013) as a measure of the performance of intellectual capital of Islamic banks in Indonesia. The difference from the previous models is located on the accounts that are used to develop a formula Value Added. Value Added in Pulic models constructed from total income, while the IB-VAIC models, constructed from the activities of Shari'ah. This research will then rank the 11 Islamic Banks in Indonesia. The main idea of this research is that the concept of human or potential knowledge are responsible for the success and performance of each company. Therefore, the cost of salaries of employees is regarded as vital in the context of the calculation of the variable BPI. The analysis process is done in two stages as follows

Result and Discussion

Data from Bank Indonesia which was officially published in January 2015 showed that the Islamic banking industry has had a network of 12 Islamic Banks (BUS), 24 Sharia (UUS), and 164 SRB, with total office network reached 2,944 offices spread across almost across the archipelago. The total assets amounted to USD 270 048 trillion, Rp 202 283 trillion financing, Islamic banking and third party funds amounting to Rp 214 813 trillion. Islamic banking industry is able to demonstrate high growth accelerated to an average of 40.2%, while the average growth of the national banks amounted to only 16.7% per year. Therefore, the Islamic banking industry dubbed as 'the fastest growing industry'

Table. 1 Institutional Growth and Performance of Islamic Bank in Indonesia

Indikator	2010	2011	2012	2013	2014
BUS	11	11	11	11	12
UUS	24	24	24	23	22
BPRS	150	155	158	163	163
Jaringan Kantor	1.763	2.110	2.663	2.990	2.910
Aset (miliar Rp)	100.257	148.987	199.716	248.109	278.916
DPK (miliar Rp)	77.644	117.510	150.499	192.200	221.886
PYD (miliar Rp)	70.241	104.715	156.063	188.616	204.334

*in million Rp

While the mean income and operating expenses Islamic Bank of 2010-2014 is shown in table 2.

Table 2. Mean of Income and Expense 11 BUS

KATEGORI	2010	2011	2012	2013	2014
Revenue	478.098	693.959	898.443	1.144.990	1.199.033
Expense	391.502	561.180	683.526	792.168	963.437

*in million Rp

The above table shows that the average 11 Islamic Banks (BUS) is able to earn more than 1 times the cost incurred in 2010. The significant difference was shown in 2013, where the average income rupiah gained 1 to 0, 7 rupiah costs incurred. However, in 2014 there was an increase of 0.2 fold the cost of the year 2013, while the average revenue BUS not increased significantly with the increase in these costs.

In the midst of the development of Islamic banking industry is rapid, we need to realize there are still some challenges to be resolved in order to improve the quality of Islamic banking growth and maintain continuous acceleration. One is the Islamic banking should not be (just)

did increase in intangible assets (tangible assets) but also intangible assets (intangible assets). By using the VAIC ™ method developed by Pulic and modified by Ulum, this study provides information on value creation efficiency of intangible assets (intangible assets) / Intellectual capital is owned 11 Islamic Banks in Indonesia.

In general, three main constructs of the IC, namely: Human Capital (HC), Structural Capital (SC), and Capital Employed (CE). Simply put, HC represents the individual knowledge of Islamic banking stocks were represented by their employees (Bontis, N., Keow, W.C.C., Richardson, S. 2000). HC is a combination of genetic inheritance; education; experience, and attitude about life and business. SC covers the entire non-human storehouses of knowledge in the organization of Islamic banking. Included in this is the database, organizational charts, process manuals, strategies, routines and all the things that make the value of the company is greater than the value of the material. While the main theme of CE is the knowledge inherent in the marketing channels and customer relationship where an organization develop through the course of business (Pulic, A. 2000).

**Table 3 Mean of HC, CE and VA 11 BUS 2010-2014**
(in million Rp)

KATEGORI	2010	2011	2012	2013	2014
HCE	140.811	225.177	254.548	331.755	513.171
CE	753.423	890.483	1.128.926	1.469.069	1.584.552
VA	227.407	357.955	469.465	684.577	748.767

Table 4. Mean of VAHC, VACE and VAIC

KATEGORI	2010	2011	2012	2013	2014
VAHCE	1,745	1,831	1,963	1,856	1,671
VACE	0,249	0,303	0,330	0,356	0,315
STVA	0,787	0,375	0,415	0,408	0,253
VAIC	2,781	2,509	2,709	2,621	2,239

Table 3 and Table 4 respectively describes the mean values of HC, CE and VA (Table 3) and the mean value of VAHC, Vace and VAIC (Table 4). VAIC value in 2010 was 2.78 and impaired VAIC (BIP) Commercial Bank in 2014 than in previous years (2010-2013). This decrease is due to factors that clicking VAIC construct, ie VAHC, Vace and STVA also decreased. The mean value VAIC years 2010-2013 the average stood at 2.6 and fell down to 2.23 in 2014

Picture 1. IB-VAIC 11 Islamic Bank (BUS) 2010-2014
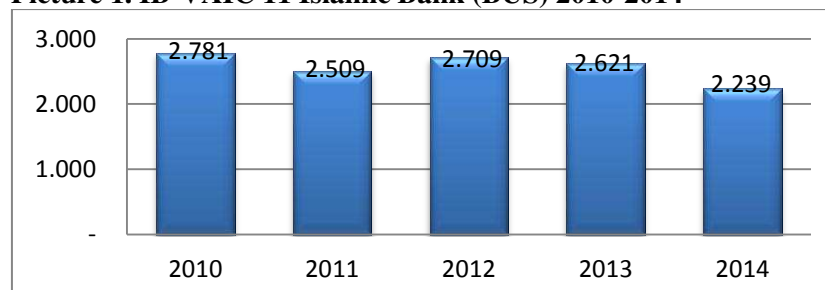
Pulic (1998) stated that the VA is a function of CE, HC and SC. Thus there must be a significant relationship between these variables to demonstrate the existence of basic theoretical relationship (Bontis, N. 1998). Therefore in this study conducted regression using VA as the dependent variable while Capital Employed (CE), Human Capital (HC) and Structural Capital (SC) respectively as the independent variable ($\alpha < 0.005$). The results are summarized in the following table

Table 5 Regression result – overall banking sector

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.012372	0.003648	3.390957	0.0016
HCE?	1.001112	0.001438	696.0945	0.0000
CEE?	1.009375	0.006626	152.3321	0.0000
SCE?	0.994535	0.001504	661.2225	0.0000
Fixed Effects (Cross)				
R-squared	0.999952			
Adjusted R-squared	0.999937			
Prob(F-statistic)	0.000000			
R-squared	0.996821	Mean dependent var		2.567636
Sum squared resid	0.230566	Durbin-Watson stat		1.979763

The regression test results demonstrate the value of R2 which is close to 1 (0.99). Therefore it is proven that the VA is predominantly determined by the Human Capital (HC), Capital Employed (CE) and Structural Capital (SC) as Pulic model assumptions. This value includes the classification is quite high, so it is considered better illustrate the regression

Bank Ranking Based on BPI (IB-VAIC)

IC performance calculation results based on the model VAIC each bank are classified into four categories based on the score IB-VAIC each bank, namely:
1. Top performers - IB-VAICTM scores above
2. Good performers - IB-VAICTM scores between 2.0 to 2.99
3. Common performers - IB-VAICTM scores between 1.5 to 1.9
4. Bad performers - IB-VAICTM brought scores of 1.5

If you look back at Figure 1 the average score VAICTM 11 Islamic Banks as a whole 2010-2014 sample of this study was 2.57. This menunjukann IB-VAIC score is between 2.0 to 2.99 (Good Performers). IB-highest value is 2.96 VAIC occurred in 2010. While the value of IB-lowest VAIC was 2,23 in 2014. The results also showed that individually, banks that fall into the category of "Top performers" during the period 2010-2014 as much as 3 banks, namely Bank Muamalat Indonesia, Bank Panin Syariah and Maybank Syariah. Here are the results of IB-VAIC each bank from 2010 to 2014

Table.6 IB-VAIC Islamic Bank, 2010-2014

Predikat	BUS	IB-VA = (OUT-IN)	IB-VACA= (VA/CE) (1)	IB-VAHU= (VA/HC) (2)	IB-STVA= [SC(VA-HC)/VA] (3)	Total IB-VAIC = (1) + (2) + (3)
Top Performers	Bank Muamallat Indonesia	1.411.763	0,455	2,125	0,502	3,081
	Bank Panin Syariah	61.485	0,090	1,890	1,457	3,437
	Maybank Syariah	77.631	0,080	4,125	0,747	4,951
Good Performers	Bank Syariah Mandiri	2.233.192	0,578	1,881	0,415	2,873
	BNI Syariah	552.421	0,400	1,623	0,362	2,385
	Bank Mega Syariah	453.288	0,748	1,393	0,260	2,401
	Bank Victoria Syariah	25.569	0,173	1,714	0,251	2,138
Common Performers	BRI Syariah	425.699	0,328	1,210	0,158	1,695
	BJB Syariah	109.205	0,182	1,352	0,258	1,792
	Bukopin Syariah	74.616	0,273	1,400	0,281	1,954
	BCA Syariah	49.106	0,136	1,343	0,255	1,734

If seen the development of IC Commercial Bank year after year, individual banks are included in the category "Top performers" in 2010 by 2 banks, 2 banks sbanyak in 2011, 2012 and 2013 by 4 banks, and in 2014 as many as three banks. Table 7 below inform the data bank in the category "Top performers" each year

Tabel 7. List of Islamic Bank "Top Performers"

2010	2011	2012	2013	2014
Panin Syariah	Victoria Syariah	Bank Syariah Mandiri	Bank Syariah Mandiri	Bank Muamalat
Maybank Syariah	Maybank Syariah	Mega Syariah	BNI Syariah	Panin Syariah
		Panin Syariah	Panin Syariah	Maybank Syariah
		Maybank Syari-	Maybank Syari-	

ah   ah

While banks are included in the category of "Bad performers" in 2010 as one bank and in 2013 to 2014 respectively (together) as one bank. as presented in Table 7 below

Table 7. List of Islamic Bank"bad performers"

Tahun	BUS
2010	BRI Syariah
2011	-
2012	-
2013	Victoria Syariah
2014	Victoria Syariah & BRI Syariah

The use of models Pulic (VAICTM) as modified by Ulum shows how the company's ability to manage and maximize the intellectual property to create value (value creation) for the company. Results of this study show that over five years (2010-2014), a row just Maybank Syariah which is a representation of Islamic Banks that have scores above VAICTM three ("top performers").

These findings also indicate that the three banks the title of "Top Performers" ie, Muamallat Indonesia, Panin Syariah and Maybank Islamic has more strategy 'intellect' in managing wealth than the other banks. This is evidenced by the empirical fact that based on the table. 6, three banks were able to create a better value added by using minimal inputs. It also shows that these banks are relatively more 'frugal' in using his wealth compared with other banks, one of them can be seen from the ability of these banks (Muamallat, Panin Syariah and Maybank Syaria) in suppressing the number of HC which resulted in the value IB- VAHU and IB-STVA relatively higher than other banks.

Further overall, these studies show that the average Islamic banks are relatively more 'extravagant' in using his wealth to personnel costs compared to the third bank (Muamallat, Panin Syariah and Maybank Syaria). In other words, these banks tend to "investment" that 'excessive' in the labor force. Based on the results of this research nearly 50 percent of bank income distributed personnel to handle the load (Human Capital). Though HC is an indicator of the IB-VAHU creating value that indicates how much the value of Value Added generated by the funds spent on labor. IB-VAHU value will be higher if the company is able to manage human capital to the maximum that can bring added value to companies using personnel costs (HC) issued a minimum. Mavridis research results even at companies in Japan proves that the best performance is the bank that manages its IC with less use of physical capital.

Another thing that is interesting is the case of Bank Victoria Syariah. In 2011, Bank Victoria Syariah categorized as "top performers" because it has a score above VAICTM 3:00 (4:41). However, in 2013 and 2014 Victoria Sharia actually be in a position bloated "bad performers" with scores below 1.5 are VAICTM 1:49 in 2013 and 0.64 in 2014. The most rational justification is that in 2010 Bank Victoria Syariah are not able to manage resources owned power optimally to produce value added for the company. Data in 2011 showed that with 19 inputs, Victoria Syariah able to produce 50 output. While in 2014, 40 inputs owned only obtain 65 output. Samahalnya the case with BRI Syariah, during the study period (2010-2014) the value of the highest VAIC BRI Syariah is the year 2012 amounted to 2.1 and in the category of "common performers

Conclusion

These results indicate that there is a shift in the performance of eleven Islamic Banks (BUS) in Indonesia from 2010 to 2014 is reviewed from the perspective of intellectual capital. Overall, IC performance of the banking sector is relatively better in 2010 than in subsequent years. This is indicated by the number of banks in the category of "bad performes" in the year 2010 to 2012 is only one bank, the Syariah BRI. Whereas in 2014, the number of banks that fell into this category reaches 2 banks (Victoria Sharia and Sharia BRI).

Despite these limitations, this study has some unique contributions, namely: 1) This study is a preliminary assessment of the performance analysis of intellectual capital of Islamic banking, which of course can be made to other sectors (BMT, Takaful, Islamic mutual funds, etc.) , 2) empirical analysis of this study present a framework of IC that may affect the business performance of Islamic banking sector in a competitive environment [note: some studies indicate that IC has an influence on business performance. For example: Bontis (1998); Firer and Williams (2003); and Tan et al. (2007)].

Results of this study have implications for both policy makers, regulators, shareholders and bank management that is based on the general findings, the performance of the IC they are in a position that is not maximized. So therefore, more appropriate policies needed to allocate resources so that organizations can create value for the company (firm's value creation).

Limitations of this study are: 1) the data used are the annual financial statements 11 Islamic Banks (BUS) which is published by BI (Bank Indonesia). Thus this study can not be generalized to the entire Islamic banking in Indonesia. Because if the other banks participating segments analyzed, then the results would have been different pemeringkatannya. 2) The financial reporting period is only 5 years to make a comparison of performance in this study seem narrow so as not objective enough to describe the performance of a bank IC, 3) subsequent research can be done by including the entire Islamic banks (197) as a sample. So that all types of Islamic banks operating in Indonesia can be evaluated IC performance is to be made the rating-ranking, both overall and per segment, 4) In addition, the study may be extended periods of time (eg for 10 years) in order to do analysis more objective about the trend of IC performance of each Islamic bank

References

Bornemann, M. and Leitner, K.H. 2002. "Measuring and reporting intellectual capital: thecase of a research technology organisation", Singapore Management Review, Vol. 24 No. 3, pp. 7-19.

Bontis, N., Keow, W.C.C., Richardson, S. 2000. "Intellectual capital and business performance in Malaysian industries". *Journal of Intellectual Capital* Vol. 1 No. 1. pp. 85-100.

Bontis, N. 1998. "Intellectual capital: an exploratory study that develops measures and models". *Management Decision*, Vol. 36 No. 2, p. 63.

Cooper, D.R., Emory, C.W., 1995. "Business research methods". Richard D. Irwin, Inc.

Firer, S. and Williams, S.M. 2003. "Intellectual capital and traditional measures of corporate performance". *Journal of Intellectual Capital* Vol. 4 No. 3. pp. 348-360.

Ghozali, I. 2005. "Aplikasi analisis multivariate dengan program SPSS". Badan Penerbit Undip. Semarang.

Harahap, S.S. 2005. *Teori Akuntansi*. Jakarta: PT Raja Grafindo Jaya.

Ihyaul Ulum, "Model Pengukuran Kinerja Intellectual Capital Dengan IB-VAIC Di Perbankan Syariah," Jurnal Inferensi, Vol. 7:1 (2013), hlm. 184.

Ihyaul Ulum, "Model Pengukuran Kinerja Intellectual Capital Dengan IB-VAIC Di Perbankan Syariah," *Jurnal Inferensi*, Vol. 7:1 (2013), hlm. 184.

Japanese financial industry" Journal of Knowledge Management. Vol. 6 No. 3. pp.262-271

Kamath, G.B. 2007. "The intellectual capital performance of Indian banking sector". *Journal of Intellectual Capital* Vol. 8 No. 1. pp. 96-123.

Kubo, I., and A. Saka. 2002 "An inquairy into the motivations of knowledge workers in the

Mavridis, D.G., "The intellectual capital performance of the Japanese banking sector," *Journal of Intellectual Capital*, Vol. 5:1 (2004), hlm. 92-115.

Pulic, A. 2000. "*VAICTM – an accounting tool for IC management*", available at: www.measuringip. at/Papers/ham99txt.htm (accessed march 2015).

Pulic,"Measuring the Performance of Intellectual Potential in Knowledge Economy, presented at the 2nd McMaster World Congress on Measuring and Managing Intellectual Capital by the Austrian Team for Intellectual Potential,1998

Sekaran, U. 2003. "Research methods for business, a skill building approach" 4th ed. John Wiley & Sons, Inc. NY.

Tan et al., "Intellectual Capital And Financial Returns Of Companies," *Journal of Intellectual Capital*, Vol. 8:1 (2007).