

# Impact of Intellectual Capital and Efficiency to the Profitability of Islamic Banking

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**Abstract:** *This study aims to prove empirically the influence of intellectual capital, and efficiency to the profitability of shari'ah banks. The sample of this research is 11 Shari'ah Commercial Bank (BUS) in Indonesia with research period year 2013-2017, with sample selection with purposive sampling. The data used are secondary data obtained from BUS annual financial statements. Data analysis in this research using panel data regression analysis, with intellectual capital calculation approach of shari'ah bank iB-VAICTM. The findings of this study indicate that: 1) iB-VACA has significant negative effect on ROA, 2) iB-VAHU, and 3) iB-STVA has significant positive effect on ROA, 4) BOPO has significant negative effect on ROA, and 5) NOM have positive effect to ROA, and 6) variables iB-VACA, iB-VAHU, iB-STVA, BOPO, and NOM together have a significant effect on ROA.*

**Keywords:** Islamic banking, Intellectual Capital, Profitability, Efficiency

## 1. Introduction

The development of industry today can not be separated from the development of science. Where now there is a shift in the company's point of view on the resources of knowledge and technology owned by the company, becomes important. Today companies with advanced science and technology will be superior to other companies. Knowledge or intellect is vital to the company, because the majority of the company's important activities are related to knowledge. Knowledge gives a change of way the company's view of human resources is no longer based on physical strength, but the quality of thinking, and the level of intellectual.

In this knowledge-based economy era, the core strength of an enterprise lies in human capital. This creates an increasingly competitive competition among companies that create a knowledge-intensive industry concept demanding the availability of knowledge workers in large numbers to support the company's progress (Nataly, 2011). Companies that apply knowledge-based economy principles will create a way to manage knowledge resources owned by their employees as a means to achieve company goals. Human capital that is directly related to knowledge will provide value added and increase the productivity of the company more significant than other factors such as material factors related to capital, or other tangible assets.

In this knowledge-based economy era, the core strength of an enterprise lies in human capital. This creates an increasingly competitive competition among companies that create a knowledge-intensive industry concept demanding the availability of knowledge workers in large numbers to support the company's progress (Nataly, 2011). Companies that implement the principles of knowledge-based economy will create a way to manage knowledge resources owned by employees as a means company to achieve corporate goals. Human capital that is directly related to knowledge will provide value added and increase the productivity of the company more significant than other factors such as material factors related to capital, or other tangible assets.

White *et al.*, (2013) constructs a knowledge-based economy structure composed of five structural components: information and communication technology (ICT) infrastructure, open innovation, education, knowledge management, and creativity. All five components are interrelated and synergize with each other that will provide a competitive advantage for the success of a knowledge-based economy. However, without building a strong ICT foundation, the other four components become dysfunctional. Francis Bacon in the 15th century has revealed a famous phrase "knowledge is power". Knowledge is a force that can bring innovation and change. Then in the 20th century Bill Gates proved the power of science through the emergence of Microsoft. Followed by the emergence of knowledge-based companies and other technologies such as Intel, IBM, Cisco, Dell, Google and other knowledge-based and technology companies. Peter F. Drucker justifies the importance of knowledge that brought great changes to the progress of the modern world (Zuhail, 2010).

The shift in the view that intangible assets become an important value is called Intellectual Capital (IC). IC assessment can be recognized as a driver of corporate value and competitive advantage. According to Pulic (1998), the goal in a knowledge-based economy is to create value added. Intellectual capital is the economic value of two categories of intangible assets, namely organizational (structural) capital, and human capital (Organization for Economic Co-operation and Development (OECD), 1999). Organizational (structural) capital is software system, distribution network, and supply chain. Human capital includes the human resources within the organization (employees) and external resources related to the organization, such as consumers, and suppliers.

In Indonesia, the phenomenon of IC began to develop, and became a concern after the emergence of PSAK No. 19 (revised 2010) describing intangible assets. PSAK 19 (revised 2010) defines intangible assets as non-monetary assets that are identifiable and have no physical form and are held for use in producing or delivering goods or services, leased to others, or for administrative purposes. However, the explanation is not stated directly as IC. In general,

companies in Indonesia still use traditional accounting in corporate financial statements that emphasize the use of tangible assets. In the measurement IC still find difficulty in measurement because IC is not visible.

Pulic (2000) suggests an indirect measurement of the IC by measuring the efficiency of the added value generated by the firm's intellectual capabilities called Value Added Intellectual Coefficient - VAICTM. VAICTM is the result of the sum of its three components: physical capital (VACA - value added capital employed), human capital (VAHU), and structural capital value (STVA). The aggregate merger of these three components measures the performance of the company's intellectual capital. Value Added Intellectual Coefficient (VAIC<sup>TM</sup>) is an easy approach in measuring intellectual capital because Value Added Intellectual Coefficient (VAIC<sup>TM</sup>) uses components in the financial statements.

Research on intellectual capital relationship to financial performance has been proven empirically. The research was conducted by Firer and William (2003) in South African banking companies that IC (VAIC<sup>TM</sup>) has no effect on company performance, and Physical capital is the most significant factor affecting the company's performance in South Africa. Then Chen et al., (2005) examined the IC relationship on the financial performance of public companies in Taiwan. The results show that IC has a positive effect on company's financial performance and market value. While IC research in Indonesia has been done by Ulum (2007) to banking sector companies in Indonesia using partial least square approach. The result there is a positive relationship affects the financial performance of the company. Then there is the effect of IC on future financial performance.

According to Firer and William (2003) the banking industry is one of the most intensive sectors of its IC. Currently one of the fast growing banking industry sectors is the shari'ah banking industry. Islamic banking has the need for human resources that have special abilities. This should be supported by knowledge based on banking sciences, and general finance, as well as sciences related to sharia science, shari'ah banking, and shari'ah finance. Currently shari'ah banking still needs competent resources, and master the sciences that support shari'ah banking activities. With the fulfillment of competent human resource needs will improve the performance of shari'ah banking, and achieve high market-share Islamic banking.

Indonesia has two types of banking that are differentiated based on their working principles. According to Darmawi (2012: 41), banks can be divided into two conventional banks, namely commercial banks and rural banks (BPR) that use interest as the basis of its activities and sharia banks, namely commercial banks and rural banks whose activities are based on shari'ah, among others the principle of sale and purchase and the principle of profit sharing. This raises the difference between accounts used by conventional banks and shari'ah banks. Thus, in conventional banking IC measurement can use VAIC<sup>TM</sup> approach proposed by Pulic. Because VAIC<sup>TM</sup> is designed for companies that have common transaction types. For that we need an IC

measurement that is specifically used for shari'ah banking system.

Ulum (2013) invented a measurement model specifically for measuring ICs in sharia banking. The measurement of IC in shari'ah banking in its research is called iB - VAIC<sup>TM</sup>. iB - VAIC<sup>TM</sup> is the result of modification of the existing measurement model VAIC<sup>TM</sup>. Basically iB - VAIC<sup>TM</sup> is not much different from VAIC<sup>TM</sup>, but the difference is only difference of account calculation in shari'ah banking that is different from conventional banking. On the other hand to measure the performance of a company can be measured by measuring efficiency. In the world of banking efficiency is one of the popular performance measurements. Efficiency is widely used as a measure of banking performance. The level of efficiency achieved is a picture of the quality of performance. Improving the quality of efficiency has an impact on improving banking performance (Endri, 2011).

Many factors illustrate the efficiency that affects banking performance, some of which are BOPO and NOM. BOPO is the ratio between total Operating Cost and Operating Income (BOPO). The efficiency of bank operations can be illustrated with a low level of BOPO ratio reflecting the bank running its operations at a small cost and earning an optimal income. Net Operating Margin (NOM) is the main profitability ratio in shari'ah banks to know the ability of earning assets in generating profit (Bank Indonesia, 2012). Increased revenue-sharing on the average productive assets managed by banks then the performance of a better bank, and the possibility of problems to be faced by the smaller banks.

Based on the research problem, the purpose of this research is to test the influence of iB-Value Added Capital Employed (iB-VACA), iB-Value Added Human Capital (iB-VAHU), iB-Structural Capital Value Added (iB-STVA), Operating Expenses and Operating Cost (BOPO) and Net Operating Margin (NOM) either partially or jointly to the performance of shari'ah banking profitability.

## **2. Theoretical Review**

### **2.1 Resource-Based Theory**

Resource-based theory (RBT) is a theory developed to analyze the competitive advantage of a company based on the company's resources. RBT's theory sees a company as a collection of assets or resources and tangible and intangible capabilities (Firer and Williams, 2003). Where intangible resources are closely related to intellectual capital. Resource-based theory spearheaded by Penrose (1959) argues that corporate resources are heterogeneous and productive services derived from company resources provide a unique character for each company enough, attractive promotions, and employees and managers who can work professionally some form of resources owned by the company (Astuti and Sabeni, 2005).

Intellectual capital is one of the company's resources. Where intellectual capital consists of three resources, Stewart (1997) in Tan et al. (2008) divides the IC into three general components, namely human capital, structural capital and relational capital power relation). Human capital includes

the knowledge, expertise, competence and knowledge of the employee. Structural capital includes corporate organizational culture, information systems and technology adaptation. While relational capital consists of consumer loyalty, service quality and good relationship with suppliers.

Intellectual capital is one of the most important resources. If the company can optimize the performance of intellectual capital to the maximum, then the company will have an added value that can provide the value characteristics of a company's superiority. So with the added value obtained from the optimal performance of intellectual capital, then the company will be able to have competitiveness against competitors because they have a characteristic of competitive advantage that is only owned by the company.

## 2.2 Intellectual Capital (IC)

Intellectual capital (IC) is one of the resources owned by the company. Intellectual capital is an intangible asset that is not seen but has value and important role in the company. There are various definitions that describe ICs in various literature and research journals. Intellectual capital was first published by John Kenneth Galbraith in 1969 (Bontis, 1998). According to Galbraith, intellectual capital is not merely a static intangible asset, but an ideological process.

Then interest in intellectual capital continued in June 1991, Tom Stewart wrote an article entitled Brain Power- How Intellectual Capital Is Becoming America's Most Valuable Asset, which leads the IC to the management agenda (Ulum, 2009). Stewart in Ulum (2009) defines intellectual capital as intellectual material (knowledge, information, intellectual property, experience) that can be used to create wealth. It is a collective power of reason or a powerful set of knowledge.

Organization for Economic Co-operation and Development (OECD) defines intellectual capital as the economic value of two categories of intangible assets, namely organizational (structural) capital, and human capital. Then Bontis (1998) in Astuti and Sabeni, (2005) states intellectual capital is elusive, but once discovered and exploited will give the organization a new source base to compete and win. Brooking in Astuti and Sabeni (2005) states that Intellectual Capital is a term given to combine intangible assets from markets, intellectual property, infrastructure and human centers that enable a company to function.

Bontis *et al.*, (2000) stated that in general, the researchers identified three main constructs of IC, namely: human capital (HC), structural capital (SC), and customer capital (CC). According to Bontis *et al.*, (2000), HC simply represents the individual knowledge stock of an organization represented by its employees. HC is a combination of genetic inheritance; education; experience, and attitude about life and business. Then Bontis *et al.*, (2000) mentions that SC covers all non-human storehouses of knowledge within the organization. These include databases, organizational charts, process manuals, strategies, routines and everything that makes the value of a company greater than its material value. While the main theme of CC is the inherent knowledge in marketing channels and customer relationship that an organization develops through the business (Bontis *et al.*, 2000).

Research Kurniasih and Heliantono (2016) concluded that the existence of intellectual capital in state-owned banking companies affect the financial performance of the company. The better the company is able to manage their intellectual capital, the greater the value of Return on Assets (ROA) generated by the company. Structural capital (SCE) has a positive but insignificant effect on the financial performance of state-owned enterprises Open financial sector. Capital employed efficiency has a significant positive effect on the financial performance of state-owned enterprises Open financial sector.

Corporate competitive advantage can be managed with good managerial. One of them by doing good IC management, the company will have a competitive advantage. In addition, IC management can also provide information about the capabilities of the company and how the company is doing activities well. The company's activities are carried out with managerial and sufficient knowledge ability so that the process of business activity undertaken by the company becomes more effective and right on target. In addition, IC can help stakeholders or shareholders to assess the company from non-asset side.

## 2.3 Intellectual Capital Components

In carrying out its function intellectual capital consists of several components that support the value creation activities in a company. There are several classifications of the intellectual capital component. According to Bontis *et al.*, (2000) intellectual capital component consists of three components, namely human capital, structural capital, and customer capital. There are different views from some researchers on the components that explain the intellectual capital component. In general, according to the majority of research states intellectual capital consists of three components, namely:

### 1) Human Capital (HC)

Human Capital is a resource that comes from the ability and competence of employees owned by a company. Employee competencies and competencies can be enhanced with training programs conducted by the company. According to Bontis (2001) human capital is a combination of knowledge, skills, ability to innovate and the ability to complete tasks, including company value, culture and philosophy. Companies that assume that the employee is a valuable asset that the company will continue to improve the knowledge and competence of its employees. So that it can increase the human capital owned by a company.

### 2) Structural Capital

Structural capital is a supporter owned by companies such as infrastructure, facilities and infrastructure in meeting the needs of business activities of the company. According to Bontis (2001) Structural capital is hardware, software, databases, organizational structures, patents, trademarks and everything else from organizational capabilities that support the productivity of their employees; in other words, everything will be left at the office when employees return. In structural capital there are system technology, hardware, software, operational system company, organization, patent, brand, and training company. Structural capital supports

employee activities to produce optimum performance in the company's business activities.

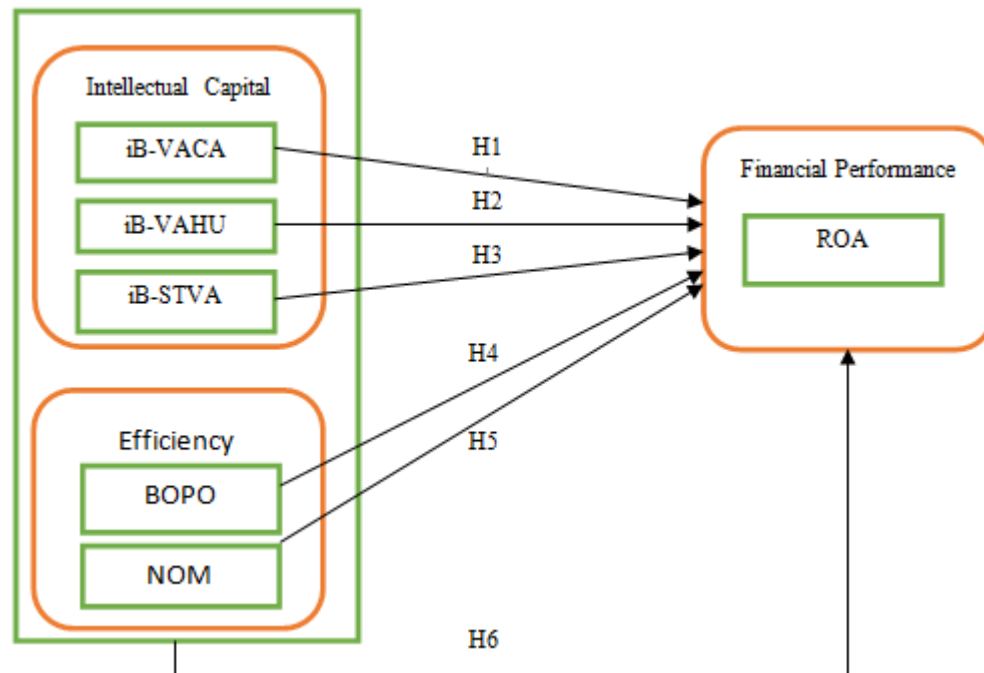
### 3) Customer Capital

Customer capital is closely linked to the company's relationship with its customer loyalty and the company's relationships with its partners or suppliers. The company's relationships with parties outside the company are included in the customer capital. In this case the need for good relations with outsiders such as government, markets,

suppliers and customers in order to create loyalty to the company.

### 3. Research Thinking Framework

The development of the following framework is based on theoretical basis, a review of several previous studies. This framework as a basis for formulating hypotheses that illustrate the influence of intellectual capital, and efficiency terhadap financial performance of shari'ah banking.



**Figure 1:** Research Thinking Framework

Based on the above framework, this research uses iB-VAICTM consisting of three components, iB-VACA, iB-VAHU, and iB-STVA which is tested partially on financial performance (ROA). Then the efficiency consists of BOPO, and NOM then tested partially the effect on financial performance (ROA). In the last stage, we examine the effect simultaneously between the iB-VAICTM variables, and the effectiveness of the effect on the financial performance (ROA).

### Research Hypothesis

- H1: iB-VACA has a positive effect on Return On Assets (ROA)
- H2: iB-VAHU has a positive effect on Return On Asset (ROA)
- H3: iB-STVA has a positive effect on Return On Assets (ROA)
- H4: BOPO negatively affect Return On Assets (ROA)
- H5: NOM has a positive effect on Return On Assets (ROA)
- H6: Intllectual capital (iB-VACA, iB-VAHU, iB-STVA), Efficiency (BOPO, & NOM) simultaneously affect Return On Assets (ROA).

### 4. Research Methods

Model and technique of data analysis in this research using iB-VAICTM model (Islamic Banking Value added Intellectual Coefficient). Then in this study examines the relationship between IC and financial performance of sharia banking by using panel data regression. Ulum (2013) has formulated IC calculations with iB-VAICTM. First stage by calculating iB-Value Added (iB-VA). IB-VA is calculated using the following method:

$$iB-VA = OUT - IN$$

Note :

OUT (Output): Total revenue, obtained from:

Sharia net income = main operating income of sharia activities + other operating income - third party rights on profit sharing and shirkah temporer

IN (input): Operating expenses and non-operating expenses except personnel / employee burdens



**Table 1: Operational Variable**

	Variable	Indicator	Scale
Independend	Intellectual Capital	$iB-VA = OUT - IN$ $iB-VAIC^{TM} = iB-VACA + IB-VAHU + iB-STVA$ <ul style="list-style-type: none"> <li><math>iB - VACA = \frac{VA}{CE}</math></li> <li><math>iB - VAHU = \frac{VA}{HC}</math></li> <li><math>iB - STVA = \frac{SC}{CE}</math></li> </ul>	Ratio
	BOPO	$BOPO = \frac{\text{Total Operational Expenses}}{\text{Total Operating Income}}$	Ratio
	NOM	$NOM = \frac{(PO - DBH) - BO}{\text{Average Earning assets}}$	Ratio
Dependen	Financial performance	$ROA = \frac{\text{Total income}}{\text{Total Asset}}$	Ratio

Source: Processed authors from several studies, (2018)

Note:

iB-VACA: Value Added Capital Employed: the ratio of iB-VA to CE

iB-VA: Value added

CE: Capital Employed: available funds (total equity)

iB-VAHU: Value added Human Capital: the ratio of iB-VA to HC

HC: Human capital: the burden of employees

STVA: Structural Capital Value Added: ratio of SC to IB-VA

SC: Structural capital: IB-VA – HC

Based on the purpose sampling criteria, there are 11 BUSs eligible to be sampled. While one BUS does not meet the keriteria, the National Savings Bank Sharia Savings Bank (BTPNS). BTPNS does not have a financial report as per the specified period.

**Table 2: Data Sample**

Number of BUS in Indonesia	12
Number of BUS that can be sampled	11
Number of BUSs that can not be entered in the sample	1
Year of observation	5 Year
Number of samples taken as observation	55

Source: The Financial Services Authority

## 5. Analysis and Discussion of Results

### 5.1 Description of Research Data

The population of this study is the Sharia (BUS) Commercial Bank listed in table 2 Data taken in this study is the annual financial statements of BUS period 2013-2017.

The result of data processing for dependent variable and indepenenden variable can be seen on the attachment page. Data processing is done manually using Microsoft Excel 2010. The data is processed sourced from the financial statements of BUS and Bank Indonesia.

**Table 4: Descriptive statistics**

	ROA	IBVACA	IBVAHU	IBSTVA	iB-VAIC	BOPO	NOM
Mean	0.841273	0.233434	1.639451	0.246628	1.639.451	90.58836	0.052608
Median	1.000000	0.258424	1.405201	0.288358	1.405.201	90.42000	0.557122
Maximum	6.930000	0.924347	3.837907	1.344288	5.182.195	192.6000	8.485507
Minimum	-20.13000	-2.100000	-2.904548	-3.996533	-9.001.081	47.60000	-32.92000
Observations	55	55	55	55	55	55	55
Cross sections	11	11	11	11	11	11	11

Source: Processed Eviews 9

The results shown in table 3 average shari'ah banking ROA in the study period of 0.84%, it shows that the average condition of Islamic banks is quite good, because the standard set by BI is the ROA of 1.5%. Then the highest ROA of 6.93%, and the lowest ROA of -20.13%. In the BOPO variable of shari'ah banking, the average of BOPO is 90.58%, it shows that the condition of shari'ah bank is in efficient condition, since BI BOPO standard is 92% maximum. Then the minimum value of BOPO is 47.60%, and the maximum value of BOPO is 192.60%. In NOM variable, the average NOM value is 0,05%, this indicates that NOM of shari'ah bank is not good, because the good NOM level determined by BI is 3%. Then the maximum value of 8.48%, and the minimum value of -32.92%.

Then for the performance of iB-VAICTM recorded an average of 1.63, this shows that Islamic banks fall into the category of common performers. Then a maximum IC value of 5.13, and a minimum value of -9.00. To be able to perform rating on a number of banks, the results of calculations iB-VAIC (for the next can be called BPI) can be ranked based on the score owned. So far, there is no standard about the IC's performance scores, but Ulum (2009) has formulated to provide a category of VAIC calculation results.

Rating category Top performers, have a VAICTM score above 3.00. For Good performers category, VAICTM score between 2.0 to 2.99. Then for common performers, the VAICTM score is between 1.5 to 1.99. While the category of Bad performers, VAICTM score below 1.5.

Based on the classification by Ulum (2009), the category of shari'ah bank in Indonesia based on its IC performance during five years of observation can be seen in the following table:

**Table 5: Performance Category of Shari'ah Banking Industry IC**

Year	IB-VAC Performance Category (BPI)	IB-VAIC Score
2013	Good performers	2,85
2014	Good performers	2,25
2015	Good performers	2,31
2016	Bad performers	1,35
2017	Common performers	1,84

Source: Edited author, (2018)

In table 5 based on IC performance scores on sharia banking industry in five years observation from year 2013-2017 decreased performance of IC performance. In three years of observation (2013-2017) the performance position of IC of sharia banking industry in good performers category. While in the year 2016 IC performance sharia banking industry has decreased to bad performer category. In the year 2017 there is improvement of IC performance of syariah banking industry so that IC performance better become common performers category. It then enhanced the performance of BUS based on IC, for five years (2013-2017). The top 11 rating of sharia commercial banks based on iB-VAIC performance can be seen in table 6 below:

**Table 6: Shari'ah Bank Rating Based on IC Performance**

No.	Year				
	2013	2014	2015	2016	2017
1	B. Victoria Syariah	B. Panin Syariah	B. Maybank Syariah	B. Maybank Syariah	B. Panin Syariah
2	B. Maybank Syariah	B. Maybank Syariah	B. Panin Syariah	B. Panin Syariah	B. Mega Syariah
3	B. Syariah Mandiri	B. Mega Syariah	B. Syariah Mandiri	BNI Syariah	B. Maybank Syariah
4	B. Muamalat	B. Muamalat	B. Syariah Bukopin	BJB Syariah	BJB Syariah
5	B. Panin Syariah	B. Syariah Bukopin	B. Mega Syariah	BCA Syariah	BNI Syariah
6	BJB Syariah	BRI Syariah	BRI Syariah	B. Mega Syariah	B. Syariah Bukopin
7	B. Syariah Bukopin	BCA Syariah	BJB Syariah	B. Muamalat	BRI Syariah
8	B. Mega Syariah	B. Syariah Mandiri	BCA Syariah	B. Syariah Bukopin	B. Syariah Mandiri
9	BNI Syariah	B. Victoria Syariah	B. Muamalat	B. Syariah Mandiri	BCA Syariah
10	BCA Syariah	BNI Syariah	BNI Syariah	BRI Syariah	B. Muamalat
11	BRI Syariah	BJB Syariah	B. Victoria Syariah	B. Victoria Syariah	B. Victoria Syariah

Source: Edited author, (2018)

The result of the performance rating of sharia banking IC can be seen in table 6. From the results of the performance rating of sharia banking IC was disinform by Bank Panin Syariah, and Maybank Bank sharia. Where here can be seen between the national sharia banks and foreign sharia banks do not have a significant difference in IC performance. The

performance of national sharia banks still leads the average growth of IC performance. Although currently the human resource issues that are part of the IC is still a challenge the development of Islamic banks in Indonesia.

## 5.2 Approach Data Panel Regression Method

The panel data model approach consists of three models, namely: Common Effects, Fixed Effects, and Random Effects. In determining which approach is most appropriate, it is necessary to do a Chow test, and Hausman test. Chow test is used to choose the best model between Common Effect model, and Fixed Effect. Hausman Test is used to select the best model between Fixed Effect model, and Random Effect.

**Table 7: Testing Result of Panel Data Regression Model**

No	Model	Testing	Prob.	Test result
1	Common effect	Chow Test	0.0000	Fixed Effect
2	Fixed effect	Hausman Test	0.0000	Fixed Effect

Source: Edited author, (2018)

At the output chow test Prob value. (0.00) <  $\alpha$  5% (0.05) then reject Ho. Then a decent model is a fixed effect. Then after getting a match on the fixed effect model. The model was re-tested with Hausman test. At the Hausman output test the Prob value. (0.00) <  $\alpha$  5% (0.05) then reject Ho. Then a decent model is a fixed effect. Based on the results of model testing that has been done, the most feasible model for this research is the fixed effect model.

## 5.3 Hypothesis Testing

After Chow test and Hausman test, then the next step is testing hypothesis. Previously we have known that the Chow test chooses the fixed effect model as a viable model to use. Then after the Hausman test, the selected model is consistent in the fixed effect model as a viable model. So, after the selection of fixed effect model. The results of this research interpretation will be interpreted through the Fixed Effect Model (FEM) estimation model. The model interprets the relationship between iB-VACA, iB-VAHU, iB-STVA, BOPO, and NOM variables against financial performance variables (ROA).

**Table 8: Fixed Effect Model Estimation**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.189941	1.777824	4.044236	0.0002
IBVACA	-2.386198	0.874716	-2.727969	0.0095
IBVAHU	0.860362	0.201305	4.273918	0.0001
IBSTVA	0.918919	0.397324	2.312772	0.0261
BOPO	-0.082169	0.017675	-4.648943	0
NOM	0.279985	0.060877	4.599178	0

Cross-section fixed (dummy variables)			
R-squared	0.951302	Mean dependent var	0.841273
Adjusted R-squared	0.932573	S.D. dependent var	3.203952
S.E. of regression	0.831963	Akaike info criterion	2.707989
Sum squared resid	26.99432	Schwarz criterion	3.29194
Log likelihood	-58.46969	Hannan-Quinn criter.	2.933807
F-statistic	50.79082	Durbin-Watson stat	2.257072
Prob(F-statistic)	0		

Source: Processed Eviews 9

#### 5.4 Determination Coefficient Test ( $R^2$ )

In Adjusted R-squared results in table 8 obtained 93.25%. This explains that the effect of iB-VACA, iB-VAHU, iB-STVA, BOPO, and NOM on ROA is 93.25%, and the rest of 7.85% can be explained by other variables. Can be interpreted that variable variables iB-VACA, iB-VAHU, iB-STVA, BOPO, and NOM very closely affect the ROA.

#### Model Significance Test (F-Test)

If the probability (p-value) < real level ( $\alpha$ ), then  $H_0$  is rejected. In table 3.6 it can be explained that the F-statistic is 0.000000 < 5%. It can be concluded that the variables iB-VACA, iB-VAHU, iB-STVA, BOPO, and NOM together have an effect on the ROA variable.

#### 5.5 Free Variable Significance Test (t-Test)

The result of fixed effect model test in Table 3.6 can be concluded that the five variables iB-VACA, iB-VAHU, iB-STVA, BOPO, and NOM partially affect the ROA. The following is a summary of the results of partial test variables with the fixed effect model:

**Table 9: Summary of Hypothesis Test Results**

No	Variable	Hypothesis	Test result	Note
1	iB-VACA	Positive significant	Significant negatives	H1 Reject
2	iB-VAHU	Positive significant	Positive significant	H2 Accept
3	iB-STVA	Positive significant	Positive significant	H3 Accept
4	BOPO	Significant negatives	Significant negatives	H4 Accept
5	NOM	Positive significant	Positive significant	H5 Accept

Source: Author Prepared, (2018)

## 6. Discussion

#### **iB-Value Added Capital Employed (iB-VACA) Influence on Financial Performance (ROA).**

iB-Value Added Capital Employed (iB-VACA) has a significant negative effect on Financial Performance, this result is not in accordance with the research hypothesis (H1). This negative influence is suspected because iB-VACA has a relationship with the use of capital in the addition of physical assets. This means that larger companies use their capital for the addition of physical assets compared to human resource development. In the observation period of 2013-2017, the total assets owned by BUS continue to increase, as the addition of physical assets such as the addition of new offices, ATM machines, land, state Islamic securities and the addition of other physical assets. This makes a negative iB-VACA effect on ROA. iB-VACA relates to the use of capital used for the addition of physical assets by shari'ah banks to generate income or value added. Given the negative impact, less capital use will contribute to the ability of shari'ah banks to generate revenue. The smaller the value of iB-VACA produced by shari'ah banks eat the lesser the use of capital used to generate income.

#### **iB-Value Added Human Capital (iB-VAHU) Influence on Financial Performance (ROA).**

iB-Value Added Human Capital (iB-VAHU) has a significant positive effect on Financial Performance (ROA),

this result is in accordance with the research hypothesis (H2). VAHU is a core component of the IC so that the value added value generated by human capital determines the amount of ROA. With the characteristics of human resources owned by shari'ah banks, it is very important for each bank to have human resources who have knowledge of competent shari'ah so that the performance of Islamic banking continues to increase. Where at present the hottest issue of shari'ah banking is related to the competence of Islamic banking human resources, and the problem of fulfilling the needs of Islamic banking human resources that still require a lot of qualified shari'ah human resources. iB-VAHU is an important IC-forming constituent. iB-VAHU shows how much value added a company can generate with funds spent on labor (Ulum, 2008). So it can be concluded that the higher iB-VAHU the higher the shari'ah banking ROA. Therefore, iB-VAHU has a positive effect on ROA.

#### **The Influence of iB-Structural Capital Value Added (iB-STVA) to Financial Performance (ROA)**

iB-Structural Capital Value Added (iB-STVA) has a significant positive effect on Financial Performance, this result is in accordance with research hypothesis (H3). Structural capital (STVA) is a tool that supports human capital (iB-VAHU) in improving company performance. STVA is related to the facilities owned by the company in assisting human capital work. STVA can be tangible information technology facilities, buildings, office equipment, networks and facilities or related equipment and support the work of human capital. In the banking industry, structural capital is very important to support the work, it can not be separated from the information technology that is very useful to conduct work related to information of shari'ah banking business in various regions in Indonesia. So this work must be supported by strong information technology so as to facilitate the processing done by human capital. So it can be concluded that the higher iB-STVA will be higher also shari'ah banking ROA. Therefore, iB-STVA has a positive effect on ROA.

#### **The Effect of BOPO on Financial Performance (ROA)**

BOPO has a significant negative effect on financial performance, so this result is in accordance with the research hypothesis (H4). The ratio of BOPO aims to measure the ability of operating income to cover operating costs. So it can be concluded that the smaller BOPO this means the more efficient operational costs incurred by the company so that the smaller the possibility of the company in trouble condition.

#### **The Effect of NOM on Financial Performance (ROA)**

NOM has a significant positive effect on Financial Performance, this result is in accordance with research hypothesis (H5). NOM is the main ratio of profitability in Islamic banks to determine the ability of productive assets in generating profits. So it can be concluded that the greater the NOM, the bank's main income will increase so as to improve financial performance as measured by ROA.

#### **The influence of intellectual capital, and efficiency together to Financial Performance (ROA)**

In testing the sixth hypothesis (H6) in this study examined the influence of intellectual capital, and efficiency together



to the Financial Performance (ROA). In the result of the fixed effect model it is found that the F-statistic is 0.000000 <5%. Can be interpreted that the variables iB-VACA, iB-VAHU, iB-STVA, BOPO, and NOM together affect the ROA.

## 7. Conclusion

Based on the result of analysis of intellectual capital influence and efficiency toward sharia banking financial performance, it can be concluded as follows:

- 1) Based on the analysis of iB-VACA influence on sharia banking profitability (ROA), it is found that iB-VACA has significant negative effect to ROA.
- 2) Based on the analysis of iB-VAHU influence on the profitability of sharia banking (ROA), it was found that iB-VAHU had a significant positive effect on ROA
- 3) Based on the analysis of iB-STVA influence on sharia banking profitability (ROA), it is found that iB-STVA has a significant positive effect on ROA.
- 4) Based on the results of BOPO influence analysis test against the profitability of sharia banking (ROA), BOPO has a significant negative effect on ROA.
- 5) Based on the results of the analysis of the effect of NOM on the profitability of sharia banking (ROA), it was found that NOM has a significant positive effect on ROA.
- 6) Based on the results of the analysis test, it is found that the variables iB-VACA, iB-VAHU, iB-STVA, BOPO, and NOM together significantly influence the profitability of sharia banking (ROA).

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