



Intellectual Capital and Financial Performance in Sharia Commercial Banks in Indonesia

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Abstract

This study measures the value-added intellectual coefficient (VAICTM) for the efficient performance of Islamic banking in Indonesia. In addition, this study examines the relationship between the efficiency of Intellectual Capital and Financial Performance. This paper uses secondary data collected from quarterly reports for 2015-2020 on BUMN Islamic Banks; BNI Syariah, BRI Syariah, and Bank Mandiri Syariah. Data analysis using SEM (Structural Equation Modeling) using Partial Least Square (PLS) analysis. The results of this study found that the efficiency of human capital (VAHU) was higher than the structured capital (STAVA) and the efficiency of employee capital (VACA) used. Furthermore, this study found that intellectual capital affects the financial performance of Islamic banks. The findings provide empirical evidence that optimal utilization of IC and resources leads to higher bank profitability. Therefore, this finding can be useful as Islamic banks wishing to improve their financial performance can focus on improving their IC.

Keywords: Efficiency; Intellectual Capital; Financial Performance; Islamic Banking

Introduction

Intellectual Capital (IC) is a study that has attracted the attention of researchers worldwide with the development of a knowledge-based economy (Ståhle et al., 2011). Some studies have been conducted in various countries to test the VAICTM (Value Added Intelligence Coefficient) method. In 1998, Pulic proposed a measure of corporate intellectual capital (IC). This method is a summary of HC, SC, and CC. This method is called the Value Added Intelligence CoefficientTM - VAICTM. The main components of VAICTM are Value Added Capital Employed (VACA), Value Added Human Capital (VAHU), and Structural Capital Value Added (STVA).

The banking system in Indonesia implements a dual banking system; in this case, conventional and Islamic banking will simultaneously compete for relatively the same customers, increasing estimates.

As in other countries, competition is quite high (Junaedi, 2019). Therefore, intellectual capital is considered to have a very important role for banking companies in the dual banking system (Ousama & Fatima, 2015). Intellectual capital in banking must be used appropriately and efficiently because intellectual capital refers to all aspects of human resources, systems, processes, and developments that will impact the banking industry's efforts to provide high-quality services to consumers (Ahuja & Ahuja, 2012). Furthermore, banks need physical capital (Simarmata & Subowo, 2016) to operate, but the intellectual capital sector will determine the quality of banks in serving customers (Al-Musali & Ismail, 2014).

Many research results prove that intellectual capital affects company performance (Rosida & Aisyah, 2021; Susanti et al., 2020; Xu & Wang, 2018; Nadeem et al., 2018; Simarmata & Subowo, 2016; Ousama & Fatima, 2015; Gozali & Hatane, 2014). In the context of banking in Indonesia, there are still differences in research results, both in the advantages of each component of intellectual capital and its relationship (positive/negative) to banking financial performance. The findings of Gozali & Hatane (2014) are that the structural capital component (STAVA) is the most superior component, and the employee capital component (VACA) is the lowest. And all components of intellectual capital have a positive influence on banking financial performance. Meanwhile, research by Simarmata & Subowo (2016) found that employee capital (VACA) contributes more to performance and value creation than the other two IC components in Indonesian banking, and the lowest component is structural capital (SCE). The employee capital (CE) and human capital employee (HCE) components have a positive impact on financial performance, while the employee capital structure (SCE) has a negative effect. Research gaps have been found in the results of these studies to fill these gaps. This research can explain the analysis of Rosida & Aisyah (2021) to re-examine the influence of intellectual capital on financial performance and provide evidence of the components of intellectual capital and financial performance of Islamic banking in Indonesia. Which component gives the greatest contribution to the assessment of intellectual capital and financial performance?

Intellectual Capital dan Financial Performance

In general, intellectual capital is an intangible asset that is not explicitly listed on the balance sheet. This tangible or commercial factor is not physically visible but has a significant impact on the company's performance and overall business success (Mondal & Ghosh, 2012). Pulic (1998) states that the components of VAICTM are: First, Value Added of Capital Employed (VACA) is an indicator of VA created by one unit of physical capital. Pulic (1998) postulates that firms are better off using CA if 1 unit of working capital (CA) generates greater returns than other firms. We recommend that this CA is part of the company's IC. The second is VAHU, which shows how much VA is generated from labor funds. So the relationship between VA and human capital (HC) indicates the ability of HC to create more value within the company. And the third is STVA which shows the contribution of Structural Capital (SC) in value creation. STVA measures the number of SCs required to produce a VA.

Company performance is important for management because it produces results that individuals or groups have achieved within an organization. The first is ROA, which is an indicator of the company's ability to utilize existing assets by controlling the company's financial policies. ROE measures the rate of return on shares held by the company's shareholders. The last is BOPO which shows the level of efficiency in running its business (Kasmir, 2016).

Researchers have studied how intellectual capital affects a company's financial performance. With a sample of state-owned Islamic banks in Indonesia, Rosida & Aisyah (2021) document a significant and positive relationship between IC and financial performance as proxied by ROA and ROE. Findings from Mondal & Ghosh (2012) show a positive relationship between IC and financial performance banking in India. Based on data from manufacturing sector companies listed in Korea, Xu & Wang (2018) argue that IC can positively improve the performance of companies in developing countries. Al-Musali &

Ismail (2014) also found that the performance of banking intellectual capital in Saudi Arabia was low and positively related to bank financial performance indicators, which is what drives traditional indicators of bank success. Therefore, we propose this research hypothesizes that Intellectual Capital has a positive effect on Financial Performance.

Method

This research is quantitative, from data collection data analysis to the emergence of data that uses numbers more (Samsu, 2017; Harmon et al., 2016). This study uses quantitative data, namely in the form of absolute numbers (parameters), to determine the amount (Aisyah, 2015b). The data sources in this study are quarterly financial reports and secondary data in financial statements obtained through the official websites of various BUMN Sharia Commercial Banks (BUS) in Indonesia.

The population of this study is all Islamic Commercial Banks (BUS) in Indonesia, with 14 companies. The sampling technique was the purposive sampling method. The samples in this study were 3 BUMN Sharia Commercial Banks, namely BNI Syariah banks, BRI Syariah banks, and Mandiri Syariah banks, with 72 observations based on quarterly financial reports for the 2015-2020 period. This study uses the SEM (Structural Equation Modeling) method using Partial Least Square (PLS) analysis.

The operational definitions of variables are as follows:

Table 1. Variable Operational Definition

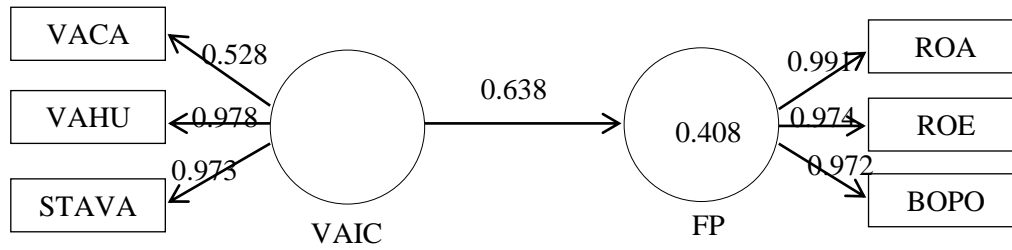
No	Latent Variable	Observed Variables	Measurement
1	Intellectual Capital (VAIC) (X)	1. Value Added of Capital Employee (VACA)	$VACA = \frac{Value\ Added}{Capital\ Employee}$
		2. Value Added of Human Capital (VAHU)	$VAHU = \frac{Value\ Added}{Human\ Capital}$
		3. Structural Capital Value Added (STVA)	$STAVA = \frac{Structural\ Capital}{Value\ Added}$
2	Financial Performance (FP) (Y)	1. Returns on Assets (ROA)	$ROA = \frac{Returns}{Assets}$
		2. Returns on Equity (ROE)	$ROE = \frac{Returns}{Equity}$
		3. Operating Expenses to Operating Income (BOPO)	$BOPO = \frac{Operating\ Expenses}{Operating\ Income}$

Source: Data processed, 2022

Results and Discussion

Structural Equation Modeling (SEM)

SEM analysis used in this study is Partial Least Square (PLS). Structural drawings to visualize the relationship between research variables are presented in the figure below:



Source: SmartPLS 3 output

Figure 1. Structural Equation Modeling (SEM)

With the PLS structural model in Figure 1 above, the writer then tests the Outer model and Inner model as follows:

1. Evaluation of the Outer Model

a. Convergent Validity

Convergent Validity to test the validity of each indicator to the construct. The assessment is that if it has a loading factor value of > 0.5 , it indicates that the indicators are valid. Here are the convergent validity values:

Table 2. Convergent Validity

	VAIC	FP
VACA	0.528	
VAHU	0.978	
STAVA	0.973	
ROA		0.991
ROE		0.974
BOPO		0.972

Source: SmartPLS 3 output

b. Discriminant Validity

The value of cross-loading can measure discriminant validity. The assessment is that if the indicator has the largest cross-loading value compared to other variables, it has fulfilled discriminant validity. The results of Discriminant Validity can be seen in Table 3 below:

Table 3. Discriminant Validity

	FP	VAIC
VACA	0.187	0.428
VAHU	0.541	0.978
STAVA	0.708	0.973
ROA	0.991	0.629
ROE	0.974	0.595
BOPO	0.972	0.649

Source: SmartPLS 3 output

c. Composite Reliability

Composite reliability is a reliability test on indicators in a construct. The assessment is that if the construct has a value > 0.7 , it meets composite reliability. The results of Composite Validity can be seen in Table 4 below:

Table 4. Composite Validity

Composite Reliability	
VAIC	0.861
FP	0.888

Source: SmartPLS 3 output

2. Evaluation of the Inner Model

a. R-Square Value

The first evaluation of the Inner Model is seen from the R-Square value or coefficient of determination. The table shows the results that the contribution of the influence given by the Intellectual Capital variable to Financial Performance is 41%, other variables outside the research variables influence the rest.

Table 5. R-Square Value

	R-Square
Financial Performance	0.408

Source: SmartPLS 3 output

b. Hypothesis testing

The research hypothesis can be accepted if the value of t arithmetic (t-statistic) > t table at an error rate of 1.96. The following is the path coefficient value (original sample estimate) and the t-count value (t-statistic) based on the Path Coefficient generated from the analysis.

Table 6. Hypothesis Test Results

	Original Sample (O)	T Statistics (O//STDEV)	P Values	Information
Intellectual Capital → Financial Performance	0.638	6.879	0.000	Significant

Sumber: Output SmartPLS 3

From the path coefficient value, it is found that VAIC/Intellectual Capital has a positive and significant influence on its financial performance (FP). Based on the original sample value, the significance value is greater than the 5% significance level (0.05) and has a T-statistic value greater than the T-table, namely 1.96. With these results, the research hypothesis, which states that Intellectual Capital has a positive and significant effect on the Company's Financial Performance, is accepted.

This study aims to analyze the effect of IC and its components on the financial performance of state-owned Islamic banks in Indonesia from 2015-to 2020. The results of the empirical analysis allow the authors to make a preliminary argument about the relationship between IC and financial performance. Findings based on the SEM model in Figure 1 show that VAIC positively affects firm performance through metrics (ROA, ROE, and BOPO), indicating that knowledge capital improves financial performance in Indonesian Islamic banking and emerging markets. Indonesian context and is consistent with most of the research findings.

The following is the valuable contribution provided by the indicators to VAIC:

Table 7. VAIC Indicator Contribution

	T Statistics (O//STDEV)
VACA <- VAIC	2.108
VAHU <- VAIC	93.301
STAVA <- VAIC	77.542

Sumber: Output SmartPLS 3

The study results in table 7 show that all indicators contribute value to the VAIC. Judging from the high value of T Statistics, the indicator that contributes the largest value is VAHU. VAHU shows how much VA is generated by spending funds on labor. The relationship between VA and human capital (HC) indicates the ability of HC to create added value within the company.

The value contribution given by the indicators to Financial Performance is as follows:

Table 8. Contribution of Financial Performance Indicators

	T Statistics (O//STDEV)
ROA <- FP	498.044
ROE <- FP	215.486
BOPO <- FP	129.289

Sumber: Output SmartPLS 3

Based on the findings in Table 8, all indicators contribute to financial performance. From the high value of T Statistics, the metric that contributes the most is ROA. ROA is one of the formulas used in the profitability ratio (Aisyah, 2015) to show the company's ability to generate profits from asset utilization. The higher the return on assets (ROA) of the company, the better in generating net income. Net profit referred to here is profit after tax (earnings after-tax), or in the financial statements, it is also known as profit for the year (earnings for the period). Total assets referred to here are owned by the company, both from its capital (equity) and its external capital, such as debt.

Most researchers use ROA as a proxy (Rosida & Aisyah, 2021; Susanti et al., 2020; Xu & Wang, 2018; Nadeem et al., 2018; Al-Musali & Ismail, 2014). The company's main purpose in carrying out business activities and shareholders (investors) in investing is to get profit or profit. Therefore, to assess the company's performance in converting its assets into profit, investors can measure based on the value of the company's return on assets (ROA) ratio. This measurement is one of the commonly used methods.

So this finding shows in the context that in Islamic banks in Indonesia, Human Capital (VAHU) affects profitability more than any other IC component. This result contradicts Simarmata & Subowo (2016) who found that employee capital (VACA) contributes more to performance and value creation than the other two IC components in Indonesian banking. However, VAHU consistently has a significant positive relationship with banking financial performance despite the differences. The results of this study are interesting because the findings are the same as for Islamic banks in Saudi Arabia Arabia (Al-Musali & Ismail, 2014) and for Islamic banks in Malaysia (Ousama & Fatima, 2015).

Conclusion

This study measures intellectual capital in Indonesian Islamic banking. In addition, this paper examines the relationship between IC and financial performance (measured by profitability). This study finds that Indonesian Islamic banks have higher VAHU than STAVA and VACA, and VAHU seems to

contribute more to Islamic bank earnings. Overall, the results show that VAIC and its components affect the profitability of Islamic banks. This study only uses profitability because it is the main measure of financial performance. Therefore, further research on Islamic banking IC should consider that VAIC and its components can also affect other financial performance indicators. Nonetheless, the results of this study can be considered useful for Islamic banks, with more efforts that could be made to improve the IC efficiency of Islamic banks, potentially increasing the profitability of these banks. Efforts to strengthen IC efficiency will be profitable and allow Islamic banks to remain competitive. Thus, the findings of this study require further research in this area.

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