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Management Science Letters 9 (2019) 1999-2008 Contents lists available at GrowingScience Management Science Letters homepage: www.GrowingScience.com/msl Intellectual capital performance of Islamic banks in Indonesia: Towards competitive advantages Irma Setyawatia*, Tri Widyastutia, Adelina Suryatia, Nira Haryatie Hartanib aUniversitas Bhayangkara Jakarta Raya, Indonesia bUniversiti Utara Malaysia C H R O N I C L E A B S T R A C T

Introduction _ The purpose of this research is to analyze the relationship between intellectual capital and financial
performance of eleven Islamic banks in Indonesia over the period 2013-2016, using the value-
added intellectual capital model, utilizing panel data with seemingly unrelated regression analysis.
The results of this research indicate that structural capital efficiency had a significant influence on
return on assets, and asset growth.

Thus, for Islamic banks in Indonesia, all non-human assets,
including the standard operating procedures, storage of all data, structural procedures, governance
and policies for decision-making had significant effects on return on assets, and asset growth. Is-
lamic banks in Indonesia can achieve competitive advantages in terms of return on assets, and asset
growth, because they have positive value added reflected in intellectual capital value consisting of
human capital efficiency, structural capital efficiency and capital employee efficiency.

Indonesia has been dealing with changes in the financial system since 1990, especially in facing the
political demands of Islamic scholars and organizations. The first Islamic cooperative was founded in
1990, then in 1991, followed with village banks and Islamic banks in 1992 (Abdul-Majid et al., 2010).

In 1998, both conventional banks and Islamic banks were given official recognition of the existence of
a dual banking system by Bank Indonesia, as part of new bank activities (Thompson, 2008). Even though 26 Islamic banks have been established in Indonesia for 26 years and is supported by majority of the
Muslim population, Islamic banks in Indonesia have not shown progress. The total assets of Islamic
banks are only around 5% rather than to the total assets of the banking industry in Indonesia (Setyawati
et al.,

2015). The low total assets in banks with Islamic principles in Indonesia might be caused by internal and exter-
nal factors. Internal factors include limitations in channeling funds, limited bank products, and income
contribution from non-operational activities (other than funding activities), while the lack of public un-
derstanding of Islamic banks might be the external factor.

The Murabaha concept is the most popular
term in Islamic microfinance institutions and is only understood by 26.85% of its customers. Customers * Corresponding author. Tel: +62811847114 E-mail address: irma.setyawati@ubharajaya.ac.id (I. Setyawati) © 2019 by the authors; licensee Growing Science, Canada doi: 10.5267/j.msl.2019.7.006

2000 who do not understand the concept of Mudaraba are 80.72%, and the same pattern also applies to the
concept of Musharakah.

While for Ijarah products, only a small number of customers understand the concept, indicating that the majority of customers do not recognize Islamic bank products (Masyita &
Ahmed, 2011). Considering such conditions, it is necessary for Islamic banks to achieve competitive advantages, be-
cause they have to compete with both fellow Islamic banks and conventional banks. This is important to
fulfill the wishes, needs, and expectations of stakeholders and make the organization's performance im-
prove continuously.

To achieve sustainable improvement, it is necessary to increase effectiveness and efficiency to achieve the ability to design, create, manage and develop organizational processes (Pulic,
2016; Suroso et al., 2017). During the industrial era, value creation was done through mass production of goods, which meant value
added for an organization in the form of physical creation.

Thus, financial capital played a decisive role.
Value creation depends on quantity, hence a large number of employees involved in low-wage jobs,
trying to produce as many items as possible. Supposedly, the value created does not depend on increasing
goods and services, but the content of knowledge is included in goods and services (Rehman et al.,
2012).

Value is not created by the quantity of goods and services, but through the quality contributed by employees, such as knowledge in designing, new software programs, or creating new medicine. People are the main carriers of knowledge. Employees are treated as investments, such as investments made in factories and machinery to create value during the industrial economy.

Investing in employees means investing in the main drivers of the contemporary economy. Intangible assets, including intellectual capital are sources of economic value and corporate wealth, in addition to the products produced by companies (María Díez

et al., 2010; Mondal & Ghosh, 2012). Intellectual capital is highly trusted in creating greater value for the company (Wang & Chang, 2005).

To achieve this state of business, it is only possible that the company increases its competitiveness con-
tinuously and upholds the knowledge assets of organizations that shape intellectual capital. Thus, meas-
uring and managing intellectual capital is very important and needed in improving organizational per-
formance and the process of creating dynamic value (María Díez et al., 2010; Pulic, 2016; Suroso et al.,
2017). In a knowledge-based economy, the most strategic asset is intellectual capital.

Intellectual capital
is not explicitly listed on the balance sheet, but has a positive impact on its performance and success
(Gan & Saleh, 2008; Hajeb et al. , 2015; Maditinos et al., 2011; Rehman et al., 2011). In the future,
intellectual capital will be able to create value and improve company performance (Black & Khanna,
2007).

Various methods have been developed to measure intellectual capital, because it has an impact on value creation and improve financial performance. Indicators for measuring intellectual capital consist of human resource skills, completeness of data, standard operating procedures, organizational structure and firm value in financial markets (Lu et al., 2014; Maditinos et al., 2011).

The latest research analyzes the suitability of intellectual capital and company financial performance using value-added intellectual capital models (VAIC) (Joshi et al., 2013; La'lbar et al., 2012; Pulic, 2016; Cater & Cater, 2009). VAIC is easy to implement and is an effective model for measuring the performance of a company's intellectual capital and making comparisons between companies (Piluso, 2013; Rehman et al., 2011; Ulum et al., 2014).

The research objective is to analyze the relationship between intellectual capital and financial perfor-
mance using the VAIC model of eleven Islamic banks in Indonesia during 2012-2014, using panel data
regression. Whereas previous researches did not analyze the efficiency of human

resources, structural

2001 capital, employee capital and added value, we aim to fill this gap and contribute to the literature in this study.

Therefore, it can be said that this research is a preliminary study to explore the relationship between the efficiency of intellectual capital added value and financial performance by combining all Islamic banks in Indonesia. 2. Literature Review 2.1. Intellectual Capital Intellectual capital is the skills and creativity of employees that can be improved by involving employees
in various training programs, thereby increasing their abilities and competencies which ultimately in-
creases organizational efficiency.

Efficient employees will produce a more efficient organization, and in
turn increase the efficiency of value added. All non-human assets, which consist of standard operating
procedures, storage of all data, structural procedures, governance, policies, copyright, patents are used
for decision making, which is the core of structural capital (Inkinen, 2015).

One of the determinants of
the profits obtained by the company is the capital invested in the business, with an indicator of the value
of return on investment and is a measure of capital employed. Capital employed is the sum of current
and fixed assets used in business and the sum of fixed assets to working capital or by reducing current
liabilities from total assets. The company invests by using capital efficiently.

Therefore, the efficiency
of capital used is the main determinant of financial performance and the stock market (Lalbar et al.,
2012). 2.2. Value Added Intellectual Coefficient (VAIC™) Value Added Intellectual Coefficient (VAIC™) is a very important approach for creating corporate value. VAIC™ includes Human Capital Efficiency (HCE), Structural Capital Efficiency (SCE) and Capital Employed Efficiency (CEE).

This methodology is often used by many researchers (Gan & Saleh, 2008; Ismail & Nik Muhammad, 2009; Joshi et al., 2010; Maditinos et al., 2011; Mondal & Ghosh, 2012; Ozkan et al., 2016; Rehman et al., 2012; Rehman et al., 2011; Salman et al., 2012; Suroso et al., 2017; Ting & Lean, 2009; Ulum et al., 2014; Zehri et al., 2012).

VAIC™ is used as a measure to evaluate the efficiency of a company with the following formula:

?????? = ??? + ??? + ??? ??? = ?? _??
??

??? = _?? ??? = _??

?? = ?????? - ????? ?? Chen Goh (2005) used VAICTM in his research and showed that almost all banks have relatively higher
human resource efficiency than the structural and capital efficiency.

Wei Kiong Ting and Hooi Lean
(2009) examined the performance of intellectual capital and its relationship with financial performance
in the financial services sector in Malaysia from 1999 to 2007. The results of this study showed a positive
association between VAICTM and return on assets (ROA). In addition, the three components of VAICTM
could explained ROA by 71.6 percent.

Mavridis (2005) conducted a study for the effect of physical
capital and human capital on VAICTM in the banking sector in Greece. The results revealed that physical
capital and human capital had a normal, strong, significant effect on ROA and the three components of
VAICTM had positive correlations with ROA, but human capital had a relatively much higher influence,
and concluded that intellectual capitalists or workers' knowledge very strongly contributes to the success
of the company and especially to added value.

In his research, Puntillo (2009) conducted a research on Italian banks for the period 2005- 2007, and the
result was that the value of intellectual capital influenced business performance, using ROI and ROA as

2002 the independent variable. Intellectual capital in the study consisted of the value ==of human capital and structural capital== efficiency. 2.3.

Theoretical framework Theoretical framework is described in Fig 1.

Human Capital Efficiency Structural Capital
Efficiency Capital Employed
Efficiency 3. Hypotheses Development _ VAIC TM Fig 1. Theoretical Framework _ Return on Asset Value
Added Assets
Growth

Several studies have found an association between VAIC and financial performance models, indicating that the intellectual capital affects the rate of profit, production and allocation efficiency, and earnings per share (Ozkan et al., 2016; Rehman et al.,

2011), and highlights positive relationships between intellectual capital and investor capital gains (Joshi et al., 2013). Many studies exploring the relationship between financial ratios and intellectual capital show that there
is a direct relationship between two variables (Joshi et al., 2013). A number of researches have suggested
that the efficiency of human resources have a relationship with the market value of the company (Chen
et al.,

2005; Gan & Saleh, 2008; Hajeb et al., 2015; Joshi et al., 2010; Maditinos et al., 2011; Ozkan et
al., 2016; Rehman et al., 2012; Salman et al., 2012; Ting & Lean, 2009; Zehri et al., 2012). Thus Ho: There is no competitive advantage when Islamic banks are able to increase their performance
  through intellectual capital.

Ha: There is competitive advantage when Islamic banks are able to increase their performance through
  intellectual capital. 4. Research Methodology 4.1. Data collection Intellectual capital and financial performance data were taken from the publication from 2013 to 2016, using the monthly data of eleven Islamic banks in Indonesia. Data sources came from the website of Bank Indonesia and the Financial Services Authority. 4.2.

Econometric Specification The estimation in this study uses a panel data model (Wooldridge, 2009). To test the relationship between intellectual capital and the performance of Islamic banks, seemingly unrelated regression (SUR) is used for Eq. (1) and Eq. (2), while Eq. (3) uses a simple linear regression equation.

2003 Dummy variable is added to the data of the Islamic banks that have competitive advantages and ones
with no competitive advantages. Therefore, this study uses the dummy interception variable, as there are
many values of the intercept term differ between the two categories (Gujarati & Porter, 2010). Data is
processed with the 15th version of Stata statistical program.

The equations used are as follows: $????? = ?? + ??????? + ??????? + ??????? + ?????? + ????$ (1) $???? = ?? + ??????? + ??????? + ??????? + ?????? + ????$ (2) $???? = ?? + ???????? ?? + ????$ (3) where Eqs. (1-3) represent multiple regression estimations. By using panel data estimation, it is determined to use a fixed effect rather than random effects approach so that ordinary least square (OLS), such as heteroscedasticity, autocorrelation and multicollinearity are implemented. The selection of panel data models uses the Hausman test.

In addition, the number of individuals (N) is smaller than the amount of research time (T), thus being chosen to use a fixed effect (Gujarati & Porter, 2010). The specific criteria of each Islamic bank can be indicated by a fixed effect approach. Table 1 below shows the variables used as proxies of intellectual capital and the variables that influence them.

In the table, there are expected notations and effects from each determinant as reflected in the literature. Table 1 Operationalization of Variables used in the Regression Equation

VARIABLE DEPENDENT VARIABLE Return on asset (ROA) Asset Growth (AG)
INDEPENDENT VARIABLE Human capital efficiency (HCE) Structural capital efficiency
(SCE) Capital employed efficiency
(CEE) Dummy variable Value added
 (VA) Value added intellectual coefficient (VAICTM) _Operationalization of the ROA and
AG Ratio used to measure the results of an investment Change in total assets Skills,
abilities, knowledge and experience of employees when leaving the company
Knowledge owned by the company, including standard operat-
ing procedures, storage of all data, structural procedures, gov-
ernance, policies, norms, and culture Company's investment in the assets consisting of
fixed assets and working capital A dummy variable that takes a value of 0 for a bank that
has a
competitive advantage (seen from a positive VA score) and a
dummy variable that takes a value of 1 for a bank that does not
have a competitive advantage (seen from a negative VA score)
Return of the resources (human and structural capital) used by
the company The efficiency of corporate value creation, which consists of human capital
efficiency, structural capital efficiency and cap-
ital employed efficiency _HYPOTHESES WITH ROA AND AG NA + + + + / - NA NA

5. Result and discussion 5.1. Selection of the Data Panel Estimation Model The selection of panel data models uses fixed effects, the Hausman test.

In addition, the amount of research time (T) is greater than the number of individuals (N), so the use of fix effect model is more appropriate (Gujarati & Porter, 2010). By using the panel fixed effect model, it will show the individual effects of each Islamic bank. 5.2. Multicollinearity Test Multicollinearity test is determined by the correlation coefficient between independent variables.

If the
partial correlation value between the independent variables is greater than 0.8, it means that there is
multicollinearity between the independent variables (Wooldridge, 2009). Table 2 shows the correlation

2004 coefficient between variables, where the partial value of the correlation between the independent variables is smaller than 0.8, meaning there is no multicollinearity. Table 2 Correlation Coefficient between Variables ROA AG HCE SCE CEE DUM ROA 1.0000 AG 0.2663 1.0000 HCE -0.0590 -0.0501 1.0000 SCE 0.0034 -0.1394 0.1556 1.0000 CEE -0.0660 -0.0621 0.7830 0.2195 1.0000 DUM -0.1009 -0.0924 0.7271 0.3144 0.7458 1.0000 5.3.

Heteroscedasticity Test Heteroscedasticity tests were performed using Bruesch-Pagan Lagrange Multiplier (BP-LM test) and Likelihood Ratio (LR test) test (Gujarati & Porter, 2010). If the p-value is less than 0.05, that means there is no element of heteroscedasticity in the model. Table 3 shows that the p-value is less than 0.05, which means that the structural variance model is not heteroscedastic.

Table 3 Heteroscedasticity Test Breusch-Pagan Lagrange Multiplier Panel Heteroscedasticity Test Ho: Panel Homoscedasticity - Ha: Panel Heteroscedasticity Lagrange Multiplier LM Test = 372.68815 Degrees of Freedom = 10.0 P-Value > Chi2(10) = 0.00000 Greene Likelihood Ratio Panel Heteroscedasticity Test Ho: Panel Homoscedasticity - Ha: Panel Heteroscedasticity Likelihood Ratio LR Test = 321.92827 Degrees of Freedom = 10.0 P-Value > Chi2(10) = 0.00000 5.4.

Autocorrelation Test For the autocorrelation test using Wooldridge Test, if the p-value is less than 0.05, there is no autocorrelation. Table 4 shows that the p-value less than 0.05, which indicates no autocorrelation. Table 4 Autocorrelation Test Wooldridge test for autocorrelation in panel data H0: no first order autocorrelation F(1, 10) = 26.284 Prob > F = 0.0004 5.5.

Estimation of research result Table 5 reveals the empirical relationships of all the proposed research equations. Basically, we have
three equations of ROA, AG and VAICTM. In the first equation, the dependent variable in the equation
is illustrated in the global test through the F statistical test, with p-value <0.05.

The R square is equal to 0.9025 or 90.25%. In the second equation, the dependent variable in the equation is illustrated in the
global test through the F statistical test, with p-value <0.05. The R square is 0.9340 or 93.4%. While the
third equation, the F statistical test states that this equation is significant because p-value < 0.05, so the
equation can be accepted in describing the independent variables. With R square of 0.9360 or 93.6%.

Table 5 Results of Research Estimates Equation 1
ROA _ 2005 Equation 2 Equation 3 AG VA

Variable Constant

HCE SCE

CEE

DUM VAICTM

R2 F (prob) _as the dependent variable

 (n = 528) 0.008***

 0.0002 49.925***

 -0.0002 -0.0128** 0.903 0.000 _as the dependent variable (n

 = 528) 0.044***

 -0.0038 -125.6915*

 0.0023 -0.0263 0.934 0.000 _as the dependent variable (n

 = 528) -0.386** 1.086***

 0.936 0.000

Based on Table 5, Eq. (1) indicates that SCE has a positive and significant influence on ROA.

The results of this
study are consistent with research conducted by several researchers (Lipunga, 2015; Lu et al., 2014; Sharabati et
al., 2010; Suroso et al., 2017). Similarly, in equation 2, SCE has a significant influence on AG. It means that all
non-human assets, including non-human assets, which consist of standard operating procedures, storage of all
data, structural procedures, governance, policies, copyright, patents are needed for decision making have a signif-
icant influence on ROA and AG.

While in the third equation, VAICTM significantly affects VA, where VAICTM
consists of components of HCE, SCE and CEE, which means that these three components will create significant
value added for Islamic banks in Indonesia. In this study, Islamic banks that can create value added, will be able
to gain a competitive advantage for the sustainability of their business.

Table 3 and Table 4 show the eleventh
Islamic banks that perform well (shown by ROA and AG) when they can create competitive advantages. Table 6
shows that only Bank BNI Syariah Indonesia has a negative ROA, because it has a negative VA, indicating that
there are ten Islamic banks in Indonesia which have a competitive advantage. While looking at the number of
AGs, all Islamic banks in Indonesia have a competitive advantage (Table 7).

The rating of competitive advantage,
judging from the achievement of ROA and AG, is presented in Table 8. Considering the achievement of ROA, the most efficient Islamic banks to achieve competitive advantages (posi-
tive VA score) is Bank BCA Syariah (ROA = 2.74%) followed by Bank Victoria Syariah (ROA = 1.97%) and
Bank Bukopin Syariah (ROA = 1.97%) = 1.67%) and Bank BNI Syariah (ROA = -0.017%) is the most inefficient.

ROA = 2.74% indicates that every rupiah of assets owned by Bank BCA Syariah will generate a return of IDR 2.74, where in this study ROA is influenced by HCE, SCE, CEE, with positive VA score. By building up the
resources they have, the services produced by Islamic banks will generate high profits, provided that Islamic banks
have better resources than their competitors (conventional banks), making it impossible for competitors to repli-
cate the same products at the same cost (Setyawati, 2017).

While considering the achievement of AG, Islamic
banks with the best growth for achieving a competitive advantage (positive VA score) are Bank Mega Syariah
(AG = 8.46%) followed by Bank BNI Syariah (AG = 8.08%) and Bank Syariah Mandiri (AG = 6.31%). The bank
with the lowest asset growth is Bank BCA Syariah (AG = 1.02%). AG = 8.46% shows that the assets of Bank
Islamic banks increase by 8.86% per year, whereas in this study the AG is influenced by HCE, SCE, CEE, with
positive VA score.

Increased assets show that assets owned by Islamic banks are increasing, from both the source
and the use of funds. 6. Conclusion and Recommendations VAIC™ is an important method for measuring the performance of Islamic banks' intellectual capital. Based on the two research equations, SCE had a significant effect on ROA and AG.

Thus, for banks with sharia principles in Indonesia, all non-human assets, including standard operating procedures, storage of all data, structural procedures, governance, policies, copyright, patents are important for decision making and they have significant influence on ROA and AG. Basically, Islamic banks in Indonesia can achieve competitive advantages in terms of ROA and AG. By using a dummy variable, we see a positive value added.

The conclusion is reflected in Eq. (3), where VAICTM consisting of HCE, SCE and CEE has a positive and significant influence on VA.

2006 Table 6 Return on Assets of banks Banks in Indonesia which have a Competitive Advantage

Banks Bank Jabar Syariah

Bank BCA Syariah

Bank Victoria Syariah

May Bank Syariah Bank Panin Syariah

Bank BNI Syariah Bank Bukopin Syariah Bank Mega Syariah Bank Muamalat Indonesia

Bank BRI Syariah Bank Syariah Mandiri _Individual ef-

fect 0.0085 0.0190 0.0113 -0.0055 -0.0062 -0.0102 0.0082 0.0024 -0.0015 0.0035 -0.0045 _Coefficient re-

Constant gression of 0.0085 0.0002 0.0274 0.0002 0.0197 0.0002 0.0029 0.0002 0.0023 0.0002 -0.0017 0.0002 0.0167 0.0002 0.0108 0.0002 0.0069 0.0002 0.0119 0.0002 0.0040 0.0002 _Coefficient regres- Coefficient re- sion of SCE gression of CEE 49.9252 -0.0002 49.9252 -0.0002 49.9252 -0.0002 49.9252 -0.0002 49.9252 -0.0002 49.9252 -0.0002 49.9252 -0.0002 49.9252 -0.0002 49.9252 -0.0002 49.9252 -0.0002 49.9252 -0.0002 _Coefficient re- Score ROA if Score ROA gression of DUM=0 if DUM=1 -0.0128 0.0085 -0.0043 -0.0128 0.0274 0.0147 -0.0128 0.0197 0.0070 -0.0128 0.0029 -0.0099 -0.0128 0.0023 -0.0105 -0.0128 -0.0017 -0.0145 -0.0128 0.0167 0.0039 -0.0128 0.0108 -0.0020 -0.0128 0.0069 -0.0058 -0.0128 0.0119 -0.0009 -0.0128 0.0040 -0.0088

Table 7

Assets Growth of Islamic Bank in Indonesia, which have a competitive advantage

Banks	_Individual effect Constant	Coefficient regression of HCE	Coefficient regression of SCE	Coefficient regression of CEE	DUMMY	_Score AG if DUM=0	Score AG if DUM=1
Bank Jabar Syariah	0.044	0.044	-0.003	-125.692	0.002	-0.026	0.044	0.018
Bank BCA Syariah	0.034	0.010	-0.003	-125.692	0.002	-0.026	0.010	-0.016
Bank Victoria Syariah	-0.013	0.057	-0.003	-125.692	0.002	-0.026	0.057	0.031
May Bank Syariah	-0.009	0.054	-0.003	-125.692	0.002	-0.026	0.054	0.027
Bank Panin Syariah	-0.016	0.061	-0.003	-125.692	0.002	-0.026	0.061	0.034
Bank BNI Syariah	-0.036	0.081	-0.003	-125.692	0.002	-0.026	0.081	0.054
Bank Bukopin Syariah	0.007	0.037	-0.003	-125.692	0.002	-0.026	0.037	0.011
Bank Mega Syariah	-0.040	0.085	-0.003	-125.692	0.002	-0.026	0.085	0.058
Bank Muamalat Indonesia	-0.016	0.061	-0.003	-125.692	0.002	-0.026	0.061	0.035
Bank BRI Syariah	0.016	0.028	-0.003	-125.692	0.002	-0.026	0.028	0.002
Bank Syariah Mandiri	-0.019	0.063	-0.003	-125.692	0.002	-0.026	0.063	0.037

/ Management Science Letters 9 (2019) 2007 Table 8 Ranking of competitive advantages of Islamic Banks in Indonesia Islamic Bank ROA Ranking AG Ranking Bank BCA Syariah 0.0274 1 0.0102 11 Bank Victoria Syariah 0.0197 2 0.0568 6 Bank Bukopin Syariah 0.0167 3 0.0371 9 Bank BRI Syariah 0.0119 4 0.0282 10 Bank Mega Syariah 0.0108 5 0.0846 1 Bank Jabar Syariah 0.0085 6 0.0443 8 Bank Muamalat Indonesia 0.0069 7 0.0608 4 Bank Syariah Mandiri 0.0040 8 0.0631 3 May Bank Syariah 0.0029 9 0.0536 7 Bank Panin Syariah 0.0023 10 0.0607 5 Bank BNI Syariah -0.0017 11 0.0808 2 The main limitation of this study is the use of intellectual capital as a measurement model, which has been widely
discussed in many previous studies.

Another limitation of this study is the use of data, which is only a data of
Islamic banks, while that of commercial banks are not used. Therefore, this study cannot determine the perfor-
mance of each bank category. Therefore, future research can be done with different intellectual capital measure-
ment models and various bank data.

However, the results of this study can explain the importance of intellectual
capital in increasing profitability and managing Islamic banks to achieve competitive advantages. Therefore, it
can be said that developing performance on the basis of intellectual capital is very important, as important as
physical investment. Especially for banks, it must be recognized as one of the important investments related to
the use of reliable human resources, standard operating procedures, storage of all data, structural procedures,
governance, policies, copyright, patents are needed for decision making, to encourage sustainable bank growth,
along with other factors.

Another implication of this research is that it helps the Indonesian banking industry, especially for Islamic banks and the regulators, also in overcoming factors affecting bank financial performance,
and in taking actions to improve their value creation References Abdul-Majid, M., Saal, D. S., & Battisti, G. (2010). Efficiency in Islamic and conventional banking: an interna-
 tional comparison. Journal of Productivity Analysis, 34(1), 25-43. Black, B. S., & Khanna, V. S. (2007).

Can corporate governance reforms increase firm market values? Event
  study evidence from India. Journal of Empirical Legal Studies, 4(4), 749-796. Chen, M. C., Cheng, S. J., & Hwang, Y. (2005). An empirical investigation of the relationship between intellectual
  capital and firms' market value and financial performance. Journal of Intellectual Capital, 6(2), 159-176. Chen Goh, P. (2005). Intellectual capital performance of commercial banks in Malaysia.

Journal of In-
  tellectual Capital, 6(3), 385-396. Cater, T., & Cater, B. (2009). (In) tangible resources as antecedents of a company's competitive advantage and
  performance. Journal for East European Management Studies, 186-209. Gan, K., & Saleh, Z. (2008). Intellectual capital and corporate performance of technology-intensive companies:
  Malaysia evidence.

Asian Journal of Business and Accounting, 1(1), 113-130. Gujarati, D., & Porter, D. (2010). Econometría, Mexico DF: McGRAW-HILL. Hajeb, H. R., Moghaddam, A. G., & Alipour, S. (2015). An investigation of intellectual capital impact on com-
  panies' market value and financial performance. Academic Journal of Accounting and Economic Researches,
  4(3), 131-139. Inkinen, H. (2015). Review of empirical research on intellectual capital and firm performance.

Journal of Intel-
  lectual capital, 16(3), 518-565. Joshi, M., Cahill, D., & Sidhu, J. (2010). Intellectual capital performance in the banking sector: An assessment of
  Australian owned banks. Journal of Human Resource Costing & Accounting, 14(2), 151-170.
Joshi, M., Cahill, D., Sidhu, J., & Kansal, M. (2013). Intellectual capital and financial performance: an evaluation
  of the Australian financial sector.

Journal of intellectual capital, 14(2), 264-285. Lalbar, A., Ghaemmaghami, M., & Farshidpoor, A. (2012). The effect of efficiency coefficient of the intellectual
  capital on increase of market value of firms. Journal of Basic and Applied Scientific Research, 2(5), 2012. Lipunga, A. M. (2014).

Determinants of profitability of listed commercial banks in developing countries:

Evidence from Malawi. Research Journal of Finance and Accounting, 5(6), 41-49. Lu, W. M., Wang, W. K., & Kweh, Q. L. (2014). Intellectual capital and performance in the Chinese life insurance
industry. Omega, 42(1), 65-74.

2008 Maditinos, D., Chatzoudes, D., Tsairidis, C., & Theriou, G. (2011). The impact of intellectual capital on firms'
  market value and financial performance.

Journal of intellectual capital, 12(1), 132-151.
Masyita, D., & Ahmed, H. (2011, December). Why is growth of Islamic microfinance lower than conventional?
  A comparative study of the preferences and perceptions of the clients of Islamic and conventional microfinance
  institutions' in Indonesia. In 8th International Conference on Islamic Economics and Finance, pp. 1â (Vol.
  22). Mavridis, D. G. (2005).

Intellectual capital performance determinants and globalization status of Greek
  listed firms. Journal of Intellectual Capital, 6(1), 127-140. María Díez, J., Lizet Ochoa, M., Begona Prieto, M., & Santidrián, A. (2010). Intellectual capital and value creation
  in Spanish firms. Journal of Intellectual Capital, 11(3), 348-367. Mondal, A., & Ghosh, S. K. (2012). Intellectual capital and financial performance of Indian banks.

Journal of
  Intellectual Capital, 13(4), 515-530. Muhammad, N. M. N., & Ismail, M. K. A. (2009). Intellectual capital efficiency and firm's performance:
  Study on Malaysian financial sectors. International Journal of Economics and Finance, 1(2), 206-
  212. Ozkan, N., Cakan, S., & Kayacan, M. (2017). Intellectual capital and financial performance: A study of the Turk-
  ish Banking Sector.

Borsa Istanbul Review, 17(3), 190-198. Piluso, F. (2013). Intangible Assets and Profitability in the Italian Banking Industry: Which Relationship?. Eura-
  sian Journal of Business and Management, 1(2), 1-15. Pulic, A. (2008). The principles of intellectual capital efficiency-A brief description. Croatian Intellectual Capital
  Center, Zagreb, 76. Puntillo, P. (2009). Intellectual capital and business performance. Evidence from Italian banking indus-
  try.

Electronic Journal of Corporate Finance, 4(12), 97-115. Rehman, W. U., Rehman, H. U., Usman, M., & Asghar, N. (2012). A Link of intellectual capital performance
  with corporate performance: comparative study from banking sector in Pakistan. International Journal of Busi-

ness and Social Science, 3(12), 313-321. Rehman, W. U., Chaudhary, A. R., Rehman, H. U., & Zahid, A. (2011).

Intellectual capital performance and its
  impact on corporate performance: An empirical evidence from MODARABA sector of Pakistan. Australian
  journal of business and management research, 1(5), 8. Salman, R. T., Mansor, M., Babatunde, A. D., & Tayib, M. (2012). Impact of intellectual capital on return on asset in Nigerian manufacturing companies. Interdisciplinary journal of research in business, 2(4), 21-30.

Setyawati, I. R. M. A., Kartini, D., Rachman, S., & Febrian, E. (2015). Assessing the Islamic banking financial
  performance in Indonesia. International Journal of Education and Research, 3(10), 233-248. Sharabati, A. A. A., Naji Jawad, S., & Bontis, N. (2010). Intellectual capital and business performance
  in the pharmaceutical sector of Jordan. Management decision, 48(1), 105-131. Suroso, S., Widyastuti, T., Salim, M.

N., & Setyawati, I. (2017). Intellectual Capital and Corporate Governance
  in Financial Performance Indonesia Islamic Banking. International Journal of Economics and Financial Is-
  sues, 7(4), 96-103. Thompson, E. C. (2012). The world beyond the nation in Southeast Asian museums. SOJOURN: Journal of Social
  Issues in Southeast Asia, 27(1), 54-83. Wei Kiong Ting, I., & Hooi Lean, H. (2009).

Intellectual capital performance of financial institutions in Malay-
  sia. Journal of Intellectual capital, 10(4), 588-599. Ulum, I., Ghozali, I., & Purwanto, A. (2014). Intellectual capital performance of Indonesian banking sector: a
  modified VAIC (M-VAIC) perspective. International Journal of Finance & Accounting, 6(2), 103-123.
Wang, W. Y., & Chang, C. (2005).

Intellectual capital and performance in causal models: Evidence from the
  information technology industry in Taiwan. Journal of intellectual capital, 6(2), 222-236. Wooldridge, J. M. (2009). On estimating firm-level production functions using proxy variables to control
  for unobservables. Economics Letters, 104(3), 112-114. Zehri, Ic., Abdelbaki, A., & Bouabdellah, N. (2012).

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   tralian Journal of Business and Management Research, 2(8), 56-62. © 2019 by the
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