

Analysis of the rate of growth of intellectual capital ability in predicting present and future profitability of Sharia commercial banks in Indonesia

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Abstract

Purpose – This research examines the growth of intellectual assets in Islamic banking (IB) in Indonesia and intellectual capital (IC) growth to predict Islamic commercial banks' (ICBs) current and future profitability.

Design/methodology/approach – This research is a quantitative descriptive research, a study that emphasizes theory testing by measuring research variables with numbers that aim to test the hypothesis. The object of this research is sharia banking companies listed on the Indonesia Stock Exchange during 2014–2019. This study takes IB companies as an object because IB has its types of relatively different transactions from conventional banking or commercial banks.

Findings – The results show that the rate of growth of IC (ROGIC) for ICBs in Indonesia can predict the current year's financial performance but has not been able to predict the profitability of the future year.

Originality/value – This study examines the predictive value rate of IC return in predicting current and next three years' earnings, which previous researchers have never done.

Keywords Financial performance, Islamic bank predictive value, Rate of growth of intellectual capital, Sharia commercial banks

Paper type Research paper

Introduction

The business competition that has increased sharply in this era of globalization requires companies to improve their performance. The increasingly tight business competition



encourages management to pay more attention to at least two important things: excellence and values. Performance appraisal is essential in a company, including the banking industry. Usually, companies also use this system in determining employee rewards and salary levels according to their skills (Wahyuni and Pujiharto, 2015). In addition, the company's performance is measured as consideration for forming a policy and evaluating policies in the past and then used as a basis for determining future policies (Wahyuni and Pujiharto, 2018). Meanwhile, for investors and potential investors, performance information can be used to assess the company's prospects in the future so that decision-making can be done appropriately.

Indonesia is a Muslim country with great potential for the Islamic banking (IB) industry (Khasanah and Wicaksono, 2021). The need for information on IBs' financial performance is a demand from the increasingly rapid competition. Banks need to improve their non-financial and financial performance to maintain the confidence of capital owners, investors and customers who invest and take advantage of their services (Mollah *et al.*, 2017). So far, IBs have improved their financial performance by managing funds by providing optimal profit sharing for their owners and customers. However, the more relevant information is needed to measure the assets contained therein, such as tangible and intangible assets, to reveal company value (Hanafizadeh *et al.*, 2015; Ningrum and Rahardjo, 2012). Based on the resource-based theory (RBT), if the company can maximize its resources, it will have a competitive advantage and competitiveness against its competitors (Krivorotov *et al.*, 2020; Prasetya and Mutmainah, 2011). Companies need to convey information to users of financial reports regarding their value added (VA). The added value includes innovation, inventions, employee skills and good consumer relationships, often known as knowledge capital or intellectual capital (IC) (Rindova *et al.*, 2010; Scherngell *et al.*, 2014).

Along with the emergence of RBT, academics, companies and investors have become interested in criticizing IC issues. Capital or intellectual property can create company property (increased financial performance). In Indonesia, IC began to develop after passing Financial Accounting Standard Guidelines (PSAK) No. 19 regarding intangible assets. Therefore, IC should be of particular concern, even if this is not stated explicitly. According to PSAK No. 19 revision 2009, businesses engaged in goods and services still require high intellectuals for administrative and management purposes (Ikatan Akuntansi Indonesia, 2009). The problem is how measuring IC directly cannot be done correctly. Pulic (2000, 2004) proposes assessing the measured value added intellectual capital (VAIC) efficiency due to the company's intellectual ability. Further development, VAIC is widely used in business and academia to measure IC.

VA is created from an economic basis. However, creating a VA also requires material and financial physical capital (Pulic, 2004). This capital is in monetary funds and potential capital represented by employees with all the potential and inherent abilities. The intellectual abilities called VAIC show how the bank has utilized these two things efficiently. Firer and Mitchell Williams (2003) stated that banking resources are one of the main components of VAIC. Namely, the relationship between VA and capital employed (CE), which is called VACE, and the relationship between VA with human capital (HC) is called VAHC. Also, the relationship between VA and structural capital (SC) is called STVA. The three components will form the VAIC value.

Researchers and academics usually used this measurement to measure the IC of established companies and banks. Ulum (2013) proposes a measure of IC for IB, arguing that IB characteristics differ from conventional banking. The intellectual coefficient sizes submitted by Ulum (2013) are called IB-VAIC. Based on the research by Ulum (2013) and Wahyuni and Pujiharto (2015), which tests the performance of IB-VAIC on the profitability of Islamic commercial banks for the 2010–2015 period. Previous studies showed that IC affected Islamic commercial banks' (ICBs) performance. Based on research conducted by Wahyuni and Pujiharto (2015), profit

becomes crucial as the basis for profit-sharing in production sharing contracts, so this research is important. The research objectives are (1) to measure the rate of growth of IB IC's (ROG-IB-IC) performance for the period 2014–2019; (2) to test whether the performance of the IC rate of growth as measured by IB-VAIC can predict the IBs' current and future financial performance which can affect the accuracy of profit predictions by users of financial statements. In contrast to previous studies, this study measured the performance of IB-IC for a relatively long period (2014–2019) to see the development of IB-IC performance over the last 6 years. This study also examines the predictive value rate of IC return in predicting current and next three years' earnings, which previous researchers have never done.

Literature review and hypothesis development

State of art

Resource-based theory. RBT provides a fundamental framework for describing and forecasting what underpins competitive advantages and company success (Barney *et al.*, 2011). Wernerfelt's (1984) study was one of the first to impact this hypothesis substantially. Furthermore, Barney's research led to the enrichment and improvement of this theory. Barney (1991) then expands on the core notions and defines the characteristics of resources and competitive advantage.

According to RBT, an organization's capacity to manage and utilize its resources effectively will give a competitive edge in creating value for the firm (Wernerfelt, 1984). According to RBT, sustainable competitive advantage is closely related to the organization's capacity to maintain unique, uncommon and irreplaceable resources and successfully use and deploy these resources (Barney, 1991). According to Barney (1991), valuable resources are those that cannot be copied or substituted totally without great effort. If the business can keep these circumstances going, the resources can generate above-average returns and provide solid performance for the firm.

The qualities of valuable, rare, imperfectly imitable and organization (VRIO) identify four factors to analyze how effectively a resource will provide a durable competitive advantage (Kozlenkova *et al.*, 2014). Individually, the VRIO features described below are essential but insufficient to create a lasting competitive advantage. According to RBT, resources that fit these four qualities are essential to obtaining a sustained competitive advantage (Barney, 1991). VRIO has the following four properties (Kozlenkova *et al.*, 2014):

(1) Valuable

Firm resources can be beneficial if they enable the company to create and implement plans that decrease company expenses and/or raise company income more than if these resources were unavailable. In addition, a resource is beneficial in the context of the strength, weakness, opportunity, threat (SWOT) paradigm if it enables the organization to capitalize on external opportunities and/or mitigate external risks.

(2) Rare

Second, resources are deemed rare when only a small number of competing enterprises manage them. Assume these resources are valuable but not uncommon. In such a situation, their utilization might contribute to competitive equality rather than a competitive advantage because other enterprises with similar resources can also utilize them.

(3) Imperfectly imitable

A resource is imperfectly imitable if a competitor firm that gets or produces it must incur high expenditures. Imperfectly imitable resources cannot be obtained by organizations that do not own the resources through substitution or direct replacement.

(4) Organization

The fourth attribute is concerned with the organization. However, if the resources have valuable, scarce and imperfectly imitable characteristics, the organization's resources must be arranged to utilize their maximum capability. This shows that the potential competitive advantage of these resources will not be maximized due to ineffective organization, processes and policies. As a result, the corporation acts as a catalyst, allowing or prohibiting the business from using the benefits connected with those rare, limited and expensive resources.

National capital for reform and development is a key innovative indicator of economic growth for middle-income countries, which generally fits into innovation and investment development (Kuzkin *et al.*, 2019). Company resources are a tool to measure competitive advantage and lead to good long-term company performance (Barney *et al.*, 2011). Business models in the 4.0 era use company resources to achieve a competitive advantage (Grabowska and Saniuk, 2022).

Barney (1991) states that company resources are all assets owned by the company in the RBT perspective, such as employee knowledge, important information, capabilities, organizational development processes, company attributes, etc. It means that everything is controlled by making the company use strategy efficiently. This explains that the proper use of company assets will affect company performance. Barney *et al.* (2011) categorize three types of resources, namely organizational resources (formal structure), HC (training, experience, insight) and physical resources (technology, plants and equipment). IC meets the criteria as a unique resource to create a competitive advantage and improve financial performance (Orakwue and Oghuvwu, 2019; Pratama, 2017). The RBT believes that a company can achieve excellence with superior resources (Barney, 1991). Companies can create and maintain competitive advantages by developing valuable, reliable, irreplaceable, non-replicable resources from other companies (Ulum, 2017). This makes IC the key to creating added value for the company. Knowledge, information and experiences are collective wealth and strength used to create better strategies (Barrick *et al.*, 1998). The IC also influences a company's value creation that employees have in it (Bontis *et al.*, 2000). In Chen *et al.* (2005), IC is generally intangible. IC as an intangible asset is a knowledge-based view that can create value and improve organizational performance (Widiartanto Wahyudi *et al.*, 2020). This means that if IC management is carried out properly, it will generate good added value.

Element of intellectual capital. Bontis *et al.* (2000) stated that the main stages of IC are divided into three, namely, (1) VACE is the people associated with a company that receives that company's services; (2) VAHC is the expertise of employees to produce goods and services and maintain good relationships with customers. This includes education, work experience, creative skills, and attitudes towards customers and colleagues; (3) STVA is the infrastructure owned by the company to meet market needs – for example, technology systems, trademarks, operational systems, training courses and patents.

Andriyani (2009) states that the methods of measuring IC are grouped into non-monetary and monetary measurements. An example of IC measurement with non-monetary valuation is the balanced scorecard assessment (Kaplan and Norton, 2008). Simultaneously, the method of measuring IC with monetary valuation is Pulic's model, known as VAIC. According to Prasetya and Mutmainah (2011), VAIC provides information on value creation efficiency from tangible and intangible company assets. VAIC is an instrument to measure performance in a relatively easy way. VAIC is used to measure IC, which consists of the efficiency of three types of company capital: HC, SC and working capital (Uslu, 2022). This instrument can measure a company's IC obtained from various data sources and types of companies.

Islamic banking-value added intellectual coefficient (IB-VAIC). Ulum (2013) stated that VAIC is an instrument that can measure company performance, especially intangible assets.

This approach is accessible because it is calculated from the accounts in the financial statements. The accounts used in calculating VAIC are accounts commonly used in conventional companies. In research, [Ulum \(2013\)](#) formulated an IC performance appraisal model for IB called IB-VAIC, modifying the existing model VAIC. VAIC is designed to measure the performance of a company's IC with common types of transactions. VAIC model is accurate in measuring IC because it can show potential intellectual use efficiently ([Anik et al., 2021](#)).

Meanwhile, IB has relatively different transactions from commercial or conventional banks. In the measurement of IC, IB added it only to differentiate the accounts used to develop the VA formula. VA in the Pulic model is calculated from total income.

In contrast, in IB, in each measurement of IC, VA is only built from income obtained from sharia activities. The results of the IB-VAIC calculation can be used as a rating for several banks. Category of the IB-VAIC calculation results, according to ([Ulum, 2013](#)):

- (1) Top performances – score VAIC < 3.00
- (2) Good performances – score VAIC 2.00–2.99
- (3) Common performances – score VAIC 1.50–1.99
- (4) Bad performances – score VAIC < 1.50

Hypothesis development

Effect of rate of growth intellectual capital (IC) on company financial performance. IC is a human resource that can be measured to increase competitive advantage, so IC growth greatly contributes to its financial performance ([Chen et al., 2005](#)). Therefore, if the company can manage and develop the rate of growth of IC (ROGIC) it has appropriately, there will be an increase in performance. Previous studies' results indicate that IC significantly positively affects financial performance ([Mutiasari and Rizki, 2020](#); [Pratama and Innayah, 2021](#); [Pratama et al., 2021](#)). This is in line with [Barney's \(1991\)](#) concept which stated that a company would create a competitive advantage if the company could manage human resources effectively. Human resources with high skills and competencies are a competitive advantage for companies ([Pratama, 2017](#)). Companies that can utilize and manage employee potential will increase employee productivity. If employee productivity increases, company performance will also increase. IC can be said to result from transforming knowledge or knowledge into intellectual property ([de Belizón et al., 2019](#)). Based on the previous description, the first hypothesis can be formulated as follows:

H1. Rate of IC has a positive effect on financial performance for the current period.

The influence of rate of growth intellectual capital on the company's financial performance for the future period. IC is the primary driver of increasing corporate value and financial performance, so IC growth must logically correlate with future financial performance improvements ([Tan et al., 2007](#)). For example, the higher the company's IC with maximum and optimal utilization of resources, the skills and abilities of these employees can increase the company's competence so that the company can continue to innovate in developing its business strategy ([Fariana, 2014](#)), which in turn has an impact on improving company performance. If the company's human resources IC management is carried out properly, it will produce good added value. Therefore, future financial performance is strongly influenced by the IC of a company's employees ([Almunawar et al., 2015](#); [Caroline et al., 2015](#); [Rochmadhona et al., 2018](#)). Suppose IC is the primary driver of firm value logically, in that case, the IC rate of growth must also be correlated with future performance improvements ([Tan et al., 2007](#)). These findings reinforce the IC's proponents as a competitive tool and that a

company must manage and improve its IC to maintain its competitive position (Ulum *et al.*, 2008). The impact of IC on financial performance has been measured through econometric models (García Castro *et al.*, 2021). Based on the previous description, the second hypothesis can be formulated as follows:

H2. Rate of growth IC positively affects financial performance in the future period.

Research method

Types and research objects

This quantitative descriptive research emphasizes theory testing by measuring research variables with numbers that aim to test the hypothesis. The object of this research is IB companies listed on the Indonesia Stock Exchange during 2014–2019. This study considers IB companies because IB has relatively different transactions from conventional banks. Furthermore, IB, the research object is ICBs because ICB has complete data related to the studied variables.

Types of data and data collection methods

The data used in this study were secondary, namely, data obtained indirectly and published. The data were obtained from the financial statements and annual reports of IB that have information to measure the ROGIC and financial performance of ICBs. The research data were obtained from the Financial Services Authority website or the official website of ICBs itself. Data are collected, recorded and reviewed. The literature study was obtained from previous research, journals, books and relevant information.

Population and sample

The population of this research is IB registered with the Financial Services Authority. The sample selection used a purposive sampling method with specific criteria to obtain a representative sample according to the research objectives. These criteria are (1) IB registered with the Financial Services Authority during 2014–2019; (2) IB, which presents an annual report during the observation period during 2014–2019; (3) IB, which provides data to measure research variables, including IC performance as measured by the IB-VAIC approach and financial performance as measured by return on asset (ROA).

Operational definition and measurement of variables

This study uses two variables, including a) dependent variable (Y): financial performance and independent variable (X): ROGIC.

Dependent variable (Y). The dependent variable in this study is financial performance, proxied by profitability, as measured by ROA. ROA indicates a company's success in generating profit from its assets. The higher the profitability, the higher the ability to generate profits. ROA can be formulated as Equation (1):

$$ROA = \frac{\text{net income tax}}{\text{Total Assets}} \times 100\% \quad (1)$$

Information:

ROA = Return on asset

Net Income Tax = Profit that is calculated before interest and tax expense

Total Assets = Total assets owned by the company

Independent variable (X). IC variables are proxied by VACE, VAHC and STVA variables. The detailed measurement of IC is explained in the attachment (available online at: https://drive.google.com/file/d/1TMboWWUCDE_Ck3e-WD0B6IK5k0wzqi8W/view?usp=share_link).

Result and discussion

Sample selection process and results

The sample of this study is presented in Table 1 (available online at: https://drive.google.com/file/d/1bVAMHsI_u1Uk6WpYl09WSvvKmNtNOXDn/view?usp=share_link).

Intellectual capital measurement results of sharia commercial banks in Indonesia

This study measured IC by the VACE, VAHC and STVA variables represented by the IB instrument in each measurement. This approach is constructed from financial statements. Therefore, adding IB in the IC measurement only differentiates between accounts used to develop the formula for VAIC. Table 2 (available online at: https://drive.google.com/file/d/1ev5mp0SoZ-y_nvjErBVj7OjGeaM7SC2V/view?usp=share_link) shows the intellectual model data proxied by the IB-VAIC for ICBs in Indonesia from 2014 to 2019.

The average IC of IB in Indonesia fluctuated from 2014 to 2019. The highest average IC occurred in 2016, and the lowest average occurred in 2015. Meanwhile, the highest IC value was achieved in 2016 and the lowest in 2015. The data above also show that in 2016, the VAIC of ICBs in Indonesia was at the top level of performance. In 2014, 2018 and 2019 VAICs' performance was good. The year 2017 was at the level of common performance, while 2015 was at the level of bad performance.

Table 3 (available online at: https://drive.google.com/file/d/1DPBk_mWKRxJaOB2CvdMqY8c9xwPxWeRs/view?usp=share_link) shows the ROGIC, which is the difference (Δ) between the IC_t value and the IC_{t-1} value.

The average ROGIC for ICBs in Indonesia for 2015–2019 also fluctuates. The highest average IC growth occurred in 2016, 2.91796, and the lowest average growth occurred in 2017, -1.87076. The highest value of IC growth occurred in 2016, 18.72271, and the lowest was in 2015, 15.21063.

Descriptive statistics of research variables

The results of the statistical description of the research variable data are presented in Table 4 (available online at: https://drive.google.com/file/d/1SLQ-JGkud-f7SKhYQB_6utw-c_qeitsr/view?usp=share_link). The average value of the ROA ratio for ICBs in the 2014–2019 period is 0.4517%. The lowest ROA ratio was -10.77%, and the highest was 3.61%. The average IB-VACE growth was -0.0221%, the lowest IB-VACE score was -3.08% in 2013, and the highest IB-VACE score was 3.05% in 2013. The average IB-VAHC is -0.0764%, the lowest IB-VAHC score was -15.40% in 2013, and the highest IB-VAHC score was 8.71% in 2013. STVA has an average score of -0.0201%, the lowest is -15.73% in 2014, and the highest IB-STVA score was 19.09% in 2013.

Testing results of intellectual capital growth ability hypothesis in predicting present and future profitability

Table 5 (available online at: https://drive.google.com/file/d/1Dl3CiEEMkG2q7Cf9kOFJBjyMOxL2hCbkg/view?usp=share_link) shows the analysis results of the IC growth variable represented by the ROG-IB-IC. ROG-IB-IC has a coefficient of 0.140 at a 0.000 significant level. The first hypothesis of this study states that IC growth can predict current profitability and is supported. These results indicate that the growth of IC can predict the IBs' current profitability.

The study's results indicate that the higher the ROGIC, the better the company's performance for the current period, which means that the ROGIC has a predictive value in assessing the company's current performance. These results support the RBT. If a company can manage resources effectively, it will create a competitive advantage. This competitive advantage is like having a superior product that will increase the company's profit and further improve the company's financial performance in the future. In addition, various continuous innovations carried out by ICBs can attract customers' interest so that the profits obtained are increased and sustainable. Thus, a sustainable increase in profit can be predicted from the growth rate of IC carried out by ICBs. This can be seen in the descriptive statistics of the average fluctuation of IC ratio growth following the average fluctuation of ROA as a proxy for profitability.

The results of this study support the findings of Barokah *et al.* (2018), Caroline *et al.* (2015) and Chen *et al.* (2005), who found that IC has a positive effect on the company's current financial performance. However, it does not support the findings of Daud and Amri (2008) and Bentoen (2012), who found empirical evidence that IC had a negative effect on the financial performance in this period. Daud and Amri (2008) argue that indications of physical and financial assets still dominate in contributing to company performance. Meanwhile, according to Bentoen (2012), it occurs because the development of IC is still in its early stages, so it has not shown results that support the company's financial performance (Bentoen, 2012).

The second hypothesis states that the IC rate of growth can predict future profitability. Table 6 (available online at: https://drive.google.com/file/d/17UhlWBZw9_0rZqDITB96dbGiA2S4uEH/view?usp=share_link) shows that the ROG-IB-IC coefficient shows -0.193 and a p -value of $0.650 (\geq 0.05)$, so this second hypothesis was not supported. Testing the second hypothesis indicates that ICBs' ROGIC cannot predict future profitability. This study indicates that the ROGIC value does not affect future financial performance next three years (ROA_{t+5}). This means that ICBs in Indonesia have not optimally increased IC growth as a competitive tool with conventional banking. The company has not created a sustainable competitive advantage based on four characteristics: VRIO. One of the characteristics of VRIO is valuable, which means that resources can be said to be valuable if the company can increase revenue and reduce company costs.

According to Pratiwi and Sudarso (2016), the unsupported hypothesis is due to the low disclosure of IC and the absence of standards for disclosing and measuring IC in Indonesia. The impact is that the public or investors have not been able to accurately assess the ROGIC. So, measuring the relationship between the ROGIC and future financial performance is still not proven with certainty. The results of this study support the findings of Kartikasari and Hadiprajitno (2014), Pratiwi and Sudarso (2016), and Ulum (2008), who found empirical evidence that there is no influence of the ROGIC on the future financial performance of the company. This means that ICBs in Indonesia have not maximally managed and developed their intellectual property. However, this study contradicts the research of Almunawar *et al.* (2015), Fajarini and Firmansyah (2012), Potrich *et al.* (2015) and Rochmadhona *et al.* (2018), who found that the ROGIC had a positive effect on future financial performance, which means that the higher the ROGIC, the higher the performance of the company in the future.

Additional test results

The results of testing the growth of IC factors that affect profitability are presented in Table 7 (available online at: https://drive.google.com/file/d/1yLJcDry54YJluRzHvgkDdGoEOHdtviny/view?usp=share_link).

Results of testing the influence of the rate of growth of IB-VACE on profitability. The further analysis of this study predicts that the ROG-IB-VACE variable positively affects IBS'

profitability. Table 7 (available online at: https://drive.google.com/file/d/1yLJcDry54YJluRzHvgkDdGoEOHdtviny/view?usp=share_link) shows that the ROG-IB-VACE coefficient has a positive value, and the t-statistic is 4.455, with a p -value of 0.000. These results indicate that the greater ROG-IB-VACE, the greater the profitability of IBs. This can be explained that people associated with IBs who receive services provided by IBs will provide added value, which will increase the profit of IBs. This study's results supported the previous research (Firer and Mitchell Williams, 2003; Maisaroh, 2015; Tan *et al.*, 2007; Ulum *et al.*, 2008).

Results of testing the influence of the rate of growth of IB-VAHC on profitability. Further analysis of this study predicts that the growth of IB-VAHC positively affects IBs' profitability. Table 7 (available online at: https://drive.google.com/file/d/1yLJcDry54YJluRzHvgkDdGoEOHdtviny/view?usp=share_link) shows that the IB-VAHC growth coefficient has a positive value but is insignificant. This study indicates that even the rate of growth of HC does not increase the profitability of IB. This means that employees' skills, competencies and abilities to produce goods and services and establish good customer relationships have not provided added value to increase IBs' profits. This study's results do not support the previous research by Firer and Mitchell Williams (2003), Maisaroh (2015), Tan *et al.* (2007), and Ulum *et al.* (2008), who found a positive effect of VACE on profitability.

Results of testing the influence of the rate of growth of IB-STVA on profitability. Further analysis of this research predicts that the growth of IB-SC has a positive effect on IBs' profitability. Table 7 (available online at: https://drive.google.com/file/d/1yLJcDry54YJluRzHvgkDdGoEOHdtviny/view?usp=share_link) shows that the ROG-IB-STVA coefficient has a positive value but is insignificant. This analysis indicates that the greater the rate of growth of the SC, the higher the IB has not increased IB profitability. A company's facilities and infrastructure to meet market needs such as technology systems, company operational systems, patents, trademarks and training courses have not added value, increasing IBs' profit. This study's results do not support the research of Arifin (2016), Firer and Mitchell Williams (2003), Ningrum and Rahardjo (2012), Tan *et al.* (2007), and Ulum *et al.* (2008), who found a positive effect of VACE on profitability.

Conclusion and limitations

This research examines the ROGIC to predict ICBs' current and future profitability. As a result, the study results can be concluded that: (1) the ROGIC can predict the profitability of IBs at present but cannot predict future profitability; (2) The IC factor has a positive effect on the profitability of ICBs is the rate growth of CE, while the rate growth of HC and SC does not affect the IBs' profitability.

This study's results are expected to contribute significantly to managers of IBs and Bank Indonesia. For managers of IBs, the results of this study can be used as input for evaluating IC performance and improving the IC performance of the banks they manage to increase profitability and can be used as a reflection to predict bank profitability in the coming years. As for Bank Indonesia as a regulator, the results of this study can be used as a basis for designing policies that can encourage the efficiency of IBs, especially the performance of IC. The growth of IC in IBs can only predict current profitability and not the future. The research implication is that IB managers must make sustainable IC improvement programs so that the ROGIC does not contain information to predict future profitability. In addition, IBs must further increase investment in intangible assets so that the IC rate of growth is sustainable and can predict future profits.

The limitations of this study are (1) the object of research is only using a sample of ICBs so that it cannot be generalized to all IBs in Indonesia; (2) Some ICBs that do not provide data to calculate the IB-VAIC factors, such as depreciation costs and amortization costs, impact the resulting negative IB-VAIC value. This factor can cause the research hypothesis to be

unsupported. Therefore, for further research, it is recommended to increase the sample size by including the Sharia business unit so that the results can be generalized to all IB in Indonesia; (1) The next researcher should trace the data carefully in notes on financial reports or other sources to minimize blank data and (2) examining other factors that affect the performance of IBs' IC, such as firm value.

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