INTELLECTUAL CAPITAL AND FINANCIAL PERFORMANCE MEASURED BY CAMELS PERSPECTIVE

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Abstract
This study empirically examines the impact of intellectual capital on banks financial performance in 57 public listed banks from Indonesia, Malaysia, and Thailand over the period of 2019 to 2020. Intellectual capital is measured by Pulic's Value Added Intellectual Coefficient (VAIC^{TM}), while banking performance is measured according to CAMELS analysis method. Through the method of partial least squares analysis to find the path coefficients value of each variable, the results obtained show that there is a significant positive impact of VAIC^{TM} on management quality (NPM) and earnings (ROA) in Indonesian, Malaysian, and Thai Banks, and significant negative impact of VAIC^{TM} on asset management (NPL) of Indonesian, Malaysian, and Thai Banks. On the other side, VAIC^{TM} is considered to have an insignificant impact on the capital adequacy (CAR), liquidity (LDR), and sensitivity to market risk (IER) of the in Indonesian, Malaysian, and Thai Banks in 2019-2020.

Keywords
Intellectual capital, financial performance, banking, Value Added Intellectual Coefficient.

JEL Classification
G21, G32

Introduction

The monetary crisis in 1998 caused a major shock to ASEAN countries, which at that time were still highly dependent on banking conditions. The three countries, namely Indonesia, Malaysia, and Thailand experienced the biggest economic shocks at that time. Therefore, the authors are interested in examining the current state of banking in the three countries, as well as the efficiency of the utilization of human intellectual resources in them. This study wants to find out whether the presence of advanced

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intellectual capital in the bank can improve the financial performance of the bank and provide significant added value for the company.

The objective of general-purpose financial statements is to provide information about the financial position, financial performance, and cash flows of an entity that is useful to a wide range of users in making informed economic decisions (IAS 1.9). The financial statements also show the results of management's accountability for the use of the resources entrusted to them. This financial report is used by stakeholders to find out the condition of the company. Good company performance will increase company value, and create high trust from the market, not only related to the company's current performance, but also positive sentiment regarding the prospects of the company concerned (Brigham & Houston, 2013). Therefore, the company must be able to maintain its financial performance and display it consistently and even increase in its financial statements. According to Babalola & Abiola (2013), financial performance is a measure of company performance and profit is one of the decision-making tools used by managers.

One way to improve financial performance is by maximizing all the company has, one of which is assets. Company development will depend on how management is able to process company resources in creating company value so that it will provide a sustainable company competitive advantage (Pramelasari, 2010). Especially in the knowledge-based business era, companies tend to focus on maximizing the intangible asset utilization (Sawarjuwono & Kadir, 2003). As said in (Usoff et al., 2002) intellectual capital is a source of competitive advantage, and a powerful factor of production that can add value to the output of knowledge-based firms. Companies are starting to realize that the ability to compete in the industry lies not only in its tangible assets, but intangible assets also play an important role in the company's performance. This is in line with the opinion of Barney (1991) in Prasetio (2014) which says that intangible assets can be treated as strategic assets that can provide a sustainable competitive advantage for companies because they are valuable, difficult to imitate, rare, and difficult to substitute with other things. The components of these intangible assets include innovation, invention, employee development, information, and knowledge of human resources, as well as good relationships with consumers, all of which are commonly known as intellectual capital.

Stewart (1997) in Ardhianto (2011) defines intellectual capital as a “useful knowledge package” which is a resource in the form of knowledge, information, intellectual property, or experience available to a company that generates assets of high value and future economic benefits for the company. Intellectual capital is intellectual material that has been formulated to create wealth by producing a high-value asset (Ulum, 2013). Awareness of the importance of intellectual capital for the growth and competitive advantage of companies lately has made many companies begin to pay great attention to the management of their intellectual capital. Not only in its management, but the company also utilizes its intellectual capital effectively and efficiently.

However, these improvements were not matched by appropriate financial reporting. There is a lot of information that should be known by stakeholders regarding the

company's surplus value but is not disclosed in the financial statements, because the traditional accounting basis financial statement doesn't show company value for intellectual capital. This is showing the limitations in company financial statement, so that the company is considered failed to provide information about intellectual capital for their stakeholders. Even though, financial statement has an important function, as an instrument for stakeholders' decision making.

Along with the increasing attention and development of the concept of intellectual capital, an appropriate measurement method is needed. Pulic (2000) in Ulum (2013) does not directly measure the intellectual capital of the company but proposes a measure to assess the efficiency of value added due to the company's intellectual capital called the Value-Added Intellectual Coefficient (VAIC^{TM}). The three main components contained in VAIC^{TM} are physical capital, human capital, and structural capital. Physical capital is measured using value added capital employed (VACA), human capital is measured using value added human capital (VAHU), while structural capital is measured using structural capital value added (STVA).

Several studies on intellectual capital have proven that intellectual capital has a significant influence on company performance. Dodik Suprayogi & Karyati (2020) and Kurniawati (2018) has proven in his research that intellectual capital has a significant influence on Loan to Deposit Ratio (LDR), Good Corporate Governance (GCG), Return on Assets (ROA), Net Interest Margin (NIM), Capital Adquency Ratio (CAR), and insignificant influence on Non-Performing Loans (NPL) of banks in Indonesia. Similar results are also shown by studies conducted in several Asian countries such as research by Meles et al., (2016) in US show a positive impact of VAIC^{TM} on bank profitability. Ting and Lean (2009) in Malaysia also show that VAIC^{TM} effects ROA positively. Chen et al. (2005) in Taiwan show that intellectual capital has a positive effect on market value and company financial performance. However, there are other studies that reveal different things. Pramelasari (2010) examined the influence of intellectual capital on financial performance and market value of the company, with result that intellectual capital has no effect on firm value (MtBV) and financial performance (ROA, ROE, and EP).

Because there is inconsistency in the effect of intellectual capital on bank performance, this study examines the issue of this relationship in Indonesia, Malaysia, and Thailand. Different from the other research, this research wants to know the impact of intellectual capital on bank performance, measured by CAMELS, in Indonesia, Malaysia, and Thailand. This study is expected to provide additional evidence and contribute to the literature on the influence of intellectual capital on bank performance and contribute to the literature, because there is still limited evidence of the effect of intellectual capital on bank performance, as well as providing a new perspective in measuring the influence of intellectual capital, namely through the CAMELS analysis method. Besides that, it can also provide comprehensive evidence because the data concludes a wider area of various countries, Indonesia, Malaysia, and Thailand.

1. Research hypothesis

Intellectual capital is classified as an intangible asset where this asset can be utilized as best as possible to increase the competitive advantage of a company. Intellectual capital is a resource that can be measured to increase competitive advantage, so that it will contribute to the company's financial performance (Ulum, 2007).

Based on resources based theory, the company's IC can create added value that can provide a competitive advantage compared to its competitors, so that it is expected to increase sales. One application of efficient IC management is being able to create high productivity for employees so that productivity can lead the company to achieve better financial performance. If the IC owned by the company, namely through the ability of its employees is high, then employee productivity will also increase. With this increase in productivity, the company's income will also increase. Competence and good employee productivity will also encourage the creation of the right company products / services for customers. The innovation and creativity of employees will create marketing ideas, new ways of working, and other innovations that are more effective in the company. This certainly encourages the company to achieve better financial performance. The relational capital owned also adds value to the company, with good service from employees, supported by the right product/service solutions for its customers, high customer engagement will be obtained. Customers will be loyal and put their trust in the company, so that it will increase the company's income and financial performance.

The influence of intellectual capital on the company's financial performance in this study is represented by CAMELS ratio. Siva & Natarajan (2012) have tested the applicability of CAMELS norms and its consequential impact on the performance of State Bank of India (SBI) Groups. The authors found that CAMELS scanning helps banks to diagnose its financial health and alert the bank to take preventive steps for its sustainability. Each aspect on CAMELS ratio reflects the financial performance, operating soundness, and regulatory compliance of a bank.

Research with a similar object taken by the author has also been carried out by Pidola, Viras Alti (2020) who examined the effect of VAIC^{TM} on the financial performance of Islamic commercial banks in Indonesia. The results of this study state that Intellectual Capital has an influence on Return on Assets (ROA), Net Returns (NR), Operating Expenses on Operating Income (OEOI), and Finance to Deposit Ratio (FDR) but Intellectual Capital has no effect on Capital Adequacy Ratio (CAR) and the Zakat Performing Ratio (ZPR). Then, research on the effect of VAIC^{TM} on bank performance in Malaysia has also been carried out by Putri, Sofie Nurlaily Eka (2016) with the results that intellectual capital (VAIC^{TM}) affects bank performance both in the current year and in the future, especially in this study, it is shown that intellectual capital component (VAIC^{TM}) is dominated by human capital (VAHU) and capital employed (VACA) components. Meanwhile, Mulyawan, Annisa Ameliawati (2022) conducted a study on the effect of intellectual capital and CEO gender on the performance of banking companies in Indonesia, Malaysia, and Thailand, with results indicating that

intellectual capital and the presence of women on the board of directors are one of the considerations in improving company performance.

Based on the description above and previous research, the hypotheses proposed in this study are as follows:

H_1: There is a significant impact between Value Added Intellectual Coefficiency (VAIC™) and Capital Adequacy Ratio (CAR) of banks in Indonesia, Malaysia, and Thailand.

H_2: There is a significant impact between Value Added Intellectual Coefficiency (VAIC™) and Non Performing Loan (NPL) of banks in Indonesia, Malaysia, and Thailand.

H_3: There is a significant impact between Value Added Intellectual Coefficiency (VAIC™) and Net Profit Margin (NPM) of banks in Indonesia, Malaysia, and Thailand.

H_4: There is a significant impact between Value Added Intellectual Coefficiency (VAIC™) and Return on Assets (ROA) of banks in Indonesia, Malaysia, and Thailand.

H_5: There is a significant impact between Value Added Intellectual Coefficiency (VAIC™) and Loan to Deposit Ratio (LDR) of banks in Indonesia, Malaysia, and Thailand.

H_6: There is a significant impact between Value Added Intellectual Coefficiency (VAIC™) and Interest Expense Ratio (IER) of banks in Indonesia, Malaysia, and Thailand.

2. Research Methodology and Data

The research conducted is empirical research. The focus of the research is on the influence of the level of intellectual capital on the financial performance of banks in Indonesia, Malaysia, and Thailand in 2019-2020 with the CAMELS analysis method. The sample used in this study includes 57 banking companies which were selected using purposive sampling technique. The sample used consisted of 39 Indonesian banking companies, 10 Malaysian banking companies, and 8 Thai banking companies. The data used is secondary data obtained from the annual reports collected by the websites of the sampled firms. The endogenous variable in this study is financial performance as measured by the CAMELS analysis method, which consists of 6 aspects, namely Capital Adequacy Ratio (CAR), Non Performing Loan (NPL), Net Profit Margin (NPM), Return on Assets (ROA), Loan to Deposit Ratio (LDR), and Interest Expense Ratio (IER). While the exogenous variable in this study is intellectual capital as measured by the VAIC™.

The analytical method used in this research is partial least square analysis, using SmartPLS 3 software to see the effectivity of path coefficient and knowing the influence of the exogenous variable (VAIC™) to the endogenous variable (CAMELS analysis method). We have run some pretest to make sure the validity and reliability of the variable used in this research. The tests that have been carried out include convergent validity test to measure the loading factor of latent variable with its indicators, discriminant validity test to measure the value of the cross loading factor that is useful for determining whether the construct has an adequate discriminant, namely by

comparing the loading value on the intended construct which must be greater than the loading value with other constructs, composite reliabillity test to see the reliability of the use of these variables, Average Variance Exracted (AVE), and Cronbach Alpha. All the tests that have been run have shown appropriate results, and gave a value above the expected value limit, so it can be said that all variables are valid and reliable for use in this study.

3. Variables of Measurement

The variables of measurement used in this research is listed as follows:

Table no. 1. Variables of Measurement

Variable Model	Proxy	Measurement
Intellectual Capital	VAIC™	$VAIC = VAHU + STVA + VACA$
Capital Adequacy	CAR	$CAR = \frac{Capital}{Risk\ Weighted\ Assets}$
Asset Management	NPL	$NPL = \frac{Total\ Non-Performing\ Loans}{Total\ Loans}$
Management Quality	NPM	$NPM = \frac{Net\ Profit}{Revenue\ from\ Operation}$
Earnings	ROA	$ROA = \frac{Net\ Profit}{Total\ Assets}$
Liquidity	LDR	$LDR = \frac{Total\ Loans}{Total\ Deposits}$
Sensitivity to Market Risk	IER	$IER = \frac{Interest\ Expense}{Total\ Deposits}$

Source: Own elaboration.

Based on the partial least square analysis method through the SmartPLS 3 software with the variables mentioned above at banks in Indonesia, Malaysia, and Thailand in 2019-2020, the following results were obtained, which can be seen later in the Results section.

4. Results

The results of the data processing can answer the hypothesis in this study through the value of t-statistics and p-values tests. The research hypothesis can be accepted if t-statistics > 1.97, and p-values < 0.05, which indicates that exogenous variables have a significant effect on endogenous variables. Meanwhile, through the value of the original sample, it can be seen the direction of the relationship of the exogenous variable to the endogenous variable. A positive value (original sample > 0) indicates a positive relationship between exogenous variables and endogenous variables, and vice versa.

Table no. 2. Hypothesis Testing Results A

CAMELS	Var	Original Sample	T-Stat	P-Values	Conclusion
Capital Adequacy	CAR	-0.113	1.188	0.235	Insignificant impact
Asset Management	NPL	-0.258	**2.991**	**0.003**	**Significant negative impact**
Management Quality	NPM	0.58	**6.343**	**0**	**Significant positive impact**
Earnings	ROA	0.336	**4.177**	**0**	**Significant positive impact**
Liquidity	LDR	0.053	0.605	0.545	Insignificant impact
Sensitivity to Market Risk	IER	-0.159	1.756	0.08	Insignificant impact

Source: Own elaboration.

In the research model, it is shown that VAIC™ has a significant impact on NPL, NPM, and ROA in Indonesian, Malaysian, and Thai Banks. These variables have shown t-stat value > 1.97, namely NPL with a value of 2,991, NPM with a value of 6,343, and ROA with a value of 4,177. The p-values of each variable also meet the criteria of < 0.05, namely the NPL with a value of 0.003, as well as the NPM and ROA variables with a value of 0. So, it can be concluded that hypotheses 2, 3, and 4 (H_2, H_3, and H_4) are accepted. Furthermore, among variables that have a significant impact, VAIC™ gives a significant positive impact to NPM and ROA, with the original sample values being 0.58 and 0.336, respectively. Meanwhile, NPL has a significant negative impact with VAIC™, with the original sample value of -0.258. That is, the higher the VAIC™ value, the higher the NPM and ROA values of the bank. Otherwise, the higher the VAIC™ value, the smaller the NPL value in the bank. The other variables, the t-stat values < 1.97 and p-values > 0.05, which means that VAIC™ can be said to have insignificant impact on the CAR, LDR, and IER of the banks in 2019-2020.

This study also analyzes the impact of VAIC™ on CAMELS separately on each country, and the hypothesis testing results are presented as follows:

Table no. 3 Hypothesis Testing Results B

Var	Indonesia			Malaysia			Thailand		
	Org. Sample	T-Stat	P-Values	Org. Sample	T-Stat	P-Values	Org. Sample	T-Stat	P-Values
CAR	0.028	0.272	0.786	-0.078	0.344	0.731	0.131	0.443	0.658
NPL	-0.214	**2.255**	**0.025**	-0.11	0.633	0.527	-0.236	0.761	0.447
NPM	0.564	**5.305**	**0**	0.221	1.499	0.134	0.305	1.215	0.225
ROA	0.413	**4.523**	**0**	0.391	1.746	0.081	0.003	0.016	0.987
LDR	0.01	0.102	0.919	-0.185	0.891	0.374	0.015	0.076	0.939
IER	-0.099	0.879	0.38	0.001	0.004	0.996	**-0.466**	**2.249**	**0.025**

Source: Own elaboration.

The results show that VAIC™ gives a difference in significance of impact to the CAMELS variable in each country tested. This may vary depending on the economic conditions and banking climate in each country. On Indonesian banks, this study found a similar result that VAIC™ has a significant positive impact on NPM and ROA with t-stat value of 5.305 and 4.523 and original sample of 0.564 and 0.413, while it has a significant negative impact on NPL with t-stat value of 2.255 and original sample of -0.214, but shows an insignificant impact on CAR, LDR, and IER. On Malaysian banks, VAIC™ shows an insignificant impact on all variables of CAMELS, with the highest and closest value of t-stat is ROA with a value of 1.746 and NPM with a value of 1.499. But both are still counted as insignificant impacts. While on Thai banks, VAIC™ shows a significant negative impact on IER. The t-stat value of IER shows a value of 2.249, with p-values of 0.025, and the original sample -0.466. This means that the higher the VAIC™, the lower the IER value for banks in Thailand.

5. Discussion

The resource based theory states that companies earn competitive profits and achieve superior performance by owning, acquiring, and using strategic assets effectively (Wernerfelt, 1984). The strategic assets in question can be in the form of tangible assets or intangible assets, one of which is intellectual capital. Resource based theory reveals that intellectual capital is able to meet the criteria as a unique resource that is able to create a competitive advantage for banks, because intellectual capital has its precious nature and is difficult to imitate, unique, and hard to substitute, where elements of touch and human creativity in each bank are very unique, difficult to imitate by banks or competitors in the form of other financial institutions, and not easy to replace with machines or digital systems. Good service provided directly by the bank's employees will provide more value in the eyes of its customers. In addition to service to customers, the existence of the human element in the bank cannot be denied from the bank's need

for creativity and innovations that can be realized through quality human resources, and various trainings conducted by the bank to improve the skills of its employees.

The results of the hypothesis H_2 are accepted, which means that there is a significant effect between VAIC™ on asset management which is calculated through the ratio of NPL (non-performing loans). VAIC™ has a significant negative effect on NPL, which means that the stronger the intellectual capital owned by the bank, the lower the NPL value. A low NPL value indicates that there is less risk of default or failure to give-back credit by the customers that occurs in the bank. The role of intellectual capital also works in lending activities provided by banks. The human approach in conducting risk and financial analysis in lending also has an important role in asset and risk management within the bank. Credit disbursed by banks needs to be accountable to the owners of the funds, namely the savers or the customers, as well as to the stakeholders. Therefore, each bank needs to analyze the financial, risk, and repayment capacity of customers who need funds. In the process, an approach and observation are carried out by employees who have been equipped with the knowledge and ability to analyze and make decisions on the distribution of credit, so that the funds lent can be accounted for and reduce the risk of default or become non-performing loans in the bank. The role of intellectual capital as an analyst and policy maker requires honed abilities and skills, which are usually honed through training and refreshment for employees, which according to resource based theory (Wernerfelt, 1984 in Komnenic & Pokrajčić 2012) it can provide a sustainable competitive advantage for companies because it is rare, difficult to imitate, and hard to substitute. Until now, there is no machine or software that can replace the role of employees as analysts in this field. In the period 2019-2020, the COVID-19 pandemic affected economic conditions and business sustainability in Indonesia, Malaysia, and Thailand. This can increase the risk of default from customers at the bank, and each client funding request should be handled case by case. However, this study shows that intellectual capital owned by banks can still have a significant influence on the NPL value in Indonesian, Malaysian, and Thai banks.

The results of the hypothesis H_3 are accepted, which means that there is a significant effect between VAIC™ on management quality as reflected by the NPM ratio. VAIC™ has a significant positive effect on the bank's management quality (NPM), which means the higher the intellectual capital in the bank, the higher the profit margin obtained by the bank. This can occur through increasing work efficiency and streamlining the bank's operating expenses, or through increasing revenues under conditions of fixed operating expenses. Management's ability to manage productive assets and its banking products can create value added that affects the financial performance of banks in Indonesia, Malaysia, and Thailand. The innovations created in the bank's management team can make the right products for its customers, as well as create a new and more efficient work system to increase the profits earned by the bank. In accordance with the resource based theory by Barney (1991) in Komnenic & Pokrajčić (2012), the unique assets could lead to a competitive advantage for the company. The same goes to banking environment, that every innovation that is born will certainly be unique in each bank, depending on the basic abilities of employees as well as providing training and a supportive work environment. The better a bank is in managing its employees as

intellectual capital assets, the more it will support the fast pace of innovation that will emerge, of course, will determine the winner in the competition in the market.

The results of the hypothesis H_4 are accepted, which means that there is a significant effect between VAIC^{TM} on earnings as reflected by the ROA ratio. VAIC^{TM} has a significant positive effect on bank management quality (NPM), meaning that if intellectual capital increases, the ROA value will also increase significantly. Return on Assets (ROA) can measure the company's ability to generate profits by using the total assets owned by the company after adjusting for the costs used to fund these assets such as development costs and employee management in improving intellectual property. In accordance with resource based theory, as said by Wernerfelt (1984) in Komnenic & Pokrajčić (2012) companies earn competitive profits and achieve superior performance by owning, acquiring, and using strategic assets effectively where the strategic assets in question include tangible assets in the form of physical assets and intangible assets that have been owned, developed, and used by companies in maintaining a competitive and profitable strategy. This result is supported by previous study conducted by Simarmata (2016) which proved that VAIC^{TM} has a positive effect on the company's financial performance (ROA) and is proven to increase company profitability. VAIC^{TM} also has a positive effect on firm value, and it is proven that the market gives a higher value to the market that can manage intangible assets in the form of intellectual capital contained in the company. The more corporate banks manage their intellectual capital, which is considered as assets, the more companies will earn competitive profits. The better the company in managing the intellectual capital, the better the company in managing assets. It can be said that resource based theory believes that the financing spent on processing intellectual capital owned by the company will not only be an expense, but will also generate good returns for the company, both in the form of product idea innovation, new marketing styles, the discovery of a new software that can increase work efficiency, as well as improve the ability of its employees to attract and engage with customers. Good asset management can increase the return on several assets owned by the bank as measured by Return on Assets (ROA).

The results of the hypothesis H_1, H_5, and H_6 are rejected, which conclude that there is no significant effect between VAIC^{TM} on capital adequacy (CAR), liquidity (LDR), and sensitivity to market risk (IER). When the data for this research was taken, in 2019-2020, Indonesian, Malaysian, and Thai Banks were still affected by the COVID-19 pandemic, so that the main operational activities of banks, such as funding and lending could not develop too much, and very restricted. This condition also affects the capital adequacy (CAR), liquidity (LDR), and sensitivity to market risk (IER) of banks in Indonesia, Malaysia, and Thailand. CAR (capital adequacy ratio) is an indicator of a bank's ability to cover a decline in its assets because of bank losses caused by risky assets. Not many lending activities occur from banks cause the bank's capital adequacy to be less affected, as well as the LDR (Loan to Deposit Ratio). However, in the conditions of the COVID-19 pandemic, bank financing activities are less developed so that they do not show a significant effect. Meanwhile, IER (Interest Expense Ratio) also did not show significant results, where the use of IER was to cover potential losses on assets invested by investors. Meanwhile the total assets and the funds deposited from

customers did not increase enough, even in some banks the amount of funds deposited decreased. This applies similarly to conditions in the CAR and LDR ratios for banks in Indonesia, Malaysia, and Thailand.

In the results of separate studies conducted in each country, the significance value of each variable in each country shows different values. This can happen because the economic conditions and banking climate in each country are different, as well as the conditions for economic recovery and improvement from the impact of COVID-19 in each country are different, so that the results of separate studies for each country are also different.

Conclusions

This study investigates the impact of intellectual capital projected by VAIC™ on banks financial performances in Indonesia, Malaysia, and Thailand. The CAMELS analysis method is chosen to evaluate the bank performance, based on six elements which are on five elements which are Capital Adequacy, Asset Management, Management Quality, Earnings, Liquidity, and Sensitivity to Market Risk. Annual data is used to compute performance of banks from the period of 2019 - 2020. With the partial least square analysis, findings show that VAIC™ has been associated with the components of CAMELS.

From the results of the research, it is shown that VAIC™ has a significant impact on asset management (NPL), management quality (NPM), and earnings (ROA) in Indonesian, Malaysian, and Thai Banks. So, it can be concluded that hypotheses 2 (H_2), hypotheses 3 (H_3), and hypotheses 4 (H_4) are accepted. Furthermore, among variables that have a significant impact, VAIC™ has a significant positive impact to management quality (NPM) and earnings (ROA), meanwhile, asset management (NPL) has a significant negative impact with VAIC™.

Meanwhile, another research conducted in this study also tested the impact of VAIC™ on CAMELS separately on each country. The results show that VAIC™ gives a difference in significance of impact to the CAMELS variable in each country tested. This may vary depending on the economic conditions and banking climate in each country. On Indonesian banks itself, this study found a similar result that VAIC™ has a significant positive impact on management quality (NPM) and earnings (ROA), while it has a significant negative impact on asset management (NPL). But it shows an insignificant impact on capital adequacy (CAR), liquidity (LDR), and sensitivity to market risk (IER). On Malaysian banks, VAIC™ shows an insignificant impact on all variables of CAMELS, with the highest and closest value of t-stat being earnings (ROA) and management quality (NPM). But both are still counted as insignificant impacts. On Thai banks, VAIC™ shows a significant negative impact on sensitivity to market risk (IER).

Concluded from the research, that VAIC™ is proven to have a significant positive impact on banking financial performance, in accordance with resource based theory which states that companies need to maximize all their resources to achieve maximum

value, and gain competitive advantage for the company, including intangible assets, or those in this study discussed such as intellectual capital.

Therefore, it is necessary for companies to pay more attention to their intellectual capital resources, so they can maximize the benefits they provide. One way to develop their intellectual capital is by holding upskilling training, workshops to increase the skills of their workers, providing incentives for employee performance, providing career paths that can be achieved by employees to increase their morale, and various others.

As a limitation in this study, the object used is only banks that have gone public and are listed on the stock exchanges of each country, not considering islamic banks and non-public banks. The research year, namely for data collection in 2019 - 2020, also shows the impact of the COVID-19 pandemic on the economy in the three countries. So, for further research suggestions, research can be carried out with a broader object of bank, or specifically examine the impact on Islamic banks, as well as conducting research on the country's economic condition if it has returned to normal.

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