The Effect of Intellectual Capital on Financial Performance and Company Value in the Financial Sector Listed on The Indonesia Stock Exchange

Wesi Hadia Nesa[1], Rosyeni Rasyid[2]

[1,2] *Universitas Negeri Padang, Padang, Indonesia*
**Coresponding author. Email: wesihadia@gmail.com*

ABSTRACT

This study aims to determine the effect of intellectual capital on financial performance and firm value in the financial sector listed on the Indonesia Stock Exchange. The population in this study are all financial companies listed on the Indonesia Stock Exchange for the period 2015-2019 using secondary data. The sampling technique used purposive sampling, the number of samples in this study was 345 samples (69 companies with a research period of 5 years). The data analysis method used is regression using the SPSS 16 program. The variable intellectual capital using the value added intellectual coefficient (VAIC). VAIC is the sum of the components efficiency, namely Capital Employed Efficiency (CEE), Human Capital Efficiency (HCE), Structural Capital Efficiency (SCE), and two additional components that are different from previous research, namely innovation capital efficiency (RDE) and relational capital efficiency (RCE). VAIC has a positive and significant effect on financial performance using return on assets (ROA), return on equity (ROE) and assets turnover (ATO). The variable intellectual capital using the value-added intellectual coefficient (VAIC) has a positive and significant effect on firm value using market to book value (MBV) and Tobin's q.

***Keywords**: Value Added Intellectual Coefficient (VAIC), Return on Assets (ROA), Return on Equity (ROE), Asset turnover (ATO), Market to Book Value (MBV), Tobin's Q.*

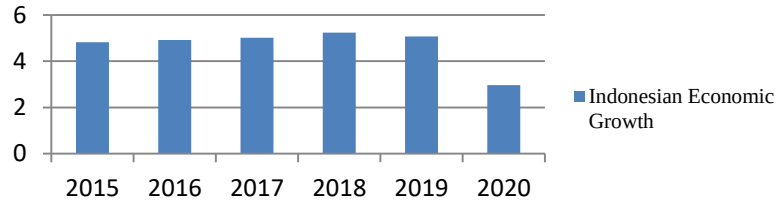
1. INTRODUCTION

As a developing country, Indonesia must strive in facing increasingly fierce competition in the business world. The government announced that Indonesia's economic growthpin the first quarter of 2020 was at 2.97% year on year (yoy), a decline from 5.07% in the first quarter of 2019.

In this case, the Financial Services Authority (OJK) focuses so that the financial sector does not experience liquidity problems and non-performing loans (NPL) / non-performing loans.

Indonesia's economicogrowth in 2015 to 2020 for the first quarter can be seen in the following diagram:

Indonesian Economic Growth Quarter 1



Source: Central Bureau of Statistics (BPS)

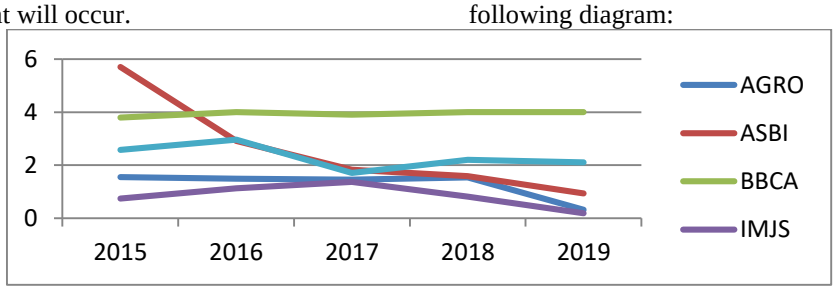
Figure 1. Indonesia's Economic Growth

Figure 1 shows that Indonesia's economic growth has fluctuated. Indonesia's economic growth continued to increase from 2015 to 2018, then experienced a decline in 2019 and 2020. The decline in Indonesia's economic growth certainly had an impact on the economy itself. In order to survive and compete in the face of increasingly fierce business competition, companies can change the company's

management pattern from a workforce management pattern to a knowledge-based management pattern. Today's technology innovation and business competition require companies to be able to improve their business strategies, especially in financial sector companies which are needed by today's society.

To be able to survive and compete, the company must be fast and precise in making strategic decisions and the company must be good at managing and analyzing company performance. Not only for companies, but investors must also be quick and precise in making decisions with due regard to the returns and risks that will occur.

Financial performance is the main measure that is often considered by parties with an interest in the company to assess the company, both internal and external parties. Assessment of the company's financial performance can be done by analyzing financial statements to determine the condition of the company periodically through financial ratios. One of the profitability ratios is Return on Assets (ROA). ROA is the ratio used to measure the company's ability to generate profits with all assets used. ROA measurements of several companies in the financial sector for the 2015-2019 period can be seen in the following diagram:



Source: Indonesia Stock Exchange (www.IDX.co.id) data is processed

Figure 2. ROA data of companies in the financial sector for the period 2015-2019

The data in figure 2 above shows changes in ROA fluctuations from financial sector companies for the period 2015-2019. Every company experience ROA fluctuation that fluctuates and tend to decline, this indicates a problem with the ROA of financial sector companies and will have an impact on the company's financial performance.

In addition to the company's financial performance, the researcher also wants to see the value of the company in the financial sector. Firm value is the investor's perception of the company's success rate which is often associated with the stock price. Firm value can be reflected in its share price, high company value reflects high stock prices and optimal company performance. According to [5] the value of the company is the company's performance as reflected by the stock price which is formed by the demand and supply of the capital market which reflects the public's assessment of the company's performance.

There are many measurement methods that can be used to measure company value, one of the measurements that can be used to measure company value is by using the MBV (market to book value). MBV is the ratio or ratio between market value and company book value. The market value of a company is the stock market price, while the company's book value is calculated from the total equity divided by the number of shares outstanding. The higher the MBV value, the greater the market confidence in the company's prospects, the higher this ratio, the higher the company value.

[1] states that companies in Indonesia will be able to compete if they use the competitive advantage obtained through creative innovations produced by the company's intellectual capital. Today, business people realize that the importance of applying a knowledge-based business pattern as a form of intangible asset, because the company's ability to compete lies not only in the tangible assets owned by the company, but rather in innovation, science, technology, information systems, organizational management and human resources owned by the company. One of the approaches used in measuring and valuing intangible assets is intellectual capital (IC).

According to [11] intellectual capital includes information and knowledge that is applied to work to create value. Intellectual capital can be defined as the amount of what is produced by the three main elements of the organization (human capital, structural capital, customer capital). [6] stated that intellectual capital management positively affects the competitiveness of companies, so that it will have an impact on company performance.

Method of measuring intellectual capital has been developed by [10] to present information on the value creation efficiency of the company's tangible assets and intangible assets, namely the VAIC (value

added intellectual coefficient). The higher the VAIC, the better the potential utilization of the company to create added value for the company.

2. THEORY

2.1. *Stakeholder Theory*

According to [4] stakeholder theory states that a company is not an entity that only operates for its own interests, but must provide benefits to all its stakeholders, such as shareholders, creditors, consumers, suppliers, government, society, analysts and others. These stakeholders are taken into company considerations inodisclosing or not disclosing information inwthe company's financial statements.

2.2. *Resource-based theory*

Resource-based theory consider knowledge as a very important resource for the company, because knowledge is an asset which, manage properly, willpimprove company performance and company value. Resources Based Theory is a theory that discusses the resources owned by the company and how the company can process and utilize its resources properly [2]. This theory explains that a good company valuation shows the company's ability to use effectively and efficiently of tangible assets and intangible assets owned by the company.

Conceptual Framework

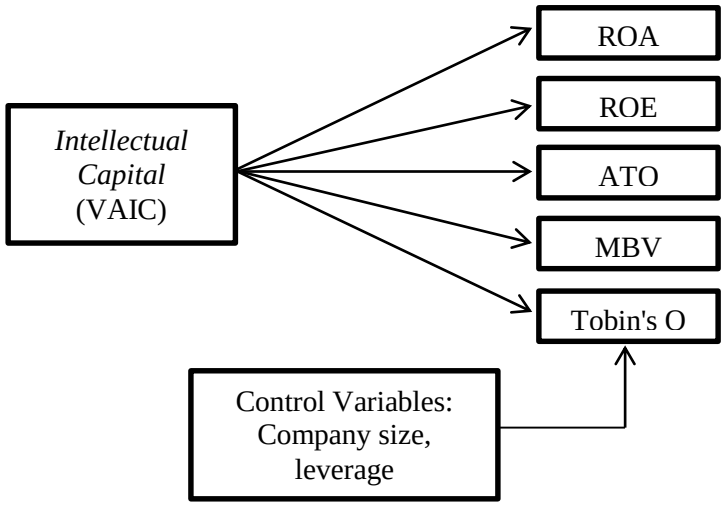


Figure 3. Conceptual Framework

3. METHOD

3.1. Population and sample

The population in this study were all financial sector companies on the Indonesia Stock Exchange in 2015-2019, there are 79 companies. The sample selection in this study using purposive sampling method, from a population of 79 companies listed on the IDX in 2015-2019 that meet the research criteria As many as 69 companies that will be sampled in this study, multiplied by the 5 years of the study period will get a total sample of 345 companies.

3.2. Operational definition

3.2.1. ROA (Return on Assets)

ROA (Return on Assets) is the ratio used to measure the company's ability to generate profits with all assets used. The formula for measuring ROA is as follows:

$$ROA = \frac{Net\ profit}{Total\ assets}$$

3.2.2. ROE (Return on Equity)

ROE (Return on Equity) is a ratio used to measure the company's ability to obtain profits available top shareholders of the company. This ratio is also influenced by the size of the company's debt, the greater the proportion of debt, the greater this ratio. The formula for measuring ROE is as follows:

$$ROE = \frac{Net\ profit}{Total\ equity}$$

3.2.3. ATO (*Asset turnover ratio*)

ATO (Asset Turnover Ratio) is a ratio to measure the level of efficiency and effectiveness of turnover and utilization of total assets in generating

sales. This ratio shows the amount of sales that the company can get for every rupiah that has been invested in the company's assets. Formula for measuring ATO is as follows:

$$ATO = \frac{Total\ income}{Average\ total\ assets}$$

3.2.4. MBV (Market to Book Value)

MBV (Market to Book Value) is a comparison or ratio between market value and book value. The higher the MBV, the greater the market confidence in the company's prospects, the higher this ratio, the higher the company value. Market to Book Value can be calculated as follows:

$$MBV = \frac{The\ market\ value}{Book\ value\ per\ share}$$

3.2.5. Tobin's Q

Tobin's q is a measure that captures the company's future market value and the company's long-term profitability, so that Tobin's q can be used as a measuring tool in determining firm value. Tobin's Q can be calculated as follows:

$$Tobin's\ Q = \frac{MVE + Total\ Debt}{Total\ Assets}$$

3.2.6. VAIC (valuemadded intellectual coefficient)

Pulic has developed a method in 1998 which is designed to present information about the value creation efficiency of tangible assets and intangible assets owned by the company, namely VAIC (*value added intellectual coefficient*). Starting with the company's ability to create value added (VA). Value added is the most objective indicator to assess business success and shows the company's ability to create value (value creation) [10].

VAIC is the sum of the five elements of efficiency, namely Capital Employed Efficiency (CEE), Human Capital Efficiency (HCE), Structural Capital Efficiency (SCE), Innovation Capital Efficiency (RDE) and Relational Capital Efficiency (RCE) [12].

VAIC = CEE + HCE + SCE + RDE + RCE

Value added can be calculated from company accounts as follows:

VA = OP + D + A + EC + MA + RD

Information:
- VA = Value Added
- OP = Operating Profit
- D = Depreciation
- A = Amortization
- EC = Employee Cost
- MA= Marketing and Advertising Expenses
- RD = R&D Expenses

4. RESULTS AND DISCUSSION

4.1. Research result

4.1.1. Descriptive Analysis Test

The results of the descriptive analysis in this study are:

Table 1. Descriptive Analysis Test Results

	N	Minimum	Maximum	Mean	Std. Deviation
VAIC	345	-149.16	1861.68	13.6638	119,73792
ROA	345	-.27	.14	.0154	.03788
ROE	345	-1.07	.26	.0455	.14227
ATO	345	-.18	135.86	.5367	7.30833
MBV	345	.00	70.42	2.4231	5.78246
Tobin's Q	345	.11	19.86	1.5186	2.14751
Company Size	345	24.68	34.89	29,9858	2.19234
Leverage	345	.01	.95	.6853	.24430
Valid N (listwise)	345				

Source: Data Processed Results, 2021

Table 1 explains the value of intellectual capital using value added intellectual capital (VAIC) with lowest value of -149.16 times in the company Agroniaga Bank in 2019 (AGRO), the value-added intellectual capital (VAIC) with the highest value of 1861.68 times in the company. Pacific Strategic Financial in 2019 (APIC). Value addedo ntellectual capital (VAIC) with an average value of 13.66 times, which means that the average financial industry on the IDX has an added value of 13.66 times the efficiency

of added capital owned and a standard deviation of 119.737 times.

The value of financial performance uses return on assets (ROA) with the lowest value of -0.27 or -27% at the Minna Padi Investama company in 2019 (PADI), return on assets (ROA) with the highest value of 0.14 or 14% at Danasupra Erapacific company in 2016 (DEFI). Return onaassets (ROA) with an average value of 0.0154 or 1.54%, meaning that the average financial industry on the IDX has a net profit of 1.54% of total assets owned and a standard deviation value of 0.03788 or 3.78%.

Value of financial performance use return on equity (ROE) with the lowest value of -1.07 in the company of the International Executive Bank in 2015 (BEKS), return on equity (ROE) with the highest value of 0.26 in the company Adira Dinamika Multi Finance in 2019 (ADMF). Return on equity (ROE) with an average value of 0.0455 and standard deviation value of 0.14227.

Value of financial performance use assets turnover (ATO) with the lowest value of -0.18 at the Minna Padi Investama company in 2019 (PADI), assets turnover (ATO) with the highest value of 135.86 at the 2015 Tifa Finance company (TIFA). Assets turnover (ATO) with an average value of 0.5367 and standard deviation value of 7.30833.

Value of the company use the market to book value (MBV) with the lowest value of 0.00 at the Bank Ina Perdana company in 2015, 2018, 2019 (BINA), the market to book value (MBV) with the highest value of 70.42 in the company Bank CIC 2015 (BCIC). Market to book value (MBV) with an average value of 2.4231 and a standard deviation value of 5.78246.

Value of the company use tobins'q with the lowest value of 0.11 in the East Java Regional Development Bank company in 2017 (BJTM), the highest value of tobins'q is 19.86 at the Minna Padi Investama company in 2017 (PADI). Tobins'q with an average value of 1.5186 and a standard deviation of 2.14751.

The value of company size with the lowest value is 24.68 in the Danasupra Erapacific company in 2015 (DEFI), the company size with the highest value of 34.89 at the company Bank Rakyat Indonesia (Persero) in 2019 (BBRI). The size of the company with an average value of 29.99 means that the average financial industry on the IDX has an added value of 29.99 times the efficiency of capital owned and a standard deviation value of 2.19.

The leverage value with the lowest value is 0.01 for the Lenox Pasifik Investama company in 2019 (LPPS), the highest leverage value is 0.95 for the International Executive Bank company in 2015 (BEKS). Leverage with an average value of 0.6853 means that the average financial industry on the IDX has a debt value of 68.53% of total assets owned and a standard deviation value of 0.24430.

4.1.2. Normality test

Results of the data normality test in this study are:

Table 2. Data Normality Test Results One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual ROA	Unstandardized Residual ROE	Unstandardized Residual ATO	Unstandardized Residual MBV	Unstandardized Residual Tobin's Q
N		345	345	345	345	345
Normal Parameters a	Mean	.0000000	.0000000	.0000000	.0000000	.0000000
	Std. Deviation	.07010579	.11631033	.38978869	.46741261	.54775135
Most Extreme Differences	Absolute	.035	.068	.047	.070	.063
	Positive	.035	.046	.047	.044	.027
	Negative	-.032	-.068	-.028	-.070	-.063
Kolmogorov-Smirnov Z		.649	1,264	.864.	1,308	1,176
Asymp. Sig. (2-tailed)		.793	.082	.445	.065	.126

a. Test distribution is Normal.

Source: Data Processed Results, 2021

Based on table 2, it is explained that the unstandardized residual value for the return on assets (ROA) variable has a significant value of 0.793> 0.05, so the data is normally distributed. The unstandardized residual value for the return on equity (ROE) variable has significant value ofi0.082> 0.05, so the data is

normally distributed. The unstandardized residual value for the asset turnover (ATO) variable has a significant value of 0.445> 0.05, so the data is normally distributed. The unstandardized residual value for the market to book value (MBV) variable has a significant value of 0.065> 0.05, so the data is normally distributed. The unstandardized residual value for Tobin's q variable has significant value of 0.126> 0.05, so the data is normally distributed.

4.1.3. Multicollinearity Test

The multicollinearity test results in this study are:

Table 3. Multicollinearity Test Results

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)s		
	Intellectual Capital (VAIC)	0.932	1,072
	Company Size	0.715	1,398
	Leverage	0.729	1,371

a. Dependent Variable: ROA, ROE, ATO, MBV, Tobin's Q

Source: Data Processed Results, 2021

Based on table 3, it is explained that the value added intellectual coefficient (VAIC) variable has VIF value of 1.072 <10 and a tolerance value of 0.932> 0.1, this explains that multicollinearity does not occur.

4.1.4. Autocorrelation Test

Results of the autocorrelation test in this study are:

Table 4. Autocorrelation Test Results

Variable	*Durbin Watson*
Return oneassets (ROA)	0.883
Return oneequity (ROE)	0832
Assetseturnover (ATO)	0817
Market tombook value (MBV)	1,185
Tobin's Q	1,169

Source: Data Processed Results, 2021

Based on table 4 above, it is explained that the durbin watson value of the return on assets (ROA) variable of 0.883 is between -2 to +2, so there is no autocorrelation symptom, and the data can be used in further statistical testing. The durbin watson value of the return on equity (ROE) variable is 0.832, between -2 to +2, so there is no autocorrelation symptom, and the data can be used in further statistical testing.

The durbin value of watson asset turnover (ATO) variable is 0.817 between -2 to +2, so there is no autocorrelation symptom, and the data can be used in further statistical testing. The durbin watson value of the market to book value (MBV) variable is 1.185, between -2 to +2, so there is no autocorrelation symptom, and the data can be used in further statistical testing. The durbin watson value of Tobin's q variable is 1.169, between -2 to +2, so there is no autocorrelation symptom, and the data can be used in further statistical testing.

4.1.5. Regression Test Results

Results of the regression test in this study are:

Table 5. The Effect of Intellectual Capital on Financial Performance and Company Value

Variables	**Financial performance**			**The value of the company**	
	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**
	ROA	**ROE**	**ATO**	**MBV**	**Tobin's Q**
Constant	**0.576 *** (0.20)**	**-0,882 ** (0.34)**	**8,418 *** (1.15)**	**0.419 (1.38)**	**2,992 * (1.62)**
VAIC	**0.087 *** (0.01)**	**0.135 *** (0.01)**	**0.343 *** (0.05)**	**0.133 * (0.06)**	**0.221 *** (0.08)**
Company Size	**-0.353 ****	**0.701 *****	**-6,507 *****	**-0,929**	**-3,126 *****

	(0.14)	**(0.23)**	**(0.78)**	**(0.94)**	**(1.10)**
Leverage	**-0.033 *** (0.01)**	**0.021 (0.01)**	**0.148 ** (0.06)**	**-0.256 *** (0.07)**	**-0,711 *** (0.08)**
Firms	**69**	**69**	**69**	**69**	**69**
Observation	**345**	**345**	**345**	**345**	**345**
R^2	**0.237**	**0.218**	**0.214**	**0.072**	**0.294**
Adjusted R^2	**0.23**	**0.211**	**0.207**	**0.064**	**0.288**

*Significant level: * p <0.1; ** p <0.05; *** p <0.01*

4.2. Discussion

H1: The effect of intellectual capital (value added intellectual coefficient) on financial performance using return on assets (ROA)

The hypothesis explains that intellectual capital using the value added intellectual coefficient (VAIC) has a significant effect on financial performance using return on assets (ROA). The test results for 5 years of observation, namely 2015-2019 on financial sector companies, showed hypothesis testing by including the controll variables, company size and leverage, concluded that the value added intellectuall coefficient (VAIC) had a positive and significant effect on financial performance using return on assets (ROA), because the significance value is 0.000 <0.01.

The results of this study support the results of previous research conducted by [7] and [9] which concluded that the value added intellectual coefficient (VAIC) has a positive effect on financial performance using return on assets (ROA). The support of research results has strengthened the relationship between intellectual capital, which is measured using the value added intellectual coefficient (VAIC), has a positive effect on financial performance using return on assets (ROA).

The results of this study support a resource-based theory which explains that companies that are able to manage and utilizemtheir resources properly will have a good impact on the company's financial performance. Discussion of this research is in the context of the financial industry on the Indonesia Stock Exchange, companies with high value-added capital can increase the company's operations and cause an increase in income which will ultimately increase company profits.

The results of this study support the stakeholder theory which explains that organizational accountability firms should not only report financial information, but also non-financial information. The types of information provided by companies in their annual reports can be classified into two categories, namely mandatory information and voluntary information.One of the information that is voluntary is information about *intellectual capital*. This information reveals the existence of a value added that is owned by the company due to the management of *intellectual capital* itself. So that with the disclosure of information *intellectual capital*. This is expected to increase stakeholder confidence and reduce the level of risk and uncertainty faced by investors.

The results of this study using the controll variables company size and leverage have a negative impact on financial performance. Existence of considerations about company size and leverage can cause changes in the relationship between the value added intellectual coefficient (VAIC) on financial performance through return on assets (ROA).

H2: The effect of intellectual capital (value added intellectual coefficient) on financial performance using return on equity (ROE)

The hypothesis explains that intellectual capital using the value added intellectual coefficient (VAIC) has significant effect on financial performance using return on equity (ROE). The test results for 5 years of observation, namely 2015-2019 for financial sector companies, show hypothesis testing by including the control variables for company size and leverage, concluding that the value-added intellectual coefficient (VAIC) has a positive and significant effect on financial performance using return on equity (ROE), because the significance value is 0.000 <0.01.

Results of this study support the results of previous research conducted by [7] and [3] which concluded that the value added intellectual coefficient (VAIC) has positive effect on financial performance using return on equity (ROE). The support of research results has strengthened the relationship between intellectual capital, which is measured using the value added intellectual coefficient (VAIC), has positive effect on financial performance using return on equity (ROE).

The results of this study support a resource-based theory which explains that companies that are able to manage and utilize their resources properly will have an impact on the company's financial

performance. Measurement of intellectual capital using the value-added intellectual coefficient (VAIC) leads to added value in the management of the company's capital structure. Companies with high value-added capital can increase company operations, causing an increase in revenue which in turn will increase company profits. Most of the company's capital increases through issued capital and retained earnings for the previous period, which can be used to fund the company's operations.

The results of this study using control variables, company size and leverage, have a positive impact on financial performance. The existence of considerations about company size and leverage can cause changes in the relationship between the value-added intellectual coefficient (VAIC) on financial performance through return on equity (ROE).

H3: The effect of intellectual capital (value added intellectual coefficient) on financial performance using asset turnover (ATO)

The hypothesis explains that intellectual capital using the valueadded intellectual coefficient (VAIC) has significant effect on financial performance using asset turnover (ATO). The test results for 5 years of observation, namely 2015-2019 on financial sector companies, show hypothesis testing by including the control variables for company size and leverage, concluding that the value-added intellectual coefficient (VAIC) has a positive and significant effect on financial performance using asset turnover (ATO), because the significance value is 0.000 <0.01.

Results of this study support the results of previous research conducted by [3] which concluded that the value added intellectual coefficient (VAIC) has a positive effect on financial performance using asset turnover (ATO). The support of research results has strengthened the relationship between intellectual capital, which is measured using the value-added intellectual coefficient (VAIC), has a positive effect on financial performance using asset turnover (ATO).

The results of this study support resource-based theory which explains that companies that are able to manage and utilizemtheir resources properly will have an impact on the company's financial performance.

The results of this study using firm size control variable have a negative impact on financial performance and using the leverage control variable has a positive impact on financial performance. The existence of considerations about company size can cause a change in the relationship between the value-added intellectual coefficient (VAIC) on financial performance through asset turnover (ATO).

H4: The effect of intellectual capital (value added intellectual coefficient) on firm value using market to book value (MBV)

The hypothesis explains that intellectual capital using the value added intellectual coefficient (VAIC) has significant effect on firm value using market to book value (MBV). The test results for 5 years of observation, namely 2015-2019 on financial sector companies, show hypothesis testing by including the control variables for company size and leverage, concluding that the value-added intellectual coefficient (VAIC) has positive and significant effect on firm value using market to book value (MBV) because the significance value is 0.051 <0.1.

Results this study support the results of previous research conducted by [3] which concluded that the value added intellectual coefficient (VAIC) has positive and significant effect on firm value using market to book value (MBV). The support from the research results has strengthened the relationship between intellectual capital as measured by the value added intellectual coefficient (VAIC) which has a positive effect on firm value using market to book value (MBV).

The results this study support a resource-based theory which explains that companies that are able to manage and utilize their resources properly will have an impact on company performance and company value.

The results this study support the stakeholder theory which explains that organizational accountability firms should not only report financial information but also non-financial information. One of the non-financial information is about intellectual capital. This information reveals that the company has added value due to the management of intellectual capital itself. Therefore, disclosure of intellectual capital information is expected to increase stakeholder trust and reduce the level of risk and uncertainty faced by investors.

The results of this study using the control variables company size and leverage have a negative impact on financial performance. Any consideration of company size can cause a change in the relationship between the value-added intellectual coefficient (VAIC) and firm value using market to book value (MBV).

H5: The effect of intellectual capital (value added intellectual coefficient) on firm value using Tobin's q

The hypothesis explains that intellectual capital using the valuemadded intellectual coefficient (VAIC) has significant effectwon firm value using Tobin's q.

The test results for 5 years of observation, namely 2015-2019 on financial sector companies, showed hypothesis testing by including the control variables, company size and leverage, concluded that the value added intellectual coefficient (VAIC) had a positive and significant effect on firm value using Tobin's q because of its significance value is 0.006 <0.01.

The results this study support the results of previous research conducted by [8] which concluded that the value added intellectual coefficient (VAIC) has positive and significant effect on firm value using Tobin's q. The support from the research results has strengthened the relationship between intellectual capital as measured by the value-added intellectual coefficient (VAIC) which has positive effect on firm value using Tobin'siq.

The results this study support the stakeholder theory which explains that organizational accountability firms should not only report financial information but also non-financial information. One of the non-financial information about intellectual capital. This information reveals that the company has added value due to the management of intellectual capital itself. So that disclosure of intellectual capital information can increase stakeholder confidence and can reduce the level of risk and uncertainty faced by investors.

The results this study using the control variables company size and leverage have negative impacts on financial performance. The existence of considerations about company size can cause changes in the relationship between the value-added intellectual coefficient (VAIC) on firm value using Tobin's q.

5. CONCLUSION

Based on the hypothesis testing conducted by the researcher, it can be concluded that the intellectual capital variable using the value added intellectual coefficient has positive and significant effect on financial performance using return on assets (ROA).

The variable intellectual capital using the value-added intellectual coefficient has a positive and significant effect on financial performance using return on equity (ROE).

The variable intellectual capital using the value-added intellectual coefficient has a positive and significant effect on financial performance using asset turnover (ATO).

The variable intellectual capital using the value-added intellectual coefficient has a positive and significant effect on firm value using the market to book value (MBV).

The variable intellectual capital using the valuer dded intellectual coefficient has positive and significant effect on firm value using Tobin'suq.

AUTHORS' CONTRIBUTIONS

One author's contribution is as a journal writer and data seeker while the second author's contribution is as a guide

ACKNOWLEDGMENTS

The completion of this thesis cannot be separated from the guidance and assistance from various parties. Therefore, the authors would like to thank Ms. Dr.Rosyeni Rasyid, SE., ME as the supervisor, who has provided a lot of knowledge, time, and input with great patience in directing and guiding the author to complete this proposal. The author also thanks parents, siblings, lecturers and UNP staff who have supported and assisted in the journal writing process.

REFERENCES

[1] Abidin, *MI Reporting: Efforts to Develop New Measures*. Media Accounting, 7th Edition, yr. VIII, pp. 46-47. 2000.

[2] Bontis, Nick, *Assessing Knowledge Assets: A Review of The Models Used To Measure Intellectual Capital*. 2000.

[3] Chu, SKW, Chan, KH, Yu, KY, Ng, HT, & Wong, WK, *An Empirical Study of the Impact of Intellectual Capital on Business Performance*. 2011.

[4] Ghozali, Imam and Anis Chariri, *Accounting Theory*, Semarang: Diponegoro University Publishing Agency. 2007.

[5] Harmono, *Financial Management: Based on the Blanced Scorecard*, Jakarta: Earth Literacy. 2009.

[6] Kianto, A., Andreeva, T., & Pavlov, Y, *The impact of intellectualcapital management on company competitiveness andwwfinancial performance*, Knowledge Management Research & Practice. 11 (2), 112-122. https://doi.org/10.1057/kmrp.2013.9. 2013.

[7] Meles, A., Porzio, C., Sampagnaro, G., & Verdoliva. V, *The impact of the Intellectual Capital Efficiency on Commercial Banks Performance: Evidence from the US*. 2016.

[8] Mohammad H. Chizari., Rasool ZM, Mohammad MS, Fatemeh KM, *The Impact of Intellectual Capitals of Pharmaceutical Companies Listed in Tehran Stock Exchange*

on Their Market Performance, Procedia Economics and Finance. 2016.

[9] Ozkan, N., Cakan, S., & Kayacan, M, *Intellectual Capital and Financial Performance: A Study of the Turkish Banking Sector*. 2016.

[10] Pulic, A, *measuring the Performance of Intellectual Potential in Knowledge Economy*, Paper Presented at the 2nd McMaster Word Congress on Measuring and Manging Intellectual Capital by the Austrian Team for Intellectual Potential. 1998.

[11] Williams, S, *Are Intellectual Capital Performance and Disclosure Practices Related?*, Journal of Intellectual Capital, 192-203.2001.

[12] Xu, J., Liu, F, *The Impact of Intellectual Capital on Firm Performance: A Modified and Extended VAIC Model*. 2020.