# The Effect of Green Banking and Intellectual Capital on Banking Financial Profitability on The IDX in The 2019-2023 Period

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#### **ABSTRACT**

Study This aiming For analyze influence green banking and intellectual capital to profitability finance banking at BEI for the 2019-2023 period . Green banking is more refers to practice banking that implements principle friendly environment . While intellectual capital measured with method Value Added Intellectual Coefficient (VAIC) which consists of from three components , namely Value Added Capital Employed (VACA), Value Added Human Capital (VAHU), and Structural Capital Value Added (STVA). Profitability measured use Return On Assets (ROA). Study This use approach quantitative with secondary data , such as sustainability report and annual report published by the Indonesia Stock Exchange . With method purposive sampling , resulting in amount sample overall as many as 145 from 29 banks each period . Research data analysis techniques This use analysis panel data regression with STATA software version 12 when process data . The results of the study indicate that green banking variables do not have a significant effect on profitability (ROA, intellectual capital as measured by Value Added Capital Employed (VACA) has a positive and significant effect on profitability (ROA) and Structural Capital Value Added (STVA) does not have a significant effect on profitability (ROA).

**Keywords:** Green Banking, Intellectual Capital (VACA, VAHU, STVA), Profitability.

## 1. INTRODUCTION

Economy in Indonesia will experience growth with existence role banking as institution finance. Where according to (Wrespatiningsih & Mahyuni, 2022), banking is a institutions that have authority in help public channel and store funds for increase growth economy in indonesia. Banking is a institutions that play a role important in the country's economy with provide credit and its liquidity, then from that, condition from performance banking become very important thing For more be noticed.

To know condition performance banking whether Already in condition healthy, needed existence evaluation to activities that can be done influence country's economy. Banking measure its performance with ratio profitability. Profitability is a ability company in look for profit or profit in the period certain results produced from sales and investment (Kasmir, 2019). Benefits from profitability Can seen based on Return on Assets (ROA) which is a proxy profitability main for banking. Benefits from profitability Can seen based on Return on Assets (ROA) which is a proxy profitability main for banking. ROA is one of the indicators used profitability For evaluate from effectiveness company in get profit with use all assets owned.

Challenges during the COVID-19 pandemic that caused the occurrence decline to profitability so that impact on performance company. As institutions that have role important in the banking sector of a country's economy has a very big influence big in create interest economic and social, because banking No only give profit in a way financial but also must give service social to environment, service social activities carried out banking is one of them with support draft green banking.

Green banking The same just with principle development sustainable, with objective give benefit environment for both the country and society (Yuniarti, 2013) in (Chen Tia et al., 2023). Banking have right in a way absolute For channeling credit or loan to more customers notice sustainability environment, one of which is in the sector

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agriculture organic and energy renewable. This is done Because banking become part institution finances that are not off from demands in do change business to direction more practice friendly to environment.

Then in determining profitability required competitive advantage, superiority competitive required banking No only source unique and difficult power imitated but also necessary existence empowerment source good power. for reach matter the need for capital increase and development his business through digital transformation for create mark Power competition more high. The creation of Power high competition No off from development knowledge knowledge and technology. So that banking must push management do utilization For optimize management asset No its form that is intellectual capital that is capable give information and knowledge use increase Power competition performance company.

Intellectual capital use a number of indicator including human capital, capital employed, and structural capital. If System banking has use digital transformation will make it easier performance in a banking so that can increase quality service on the customers used For activity bank operations in minimize costs and preparation to in front (Andarwati, 2016) in (Islamadinna et al., 2021). Intellectual capital this is very important important in create mark add and competitive advantage for banking.

Study This expected can fill in gap from condition profitability banking moment this is what must be done more notice asset his and more responsible answer on aspect environment. Based on Exposure background behind above, researchers are also interested For to study more continued with the research entitled " The Influence of Green Banking and Intellectual Capital To Profitability Banking at BEI period 2019-2023".

### 2. RESEARCH METHODS

The type of data in this study is quantitative data. The sampling technique in this study uses the Purposive Sampling technique. The method of data collection in this study is carried out using the data documentation method in the form of numbers in the financial statements. The type of data in this study is quantitative data. The data source used in this study is secondary data. This study uses a quantitative descriptive analysis method that is interpreted using time series and cross sections .

# 3. RESULTS AND DISCUSSION

Analysis Statistics Descriptive

**Table 1.** Statistical Test Results Descriptive

Variables	Obs	Means	Std. Dev	Min	Max
ROA	145	0.1517543	0.5619448	-1.992633	2.012691
GB	145	0.3668309	0.2620925	0	0.9047619
VACA	145	1.364018	5.812438	-11,21547	58.64014
VAHU	145	5,808437	33,637	-139,7735	261,8723
STVA	145	-3763,906	46012.99	-553781.8	11772.04

Table 1 shows results that amount sample assessed by obs is 145 samples. Can seen that mean value of ROA variable is 0.1517543 with standard deviation as big as 0.5619448. Then For mark the minimum of -1.99263 and the value the maximum of 2.012691. This is show If There is companies that experience losses, but there are also banking that obtains profit Enough tall in accordance with total assets owned.

Furthermore from variable Green Banking (GB) produces the mean value is 0.3668309 with standard deviation of 0.2620925. And for mark the minimum is 0 with mark the maximum of 0.904762, value This show that in a way general implementation policy friendly environment in banking Already Enough good, but Still Not yet applied fully or Still There is a number of banking that has not disclose about implementation green banking in operations his company.

Next is VACA (Value Added Capital Employed) which produces the mean value is 1.364018 with standard deviation of 5.812438. This value show that in a way general banking capable to obtain mark plus from the capital used. However with mark sufficient standard big, signifies that existence a difference in a way significant in effectiveness utilization of capital between banking. This is supported by the results from minimum value of -11.2155

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and the value maximum of 58.64014 which shows If There is banking that does not capable produce mark plus from capital and some are able take advantage of it in a way Good .

Next is VAHU (Value Added Human Capital) which is obtained the mean value is 5.808437 with standard deviation amounting to 33,637, the value This show that in a way general, banking Can produce mark plus from source Power humans in it. However in study This produced standard sufficient deviation big. This is to signify If There is difference significant in effectiveness utilization of human capital between supported banking from results minimum value of -139.774 and the value maximum amounting to 261.8723, the value This show existence banking that has not optimally in manage source Power the human being For get mark plus.

Lastly (STVA) Structural Capital Value produce very different mean values from the others namely of -3763.906 with standard deviation of 46012.99. The mean value is negative show If in a way general structure organization, processes and systems owned banking Not yet Enough For give mark plus to performance. So are the standards very high deviation show that existence level very high data distribution. So that There is difference in effectiveness utilization structural capital, thing This seen in minimum value generated of -553782 which means There is companies that experience loss big from structure his organization whereas from mark maximum as much as 11772.04 can be obtained show If Still There is manage structure his organization in a way effective.

**Table 1.** Common Effect Model CEM Test Results )

Variables	Coefficient	t- statistics	Significant
GB	-0.062937	-0.45	0.651
VACA	0.0326409	5.06	0,000
VAHU	0.0078513	7.05	0,000
STVA	-5.28E-09	-0.01	0.995
_ Constantine	0.0846933	1.34	0.182
R squared	0.4347		
F statistic	26.92		
Significance (F statistic)	0.0000		

Table 2. Fixed Effect Model (FEM) Test Results

Variables	Coefficient	t- statistics	Significant	
GB	0.093425	0.37	0.711	
VACA	0.0165295	2.73	0.007	
VAHU	0.0077225	7.13	0,000	
STVA	9.78e-08	0.14	0.886	
_ Constantine	0, 0504492	0.52	0.603	
R squared	0.4096			
F statistic	19.33			
Significance (F statistic )	0.0000			

Table 4. 3 of Random Effect Model (REM)

Variables	Coefficient	t- statistics	Significant
GB	-0.091543	0.05	0.959

VACA	0.0218895	3.76	0,000
VAHU	0.0077533	7.51	0,000
STVA	9.31e-08	0.14	0.889
_ Constantine	0, 0845498	0.94	0.348
R squared	0.4270		
F statistic	96.58		
Significance (F statistic)	0.0000		

**Table 4**Chow Test Results

Chow Test	Signification
F Test (Prob > F)	0.0000

Test is used to compare the results of the common effect and fixed effect. With the results of the chow test that has been carried out, it shows Prob > F of 0.0000 < 0.05. So H0 is rejected and H1 is accepted, where the selected model is the fixed effect model (FEM).

Table 5Hausman Test Results

Hausman Test	Signification
Prob > chi2	0.0085

In the chow test findings showed that selected fixed effect model as the best model, then the Hausman test used For become comparison estimate random effect and fixed effect. The results of the Hausman test that have been done identify If pro > chi2 with a value of 0.0085 < 0.05, then H0 is rejected and H1 is accepted. So the model selected in the study This is fixed effect model (FEM).

Table 7. 6Test Results

Variables	VIF	1/VIF
GB	1.04	0.962097
VACA	1.10	0.905512
VAHU	1.10	0.907335
STVA	1.03	0.968888
Mean VIF	1.07	

In study This produce VIF value owned namely 1.07 < 10. With thus can concluded that study This No happen multicollinearity. In accordance with the results of the fixed effect model, the panel data regression model equation can be presented as follows:

Table 8. 7Panel Data Regression Test with Fixed Effect Mode 1

Variables	Prediction	Coefficient	t- statistics	Sig	Note
GB	Positive	0.093425	0.37	0.711	Rejected
VACA	Positive	0.0165295	2.73	0.007	Accepted
VAHU	Positive	0.0077225	7.13	0,000	Accepted
STVA	Positive	9.78E-08	0.14	0.886	Rejected
_ Constantine		0.0504492	0.52	0.603	
R squared	0.4096	•			•
F statistic	19.33				



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Significance (F statistic )	0.0000	

ROA = 0.0504492 + 0.093425 GBit + 0.0165295 VACAit + 0.0077225 VAHUit + 9.78E-08 STVAit + eit

Based on results from equality on Can concluded, as following:

Mark constant is 0.0504492 which shows if variable independent, such as GB, VACA, VAHU, and STVA values zero, then ROA banking of 5.04%. This ROA presenting level profitability company in study This. The GB ( Green Banking ) variable has coefficient regression positive with the amount is 0.09342 and the value significance of 0.711 which is the amount more big from value of 0.05. Although direction the relationship positive but in study This green banking No influential significant. VACA has coefficient of 0.0165295 with mark significance of 0.007 which is higher small from value 0.05. This is show that There is influence positive to ROA. VAHU has coefficient as big as 0.0077225 with mark significance of 0.0000 which is more small from value 0.05. This is show that There is influence positive to ROA. STVA has coefficient as big as 9.78E-08 with mark significance of 0.886 which is higher big from value 0.05. This is show that STVA does not can affect ROA significantly significant.

Table 8Coefficient Results Determination

R-Squared	Significance
Overall	0.4096

Table 9 shows that The R2 value represented by the overall R-squared is 0.4096 or equivalent with value of 41%. Then it can known If variable independent in study this, namely green banking and intellectual capital as measured using (VACA, VAHU, and STVA), can explain Profitability (ROA) of 41%. And 59% (100%-41%) others explained by other variables outside the research model This.

Table 9F Test Results

F- Statistics	Significance
Prob > chi2	0.0000

The results of the Fixed Effect Model (FEM) test presented in Table 4 show the results of the prob value > chi2 of 0.0000 < 0.05. It can be concluded that simultaneously the green banking and intellectual capital variables (VACA, VAHU, and STVA) have a significant effect on ROA.

**Table 10**. Results of the T -Statistic Test (Partial)

Variables and Models	Prediction	Coefficient	Z	P  z	Note
			t- statistics		
GB	Positive	0.093425	0.37	0.711	Rejected
VACA	Positive	0.0165295	2.73	0.007	Accepted
VAHU	Positive	0.0077225	7.13	0,000	Accepted
STVA	Positive	9.78E-08	0.14	0.886	Rejected
_ Constantine		0, 0504492	0.52	0.603	

From testing hypothesis in the T test can show If;

H1: Green Banking influential positive significant to profitability.

Based on results mark coefficient 0.093425 and obtained P>|z| GB shows number 0.711 where mark This more big from 0.05. So that H1 of the study This rejected , namely green banking (GB) no influential in a way significant with direction positive to profitability (ROA).

H2 A: VACA has an effect positive significant to profitability.

Coefficient value from VACA is 0.0165295 with results P>|z| is as big as 0.007 where mark This more small from 0.05. So H2 A research This accepted , namely VACA has an effect positive significant to profitability (ROA).

H2 B: VAHU has an effect positive significant to profitability.

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It is known mark coefficient from VAHU of 0.0077225 with results P>|z| is as big as 0,000 where mark This more small from 0.05. So H2 B research This accepted , namely VAHU has an effect positive significant to profitability (ROA).

H2 C: STVA has an effect positive significant to profitability.

Coefficient value from STVA of 9.78E-08 with results P>|z| is as big as 0.886 where mark This more big from 0.05. So H2 C research This rejected, namely STVA does not influential significant to profitability (ROA).

### 4. CONCLUSION

From the research that has been done done, there are things that can concluded from study the as following: Green Banking does not influential in a way significant to Profitability. (ROA), Value Added Capital Employed has an effect in a way significant to Profitability (ROA), Value Added Human Capital has an influence in a way significant to Profitability (ROA), Structural Capital Value Added no influential in a way significant to Profitability (ROA). Study This only own a number of variables and data coverage used so that study furthermore recommended add variable, expand sample, and add period observation. Research this can also become evaluation for banking in implementation of green banking real, and push government For strengthen policies and reporting sustainability in the sector banking.

#### 5. THANK-YOU NOTE

All praise and gratitude writer raise it to the presence of God Almighty. Because of His blessings , grace and gifts , so that writer can finish journal with title " THE INFLUENCE OF GREEN BANKING AND INTELLECTUAL CAPITAL ON BANKING FINANCIAL PROFITABILITY ON THE IDX IN THE 2019-2023 PERIOD " just in time. Writer to pronounce accept love to meritorious party behind completed journal this . In special , writer express gratitude love to Rochman Arif as lecturer the mentor who has Lots take time out time , energy , patience and guidance as well as give attention in mentoring during the drafting process journal. Writer realize that journal This Far from the word perfect so that expect input , criticism and suggestions that can be build journal This toward more positive .Finally, the author hope Hopefully journal This can give benefit for all the party that needs it .

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