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Analysis Efficiency of Islamic Banking Financing in Improving Sustainability Performance and Green Banking in Indonesia

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Abstract. *This study aims to analyze the efficiency of Islamic banking financing in increasing sustainability performance and green banking in Indonesia. This study used 34 Islamic banking institutions through filling out questionnaires by the heads of the accounting and reporting divisions. The data was processed and analyzed using Structural Equation Modeling (SEM). The results of the study show that the efficiency of Islamic banking financing has a positive effect on increasing sustainability performance and green banking in Indonesian Islamic banking. Improved sustainability performance and green banking caused by the financing return strategy carried out by Islamic banking can help companies to obtain information from financial performance so that they can plan suitable strategies in the future and Islamic banking can focus on community welfare through environmental preservation.*

Keywords: *Efficiency of Islamic Banking Financing, Green Banking, Sustainability Performance, Structural Equation Modeling*

Abstrak. *Penelitian ini bertujuan untuk menganalisis efisiensi pembiayaan perbankan syariah dalam meningkatkan kinerja keberlanjutan dan green banking di Indonesia. Penelitian ini menggunakan 34 lembaga perbankan syariah melalui pengisian kuesioner oleh kepala divisi akuntansi dan pelaporan. Data diolah dan dianalisis menggunakan Structural Equation Modeling (SEM). Hasil penelitian menunjukkan efisiensi pembiayaan perbankan syariah berpengaruh positif terhadap peningkatan kinerja keberlanjutan dan green banking perbankan syariah di Indonesia. Peningkatan kinerja keberlanjutan dan green banking yang disebabkan oleh strategi pengembalian pembiayaan yang dilakukan oleh perbankan syariah dapat membantu perusahaan untuk memperoleh informasi dari kinerja keuangan sehingga dapat merencanakan strategi yang cocok di masa depan dan perbankan syariah dapat fokus pada kesejahteraan masyarakat melalui pelestarian lingkungan.*

Kata Kunci: *Efisiensi Pembiayaan Perbankan Syariah, Green Banking, Kinerja Keberlanjutan, Structural Equation Modeling*

Introduction

Islamic banking is an Islamic financial institution that carries out Islamic commercial finance and Islamic social finance activities that support the achievement of macroeconomic goals (Ascarya et al., 2016). In other words, Islamic banking has a unique role in comparison to conventional banking. This

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entity is not only a business organization but also a social organization and missionary (Khan, 2010).

Islamic banks in carrying out their operational business as financial institutions, to gain profits must pay attention to the risks they will face (Noor et al., 2016). In channeling financing, banks must also pay attention to the return of funds from debtors. The credibility of Islamic banks will also be seen from how much the financing is problematic. Customers with problem financing with substandard, doubtful and loss collectability will be calculated in the Non Performing Financing (NPF) rasio (IFSB, 2016). With an increase in the NPF of Islamic banks, the level of risk faced will increase, due to the possibility of losses from disbursed financing, and of course have an impact on financing inefficiencies in Islamic banks in realizing justice through a reasonable rate of return so that Islamic banks will experience difficulties in creating economic welfare.

With regard to the existence of companies in Indonesia, many parties expect that companies in Indonesia and even around the world must begin to develop sustainable and environmentally friendly performance. Financial performance is a description of the company's financial condition in a certain period regarding aspects of raising funds and channeling funds, which are usually measured by indicators of capital adequacy, liquidity and profitability (Ulum MD, 2008). It can be explained that financial performance in Islamic banking is an analysis carried out to see the extent to which a company has implemented it by using financial implementation rules according to sharia principles (Amalina Wan Abdullah et al., 2013).

The implementation of accounting practices in Islamic banking that is in accordance with the paradigm and principles of Islamic transactions, of course, plays a role in efforts to preserve the environment, namely through voluntary disclosure in its financial reports related to environmental costs or environmental costs (Agyei-Mensah, 2016). The accounting system in which there are accounts related to environmental costs is referred to as green

accounting or environmental accounting (Cohen, 2011). Through the implementation of green accounting, it is expected that the environment will be preserved.

Based on the description above, in order to create sustainable performance and green banking in Islamic banking, it must be supported by the efficiency of Islamic banking financing so that it has an impact on social welfare. This study will analyze the efficiency of Islamic banking financing on sustainability performance and green banking with a survey on Islamic banking in Indonesia.

Literature Review

Islamic banking distributes funds using a variety of contracts, including mudharobah, murabahah, musyarakah, salam and istishna`. The Financial Report of Islamic Banking in 2019 shows that the three dominant Islamic financing products are murabaha followed by musyarakah and mudharabah. With the high popularity of murabahah, musyarakah and mudharabah contracts, the reporting of these products in the Financial Statements of Islamic Banks is important and needs attention. Errors in recording and reporting will greatly interfere with the policies taken based on financial report information (Agyei-Mensah, 2016). Bakar and Yasin (Mahinar et al., 2019) found that editorial problems in financing contract documents at Islamic banks can lead to mafsadah for customers, which means that they have not been able to provide justice for customers.

Islamic banks as institutions based on Islamic principles are not allowed to manipulate the results of their financial performance. This is because information can mislead a company's performance (Masykuroh, 2012). Practically, quality financial performance must be measured by meeting CAMEL criteria and developed by incorporating an element of risk (Mulyani & Rachmawati, 2016). Financial performance in Indonesian Islamic banking is still facing the problem of limited financial reporting which has not been able to provide important and sufficient information regarding the value and

strength of the company for stakeholders, causing financial reports to lose their relevance. This loss of relevance causes stakeholders not to get actual information because it does not explain the intellectual capital that exists in the company (Ulum MD, 2008).

Social responsibility through the presentation of accounting information, Maali, et al. (Maali et al., 2006) has formulated a standard for disclosure of Corporate Social Responsibility (CSR) specifically for Islamic Banks. These standards are derived from Islamic values and adapted to the regulations set by the Accounting and Auditing Organization for Islamic Institutions (AAOIFI) (AAOFI, 2015). Research Maali, et al.(Maali et al., 2006) used a sample of 29 Islamic banks in Muslim countries. However, the results show that only eleven banks (38%) disclose their social responsibility in accordance with the standards set by AAOIFI. The results of this research indicate that 62% of Islamic banks do not disclose their social responsibility as expected. This shows that the implementation of Green Banking has not been achieved in accordance with sharia objectives.

Method

The research was conducted in all Islamic Commercial Banks (ICB) and Indonesian Sharia Business Units (SBU). The research was carried out from September 2022 to December 2022 by collecting data by distributing questionnaires to the heads of the accounting and reporting divisions at 12 Islamic Commercial Banks and 22 Islamic Business Units in Indonesia. Questionnaires were distributed by providing a Google Form link that could be answered immediately (Taherdoost, 2019). The instrument used is the theory of Islamic banking financing efficiency, sustainability performance and green banking. Secondary data was collected through literature studies from various articles such as books, scientific journals and scientific research results that are relevant to the problems and objectives of this research. The data were analyzed using the Structural Equation Modeling (SEM) method with

SmartPLS 3.0 software. Measurement models and structural models are used as test models.

This study uses exogenous and endogenous variables. The exogenous variable is described as the efficiency of Islamic banking financing (X) as a latent variable with indicators namely the rate of return on mudharabah financing, the rate of return on musyarakah financing, and the rate of return on murabahah financing. Furthermore, there are two endogenous variables, namely sustainability performance (Y1) as a latent variable with the indicators being earning asset quality, third-party funds, current account saving accounts (CASA), long-term funds, profit-sharing funds, and profitability.

The second endogenous variable is green banking (Y2) as a latent variable with indicators 1) caring and paying attention to environmental friendliness in financing and other activities and maintaining a safe environment, 2) conducting in-depth analysis and evaluation of the business of prospective financing customers, 3) has specific guidelines regarding the types of business that may be financed/may not be financed related to environmental compliance, 4) exercise concern and attention to environmental security in financing and other activities, 5) carry out environmental responsibility in its activities.

Results and Discussion

Descriptive Analysis

Table 1. Data Description

Variable	Indicator	Mean	Description
Efficiency of Islamic Banking Financing	Murabahah	4.2	Very Good
	Musyarakah	4.1	Good
	Mudarabah	3.9	Good
	Mean	**4.1**	**Very Good**
Sustainability Performance	Earning Aset Quality	4.8	Very Good
	Third Party Fund	4.5	Very Good

	CASA	4.6	Very Good
	Long-term Funds	4.5	Very Good
	Profit-sharing Funds	4.6	Very Good
	Profitability	4.7	Very Good
	Mean	**4.6**	**Very Good**
Green Banking	Caring and paying attention to environmental friendliness in financing and other activities and maintaining a safe environment	3.6	Good
	Conducting in-depth analysis and evaluation of the business of prospective financing customers	3.8	Good
	Specific guidelines regarding the types of business that may be financed/may not be financed related to environmental compliance	3.4	Good
	Exercise concern and attention to environmental security in financing and other activities	3.5	Good
	Carry out environmental responsibility in its activities	3.5	Good
	Mean	**3.5**	**Good**

Table 1 shows an overview of the results of the questionnaires that have been distributed to the accounting and reporting divisions at ICBs and SBUs in Indonesia. The efficiency of Islamic banking financing shows that the respondent's response is very good with an average value of 4.1. This shows that ICB and SBU have made efforts to return murabahah, musyarakah and mudarabah financing to run smoothly and there is no congestion from customers.

The response results related to sustainability performance show that respondents gave very good answers with an average value of 4.6. This shows that ICB and SBU are continuously working to improve financial performance in order to provide the right information so that the company's management can take the right steps going forward.

The results of the responses related to Green Banking show that the respondents gave good answers with an average value of 3.5. This shows that ICB and SBU continue to provide financing and financial reporting while still paying attention to environmental security.

Structural Equation Modelling Analysis

Data analysis was carried out in three stages: 1) evaluating the measurement model or outer model, 2) analyzing the structural model or inner model, 3) testing the hypothesis. Model evaluation was carried out in three stages by calculating convergent validity, discriminant validity and composite reliability. Furthermore, structural analysis was carried out by focusing on the R-square value and p-value of the path coefficient derived from the bootstrapping process (Juliandi, 2018).

Measurment Model Evaluation Analysis (Outer Model)

Convergent validity checks are carried out by examining the loading factor value derived from the convergent validity test which illustrates the strength of the correlation between each indicator and its construction.

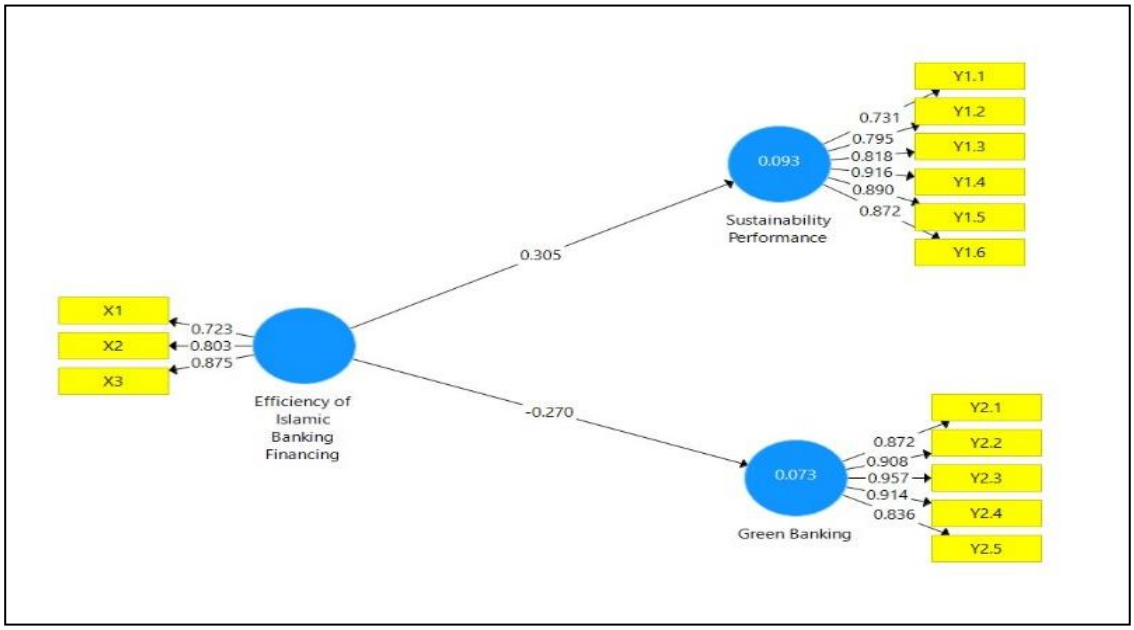

Figure 1. Fit Loading Factor Model

If the loading factor value is greater than 0.7, then it is considered valid. These results indicate that more than 50% of the variance in the indicator can be explained by the construct variable, so that the indicator is valid and acceptable. Figure 1 shows loading factor value of the convergent validity test. It can be seen from these results that all the indicators have a loading factor value greater than 0.7.

Fit Loading Factor Model

This section shows that all scales have fulfilled the requirements of the loading factor and are declared valid. The total loading factor value is shown in Table 2.

Table 2. The Value of Loading Factor Indikator

	Efficiency of Islamic Banking Financing	Green Banking	Sustainability Performance
X1	0.723		
X2	0.803		
X3	0.875		
Y1.1			0.731

	Efficiency of Islamic Banking Financing	Green Banking	Sustainability Performance
Y1.2			0.795
Y1.3			0.818
Y1.4			0.916
Y1.5			0.890
Y1.6			0.872
Y2.1		0.872	
Y2.2		0.908	
Y2.3		0.957	
Y2.4		0.914	
Y2.5		0.836	

The average variance extracted (AVE) value must also be considered because it illustrates the amount of variance or the diversity of manifest variables that are owned by latent variables. The recommended AVE value must be greater than 0.5. This shows that latent variables can explain more than half of the variance in indicators. Based on the results of data estimation, all variables already have an AVE value greater than 0.5. As a result, the validity has been fulfilled at the convergent stage. Table 3 shows the AVE values.

Table 3. Average Variance Extrscted (AVE)

	Average Variance Extracted (AVE)
Efficiency of Islamic Banking Financing	0.644
Green Banking	0.807
Sustainability Performance	0.704

The next step is to examine the correlation value between variables to determine discriminant validity. In Fronell-Lacker, the variable's correlation with the variable itself must be greater than the correlation of the variable with other variables. Table 4 shows the estimation results.

Table 4. Fronell-Larcker Criterion

	Efficiency of Islamic Banking Financing	Green Banking	Sustainability Performance
Efficiency of Islamic Banking Financing	**0.803**		
Green Banking	-0.270	**0.898**	
Sustainability Performance	0.305	-0.116	**0.839**

Based on the results from Table 4, the correlation between the variable and the variable itself is greater than the correlation between the variables and other variables. The variable efficiency of Islamic banking financing has a correlation coefficient of 0.803 with itself. Green banking and sustainability performance variables also have large correlation values with themselves, namely 0.898 and 0.839. Based on these results it was concluded that the test complied with the rules of thumb for the Fronell-Larcker Criterion value.

Table 5. The Value of Cross Loading

	Efficiency of Islamic Banking Financing	Green Banking	Sustainability Performance
X1	**0.723**	-0.130	0.244
X2	**0.803**	-0.067	0.258

X3	**0.875**	-0.362	0.246
Y1.1	0.114	-0.178	**0.731**
Y1.2	0.123	0.063	**0.795**
Y1.3	0.187	-0.041	**0.818**
Y1.4	0.297	-0.097	**0.916**
Y1.5	0.190	-0.168	**0.890**
Y1.6	0.392	-0.124	**0.872**
Y2.1	-0.131	**0.872**	-0.156
Y2.2	-0.194	**0.908**	-0.163
Y2.3	-0.344	**0.957**	-0.071
Y2.4	-0.112	**0.914**	0.013
Y2.5	0.037	**0.836**	0.139

Based on Table 5, the correlation coefficient value of the construct indicator with the indicator itself is greater than the correlation coefficient value of the indicator with other construct indicators. This finding indicates that the construct in this study already has appropriate discriminant validity..

Construct reliability testing also really needs attention. Construct reliability can be calculated in two ways, namely by looking at the value of Cronbach alpha (CA) and the value of composite reliability (CR). When the resulting Cronbach alpha (CA) and composite reliability (CR) values are greater than 0.7, the indicator is considered reliable. Table 6 shows the CA and CR results.

Table 6. Cronbach Alpha and Composite Reliability (CR) values

	Cronbach's Alpha	Composite Reliability
Efficiency of Islamic Banking Financing	0.733	0.844
Green Banking	0.951	0.954

Sustainability Performance	0.921	0.934

Overall the CR results show a result greater than 0.7. The latent variable can be interpreted reliably because it meets the requirements and the CA value also shows a result that is greater than 0.7.

Structural Model Evaluation (Inner Model)

The R Square value on endogenous constructs is one of the stages of testing the structural model (Sekaran & Bougie, 2016). The value of R Square is the coefficient of determination of the endogenous construct and is used to assess the inner model's predictive power. The criteria for R square values are 0.67 (strong), 0.33 (moderate), and 0.19. (weak). Table 7 shows the R-Square values obtained in this study.

Table 7. R-Suqare Values

	R Square
Green Banking	0.073
Sustainability Performance	0.093

The R-Square results show that the relationship between the efficiency of Islamic banking financing and sustainability performance and green banking is considered weak because the R-Square values are only 0.093 and 0.073.

The bootstrapping technique is performed to recalculate the random sample data to obtain the p-value using the path coefficient test. If the p-value is below 0.05 then the hypothesis of this study can be accepted. Furthermore, the magnitude of the influence can be seen from the original sample value. Table 8 shows the results of the bootstrapping process from the study data.

Table 8. Results of Bootsrapping Process

	Original Sample (O)	P Values	Description

Efficiency of Islamic Banking Financing -> Green Banking	0.351	0.023	Significant
Efficiency of Islamic Banking Financing -> Sustainability Performance	0.316	0.029	Significant

Based on Table 8, the results of this study indicate that the efficiency of Islamic banking financing has a positive effect on sustainability performance with a p-value of 0.029 (<0.05) and an original sample value of 0.351. Furthermore, the efficiency of Islamic banking financing has a positive effect on green banking with a p-value of 0.023 and an original sample value of 0.316. The following details the influence of variables that can be explained:

1. The effect of the efficiency of islamic banking financing on sustainability performance.

Islamic banking financing has a positive and significant impact. This shows that Islamic banking has implemented a good strategy and risk management of financing which has been proven by the very good rate of return on financing that has been distributed. This result is in line with the research of Aditya and Nugroho (Aditya & Nugroho, 2016) which states that increasing returns on financing channeled by Islamic banking will improve the company's financial performance so that it can provide the right information for company management to determine future strategies.

Haq (Haq, 2015) adds that Islamic banking financing, especially murabaha financing, has the greatest impact on the financial performance of Islamic banking, while profit-sharing-based financing such as mudarabah tends to have a weak rate of return. This is presumably because financing with consumptive contracts such as murabaha has short-term agreements, while profit-sharing based financing tends to be for business capital which generally has a long term agreement.

Thus, in addition to paying attention to financing risks, Islamic banking managers are also expected to pay more attention to the structure of the financing provided so that the benefits obtained are not only for the short term but can also be felt in the long term. Ultimately, Islamic banking needs to optimize a good financing portfolio to increase sustainability performance.

2. The effect of the efficiency of islamic banking financing on green banking

Islamic banking financing has a positive and significant impact. Bhardwaj and Malhorta (Bhardwaj & Malhotra, 2013) state that the positive effect of Islamic banking financing with green banking is caused by smooth financing that allows banks to allocate funds for environmental maintenance. Hossain and Kalince (Hossain & Kalince, 2014) and Meena (Meena, 2017) state that Islamic banking which already has good profitability can allocate funds for improving bank operations that lead to environmental protection such as developing online banking which will make bank activities more efficient and more profitable.

Conclusion

The results of the study show that there is an effect of the efficiency of Islamic banking financing on sustainability performance and green banking at ICB and SBU in Indonesia. This shows that increasing returns on financing, especially on murabaha, musyarakah and mudarabah contracts, will increase the sustainability performance of Islamic banking so that it can provide the right information about financial performance so that it can take the right steps and strategies going forward. Furthermore, increasing the efficiency of sharia banking financing also helps the implementation of green banking in Indonesian islmaic banking in order to improve people's welfare.

Meanwhile, further research is expected to be able to add to the criteria for customers who get financing in Islamic banking in order to find out what customer criteria hinder the increased return on Islamic banking financing.

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