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The Effect Enterprise Risk Management, Sustainable Banking Disclosure, and Financial Inclusion on Firm's Value

Liya wahyuningsih[1)]; Asep Risman[2)]

[1] *Wahyuningliya3@gmail.com, Faculty Economics and Business, Mercu Buana University College, Indonesia*
[2] *Asep.risman@mercubuana.ac.id, Faculty Economics and Business, Mercu Buana University College, Indonesia*

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Abstract in English

This research aims to determine the influence of Enterprise Risk Management, Sustainable Banking Disclosure and Financial Inclusion on Firms Value. The population in this research is banking sub-sector companies listed on the Indonesia Stock Exchange for the 2019-2023 period, totaling 9 companies according to the characteristics determined by the researcher. The sample used was 45 samples, calculated based on purposive sampling technique. The data for this research is collected through secondary sources, and the analysis is conducted using panel data regression with Eviews 12 software. The results of this research show that risk management has a positive effect on firm's value, sustainable disclosure has a negative effect on firm's value, and financial inclusion has no effect on firm's value.

INTRODUCTION

Banking plays a key role in supporting Indonesia's economy. Through the distribution of credit, banking helps increase investment and economic growth. Banking plays an important role in helping to finance small and medium enterprises, which are important economic resources for the country. In addition, banking also plays a role in helping the government finance infrastructure projects and economic development.

Figure 1. Banking Company Assets

According to data published on the official website of the Financial Services Authority up to 2017, the banking industry continued to experience growth in total assets. In 2017, the total assets of the banking industry increased to 7,387.1 trillion. However, in recent years, financial crises have frequently struck the global economy with increasing intensity and

frequency. The Asian financial crisis of 1997-1998 and the Global financial crisis of 2008 are among the most significant examples, where the decline is evident in the data.

Moreover, the emergence of the Covid-19 virus caused an economic slowdown in many countries, including Indonesia, as evidenced by Indonesia's economic growth of -2.07 percent at the end of 2020 (BI, 2021). Every company hopes that its value continues to increase and strives for this improvement so that its performance can be assessed positively by owners and external stakeholders in the company. The company's value is important to attract investors; the larger the investment, the greater the company's value will be (Purnama, 2016). However, the reality is that many companies continue to decline, as reflected in the drop in their stock prices each year. This may be due to the increasing risks faced by banks over time, as a result of the growing complexity of bank products and activities. Sustainable disclosure implies running a banking business by incorporating social and environmental ethical considerations into business strategies and promoting sustainable development. Being sustainable means that banks are required to establish their own environmental risk management systems and social behavior policies to integrate sustainability into their business strategies (UNEP and the World Bank Group, 2017). In addition to implementing risk management and continuous disclosure, financial inclusion has become a new challenge for banking in Indonesia. Financial inclusion is a initiative aimed at removing all types of barriers to public access in utilizing financial services, which can improve the standard of living of the community, especially in hard-to-reach areas. This means that financial inclusion is crucial for economic growth in Indonesia and can help alleviate poverty in Indonesian society. Several studies on the impact of financial inclusion on company value yield different result; one such study by Juhaeriyah (2023) and Suryani (2021) revealed that financial inclusion produce an adverse and significant effect on firm's value.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Firm's Value

A high company value boosts market confidence in the company's current performance and future potential (Akbar & Fahmi, 2020). Based on Signal Theory, the presence of many investment opportunities serves as a positive signal about the company's future growth, thereby increasing its value (Kurnia, 2017). In this study, the firm's value is proxied by the Price Book Value (PBV) using the following formula:

$$PBV = \frac{price\ per\ share}{book\ value\ per\ share}$$

Enterprise Risk Management

Risk management is an effort by the company intended for stakeholders to be considered in decision-making. The disclosure of risk management includes information provided by the company regarding its risk management practices and the potential impacts that may occur in the future (Prayoga and Luciana, 2013). Risk management is assessed using a dummy variable, where a value of 1 is assigned to companies that disclose risk management items and 0 to those that do not disclose them. The calculation of risk management is as follows:

$$ERMDI = \frac{\sum ij\ Ditem}{\sum ij\ ADitem}$$

Explanation:
ERMDI = Enterprise Risk Management Disclosure Index
∑ij Ditem = Total ERM score expressed
∑ij ADiem = Total ERM Score that must be disclosed

The research conducted by Dikaputera (2021) shows that the implementation of risk management can affect the value of a company. Additionally, the research by Yuliana (2020) and another study by Suardi & Werastuti (2024) indicates that risk management has a significant positive impact on the value of banking companies.

H1: Enterprise risk management has a positive effect on firm's value.

Sustainable Banking Disclosure

Sustainable disclosure implies conducting banking business by incorporating social and environmental ethical considerations into business strategies and promoting sustainable development. Sustainable banks are required to establish their own environmental risk management systems and social behavior policies to integrate sustainability into their business strategies (UNEP and the World Bank Group, 2017). One of the objectives of sustainable disclosure is to enhance the resilience and competitiveness of financial services institutions (FSIs) so that they can grow and develop sustainably. Related to better risk management and the banking sector's ability to innovate products or services, continuous disclosure will enable banking institutions to further develop and maintain their value. Therefore, the greater a company's sustainability disclosure, the higher its respective value will be. The above description aligns with previous research findings, including a study conducted by Mawarni (2023), which shows that the financial dimension of 3R sustainability affects a firm's value. Another study by Winarto (2021) shows that sustainable banking disclosure has a positive and significant impact on firm's value.

$$SDI = \frac{number\ of\ items\ disclosed}{number\ of\ items\ that\ should\ be\ disclosed}$$

Explanation:
SDI = Sustainble disclosure Index
H2: Sustainable disclosure positively impacts on firm's value

Financial Inclusion

Financial inclusion is a condition in which the community has access to effective, efficient, and quality financial services. The increase in public access to financial service products will further reduce the level of economic and social inequality in society and boost economic growth, ultimately improving the welfare of the community (Risman et al., 2021). Yanti (2019) explains that financial inclusion has a positive impact on the financial performance of companies. Additionally, research by Bethari (2022) shows that financial inclusion positively affects the value of the company, which is described as financial performance.

H3: Financial inclusion has a positive impact on Firm's Value

The indicators used for the dimension of banking service usage in the study are the amount of deposits/savings, indicated by outstanding deposits with commercial banks (% of GDP) and the amount of credit indicated by outstanding loans from commercial banks (% of GDP). The index for each dimension can be calculated using the following equation:

$$\boldsymbol{d1 = \frac{A_{i-m_i}}{M_i - m_i}}$$

Explanation:
Di = Dimension of financial inclusion

Ai = Value of variable i
mi = minimum value of variable i
Mi = maximum value of variable i

After obtaining the scores from each dimension, the measurement of the Index of Financial Inclusion (IFI) can proceed as follows:

$$IFI = \sqrt{\frac{(1-d1)^2 + (1-d2)^2 + \cdots + (1-dn)^2}{n}}$$

Explanation:
IFI = Index of financial inclusion
d1, d2…n = Dimensions of financial inclusion
n = Number of dimensions of financial inclusion

RESEARCH METHOD

Research Design

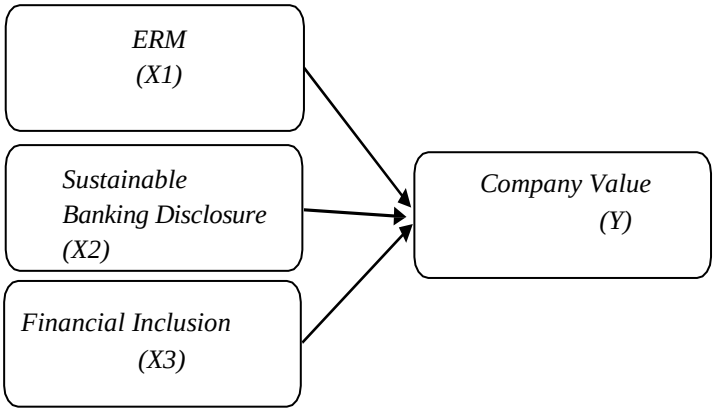
This study employs a causal design, which focuses on testing hypotheses regarding the impact of one or more independent variables on dependent variables (Sugiyono, 2019). The data processing tool used by the researcher is EViews 12 software.

Research Sample

The population used in this study consists of banking sub-sector companies for the period 2019-2023, totaling 9 companies based on the established characteristics. The research sample was chosen through a purposive sampling method based on specified criteria. The criteria for sampling in this study are as follows:

1. Banking companies listed on the IDX from 2019-2023
2. Companies that are not listed or have been delisted during the observation period of 2019-2023
3. Banking companies that do not have complete financial reports
4. Companies that are not part of the Indonesia Sustainable Finance Initiative (IKBI)

Figure 3. Research Framework



Data Analiysis Technique

The data analysis method used in this research is panel data regression analysis with the help of EViews 12 software. This panel data regression test is employed to examine the effect of risk management, sustainable disclosure, and financial inclusion on firm's value. For

hypothesis testing, the following steps will be followed: classical assumption test, panel data regression, model feasibility test, and hypothesis test.

RESULT AND DISCUSSION

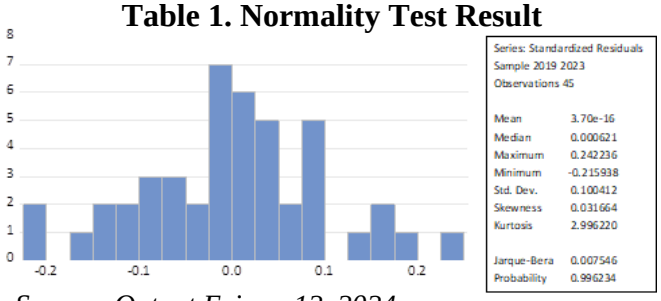
Result

Classical Assumption Test

In this study, the panel data regression model chosen was the Common Effect Model. The following are the results of the classical assumption test of this study:

Normality Test

Table 1. Normality Test Result



Source: Output Eviews 12, 2024

It is known that the Jarque-Bera Probability Value is 0.007546 with a probability of 0.996234 indicating that the probability value is more than 0.05, so it can be concluded that the data is normally distributed or the residual normality assumption is met.

Multicollinearity Test

Table 2. Multicollinearity Test Result

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	1.423288	5919.221	NA
X1	0.086680	200.4772	1.055590
X2	0.049600	122.1740	1.042432
X3	2.821405	5448.449	1.012895

Source: Output Eviews 12, 2024

According to the results of the multicollinearity test presented in Table 4.6, the Centered VIF values for variables X1, X2, and X3 are 1.055590, 1.042432, and 1.012895, which are all less than 10 and have tolerance values greater than 0.01. This indicates that there is no multicollinearity among the independent variables in the model

Heteroscedasticity Test

Table 3. Heteroscedasticity Test Result

F-statistic	0.214661	Prob. F(3,41)	0.8857
Obs*R-squared	0.695881	Prob. Chi-Square(3)	0.8742
Scaled explained SS	0.576576	Prob. Chi-Square(3)	0.9018

Source: Output Eviews 12, 2024

The results of the heteroscedasticity test show that the probability values for the F-statistic (Prob. F(3.41)), Obs*R-squared (Prob. Chi-Square(3)), and Scaled explained SS (Prob. Chi-Square(3)) are 0.8857, 0.8742, and 0.9018, respectively. Since these values are all greater than the significance level of 0.05, it indicates that there is no evidence of heteroscedasticity.

Panel Data Regression Model Selection

Chow Test

The Chow test is used to determine which model is better and more suitable between the Fixed Effects model and the Common Effects model in the estimation of panel data models. If the probability value of F or Chi-square is less than 0.05, then the selected model is Fixed Effects. Conversely, if the probability of F or Chi-square is greater than 0.05, then the selected model is Common Effects

Table 4. Chow Test Result

Effects Test	Statistic	d.f.	Prob.
Cross-section F	1.354143	(8,33)	0.2526
Cross-section Chi-square	12.774717	8	0.1198

Source: Output Eviews 12, 2024

Based on the Chow Test results mentioned above, a probability value of 0.2526, which is greater than 0.05, indicates that H0 is accepted, and the approach used is the Common Effect Model. If the test results suggest that the Common Effect model is more appropriate, there is no need to conduct the Hausman Test.

Lagrange Multiplier Test

Table 5. Lagrange Multiplier Test Result

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	0.102842 (0.7484)	0.770511 (0.3801)	0.873353 (0.3500)
Honda	0.320689 (0.3742)	0.877788 (0.1900)	0.847451 (0.1984)
King-Wu	0.320689 (0.3742)	0.877788 (0.1900)	0.901861 (0.1836)
Standardized Honda	0.543068 (0.2935)	1.190816 (0.1169)	-1.955262 (0.9747)
Standardized King-Wu	0.543068 (0.2935)	1.190816 (0.1169)	-1.745618 (0.9596)
Gourieroux, et al.	--	--	0.873353 (0.3366)

Source: Output Eviews 12, 2024

According to the results of the Lagrange Multiplier (LM) Test shown in Figure 7 above, the value is 0.7484, which is greater than 0.05. Consequently, the LM test results of 0.7484 > 0.05 lead to the failure to reject H0, indicating that the model used is the Common Effect Model approach

Panel Data Regression Analysis

Common Effect Model Test

Based on the test results using the chow test and the lagrange multiplier test, the appropriate panel data regression model used in this study is the Common Effect Model. From data processing using Eviews 12, the following results were obtained:

Table 6. Common Effect Model Test Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.808816	1.193016	1.516171	0.1371
X101	1.564129	0.294415	5.312670	0.0000
X201	-2.085949	0.222710	-9.366213	0.0000
X301	0.082122	1.679704	0.048891	0.9612

Root MSE	0.099290	R-squared	0.709579
Mean dependent var	1.429649	Adjusted R-squared	0.688329
S.D. dependent var	0.186325	S.E. of regression	0.104021
Akaike info criterion	-1.603763	Sum squared resid	0.443634
Schwarz criterion	-1.443171	Log likelihood	40.08468
Hannan-Quinn criter.	-1.543896	F-statistic	33.39147
Durbin-Watson stat	1.972485	Prob(F-statistic)	0.000000

Source: Output Eviews 12, 2024

The results of the Common Effect Model Test presented in Figure 8 can be summarized as follows:

1. Variable X1 (Risk Management) exhibits a positive t-statistic of 5.312670 with a probability value of 0.0000, which is less than 0.05.
2. b. Variable X2 (Sustainable Disclosure) shows a negative t-statistic of -9.366212 with a probability value of 0.0000, also less than 0.05.
3. c. Variable X3 (Financial Inclusion) has a positive t-statistic of 0.048891 with a probability value of 0.9612, which is greater than 0.05.

The equation is Y = 1.808816 + 1.564129 X1 - 2.085949 + 0.082122

Model Feasibility Test

Hypothesis testing involves assessing the sample regression function to statistically determine the actual value, which necessitates conducting a Model Feasibility Test that includes both the F Test and the Coefficient of Determination Test

F Test

Table 7. F Test Result

R-squared	0.709579
Adjusted R-squared	0.688329
S.E. of regression	0.104021
Sum squared resid	0.443634
Log likelihood	40.08468
F-statistic	33.39147
Prob(F-statistic)	0.000000

Source: Output Eviews 12, 2024

From the above results, the calculated F value is 33.39147 with a probability value of 0.000000. This probability value is smaller than 0.05, so H0 is rejected and Ha is accepted, meaning that variables X1, X2 and X3 have an effect on variable Y together.

Coefficient of Determination Test

Tabel 8. Coefficient of Determination Test Result

R-squared	0.709579
Adjusted R-squared	0.688329
S.E. of regression	0.104021
Sum squared resid	0.443634
Log likelihood	40.08468
F-statistic	33.39147
Prob(F-statistic)	0.000000

Source: Output Eviews 12, 2024

It can be seen that the R-squared value is 0.709579 or 70.96%, the coefficient of determination shows that the independent variables consisting of risk management (X1), sustainable disclosure (X2) and financial inclusion (X3) are able to explain the dependent variable, namely firm value (Y). However, there is still about 29.04% of the variation influenced by other factors not included in the model.

Hypothesis Test

T-Statistic Test

In the results of this t-Statistic test, if the probability level > 0.05 then it can be considered insignificant, and vice versa if the probability level <0.05 then it can be declared significant or influential.

Table 9. T-Statisctic Test Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.808816	1.193016	1.516171	0.1371
X101	1.564129	0.294415	5.312670	0.0000
X201	-2.085949	0.222710	-9.366213	0.0000
X301	0.082122	1.679704	0.048891	0.9612

Source: Output Eviews 12, 2024

The effect of the independent variable on the dependent variable partially is as follows:

1. The results of the t-test for the risk management variable (X1) obtained a coefficient value of 1.564129, with a t-statistic of 5.312670 and a probability of 0.0000 < 0.05. Therefore, H0 is rejected and Ha is accepted, meaning that the risk management variable (X1) has a positive effect on firm's value (Y).
2. The t-test results for the sustainable disclosure variable (X2) obtained a coefficient value of -2.085949, with a t-statistic of -9.366213 and a probability of 0.0000 < 0.05. Therefore, H0 is rejected and Ha is accepted, meaning that the sustainable disclosure variable (X2) has a negative effect on firm's value (Y).
3. The t-test results for the financial inclusion variable (X3) obtained a coefficient value of 0.082122, with a t-statistic of 0.048891 and a probability of 0.9612 > 0.05. Therefore, H0 is accepted and Ha is rejected, meaning that the financial inclusion variable has no effect on firm's value.

Discussion

The Effect Enterprise Risk Management on Firm's Value

In this study, risk management has a positive effect on the value of companies in the banking sub-sector listed on the IDX from 2019 to 2023. Companies that implement risk management can mitigate or prevent risks. This risk prevention effort means that the company is trying to minimize the occurrence of risks. With minimal risk, it is hoped that the company can maintain its stability. High levels of risk management illustrate the existence of good corporate risk governance, including ensuring that the company's internal controls are maintained, thereby avoiding the risk of loss and increasing investor confidence. Therefore, the better the risk management in a company, the higher the value of that company. The results of this study support research conducted by Dikaputera (2018) and by IGN Agung Ananda Reraspatika Suardi and Desak Nyoman Sri Werastuti (2022), which found that risk management has a positive effect on firm's value.

The Effect of Sustainable Disclosure on Firm's Value

In this study, sustainable disclosure is found to have a negative effect on the company value of banking sub-sector firms listed on the IDX from 2019 to 2023. This relates to the signaling theory introduced by Michael Spence (1973), which states that the information conveyed by a company's management to the market acts as a "signal" for investors. In the context of sustainable disclosure, the company communicates its sustainability efforts to stakeholders, which should provide a positive signal regarding its commitment to environmental, social, and governance (ESG) aspects.

However, in the research by Furqoni & Asandimitra (2019), sustainable disclosure was found to negatively influence the value of banking sub-sector companies listed on the IDX for the 2019-2023 period. Although signaling theory assumes that increased information disclosure will enhance firm value by strengthening investor confidence, these results suggest the possibility of misinterpreted signals or unintended effects from the disclosure. Based on Spence's signaling theory, continuous disclosure that negatively influences the value of banking companies on the IDX may result from signals that are not well received by the market. Investors may focus more on the short-term financial performance of the company.

The Effect of Financial Inclusion on Firm's Value

In this study, financial inclusion is found to have no effect on the value of companies in the banking sub-sector listed on the IDX from 2019 to 2023. Lending is one of the indicators of financial inclusion that can increase company value. The more credit that is channeled, the more additional funds the bank will generate from loan interest profits. Therefore, the higher the financial inclusion of a company, the higher its value is expected to be. Several previous studies have concluded that financial inclusion has a positive relationship with firm value, while others have indicated a negative relationship. Research by Arianti (2019) concluded that financial inclusion, as measured by the financial inclusion index (IFI), indicated it had no effect on financial system stability. This is because an increase in financial inclusion in developing countries is not necessarily accompanied by a decrease in borrowing costs or improvements in standard credit terms.

In their research, Furqoni & Asandimitra (2019) found that financial inclusion could provide a negative signal to firm value in several sectors, including banking. In this study, increased financial inclusion may be perceived as an additional burden or unmeasured expansion, leading to increased risk for the company. In the context of signaling theory, this suggests that not all signals from financial inclusion efforts are automatically received as positive by the market. Investors may assess these signals negatively if they perceive that financial inclusion increases risk without adequate management. Furthermore, signaling theory also explains how increased financial inclusion can send positive signals to investors and

stakeholders, ultimately affecting firm value. Financial inclusion refers to efforts to provide wider and more accessible access to financial services for all levels of society, including those previously unreached by formal financial services.

CONCLUSION

This research aims to determine the influence of risk management, sustainable disclosure, and financial inclusion on firm value. In this study, enterprise risk management has a positive effect on the value of companies in the banking sub-sector listed on the IDX from 2019 to 2023. Companies that implement risk management will engage in risk mitigation or prevention. This risk prevention effort means that the company is trying to minimize the occurrence of risks. However, this study also shows that sustainable banking disclosure has a negative impact on the value of companies in the banking sub-sector listed on the IDX during the same period. Based on Spence's signaling theory, the negative impact of sustainable banking disclosure on the value of banking companies on the IDX may be due to signals that are not well received by the market. Investors might be more focused on short-term financial performance than on the long-term value generated by sustainability initiatives, or they may be concerned about the high costs and risks that such disclosures might entail. Furthermore, this research indicates that financial inclusion does not affect the value of companies in the banking sub-sector listed on the IDX from 2019 to 2023. This is because the increase in financial inclusion in developing countries has not been accompanied by a decrease in loan costs or a reduction in credit requirements. Research by Furqoni & Asandimitra (2019) on sustainability disclosure, which includes financial inclusion, found that financial inclusion can send negative signals regarding firm value in several sectors, including banking. In this study, the increase in financial inclusion may be perceived as an additional burden or unmeasured expansion, leading to increased risk for the company.

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