Budapest International Research and Critics Institute-Journal (BIRCI-Journal)
Humanities and Social Sciences
ISSN 2615-3076 Online)
ISSN 2615-1715 (Print)
www.bircu-journal.com/index.php/birci

The Effect of Sustainable Finance on Firm Value with Investment Opportunity Set as Moderating Variable

Eka Suryaningsih[1], Yana Handayani[2]
[1,2]Universitas Trisakti, Indonesia

Abstract

The purpose of this study is to analyze the the effect of Sustainable Finance on Firm Value with Investment Opportunity Set (IOS) as moderating variable for the period 2017 to 2019. Sustainable finance is calculated using SFD value (total value of sustainability disclosure) with PJOK 51. Firm value is calculated using ratio of Tobin's Q and Investment Opportunity Set is calculated using market to book value ratio. The population in this study are banking companies listed on the Indonesia Stock Exchange during the 2017-2019. The data used in this study is secondary data and there were 37 companies using purposive sampling method. The results of the study show that the Sustainable Finance has no significant effect on Firm Value. The use of a moderating variable Investment Opportunity Set (IOS) is able to strengthen the influence of sustainable finance and firm value

Keywords
Sustainable finance; firm value; ios

I. Introduction

Sustainable development goals cannot be separated from responsible economic growth. Changes in the mindset of business actors that continue where the transition process for development can run well, if it does not only pay attention to economic matters, but also needs to pay attention to social and environmental aspects as well as governance. Development is a systematic and continuous effort made to realize something that is aspired. Development is a change towards improvement. Changes towards improvement require the mobilization of all human resources and reason to realize what is aspired. In addition, development is also very dependent on the availability of natural resource wealth. The availability of natural resources is one of the keys to economic growth in an area. (Shah, M. et al. 2020)

The Sustainable Finance Roadmap prepared by the OJK has the aim of increasing the understanding of financial services sector players to move towards a low-carbon economy, and has achieved several achievements such as the introduction of sustainable finance principles, grouping sustainable business criteria, carrying out socialization and developing incentives and providing training for the financial industry. This sustainable finance initiative received a positive response from the financial industry, to the international community.

Sustainable finance, which we know as Sustainable Finance, is increasingly being carried out by companies in Indonesia. We can see tangible evidence of its implementation through the current form of sustainable financial reporting. Reporting on Sustainable Finance has been intensified since the enactment of the POJK Number 51/POJK.03/2017 regarding the Implementation of Sustainable Finance for Financial Services Institutions, Issuers, and Public Companies. The purpose of this regulation is to encourage increased public trust in companies as managers of public funds, by reporting them to the OJK.

DOI: https://doi.org/10.33258/birci.v5i3.6523

Development of technology and information, people certainly have their own standards when choosing products. Choosing a product that cares about the environment and its social environment, as well as leaving a product that has a bad image, is now a consideration for consumers. Seeing this, the disclosure of the Sustainability Report can certainly be used as a marketing tool for the company.

Investment decisions can determine the investment opportunity set, where the growth of company assets or activities that have a positive net present value (NPV) can be influenced by the choice of future investment opportunities, the ratio of market value of equity to market value to book value of equity (MVE/BVE) can be reflects the existence of IOS for a company. The higher the MVE/BE ratio, the higher the value of a company. High market value through high stock prices is one indicator that the company is considered good by investors. Therefore, the disclosure of Sustainable Finance is one of the important roles in increasing the value of the company and is encouraged by a high set of investment opportunities in a company.

1.1 Research Problem

Several previous research results showed that there were different or contradictory results between sustainability and firm value. Based on these conditions, it is suspected that the relationship between sustainability and firm value is influenced by other factors, which can strengthen or weaken it. Therefore, the research problem is formulated as follows:

1. Does Sustainable Finance affect the value of the company?
2. Can the Investment Opportunity Set moderate the relationship between Sustainable Finance and firm value?

1.2 Research purposes

1. To determine the effect of Sustainable Finance on the value of the company.
2. To determine the ability of the Investment Opportunity Set in moderating the relationship between Sustainable Finance and firm value.

1.3 Research Contribution Academics

This research can be used as suggestions and inputs to develop an analysis of the effect of Sustainable Finance on Firm Value with the Investment Opportunity Set as a Moderating Variable.

1.4 Practitioner

This research is expected to provide advice to users in financial reporting and company managers in providing an understanding of the disclosure of Sustainable Finance with its effects that can increase firm value for company managers and can provide assistance in the decision-making process, both investment and managerial decisions.

1.5 Policy Contribution

This research is expected to provide benefits for the government in issuing policies for the public interest, especially regarding the disclosure and implementation of Sustainable Finance in Indonesia

II. Review of Literature

2.1 Stakeholder Theory

In this theory, it is stated that company managers must understand the needs of all groups that have an interest in the company's business continuity, and balance the interests of stakeholders with strategic interests. Managers can improve the company's performance by increasing the performance of sustainable finance because sustainable finance is one component of the stakeholder theory concept that can maximize company performance. (Meutia, Ramadhani, & Adam, 2019) Stakeholders are very closely related to sustainability performance, given the increasing demand for transparency from business and the practice of sustainability information has been accepted as an important medium for carrying out corporate responsibility as a form of media to inform about the impact of business operations. on society and the environment.

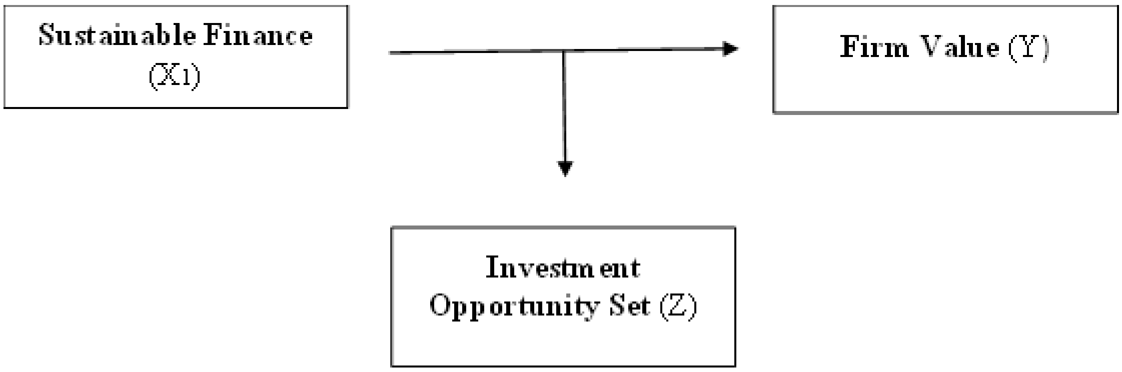
2.2 Legitimacy Theory

Operating within the norms that exist in the society where the company is located, is something that the company continues to strive for, in order to ensure that they have operated within the existing norms, and are accepted as legitimate by outsiders.

The theory of legitimacy (Mousa & Hassan, 2015) states that legitimacy is a system for managing the activities of a company whose focus is on the side of the community, individuals, government and local communities or organizations.

Getting recognition from the surrounding community, it can be said that the company is legitimized. In order for its activities and existence to be recognized by the community, one of the things the company needs to do is social disclosure. Legitimacy is a company management system that is oriented towards the alignment of individuals, groups, communities and governments. Then the company's operations must be congruent with society's expectations.

2.3 Research Framework



2.4 The Effect of Sustainable Finance on Firm value.

Increasing the value of the company is one of the main goals of the company, it is expected that the value of the company will continue to grow in a sustainable manner. In addition to paying attention to the economic side, companies also need to pay attention to other things such as social and environmental aspects. Because sustainability requires a balance of economic, community and environmental interests. When the company implements sustainability finance disclosure, there will be many benefits, one of which is that the product is increasingly favored by consumers, which of course also makes the company more attractive to investors. Based on this explanation, the following hypothesis is formulated:

H1: Sustainable Finance has a positive effect on firm value

2.5 The relationship of Sustainable Finance with firm value, with the Investment Opportunity Set as a moderating variable

The Investment Opportunity Set will be determined by investment decisions, namely the growth of company assets or projects that have a positive net present value can be influenced by the choice of investment opportunities in the future. Therefore, the disclosure of sustainability has an important role in increasing the value of the company by being encouraged by the high set of investment opportunities in a company. The results of research conducted by (Gunawan & Mayangsari, 2015) stated that the set of investment opportunities significantly moderated the relationship between sustainability and firm value.

H2: Investment Opportunity Set moderates the relationship between Sustainable Finance and firm value.

III. Research Method

3.1 Research Design

This study uses hypothesis testing as described. The two hypotheses that have been mentioned will then be tested to see the results obtained in the form of an explanation of the relationship between the independent variable and the dependent variable, whether there is a significant negative, positive, or no significant effect.

This study uses secondary data, and the population is banking sector companies listed on the Indonesia Stock Exchange, during the period 2017-2019. The statistical technique used to analyze the data in this study uses multiple regression (multiple regression model).

3.2 Operational Definition of Variables and Measurement

a. Sustainable Finance

Sustainable finance that makes investment decisions that do not only consider financial benefits but also involve environmental, social and governance factors. The sustainable finance variable will be measured using sustainable finance disclosure (SFD). Sustainable finance disclosure describes the amount of disclosure in a sustainable report or sustainable finance based on the guidelines of the Financial Services Authority Regulation Number 51/POJK.03/2017

$$SFD = \sum \frac{\text{Number of sustainability information disclosed by each company}}{\text{Total indicators for disclosure of sustainability information}}$$

b. Firm Value

Firm value is defined as market value in this study, because the prosperity of the shareholders can be provided by the company if the value of the company is good and the company's share price increases.

Measurement of firm value, using the Tobin's Q ratio measurement scale. If the ratio is above 1, then it shows that investment in assets generates profits or profits that provide a higher value than investment spending, which of course can stimulate higher investment new

$$Q = \frac{(MVE + DEBT)}{TA}$$

Description:
MVE = Market Value of Equity
DEBT = Total Debt
TA = Total Asset

3.3 Investment Opportunity Set

When making long-term investments, investors will generally focus on investment opportunities, as an expectation of good growth in the future. One of them can be seen from the investment opportunities made with various combinations of the value of the investment opportunity set, or commonly known as the investment opportunity set.
This variable will be measured by market value to book value of equity (MVE/BVE). Mathematically, it is formulated as follows:

$$MVE/BVE = \frac{Number\ of\ Outstanding\ Shares\ x\ closing\ Price}{Total\ Equity}$$

3.4 Sampling and Data Collection Method

a. Data Collection

The data collection technique used is documentation, derived from the company's annual report and sustainability report in the banking industry (2017-2019) via www.idx.co.id and the official website of each company. The data taken is in accordance with the variable indicators used in this study, the data is calculated and then processed.

b. Sampling Method

The population in this study are banking companies that have been listed on the Indonesia Stock Exchange, with the 2017-2019 period and have published annual reports and sustainability reports during the observation period. In this study using a purposive sampling method. selected based on the following criteria:

1. The company is listed on the IDX and has published a Sustainability Report and Annual Report for the period 2017-2019 and can be accessed through the official website of each company.
2. Complete data available in the observation period, both data needed to measure the level of sustainability finance, firm value, and Investment Opportunity Set (IOS).

c. Data analysis method

Moderated Regression Analysis (MRA) is one way, to test regression with moderating variables

$$Y = \alpha + \beta 1X1 + \beta 2X1Z + e$$

Information:
Y = Firm Value
α = Constant
β1- β2 = Regression Coefficient on each Variable

X1 = Sustainable Finance
Z = Investment Opportunity Set
e = Error term

IV. Result and Discussion

4.1 The Relationship of Sustainable Finance and Corporate Value Correlation and Determination Coefficient

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,062[a]	,004	-,025	,17077

a. Predictors: (Constant), Suistainable Finance

a. Correlation Coefficient

Based on the results of the data analysis listed in the table, the R value is 0.062. This means that the relationship between Sustainable Finance and Firm Value is considered weak. Because the value of R is not close to one.

b. Coefficient of Determination

Based on the results of data analysis listed in the table, the value of determination is 0.4%. This means that sustainable finance affects the value of the company by 0.4% and the remaining 99.6% is influenced by other factors or variables.

c. Regression Coefficient

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	,956	,262		3,642	,001
	Suistainable Finance	,157	,425	,062	,370	,714

$$Y=a+bX1$$
$$Y=0,956+0,157X1$$

The value of 0.956 indicates a constant. This means that if X1 is 0 then the Firm value is 0.956.

The value of 0.157 indicates the coefficient of Sustainable Finance. This means that if Sustainable Finance increases by 1 unit, then the Firm value will change, which is 0.157 times.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,004	1	,004	,137	,714[b]
	Residual	1,021	35	,029		
	Total	1,025	36			

a. Dependent Variable: Firm Value
b. Predictors: (Constant), Suistainable Finance

The results of the analysis above show a significance value of 0.714 > 0.05 (alpha). This means that Ho is accepted, H1 is rejected. There is no significant effect of Sustainable Finance on Firm Value. This is also proven by the results of the F-Count (0.137) < F-Table (4.11) test, meaning that the regression equation model based on the research data is not significant, and does not meet the linearity criteria.

Based on the results of the t-test, the value of t-count (0,370) <t-table (2.042) means that H0 is accepted, H1 is rejected. Partially there is no significant effect of sustainable finance on firm value.

4.2 The influence of the Investment Opportunity Set as a moderating variable on the relationship between Sustainable Finance and Firm valueCorrelation And Determination Coefficient

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,916[a]	,839	,824	,07080

a. Predictors: (Constant), Suistainable Finance*Investment Opportunity Set, Suistainable Finance, Investment Opportunity Set

a. Correlation Coefficient

Based on the results of the data analysis listed in the table, the R value is 0.916. This means that IOS moderates the relationship between Sustainable Finance and Firm Value to be strong**.**

b. Coefficient of Determination

Based on the results of data analysis listed in the table, the value of determination is 83.9%. This means that IOS strengthens the influence of Sustainable Finance on Firm value by 83.9%. The remaining 16.1% is influenced by other factors or variables

4.3 Regression Coefficient

Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t
1	(Constant)	1,140	,206		5,532

	Suistainable Finance	-,462	,326	-,183	-1,420
	Investment Opportunity Set	-,055	,105	-,354	-,527
	Suistainable Finance*Investment Opportunity Set	,305	,162	1,291	1,885

Y=1,140-0,642X1+0,305X1Z

The value of 1.140 indicates a constant. This means that if X1 and Z are 0, then the Firm value is 1.140

The value of 0.642 indicates the coefficient of Sustainable Finance. This means that if Sustainable Finance changes by 1 unit, then the Firm value will also change by 0.642 times.

The value of 0.305 means that if X1Z changes by 1 unit, the value of the company will also change by 0.305 times.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,859	3	,286	57,149	,000[b]
	Residual	,165	33	,005		
	Total	1,025	36			

a. Dependent Variable: Firm Value

b. Predictors: (Constant), Suistainable Finance*Investment Opportunity Set, Suistainable Finance, Investment Opportunity Set

4.4 Hypothesis Testing

Based on the results of the analysis above, the significance value is 0.000 > 0.05 (alpha). This means that together all independent variables affect the value of the company. This is also proven by the results of the F-Count (57,149) > F-Table (2,86).

Coefficients[a]

Model		Sig.
1	(Constant)	,000
	Suistainable Finance	,165
	Investment Opportunity Set	,602
	Suistainable Finance*Investment Opportunity Set	,048

a. Dependent Variable: Firm Value

Based on the test results above, it is known that the significance value of sustainable finance is 0.165> 0.05 (alpha), meaning that this variable has no significant effect on firm value. Likewise with Investment.Opportunity. Set which has a significance value of 0.602>0.05 (alpha). However, after there was an interaction between the Investment

Opportunity Set moderating variable and Sustainable Finance, there was a difference in effect, the significance value of 0.048 <0.05 (alpha). This means that IOS is a moderating variable. So, H2 is accepted, meaning that IOS moderates the relationship between sustainable finance and firm value.

The Investment Opportunity Set moderates the relationship between Sustainable Finance and firm value.

V. Conclusion

Based on the results of the study, the following conclusions can be drawn:

1. Sustainable finance does not affect the value of the company
2. The Investment Opportunity Set significantly moderates the relationship between sustainable finance and firm value.

References

Farahmita, A., Halimatussadiah, A., Iskandar, S. D., Machmud, Z., Siregar, A. A., & Sholihah, N. K. (2018). Bankers' perception on the Implementation of sustainable finance in Indonesia. E3S Web of Conferences.

Fatchan, I. N. (2016). Pengaruh Good Corporate Governance Pada Hubungan Antara Sustainability Report Dan Nilai Perusahaan. Riset Akuntansi dan Keuangan Indonesia.

Gunawan, J., & Pratiwi, D. (2017). Corporate Social Responsibility, Corporate Governance, and Corporate Financial Performance. Indonesian Management and Accounting Research.

Gunawan, Y., & Mayangsari, S. (2015). Pengaruh Sustainability Reporting Terhadap Nilai Perusahaan Dengan Investment Opportunity Set Sebagai Variabel Moderating. e-Journal Akuntansi Trisakti, 1-12.

Handajani, L., Akram, & Rifai, A. (2021). Sustainable Banking and Bank Performance. Jurnal ilmiah dan akuntansi bisnis.

Ismaeel, M., & Zakaria, Z. (2020). Perception of preparers of sustainability reports in the Middle East Contrasting between local and global. Meditary accountancy research, 89-116.

Meutia, I., Ramadhani, M., & Adam, M. (2019). Does Eco-Efficiency Improve Financial Performance of Manufacturing Companies in Indonesia? Jurnal Dinamika Akuntansi and Bisnis, 137-150.

Migliorelli, M. (2021). What Do We Mean by Sustainable Finance? Assessing Existing. sustainability, 1-17.

Mousa, G., & Hassan, N. (2015). Legitimacy Theory and Environmental Practices: Short Notes. International Journal of Business and Statistical Analysis, 48-53.

Nizam, E., Ng, A., Dewandaru, G., Nagayev, R., & Nkoba, M. A. (2019). The impact of social and environmental sustainability on financial performance: A global analysis of the banking sector. Journal of Multinational Financial, 35-53.

Nofitasari, N., Kertahadi, & Yaningwati , F. (2015). Pengaruh Good Corporate Governance Dan Kinerja Perusahaan Terhadap Nilai Perusahaan. Jurnal Administrasi Bisnis, 1-7.

Nugroho, L., Nugraha, E., & Badawi, A. (2020). Sustainable Finance Portfolio Analysis in Islamic Bank. International Journal of Commerce and Finance,, 226-240.

Oktarina, D. (2018). The Effect of Disclosure of Sustainability Report On Financial

Distress With Company Performance As Intervening Variables. Journal of Accounting and Strategic Finance, 109-121.
Shah, M. et al. (2020). The Development Impact of PT. Medco E & P Malaka on Economic Aspects in East Aceh Regency. Budapest International Research and Critics Institute-Journal (BIRCI-Journal). P. 276-286.
Sianipar, M. A., & Mulyani, S. D. (2017). Peran Investment Opportunity Set Sebagai Pemoderasi Pengaruh Kinerja Keuangan, Good Corporate Governance Dan Corporate Social Responsibility Terhadap Nilai Perusahaan. Jurnal Akuntansi Trisakti, 85-100.