

# The Use Of Environmental And Social Performance Information As Risk Assessment In Recommending Credits

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**Abstract:** -The purpose of this study is to examine whether there is a difference between the use of environmental and social performance information on loan recommendations by loan officers. This study used an experimental method using a total of 96 students as research subjects. Data testing was performed using the Anova test to compare between environmental and social risks assessed by experimental subjects. The results of this study indicate there is an influence between the use of environmental performance information on credit recommendation decisions.

**Index Terms:** non-financial performance, environmental information, social information, loan officer, credit risk, risk assessment, experimental research.

## 1. INTRODUCTION

In assessing the feasibility of a business, it requires a method of analysis in the company's financial statements. For banks, certain analytical methods can be used that can be used to view business viability. One analysis uses 5C to assess all aspects of the company applying for credit. From the results of the analysis then the bank is required to provide recommendations to the credit committee whether the prospective customer's credit is feasible or not. As a measurement, 5C is appropriate because it is considered to reduce risk in the future. However, the growing information that can be published by companies, making the analysis carried out must be able to accommodate all useful information. Sustainability is one thing that can be used to see the state of the company. In general, sustainability for the company means that the company is able to achieve business objectives and can increase long-term value for shareholders by integrating institutional, economic, social and environmental aspects into its business strategy. This was conveyed by OJK through the "Roadmap for Sustainable Finance in Indonesia" in 2014. The assessment on environmental and social impacts in the medium term focuses on the basic framework of regulation and reporting systems and understanding by the financial services industry, in this case banks. While for the long term, it focuses on risk management, corporate governance, and health improvement by banks. The bank as a financial institution is also expected to be able to take into account future social and environmental impacts in the credit analysis process. Credit analysis is carried out by the loan officer of the bank. Loan officers are tasked to obtaining and evaluating financial measurement tools for prospective borrowers who are later recommended for approval or rejection. The recommendations given are prioritized to avoid risks that might occur in the future and avoid moral hazard by irresponsible parties.

Previous research by Sarumpaet, Amelia, and Agustina (2017) aims to examine whether bank loan officers and other financial institutions use environmental and social performance considerations in assessing commercial credit proposals submitted by companies. Among non-financial information, information about environmental and social performance is one of the important information that can affect the risk of a business and the company's cash flow in the future. The difference between this study and previous research is the selection of experimental subjects based on training criteria. This study also uses credit recommendations as the dependent variable replacing financing risk. Given these differences, the method is expected to be able to expand contributions to related topics so that more attention can be paid to future researchers, or decision-maker.

## 2. LITERATURE OF REVIEW

### a. Attribution Theory

Attribution theory emphasizes how each individual interprets various events and how they relate to their thoughts and behavior. Attribution theory assumes that people try to understand the causes that influence their behavior as individuals. As someone who introduces attribution theory, Fritz Heider revealed that attribution theory explains the process of how a person determines the causes and motives of a behavior. In a psychological process, Fritz Heider argues that humans connect subjective experiences with various existing objects. Then the various objects are reconstructed cognitively so that they become sources of effects from perceptual experience. According to him there are three stages in understanding behavior namely observing behavior, determining behavior, and classifying the behavior both as internal or external motivation (Luthans, 2005).

### b. Prospect Theory

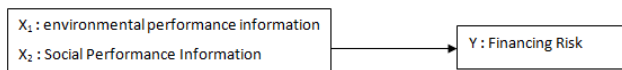
According Nahartyo (2016) explains that prospect theory explains and predicts individual behavior when dealing with risky conditions, ranging from investment decisions, selection of marketing methods, to the determination of life partners. This theory predicts that individuals will be risk averse in conditions of profit and be risk seeking in conditions of loss. According to Kahneman and Tversky (in Nahartyo 2016) there are 2 phases in making risky decisions. The first stage is called the editing stage, where individuals change or edit complicated decisions into simple decisions. Then the second

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stage, individuals make decisions based on the options that have been edited.

### c. Banking

In general, banks are financial intermediary institutions whose job is to collect and distribute funds in the community to improve people's lives. Whereas the notion of banking is everything related to banks. The collection of funds from the public is done by banks through savings or savings and channeling funds is done through credit or loans to the public. According to Reksoprayitno (1992) there are several functions of banks, one of which is to reduce the risk for fund owners who want the excess funds they have to be able to play in business activities. Indonesian Banking Law No. 10 of 1998 explains that credit is the provision of money or bills that can be equaled based on the agreement or agreement between the bank and other parties that require the borrower to repay the debt after a certain period of time with interest.



**Figure 2.1** Research Framework

The response to the PROPER rating is shown by capital market investors through changes in stock prices. Research examining market reaction to the PROPER announcement found that better environmental performance was associated with higher share prices (Sarumpaet, Nelwan, & Dewi, 2016). Positive responses also occur among companies whose environmental performance is assessed or included in the PROPER program. García, Afsah, & Sterner (2009) research results show that companies consistently respond to PROPER rating announcements by improving environmental performance. All of these phenomena indicate that the PROPER rating is quite an impact on the company, especially the poor rating obtained by the company puts significant pressure on the company. For investors, a poor environmental performance rating indicates the risk of a decrease in cash flow in the future, thereby reducing the value of the company. This study suspects that high political costs stemming from poor environmental performance ratings will be perceived as higher financing risks.

$H_1$  : Information on the company's environmental performance negatively affects credit recommendations assessed by the loan officer

Information on social responsibility also has special attention for investors. This is important because good corporate social conditions will not interfere with the company's business activities. Therefore, this study also suspects that loan officers will perceive high financing risks for companies with poor social performance, and vice versa.

$H_2$  : Information on corporate social performance has a negative effect on credit recommendations assessed by loan officers

## 3. RESEARCH METHOD

This study uses students as experimental subjects. Experimental subjects are chosen based on certain criteria or purposive sampling so that the topic under study will be more focused. The criteria determined were students in economics, accounting and management who were studying for undergraduate education, but had taken courses in financial

statement analysis. Students who have taken financial analysis courses should understand how the loan officer works so that it becomes a minimum requirement in this study.

### 3.1. Research Design

This study uses an experimental design by providing treatment for independent variables so that it fits the research objectives. In addition, the experimental subjects were given the knowledge as loan officers so that all participants had the same point of view as loan officers. Then to examine the relationship between environmental and social performance, there will be manipulation between good and bad performance for each environmental and social performance. So that the cell is obtained as follows:

**Table 3.1** Research Design

		Environmental Performance	
		Good	Poor
Social Performance	Good	Cell 1	Cell 3
	Poor	Cell 2	Cell 4

Source: Respondent data, processed (2019)

### 3.2. Experiment

This research method uses experiments as a method of data collection and uses students as experimental subjects, where each subject is manipulated so that they have the same knowledge as a loan officer. Then in the predetermined conditions each subject will be asked to provide an opinion which will later be analyzed. The relationship between environmental performance and social performance with the user's perception of the "information content" researchers manipulate environmental performance (ie: good and bad) and social performance (ie: good and bad) and test their impact on users' credit decisions while still controlling for disruptive variables (counfounding). This study uses a Focus Group Discussion to build experimental instruments related to the use of environmental and social information. With the discussion developed, the researcher is able to make a suitable treatment to be carried out on the experimental subject based on the objectives of this study. The FGD was conducted by researchers together with academics as well as banking practitioners who deal directly with termination of credit. According Nahartyo (2016) experimental designs that can be used in experimental research are inter-subject experiments and intrasubject experiments. In this study using inter-subject experiments where each subject only gets one manipulation and control. The research will be conducted using posttest control, because previous researchers did not observe or recognize the experimental subject. Posttest control means that observations are made after manipulation is given to the subject. For this experimental research is more suitable because no behavior was observed before, only decision making is taken into consideration in this study.

### 3.3. Experimental Instrument

Manipulation will be done by giving a case to each resource person, which has been conditioned as a loan officer and see what decisions they make. Experimental subjects will be given information (manipulation 1) about the company's environmental performance rating issued by the government and the company voluntarily. In addition, information will be

provided (manipulation 2) in the form of corporate social performance taken from the mass media such as the issue of labor costs and corporate social responsibility to the community. This study uses financial statement analysis courses as criteria for experimental subjects. By having more analytical skills, understanding the experimental subject on the risk of granting credit is also expected to be able to describe this study. The experimental subjects were then divided by the randomization method by dividing groups that came to different groups. It is intended that each experimental subject is not affected by other subjects. Manipulation checks are also carried out in this study through manipulation checks. Manipulation checks are carried out to ensure that the experimental subject understands what is conveyed in the experiment and ultimately is expected to provide valid answers. Mediators in each group were also selected based on the same criteria as the researchers, in addition a technical meeting was held first so that it was hoped that what the researcher wanted to convey could be delivered accordingly. The analysis is performed using the ANOVA test as a different test which gives confidence that the dependent variable has an effect on or not on the independent variable. The test will be performed using SPSSv.25 software.

#### 4. RESEARCH RESULTS

Researchers collected experimental subjects and managed to obtain 97 data from experimental subjects. In obtaining data, researchers conducted according to established methodological procedures, namely by dividing experimental subjects into 4 different groups, then given treatment according to the research objectives.

Elimination based on manipulation check testing.

**Tabel 4.1 Manipulation Check**

	Pass	Not Pass	Total
Cell 1	20	4	24
Cell 2	22	2	24
Cell 3	22	2	24
Cell 4	21	4	25
Total	85	12	97
Percentage	87,63%	12,37%	100%

Source: Respondent data, processed (2019)

Elimination based on taking the Financial Statement Analysis course.

**Tabel 4.2 Financial Statement Analysis**

	Pass	Not Pass	Total
Cell 1	22	2	24
Cell 2	22	2	24
Cell 3	20	4	24
Cell 4	21	4	25
Total	85	12	97
Percentage	87,63%	12,37%	100%

Source: Respondent data, processed (2019)

After doing a manipulation check and taking the Financial Statement Analysis course to eliminate experimental subjects that do not meet the research criteria. This method then succeeded in eliminating some data so that the final data used in the study of each cell was 20, so the total data was 80. Credit recommendations are measured to illustrate how much

the conditions given to the subject of the experiment in influencing his decision, in this case the credit recommendation as a loan officer. The highest credit recommendation in cell 1, while the lowest in cell 4.

**Tabel 4.3 Credit Recommendation**

		Environmental Performance	
		Good	Poor
Social Performance	Good	100%	35%
	Poor	65%	10%

Source: Respondent data, processed (2019)  
Anova Test

#### 4.1. Information on Environmental Performance Against Risks in Recommending Credit

Homogeneity test is done to see the diversity of data distributed in one or more data groups.

**Tabel 4.4 Homogeneity Test (Environmental)**

	Levene Value	Degree of Freedom 1	Degree of Freedom 1	Sig.
Based on Mean	1,926	3	76	0,133

Source: Respondent data, processed (2019)

The test results show the Levene Statistics value of 1.926 with a significance of 0.133 ( $\geq 0.05$ ) so it can be concluded that the variants of the four data groups are the same or homogeneous. Then the test can proceed because the initial assumptions are met. Next, a test is performed to see the difference in risk in environmental performance information from the four cell groups.

**Tabel 4.5 Anova Test (Environmental)**

	Sum of Squares	Degree of Freedom	Mean Squared	F-Value	Sig.
Between Group	115,937	3	38,646	77,394	0,000
Within Group	37,950	76	0,499		
Total	153,888	79			

Source: Respondent data, processed (2019)

The test results show an F-value of 77,394 with a significance level of 0,000 ( $\leq 0.05$ ) so that it can be concluded that there is a difference between the average environmental performance information based on the four existing cell groups.

**Tabel 4.6 Multiple Comparison (Environmental)**

	Cell (I)	Cell (J)	Mean Difference (I-J)	Sig.	Explanation
Turkey HSD	Good (1)	Good (2)	0,100	0,970	H <sub>1</sub> accepted
		Poor (3)	-2,050	0,000	H <sub>1</sub> accepted
		Poor (4)	-2,600	0,000	H <sub>1</sub> accepted
	Good (2)	Poor (3)	-2,150	0,000	H <sub>1</sub> accepted
		Poor (4)	-2,700	0,000	H <sub>1</sub> accepted
		Poor (3)	Poor (4)	-0,550	0,074

Source: Respondent data, processed (2019)

Different tests were performed using the Turkey method and used to compare environmental risks assessed by experimental subjects between cell groups. The test results obtained information that there are significant differences in environmental performance information with good conditions compared with bad conditions. While there is no risk difference between environmental performance information under similar

conditions. This supports the Hypothesis.

#### 4.2. Information on Social Performance Against Risks in Recommending Credit

Homogeneity test is carried out as an assumption of the independent t-test and Anova test on social performance information is as follows.

**Tabel 4.7 Homogeneity Test (Social)**

	Levene Value	Degree of Freedom 1	Degree of Freedom 2	Sig.
Based on Mean	2,514	3	76	0,065

Source: Respondent data, processed (2019)

The test results show the Levene Statistics value of 2.514 with a significance of 0.065 ( $\geq 0.05$ ) so that it can be concluded that the variants of the four data groups are the same or homogeneous. Then the test can proceed because the initial assumptions are met. Next, a test is performed to see the difference in risk in the social performance information from the four cell groups.

**Tabel 4.8 Anova Test (Social)**

	Sum of Squares	Degree of Freedom	Mean Squared	F-Value	Sig.
Between Group	108.450	3	36.150	70.266	.000
Within Group	39.100	76	.514		
Total	147.550	79			

Source: Respondent data, processed (2019)

The test results show an F-calculated value of 70.266 with a significance level of 0.000 ( $\leq 0.05$ ) so that it can be concluded that there is a difference between the average social performance information based on the four existing cell groups.

**Tabel 4.9 Multiple Comparison (Social)**

	Cell (I)	Cell (J)	Mean Difference (I-J)	Sig.	Explanation
Turkey HSD	Good (1)	Poor (2)	-1,800	0,000	H <sub>2</sub> accepted
		Good (3)	-0,250	0,689	H <sub>2</sub> accepted
		Poor (4)	-2,850	0,000	H <sub>2</sub> accepted
		Good (2)	1,550	0,000	H <sub>2</sub> accepted
	Poor (2)	Good (3)	1,550	0,000	H <sub>2</sub> accepted
		Poor (4)	-1,050	0,000	H <sub>2</sub> rejected
	Good (3)	Poor (4)	-2,600	0,000	H <sub>2</sub> accepted

Source: Respondent data, processed (2019)

Different tests were performed using the Turkish method and used to compare social risks assessed by experimental subjects between cell groups. The test results obtained information The test results obtained information that there are significant differences in social performance information with good conditions compared with bad conditions. While information on social performance in similar conditions in cell 2 with cell 4 actually shows a significant difference where this is contrary to the research hypothesis.

## 5. DISCUSSION

Based on comparisons between 4 groups in different risk conditions it is known that:

H<sub>1</sub>: Information on the company's environmental performance negatively affects credit recommendations assessed by the loan officer. Information on environmental performance illustrates the significant difference between

groups with good environmental conditions and poor environmental conditions. Under the same conditions, the average data tends to show no significant difference so it is assumed that environmental performance information has an effect on assessing the company's environmental risk. With this H<sub>1</sub> is accepted. Based on the data analysis that has been done, the environmental performance information variable has a negative effect on the risk of financing. This means that the lower the risk of the environmental performance information provided, the higher the likelihood that the loan officer recommends credit. Based on the percentage of credit recommendations in good environmental conditions, loan officers tend to recommend loans with percentages of 100% and 65% in the cell 1 and 2. While in poor environmental conditions the loan officer loan recommendations are only 35% and 10% in the cell 3 and 4. Loan officers will tend to refuse credit if the company's environmental conditions are less supportive in the company's business because it is considered risky, and vice versa.

H<sub>2</sub>: Information on corporate social performance has a negative effect on credit recommendations assessed by loan officers. Information on social performance illustrates significant differences between groups with good social conditions and poor social conditions. However, in the same conditions, the average data tends to show no significant changes in the data group with good conditions, while the data group with bad conditions there are differences. With this, H<sub>2</sub> is rejected. Information on social performance has not been proven to affect the risk of bank financing. Based on the percentage of credit recommendations in good social conditions, loan officers recommend loans with a percentage of 100% in good environmental conditions and 35% in bad environmental conditions. This means that social performance information has not directly affected the loan officer decision.

## 6. CONCLUSION

This study provides evidence that information on environmental performance influences risk in recommending credit. This means that information on environmental performance influences decision making by a loan officer in determining credit recommendations. While information on social performance has not been proven to influence loan officer decision making. The results of this study support previous research by Sarumpaet, Amelia, & Agustina (2017) that environmental performance information has an effect on credit risk assessment in recommending credit. While for social performance information with different research methods in this experiment can not provide different results compared to previous research. Banking loan officers, especially commercial ones, are expected to be more concerned with environmental performance information, not just financial statement information as information considered in making credit decisions. Information on social performance in this study has not been able to provide evidence of its influence on decision making by loan officers. This might be because the social issues raised in the experimental method related to CSR have not been influential enough for the experimental subjects.

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