Credit Decisions Making Through the Use of Information Company’s Financial Performance and Environmental Performance

Putu Riesty Masdiantini*, Ni Luh Asri Savitri, Sunitha Devi
Universitas Pendidikan Ganesha, Jalan Udayana 11, Singaraja, Bali, Indonesia
*riesty.masdiantini@undiksha.ac.id

Abstract
Before credit is given, the bank must first conduct a credit analysis to ensure that the customer can really be trusted. It is important for loan officers to understand other information or the latest information related to lending. Through the use of data on the company’s financial performance and environmental performance, this study seeks to obtain empirical evidence about the provision of loan decisions. This study uses a quasi-experimental design with a 2X2 factorial layout, which is an experimental method. 81 students enrolled in the Bachelor of Accounting Program comprised the sample for this study, which was chosen using a purposive sampling technique and the non-probability method. The Two-Way Analysis of Variance (ANOVA) test was employed in the data analysis process. The study’s findings show that credit decisions are significantly impacted by both financial and environmental performance.

Keywords: credit decisions; financial performance; environmental performance

INTRODUCTION
Economic development is a significant aspect of a country’s national progress. The involvement of financial institutions is required to enable optimal economic development. A bank is one of the financial entities involved in the process of economic development (Yassa, 2018). The presence of a bank in the community in both developed and developing countries is required as a location for financial activities. The financial activities that are often carried out by people in developed and developing countries include saving and distributing funds (Ismail, 2011) (Sari, 2018).

The COVID-19 pandemic, which afflicted all countries in early 2020, has put strain on the global economy, especially the Indonesian...
The spread of the coronavirus has a negative influence on the majority of Indonesia’s industrial sectors, in addition to having an impact on Indonesia’s zero economic growth. The banking sector is one of the industrial sectors under stress as a result of the Corona virus outbreak. The banking industry is a service business that gathers public funds and distributes them back to the community in the form of loans or credit. The advent of the COVID-19 pandemic has rendered the financial sector unable to freely disburse credit, owing to the increased risk of creditor default because most people, both individuals and businesses, have seen a fall in income (Seto & Septianti, 2021).

At the end of 2021, along with the decline in Covid-19 cases, Bank Indonesia (BI) announced that banking intermediation continued to improve until the end of 2021. Quoted from Business Finance (2021), Governor of Bank Indonesia, Perry Warjiyo said that banking credit in November 2021 recorded growth by 4.73 percent on an annual basis (year-on-year/yoy). Credit growth was more fairly distributed across all forms of use, with a 5.38 percent yoy (year on year) increase in working capital credit, a 4.3 percent yoy increase in investment credit, and a 4.11 percent yoy increase in consumption credit, respectively. This condition indicates an increasing demand for credit in line with the recovery in business activities (Elena, 2021).

The impact of bank activities in providing funds in the form of credit to the public can increase investment, production, and consumption of goods and services which will increase economic activity for the community. Credit is a loan obtained by the public from the bank. The credit obtained is used by the community for consumptive and productive needs. (Supriadi & Hr, 2018). Bank lending must be able to generate profits, help customers and help the government. Determining the quality of a credit needs to be given certain measures. Credit collectibility is divided into five categories: current credit, special mention credit, substandard credit, dubious credit, and bad credit. Credit distribution is not easily given to customers, the bank must know whether the customer is problematic or not, because if the debtor is in trouble, then credit distribution needs to be avoided so that bad credit or other things that are not wanted are avoided. Before credit is given, the bank must first conduct a credit analysis to ensure that the customer can really be trusted. Giving credit
without prior analysis will be very dangerous for the bank (Kasmir 2016); (Adha & Riwayati, 2019).

Efforts to minimize the possibility of risks that will be faced by the Bank as a creditor, namely the bank requires an analysis of the financial statements of the prospective debtor company. Financial reports are used as a source of information for interested parties, both external and internal to the company. Therefore, companies in recording financial statements must consider aspects of costs and benefits, so it is necessary to prepare financial statements quickly and accurately. To save time and minimize errors in recording financial transactions, it must be adjusted to the applicable accounting system, and can use computerized applications that make it easier for users to input financial data.

One of the analyzes that will be used to analyze the financial statements is ratio analysis, with this analysis, quantitative information will be obtained that is useful for making credit decisions. This information is used as supporting material for consideration of credit decisions. This financial analysis shows if the data and financial state of the prospective debtor’s firm are creditworthy or not.

However, financial information is not the only information used by creditors or other stakeholders in making decisions. In addition to financial reports, there are other sources of information that are used in assessing the credit worthiness submitted by customers (Israel, 2020; Ruggeri et al., 2018; Danos et al., 1989; Obara & BO, 2004). Berry & Robertson (2006) reported that some of the information that is considered the most important by loan officers in conducting credit analysis are: customer track records according to internal bank records, interim reports, industry comparisons with other companies, reports from the mass media, reports published by the bank intelligence, and statistical information from the government. In line with the increasing attention and discussion of various stakeholders on environmental and social issues, information about environmental performance becomes important and is believed to have an impact on the risk and cash flow of the company in the future (Fleming et al., 1997; Anagnostopoulos et al., 2018; Höck et al., 2018). al., 2020; Weber et al., 2008). Compliance with the principles of environmental management and preservation needs to be a reference for commercial banks in providing credit to investors. This consideration has also been stated in the memorandum of understanding
between Bank Indonesia and the office of the State Ministry of the Environment since five years ago which is regulated in Bank Indonesia Regulation No. 7/2/PBI/2005 on Commercial Bank Asset Quality Assessment. Bank credit quality is defined by assessment variables such as business prospects, debtor performance, and the ability to pay. The debtor's efforts in the context of environmental preservation are one component of assessing economic prospects. Banks examine whether clients are concerned about environmental protection when granting credit (Mys, 2010).

The loan officer at the bank does credit analysis. Loan officers are responsible for receiving and assessing financial measuring instruments for prospective debtors, which are subsequently approved or rejected. It is important for loan officers to understand other information or the latest information related to lending. OJK in 2014 through its discussion themed “Roadmap for Sustainable Finance in Indonesia” encouraged financial institutions to develop social and environmental fields. Banks, as financial organizations, are expected to be able to consider social and environmental implications when making loan decisions (Widyaka, 2019). This study refers to the research of Sageri, Q, & Patra (2012) regarding the effect of financial performance and the research of Sarumpaet et al. (2020) and Widyaka (2019) regarding environmental performance on bank lending decisions. The results of the study by Sarumpaet et al. (2020) and Widyaka (2019) stated that the company's environmental performance does not affect the environmental risk assessment and credit recommendations by loan officers. In addition, the creditworthiness assessment certainly cannot be separated from the use of financial information in line with the research of Welson, Sabijono, & Elim (2015); Nur Jannah, Pudiastiono, & Ruswaji (2018) and Supriadi & Hr (2018). The innovative component of this research is the use of an experimental study design to combine characteristics of financial performance and environmental performance in the provision of corporate loan decisions.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Signaling Theory

Spence's (1973) Signaling Theory explains how signals of success or failure of management (the agent) should be sent to the owner (the principal). According to Sumarlin
signal theory assumes that organizations with superior performance (or good companies) use financial information to send signals to the market. Signal theory can also assist the company (agent), owner (principal), and parties outside the company in reducing information asymmetry by creating financial statement information of high quality or integrity. Interested parties that want to ensure the veracity of financial information given by the company (agent) should seek opinions from other parties who are free to provide financial statement opinions (Jama’an, 2008).

The Prospect Theory
Prospect theory is a decision-making theory that deals with uncertainty. There are two stages in risky decision-making, according to Kahneman and Tversky (in Nahartyo 2016). The first stage is known as the editing stage, and it involves the individual converting or editing a complex decision into a simple one. Then the second stage, the individual makes a decision based on the options he has edited. The basis for the decision is the value of each option and the weight assigned to each option. The option with the highest weight value will be taken as the final choice. Thus, it is clear that individuals are never perfectly rational when making decisions. The gain or loss condition will change the weight given to each option so that the decision will be different if there are changes in circumstances and conditions.

Banking
A bank is a financial intermediary institution that collects and distributes funds in the community to improve people's living standards. While banking is defined as everything relating to banks, Banks acquire monies from the general public through deposits or savings, and they distribute funds to the general public through credit or loans. According to Reksoprayitno (1992), one of the functions of a bank is to reduce risk for fund owners who want to invest their extra assets in economic activities. According to Banking Law No. 10 of 1998, credit is the provision of money or comparable claims based on an agreement or loan agreement between a bank and another party that compels the borrower to return his debt with interest after a set length of time.

Credit
The term credit is derived from the Greek word “credere”, which means “trust.” In this sense, obtaining
Credit indicates that a person has acquired trust. So, if a credit grant occurs, it contains the belief of the person or entity that grants it to another person or entity to whom it is granted, with the agreement that the person or entity given the credit must satisfy all responsibilities that were promised to be performed on time. If the transaction takes place, it is clear that there is a material transfer from the one who gives credit (the creditor) to the one who is granted credit (the debtor). Credit also has a special meaning, namely lending money (delayed payments). If people say they buy on credit, it means that the buyer does not have to pay at that time (Ruwati, 2014); (Aziza, 2016).

Credit Decision Making

According to Karamina (2012) credit decisions are written approval from authorized credit analysts, on the amount of credit that has been prepared, the type and value of credit collateral. The decision to grant credit includes indicators (a) seeking information about the debtor by looking at various aspects of evaluating the terms of credit application to debtors who apply for credit; (b) consideration of credit security (safety); (c) the perception of seeing the performance or performance of the debtor company whether it has good and promising potential for the future.

Financial performance

Financial performance, in general, assesses the efficacy and efficiency with which a company seeks and manages funding sources (Epstein et al., 2015). Similarly Fahmi (2011) and Armereo et al. (2020) indicate that a description of a company’s financial status is assessed using financial analysis techniques to determine whether the company’s financial condition is excellent or bad (Seto & Septianti, 2021). Financial performance, in general, assesses the efficacy and efficiency with which a company seeks and manages funding sources (Epstein et al., 2015).

Environmental Performance

The environmental performance (environmental performance) of a corporation is its ability to create a good (green) environment (Suratno et al. 2006:16). This initiative is intended to encourage businesses to improve their environmental management performance in order to reduce the environmental impact of their operations. Since 1995, the Ministry of Environment has used Company Performance Ratings in Environmental Management to construct an alternative tool. This
program was formerly called as PROPER PROKASIH.

A banking institution's decision to give credit is based on the results of an investigation into the potential debtor's viability. There are several factors that are taken into consideration in determining credit decisions by financial institutions. One of these factors according to Arief, Wibowo, & Santosa (2010) are financial ratios. Financial ratios are a tool for analyzing the financial performance of a business entity that compares financial data on items on the balance sheet and in the income statement (Aizenman & Pasricha, 2010). These findings are consistent with those of Sageri, Yusuf Q & Patra (2012); Jacob, Sabijono & Tangkuman (2014); Supriadi & Hr (2018); and Suryanto & Dai (2018), who found that financial performance had a significant positive effect on lending decisions. The following research hypotheses might be established based on the explanation of theoretical studies and the outcomes of prior studies.

H1: Financial performance has a significant positive effect on credit decisions

H2: Environmental performance has a significant positive effect on credit decisions

METHOD

An experimental technique will be used to test the design of research questions connected to financial and environmental performance. The 2X2 factorial design is a quantitative research design that employs an experimental approach to a quasi-experimental design (quasi-experimental design). Because participants in this study use students as substitutes for employees and firm management, the sort of experimental research used in this study is Quasi Experimental Design.
The researchers observed the individual's tendency to credit decisions by splitting the individuals into four treatments (Treatment A-Case 1, Treatment B-Case 2, Treatment C-Case 3, Treatment D-Case 4), as shown in Figure 1. The study manipulates the independent variables of financial performance, which has two levels, good and bad, and environmental performance, which also has two levels, good and bad. Researchers used experimental designs that had previously been observed. This study's population consisted of all students from the Faculty of Economics at Ganesha University of Education Bachelor of Accounting Program. This study's sample of 81 students was chosen using a non-probability method and a purposive sampling technique.

The operational definition of variables, as shown below, provides a concise description of the dependent and independent variables, as well as the formula used to calculate the dependency and independence variable values in research; (1) The credit decision was assessed using instruments modified from Jacob et al. (2014), Supriadi & Hr (2018), Sarumpaet et al. (2020), and Widyaka (2019) research. Accepting or rejecting credit on one of six possible scales indicates credit decision-making; (2) Financial performance is measured using instruments developed from Jacob et al. (2014) and Supriadi & Hr (2018) research. A case is the instrument; and (3) Environmental performance is assessed using measures modified from the studies of Sarumpaet et al. (2020) and Widyaka (2019). A case is the instrument.

A two-Way Analysis of Variance (ANOVA) was used to test the research hypothesis. In this investigation, the level of significance was set at 0.05. The Statistical Package for the Social Sciences (SPSS) software was used to test the research hypotheses.
necessary test, particularly the normality and homogeneity tests, will be performed before evaluating the hypothesis. The test criteria with a 5% level of significance are as follows (Ghozali, 2013).

a) If the significance value is greater than 0.05, $H_0$ is accepted.

b) If the significance value is less than 0.05, $H_0$ is rejected.

**RESULTS AND DISCUSSION**

**Pilot Test**

The pilot test aims to determine the level of participants' understanding of the given case. The pilot test was attended by 40 students of Bachelor of Accounting programs 2019, Faculty of Economics, at Ganesha University of Education. From the number of students, the researcher gave four types of cases which were given to participants randomly, and the number obtained was 10 respondents for case 1, 10 respondents for case 2, 10 respondents for case 3, and 10 respondents for case 4.

From the pilot test for cases 1-4, it can be seen that, on average, participants have answered the manipulation check question with the percent (%) truth equal to greater than 50% (0.5); this means that the respondent has answered 2 to 4 questions about manipulation correctly.

**Normality test**

Normality test is a test used to determine whether the data to be processed is normally distributed or not. This test is important to do before testing the research hypothesis. The results of the normality test can be seen in Table 1. All data from the four types of experimental cases are normally distributed from the residuals, this is evidenced by the significance of the normality test results greater than 0.05. With these results it can be said that the data is normally distributed so that it fulfills one of the assumptions of analysis of variance (ANOVA).

<table>
<thead>
<tr>
<th>Normality test</th>
<th>Sig</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kolmogorov-Smirnov Z</td>
<td>0.060</td>
<td>Data is normally distributed</td>
</tr>
<tr>
<td>Shapiro-Wilk</td>
<td>0.086</td>
<td>Data is normally distributed</td>
</tr>
</tbody>
</table>
Table 2. Homogeneity Test Results

<table>
<thead>
<tr>
<th>Levene Test (Sig.)</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.970</td>
<td>The variance between groups is the same</td>
</tr>
</tbody>
</table>

Table 3. Recapitulation of Two Ways ANOVA Test Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sig.</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial performance</td>
<td>0.000</td>
<td>H₁ Accepted</td>
</tr>
<tr>
<td>Environmental Performance</td>
<td>0.000</td>
<td>H₂ Accepted</td>
</tr>
<tr>
<td>R Squared</td>
<td>0.683</td>
<td></td>
</tr>
<tr>
<td>Adjusted R Squared</td>
<td>0.671</td>
<td></td>
</tr>
</tbody>
</table>

Homogeneity Test

Homogeneity test is used to determine whether the population variance is the same or not. The homogeneity test was carried out as a prerequisite test before performing the analysis of variance test.

The significance value of Levene’s Test is 0.970, which is greater than 0.05, as shown in Table 2 above; these results imply that there is no significant variation in variance across the data groups.

Hypothesis Testing

In this experimental study, the data analysis approach used to test the hypothesis is a two-ways ANOVA. To see the significance of the research test results, it can be seen from the p-value of the data processing results. The hypothesis is accepted if the p-value of significance is less than 0.05. In the meantime, if the p-value of significance is greater than 0.05, the hypothesis is rejected.

Two Ways ANOVA test can be seen in Table 3 which shows a significant level for financial performance of 0.000 and less than 0.05. This indicates that statistically financial performance has an effect on credit decision making, in other words this study accepts H₁ or the alternative hypothesis is supported. This is consistent with signal theory, which holds that superior performers (or good organizations) use financial information to transmit signals to markets (Sumarlin, 2016). Signal theory can also assist the company (agent), owner (principal), and external parties in reducing information asymmetry by generating the quality or integrity of financial report information, as proven by the company’s financial performance reporting. This is supported by the
statistical results of the descriptive case, where the participant in treatment A (Case 1) has an average of 5,5000 and the participant in treatment C (Case 3) has an average of 4,0000, indicating that when the potential debtor's financial performance is in good condition, the participants choose to accept the submission of credit. Similarly, when a participant is presented with treatment D (Case 4), that is, the condition in which the potential debtor's financial and environmental performance are both poor, the average is 2,8500, indicating that the participant chooses to reject the credit application. This is in line with research conducted by Sageri, Yusuf Q & Patra (2012); Jacob, et al. (2014); Supriadi & Hr (2018); Suryanto & Dai (2018) which states that financial performance has a positive and significant effect on credit decision making, so that it can prove that financial performance is one of the main considerations in providing credit beyond other factors.

The prospect theory describes and predicts individual behavior in situations involving risk, such as investment decisions. Investors are not apathetic when it comes to investing their assets; they must first evaluate a variety of factors. In addition, the general public will react when there is a bad environmental performance in a company. Of course, the public's reaction will affect the sustainability of a company. This can be proven through statistical testing in Table 3. In the table it can be seen that the p-value of environmental performance significance is 0.000 and is smaller than 0.05. So that statistically environmental performance influences credit decision making, in other words this study accepts H₂ or the second alternative hypothesis is supported. This is supported by the statistical results of the descriptive case, where the participant in treatment A (Case 1) has an average of 5,5000 and the participant in treatment B (Case 2) has an average of 4,1905, indicating that when the candidate debtor's environmental performance is in good condition, participants choose to accept the submission of credit. Similarly, when a participant is presented with treatment D (Case 4), that is, the condition in which the potential debtor's financial and environmental performance are both poor, the average is 2,8500, indicating that the participant chooses to reject the credit application. This is consistent with the findings of Anagnostopoulos et al. (2018) using a mixed method approach of online questionnaires and interviews to
examine how financial institutions use sustainability (environment) issues in credit risk management and their impact on credit decisions; and research by Höck et al. (2020) who found evidence that more sustainable companies have a lower premium credit risk and have higher creditworthiness.

The credit decision considers numerous indications, one of which is the perception of whether the debtor company’s performance has good and promising future potential. According to the interaction test, the R Squared value of 0.683 suggests that financial performance and environmental performance variables contribute 68.3% to credit decision-making, while the remaining 31.7% is influenced by other variables. As a result, it is possible to conclude that both financial performance information and environmental performance have a major impact on credit decision-making.

CONCLUSION, IMPLICATION AND LIMITATION

The following conclusions can be derived based on the findings of the hypothesis testing that has been performed: First, financial performance influences credit decisions positively. According to the R Squared value, the contribution of financial and environmental performance variables to credit decision-making is 68.3%, while the remaining 31.7% is influenced by other variables.

The results of this study have implications for the formulation of policies in banking regulations related to financial and corporate environmental issues. A statement of a company’s financial condition that is assessed using financial analysis methods to determine whether the company’s financial condition is excellent or bad. From the results of previous research, The PROPER rating has a tremendous impact on the firm, particularly the negative rating achieved by the company, which puts significant pressure on the company. A bad environmental performance grade suggests the risk of diminishing cash flows in the future for investors, so that environmental performance contains information that is useful in making credit decisions.

This study has several limitations that can be used as a reference in future research. First, the background of the subjects regarding knowledge and awareness of financial and environmental performance in this study is assumed to be equivalent. Even though the research
subjects have attended courses or are involved in related activities. Further research can consider different subjects, such as bank credit analysts making credit decisions through information on financial performance and company environmental performance, so that different research results can be obtained.

Second, this study focuses on financial and environmental concerns as well as social factors involved in credit decisions. In addition to economic, financial, and environmental factors, two other variables influence a company’s sustainability: social and governance. A future study could use this element. Furthermore, the following study can incorporate demographic characteristics such as gender and age, as well as mediation and moderation variables, as well as other supporting theories and mixed research methodologies, to provide new variations on the research findings.

REFERENCES


