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Good corporate governance as moderator of the diversification of portfolios

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Abstract

The purpose of this study was to empirically examine the effect of credit portfolio diversification on credit risk with Good Corporate Governance (GCG) as a moderating variable. The samples in this study were 38 commercial banks listed on the Indonesia Stock Exchange from 2013 to 2015. The data in this study were analyzed using moderated regression analysis with the SPSS software. The results of the study proved that working capital loans had a negative and significant effect on credit risk. In conclusion, GCG can moderate the influence of the diversification of the loan portfolio on the level of credit risk.

Keywords: Credit, Portfolio, Diversification, Good corporate, Governance.

Buen Gobierno Corporativo como moderador de la diversificación de carteras

Resumen

El propósito de este estudio fue examinar empíricamente el efecto de la diversificación de la cartera de crédito sobre el riesgo de crédito con el Buen Gobierno Corporativo (GCG) como variable moderadora. Las muestras en este estudio fueron 38 bancos comerciales que cotizan en la Bolsa de Valores de Indonesia de 2013 a

2015. Los datos de este estudio se analizaron mediante análisis de regresión moderada con el software SPSS. Los resultados del estudio demostraron que los préstamos de capital de trabajo tuvieron un efecto negativo y significativo sobre el riesgo de crédito. En conclusión, GCG puede moderar la influencia de la diversificación de la cartera de préstamos en el nivel de riesgo de crédito.

Palabras clave: Crédito, Cartera, Diversificación, Buen corporativo, Gobierno.

1. INTRODUCTION

Each bank has a different economic sector loan portfolio. In general, the bank's loan portfolio based on the use is divided into three, namely business capital loans, investment loans, and consumer loans. Working capital loans are loans for corporate working capital in the context of financing company activities, such as purchasing raw materials, account receivables and others. Investment credit is credit (medium or long term) given to businesses to rehabilitate, modernize, expand or establish new projects, for example for the purchase of machinery, buildings, and land for factories.

Determination of risk management for commercial banks explains that sources of credit risk exist throughout the various bank business activities. To reduce the level of credit risk, banks must manage the credit portfolio so that it is well diversified. Credit risk will become higher if the credit fund portfolio is not diversified. It will give an impact on unhealthy banking financial conditions and cause bankruptcy in the banking industry. Credit risk is the risk that the bank receives because the recipient of the credit fund (the debtor) fails to

fulfill its obligations to pay both the principal and the loan interest on the maturity date. Therefore, credit that is too aggressive will be a factor in the fall of banks if it is not balanced with the quality of credit itself.

In addition to bank policies to reduce the level of credit risk by applying portfolio diversification, a bank must improve the performance with a good corporate governance mechanism to further minimize the risk of failure on the managerial side of the bank. Bank of Indonesia tightens banking regulations in Indonesia to increase the effectiveness of the implementation of risk management and good corporate governance. The implementation of good corporate governance hereinafter referred to as GCG, is intended to enable banks to be able to identify problems early, carry out follow-up corrections to existing conditions, and be more resilient in facing crises. Organizations, including banks, need a formal control system to ensure that company goals and strategies are implemented properly.

Previous research discussed the impact and evolution of the diversification of credit portfolios in 2001 and 2002 when Argentina experienced a financial crisis and examined its impact on portfolio returns and quality (BEBCZUK & GALINDO, 2008). The sample period used data from 1999 to 2004. The study found that small banks and foreign banks on average were more diversified than small banks and national banks. It was also discovered that banks did not change credit portfolios much in response to the crisis, despite the positive effects of sectoral diversification and lending to tradable sectors. The

results of the study showed the benefits of greater diversification when the business cycle was down. (USMANOVA, 2019).

Diversification of credit portfolios has a negative effect on credit risk by maintaining good monitoring and governance function as a tool that will have a positive impact on decreasing the level of banking risk (BEHR, KAMP, MEMMEL & PFINGSTEN, 2007). The effect of the diversification of credit portfolios on risks to banks had also been carried out in Austria in the period 1997 to 2003. The study found that diversification had a negative effect on cost efficiency, increased profit efficiency, reduced risk, and positively affected bank capitalization (ROSSI, SCHWAIGER & WINKLER, 2009).

The main focus of management control lies in the implementation of the strategies formulated by the organization. Furthermore, performance measures are evaluated regularly to ensure that the strategies formulated are successful for the company's progress. There is an award for every satisfactory performance, and corrective action is taken if the performance target has not been achieved. GCG is a formal control system that is used to support the successful implementation of bank loan fund keeper strategies to achieve maximum performance. One factor to measure banking performance is the success of lending funds to third parties by maintaining a low level of risk. The smaller the composite value of GCG self-assessment shows the better banking GCG performance. A study shows that the CGC mechanism with (Corporate Social

Responsibility) CSR has a positive effect on financial performance and earning management (MAHRANI & SOEWARNO, 2018).

Regulation and supervision using good corporate governance can contribute to the decline in the level of bank credit risk. The decline is through the diversification mechanism of the loan portfolio to be able to maximize the bank's function in raising funds in the form of deposits and distribution. These activities are not solely to gain profit, but bank activities must also improve people's living standards (ROSSI ET AL., 2009). The existence of previous research regarding the diversification of credit portfolios against credit risk is known to obtain less efficient results, so that moderation, such as GCG, is needed. Therefore, this study was conducted to empirically examine the effect of the diversification of credit portfolios on credit risk with GCG as a moderating variable.

2. LITERATURE REVIEW

The bad management hypothesis concept states that poor management practices both in day-to-day business operations and in the management of credit portfolios, among others, do not monitor, control operational costs and carry out adequate lending practices so that non-performing loans can increase (BERGER & DEYOUNG, 1997). Banking businesses have information that can be different between investors and company agents. The adverse selection has a role in knowing more information about the current condition and

prospects of the firm than outside investors. The relationship between the management of a bank and the owner of the bank will be stated in a contract (performance contract). The contractual relationship between the owner and the management is in line with the Agency Theory (JENSEN & MECKLING, 1976). Agency theory is engulfed by 3 assumptions covering assumptions about human nature, assumptions about organization and assumptions about information (EISENHARDT, 1989). The essence of Agency Theory is the design of contracts that are appropriate for aligning principal and agent interests in the event of a conflict of interest.

Portfolios can be interpreted as the study of an individual investor achieving the maximum expected return from different portfolios, in which each has a certain level of risk. The classical diversification theory shows that the higher the level of diversification of the loan portfolio, the lower the risk faced by the bank because if one of them fails, it can still be covered by other sectors that do not experience similar failures. Bank risk tends to decline when the bank's loan portfolio is diversified well (BEHR ET AL., 2007).

Good Corporate Governance is a concept that is based on agency theory, expected to function as a tool to provide confidence to investors that they will receive returns on the funds they have invested (HERAWATY, 2008). Researches that examined the diversification of credit portfolios has been carried out in several countries. The effect of the diversification of credit portfolios on bank returns has been studied on 983 banks in Germany from 1996 to 2002. The results of these

studies indicate that the higher the level of diversification of credit portfolios, the lower the risk and bank returns (HAYDEN, PORATH & WESTERNHAGEN, 2007). In another case, GCG has an insignificant influence on stock return.

The study used the Herfindahl Hirschman Index (HHI) to measure the level of diversification of the loan portfolio and uses a sample of 105 banks in Italy from 1993 to 1999. The results of the study indicate that the higher the level of diversification of the loan portfolio, the lower the risk and bank return, which means that the diversification of the loan portfolio has a negative effect on bank risk and return (ACHARYA, HASAN & SAUNDERS, 2006).

Hypothesis

H₁: Working capital loans have a negative effect on non-performing loans

H₂: Investment loans have a positive effect on non-performing loans

H₃: Consumer loans have a positive effect on non-performing loans

H₄: Good corporate governance moderates the effect of diversifying the working capital loan portfolio on the level of credit risk.

H₅: Good corporate governance moderates the effect of diversifying the working capital loan portfolio on the level of credit risk.

H₆: Good corporate governance moderates the effect of diversifying the working capital loan portfolio on the level of credit risk.

3. METHODOLOGY

This was a quantitative descriptive study with associative research methods. The type of data used in this study was quantitative data in the form of numbers. The data collected were periodic (time series), namely data for the period of 2013 to 2015.

Based on the analysis model and research hypothesis, the variables used in this study included independent variables, which were working capital loans, investment loans, and consumer loans. The moderating variable in this study was good corporate governance. The dependent or bound variable in this study was a non-performing loan.

The data source used is secondary data with the documentation method, which is a search tool through company records and written documents. Information on the list of banking companies listed on the Indonesia Stock Exchange (IDX) and the annual report of banking

companies listed on the IDX during the 2013-2015 period was obtained from the IDX website www.idx.co.id.

The population and sample in this study were all banking companies listed on the Indonesia Stock Exchange from 2013 to 2015. Sampling in this study was conducted using a purposive sampling method with consideration of banking companies listed on the IDX and publishing financial reports or annual reports on the IDX website from 2013 to 2015, and banking companies also presented complete data related to this research variable. Banking companies selected as research samples were 31 companies in 2013, 35 companies in 2014 and 37 companies in 2015.

Hypothesis test was done by using multiple linear regression analysis on working capital credit, investment credit, and consumer loan data. Then, it was proceeding with the moderation Regression Analysis technique. The analysis was carried out using the SPSS software.

4. RESULTS

The test of the first research model was to determine the effect of the working capital loan (WCL), investment loan (IL), and consumer loan (CL) on credit risk as measured by NPL. The determination of the regression equation can be seen in Table 1 below.

Table 1: Results of the linear regression test

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	
	B	Std. Error	Beta			
1	(Constant)	2.877	1.016		2.832	0.006
	Working capital loan (WCL)	-0.027	0.011	-0.441	-2.478	0.015
	Investment loan (IL)	0.003	0.012	0.029	0.282	0.778
	Consumer loan (CL)	0.024	0.012	0.335	2.014	0.047
Multiple coefficients (R)		0.746				
The determination coefficient (R2)		0.542				

Based on Table 1, it is known that the coefficient value of the regression equation from the output is obtained by the regression equation model:

$$NPL = 2.877 - 0.027 WCL + 0.003 IL + 0.024 CL$$

Regression coefficients that have a positive sign indicate a unidirectional change between the independent variables on the dependent variable, while the coefficients that have a negative sign indicate the opposite change.

Based on the results of the t-test in Table 1, it is known that the value of t for the working capital loan variable against the NPL is -0.027 with a significance value of 0.015. The value was $0.015 < 0.05$,

so it can be concluded that working capital loans had a significant negative effect on credit risk (NPL). The investment loan variable for NPL was 0.003 with a significance value of 0.778. The value was $0.778 > 0.05$, so it can be concluded that investment loan had a positive but not significant effect on credit risk (NPL). The consumer loan variable for NPL was 0.024 with a significance value of 0.047. The value of $0.047 < 0.05$, so it can be concluded that consumer loans had a significant positive effect on credit risk (NPL).

The test of this second research model was to determine the effect of the working capital loan (WCL), investment loan (IL), consumer loan (CL) and moderating variables of good corporate governance (GCG) on credit risk (NPL). The second linear regression test results can be seen in Table 2.

Table 2: The second linear regression test results

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
2	(Constant)	2.041	0.883		2.312	0.023
	Working capital loan (WCL)	-0.030	0.009	-0.495	-3.233	0.002
	Investment loan (IL)	-0.014	0.011	-0.120	-1.298	0.197
	Consumer loan (CL)	0.011	0.010	0.157	1.075	0.285
	GCG	0.831	0.138	0.389	6.037	0.000
Multiple coefficients (R)		0.822				
Coefficient of Determination (R2)		0.663				

Based on Table 2, it is known that the coefficient value of the regression equation from the output is obtained by the regression equation model:

$$\text{NPL} = 2.041 - 0.030 \text{ WCL} - 0.014 \text{ IL} + 0.011 \text{ CL} + 0.831 \text{ GCG} + \varepsilon$$

Regression coefficients that have a negative sign indicate the opposite change, while the positive regression coefficient indicates a unidirectional change between the independent variables on the dependent variable.

Based on the results of the t-test in Table 2, it is known that the value of t for the working capital loan variable (WCL) for the NPL is - 0.030 with a significance value of 0.002. Value of $0.002 < 0.05$ indicated that working capital loan had a significant negative effect on credit risk (NPL). The investment loan variable (IL) for NPL was - 0.014 with a significance value of 0.197. Value of $0.197 > 0.05$ indicated that investment loans had a negative and not significant effect on credit risk (NPL). The consumer loan variable (CL) for NPL was 0.011 with a significance value of 0.285. Value of $0.285 > 0.05$ indicated that consumer loans had a positive and not significant effect on credit risk (NPL). The variable good corporate governance (GCG) on NPL was 0.831 with a significance value of 0,000. A value of $0.000 < 0.05$ so indicated that good corporate governance (GCG) had a significant positive effect on credit risk (NPL).

Moderated regression analysis (MRA)

Moderated regression analysis test was used to determine the effect of good corporate governance (GCG) on the effect of working capital loan, investment loan, consumer loan on credit risk (NPL).

Table 3: Results of moderated regression analysis

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
3	(Constant)	-0.080	0.059		-1.360	0.177
	WCL	-0.302	0.162	-0.302	-1.866	0.065
	IL	-0.046	0.089	-0.046	-0.517	0.606
	CL	0.313	0.148	0.313	2.109	0.038
	GCG	0.385	0.061	0.385	6.338	0.000
	WCL*GCG	0.147	0.129	0.134	1.142	0.256
	IL*GCG	-0.159	0.084	-0.144	-1.894	0.061
	CL*GCG	0.588	0.155	-0.363	3.800	0.000
Multiple coefficients (R)		0.858				
The determination coefficient (R2)		0.716				

Based on Table 3, multiple linear regression equations can be obtained with moderating variables as follows:

$$NPL = -0.080 - 0.302 WCL + 0.385 GCG + 0.147 WCL * GCG - 0.046 IL + 0.385 GCG - 0.159 IL * GCG + 0.313 CL + 0.385 GCG + 0.588 CL * GCG$$

Based on the results of the t-test in Table 3, it is known that the WCL variable regression coefficient was -0.302 with a significance level of 0.065. The IL variable had a regression coefficient of -0.046 with a significance value of 0.606. The CL variable had a regression coefficient of 0.313 with a significance value of 0.038. The GCG variable had a regression coefficient of 0.385 with a significance value of 0.000. The moderating variable of WCL*GCG produced a regression coefficient of 0.147 and a t value of 1.142 with a significance value of 0.256. The significant value of $0.256 > 0.05$ indicated that the GCG variable was not able to moderate the effect of working capital loan (WCL) on credit risk and was significant. The moderate variable of IL*GCG resulted in a regression coefficient of -0.159 and a t value of -1.894 with a significance value of 0.061. The significant value of $0.061 > 0.05$ indicated that the GCG variable was not able to moderate the effect of investment loan (IL) on credit risk. The moderating variable of CL*GCG resulted in a regression coefficient of 0.588 and a t value of 3.800 with a significance value of 0.000. A significance value of $0.000 < 0.05$ indicated that the GCG variable was able to moderate the impact of consumer loans on credit risk.

5. DISCUSSION

This study showed that working capital load had a negative effect on non-performing loans and proved significant. This was indicated by the significance value of the calculation ($0.015 <$

significance level (0.05). Working capital loans are needed by companies to finance production activities, receivables, and others.

This study showed that the larger working capital loans issued by banks had an impact on reducing the risk of non-performing loans at banks. This is because based on the results of the research, the level of granting working capital credit is the first position. This position illustrates that management has managed the diversified loan portfolio accordingly. The impact of diversification can be seen in the allocation of funds for working capital loans which can increase the economic passion of the real sector. Increased production activities can be beneficial for the company (the debtor). Increasing the company's income due to the working capital loans channeled by the bank will be accompanied by the ability of the debtor to immediately repay the credit obligations as soon as possible.

The Bad Management Hypothesis states that poor management practices both in day-to-day operations and in the management of credit portfolios. Not doing the monitoring, controlling operational costs and not carrying out adequate credit practices can increase problem loans (BERGER & DEYOUNG, 1997). In this case, management seeks to manage the allocation of working capital loans to reduce the level of credit risk. Credit diversification in Austrian banks is known to show a diversification of credit that reduces risk (ROSSI ET AL., 2009). Diversification of all Azerbaijani central banks with the 2007-2012 observation period shows that it can reduce the level of risk of returns (HAUGEN & HAUGEN, 2001).

This study showed that investment credit had a positive effect on non-performing loans but was not significant. This is indicated by the significance value of the count (0.778) > significant level (0.05). Investment credit is useful for rehabilitation, modernization, expansion or establishment of new projects. The greater the investment credit is given, the greater the risk faced by the company for the rate of credit repayment.

6. CONCLUSION

Based on the results of this study, we can conclude that GCG can moderate the effect of portfolio diversification on the level of credit risk. The results of this study showed that working capital loans had a negative effect on credit risk, and it was proven significant. Investment loans had a positive effect on non-performing loans but did not prove significant. Consumer loans had a positive effect on non-performing loans, and it was proven significant. GCG was not able to moderate the influence of credit working capital loans against credit risk. GCG was not able to moderate the effect of investment loans on credit risk, but it was able to moderate the effect of consumer loans on credit risk.

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