

THE EFFECT OF CREDIT RATING, DISCRETIONARY ACCRUAL, AND FINANCIAL DISTRESS ON CREDIT FACILITIES IN MANUFACTURING COMPANIES IN INDONESIA

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ABSTRACT

This study aims to analyze the effect of credit rating, discretionary accrual, and financial distress on credit facilities, namely the rate spread, credit collateral, and maturity date extended by banks. This study uses static panel equations and panel data, consisting of 50 manufacturing companies in Indonesia from 2010 to 2017. The research methods used are the Pooled Least Square (PLS), Fixed Effect Model (FEM), Random Effect Model (REM), and logit panels. This study concludes that earnings management has a negative and insignificant impact on the rate spread and maturity date but positively and significantly affects the collateral variable. Financial distress has a positive and insignificant effect on the rate spread and maturity date but negatively impacts the collateral variable. The company's investment rating has a negative and insignificant impact on the three dependent variables, namely, rate spread, collateral, and maturity date.

Keywords: Credit Rating, Discretionary Accrual, Financial Distress, Credit Facilities

JEL: C23, G21, G24

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Introduction

The bank is an intermediary financial institution that focuses on fundraising and channel funds to the public (Kadang, 2018). The main activity of banks in extending credit to the public has a strategic role. Providing credit to the public can encourage economic growth through capital accumulation and increasing company productivity (Demirgüç-Kunt & Levine, 2004). Loans extended by banks can boost economic growth in various countries, including Nigeria (Akpanung & Bababola, 2011) and Indonesia (Sipahutar et al., 2016).

Sassi & Gasmi (2014) prove that not all bank loans positively impact economic growth. Consumption credit extended to households had a negative impact on economic growth in Europe during the 1995-2012 period. On the other hand, credit which played an essential role in stimulating economic growth in Europe during this period, was business credit. Similar research was also conducted (Raz, 2017), which shows that bank credit can boost Indonesia's economy is the type of business credit.

Banks have several specific considerations in extending credit to prospective customers, which result in different treatment given by banks to each prospective customer. It is usu-

ally seen from the amount of credit offered, interest rates, repayment period, and collateral pledged (Strahan, 1999). The difference in treatment depends on the prospect's business performance, which can be seen from the credit rating, earnings quality, and financial distress. Generally, the bank will provide various promotions to companies with good performance. On the other hand, companies with poor performance will usually get special treatment in line with the higher risks they face.

The easiest way to determine the company's performance is by looking at a potential customer's position in several trusted credit rating agencies that can be accessed free of charge by the general public. Investors also use this information to determine which will target company stocks or bonds for investment. Finnerty et al. (2013) stated that the better its rating, the higher the confidence level of potential investors. Other than that, Norden & Weber (2004) suggested that potential investors can anticipate the decline in company performance from credit rating development. However, some parties still doubt the quality of the credit rating agency results because it is related to whether the agency is an issuer-paid rating agency, which tends to over-evaluate the company being assessed, or the investor-paid agency the opposite result (Xia, 2014). Therefore, the bank still has to carry out an in-depth analysis of the prospect's performance, such as earnings quality and financial distress.

Companies with high profitability will increase their credit score during the credit evaluation process (Yurdakul & Tansel, 2004). However, along with financial discretion, it can no longer use the profitability indicator to see its performance as a whole. Companies usually avoid negative earnings to make their profit and loss statements look good, even if it's illegal (Dong et al., 2012). Parvin (2020) revealed that around 39% of manufacturing companies in Bangladesh manipulate profits or do earnings management. Furthermore, Yusuf & Soraya (2004) stated that from a sample of 30 companies listed on the Jakarta Stock Exchange, 14 companies carry out earnings management activities.

Information asymmetry due to earnings manipulation certainly increases the risk of default if the bank is not observant in analyzing the company's performance. Therefore, Bortoluzzo et al. (2016) stated that banks should use the earning management indicator to determine the quality of prospective customers' earnings. The higher the earning management, the lower the profit quality of the prospective customer. Thus, this information can be used by banks to be more careful when extending credit.

Apart from earnings quality, banks must also pay attention to a company's financial distress when extending credit. Financial distress is when the company experiences a decline in performance before bankruptcy (Jones & Hensher, 2004). The chances of financial distress are usually higher when the company's business management is poor (Elloumi & Gueyie, 2001; Whitaker, 1999). When a company enters financial distress, it usually faces difficulties fulfilling its short-term obligations (Hernandez Tinoco & Wilson, 2013). Analysis of this matter is undoubtedly essential for banks because a company that enters financial distress has a higher risk of credit default.

Therefore, it is essential to analyze the effect of credit rating, earnings quality, and financial distress on credit facilities, especially business credit, extended by banks to prospective customers. Some studies like Asghari et al. (2014), Bharath et al. (2008), Kirschenmann & Norden (2012), Spiceland et al. (2016), and Strahan (1999) has analyzed how the quality of earnings, company size, liquidity, and leverage on credit facilities provided by banks such as volume, interest, collateral and credit terms. However, there has been no research on measuring the role of credit rating and financial distress in determining bank credit facilities. Based on

these conditions, this study has a primary focus on seeing how credit rating, earnings quality, and financial distress on credit facilities provided by banks using case studies of manufacturing companies in Indonesia.

Literature Review

According to agency theory, can use a capital structure to reduce conflicts of interest between managers and shareholders. Companies with high debt or leverage face pressure to generate cash flow, which is later used to pay instalments. Managers maximize existing resources, thereby increasing company value (Palepu et al., 2013).

The same thing was stated by Bathala et al. (1994), where the selection of sources of debt financing can minimize conflicts of interest between the principal (company owner) and the agent (manager). Apart from shareholders, creditors will also oversee the performance of the company's management. The tighter the supervision, the smaller the chances for managers to take actions detrimental to the company.

Managers and shareholders sometimes do not always agree in making a decision. For example, a manager invests in a project that can benefit the manager himself, not the shareholders. The bank plays a role in monitoring and ensuring that managers invest in projects that benefit shareholders (Hoshi et al., 1993). Bank supervision is better than bondholders because banks have human resources, systems, and technology that support debtor supervision, and bank credit requirements are also stricter than bonds (Diamond, 1984; Mather & Peirson, 2006).

Companies with high conflicts of interest, such as low-profit quality or financial distress, tend to choose banks over bonds to minimize disputes between agents and principals. The bank will help supervise the manager to ensure the manager is making a profit so that the principal and interest are paid off. Bank supervision certainly minimizes the cost of top management.

Based on the signalling theory, managers can inform the company's quality by directly and indirectly sending signals to the market. It will be now reflected in the financial statements. Meanwhile, indirectly can do it through the capital structure (choice of sources of debt funding).

The choice of source of debt funding is the signal that the manager sends to the market. Of course, a new company with no good quality chooses to borrow from a bank to form a "good reputation". The new company initially meets all bank covenants as "reputation capital," which will be upgraded from bank debt to bonds' issuance. Meanwhile, companies that are already standing with a good reputation can choose bonds because the cost of "losing reputation" will prevent them from acting detrimentally (Diamond, 1984).

Firms with good quality will face low capital costs and the potential for default. On the other hand, companies with low ratings have high capital costs and the potential for bankruptcy to act in their favour even though they may be detrimental to creditors. It shows that companies that issue bonds give the market a signal that they are more credible than companies that do not have issued bonds.

Debtors with low earnings quality, characterized by a high accrual discretionary value, will be subject to higher interest rates and shorter loan terms. (De Meyere et al., 2018; García - Teruel et al., 2010; Rey et al., 2020) And must provide a guarantee (Bharath et al., 2008; Spiceland et al., 2016). Companies that do not have an investment rating will be subject to higher credit interest rates (Strahan, 1999) and must pledge their assets (Booth & Booth,

2006; Gonas et al., 2002; Strahan, 1999).

The volume of bank credit is caused by the company's size, low leverage, and high firm value. According to Strahan (1999), high bank interest is influenced by the low company rating, small size, low profits, and high leverage. The length of the credit period is due to the company's high gain and rating. The amount of collateral charged by the bank is influenced by the small company's size, increased leverage, and low rating. Furthermore, the greater the likelihood of financial distress, the greater the interest and collateral charged, and the shorter the credit period (Bharath et al., 2008).

However, Asghari et al. (2014) argue that the quality of earnings has a negative effect on the tenor of debt. Companies with high earnings will reduce the information asymmetry between managers and owners, where managers try to give their best performance by shortening the debt's life. Research conducted by Huang & Kuo (2014) concluded that banks impose a more extensive rate spread on companies that receive an investment-grade upgrade.

Thus, it can be seen that the relationship between discretionary accrual, financial distress, and investment rating, each of which affects the three dependent variables at the same time, which includes interest rates, collateral, and maturity date. It is different from the current research because this study consists of three equations: three dependent variables: interest rates, collateral, and maturity date, each of which is influenced by three independent variables: discretionary accrual, financial distress, and investment rating. In addition, this study classifies manufacturing companies based on the condition of the company's financial statements.

Refer to research Bharath et al. (2008), with several reforms that have been mentioned. The research hypothesis is as follows:

Model 1:

- a. Discretionary accrual has a positive effect on the rate spread;
- b. Financial distress has a negative effect on rate spreads; and
- c. Investment rating has a negative effect on the rate spread.

Model 2:

- a. Discretionary accrual has a positive effect on credit guarantees;
- b. Financial distress has a negative effect on credit guarantees; and
- c. Investment ratings have a negative effect on credit guarantees.

Model 3:

- a. Discretionary accrual has a negative effect on maturity date;
- b. Financial distress has a positive effect on maturity date; and
- c. Investment rating has a positive effect on maturity date

Data and Research Methods

This study uses a quantitative approach and analyzes it through static panel equations and panel data. The type of data used in this research is secondary data in the form of panel data. The data consists of cross-section data of 50 companies classified as manufacturing companies with time-series data from 2010 to 2017. The data used to calculate the value of the independent and dependent variables are contained in the company's financial statements available on the Indonesia Stock Exchange. The research period was started in 2010 because, in that year, the world economy began to rebound slowly after experiencing the 2008 to 2009 crisis (Claessens et al., 2013; Khoirunurrofik et al., 2020; Laeven & Valencia, 2013; Sugema, 2012).

The sample used in this study was 50 manufacturing companies with data and information that met the research criteria. The criteria for the company used in the study are that the company is listed on the Indonesia Stock Exchange during the period (did not conduct an initial public offering or IPO in mid-2010-2017 and did not delist or relist during the study period). The company published its 2010-2017 financial statements in rupiah currency, and the company has credit or bank loans. The company has complete research data for data processing. In detail, the variables used in this study can be seen in the following table:

Table 1: Variable Name, Unit, and Data Source

Variable Name	Unit	Data source
Discretionary Accrual (DA _{it})	Discretionary Accrual (+) = Earnings Quality (-)	Company Annual Report
	Discretionary Accrual (-) = Earnings Quality (+)	
Financial Distress (dum _{FDit})	X-score > upper limit = default	Company Annual Report
	X-score < lower limit = healthy finances	
	Lower limit < X-score < upper limit = default risk	
	1 = no financial distress 0 = there is financial distress	
Investment Rating (dum _{RIit})	1 = the company has an investment-grade rating	Indonesia Stock Exchange
	0 = the company has a junk bond rating or does not have a rating	
Collateral (Cit)	1 = the company pledges its assets for accounts payable to the bank	Indonesia Stock Exchange
	0 = the company does not guarantee its assets for trade payables to the bank	
Rate Spread (RS _{it})	The percentage difference between loan interest rates and deposit rates	Company Annual Report
Maturity Date (MD _{it})	The value of the period for repayment of trade payables given by the bank to the company	Indonesia Stock Exchange

In this study, two models have a dependent variable in the form of a dummy, namely a model with a collateral dependent variable (credit guarantee) and a maturity date variable (credit period). Therefore, the estimation method uses the logit panel method. Logit is the percentage change in log odds or the ratio of opportunities for each increase in variable X (independent or independent variable). The logit panel equation shows that the logit probability ratio log is linear on X and the parameter. If the logit is positive, then the independent variable's value increases, the chance that the dependent variable is equal to 1 (the event occurs) increases. The analysis model in this study is as follows.

Equation 1

$$RS_{it} = \beta_1 + \beta_2 DA_{it} + \beta_3 dumFD_{it} + \beta_4 dumRI_{it} + \epsilon_{it} \quad (1)$$

Equation 2

$$C_{it} = \beta_1 + \beta_2 DA_{it} + \beta_3 dumFD_{it} + \beta_4 dumRI_{it} + \epsilon_{it} \quad (2)$$

Equation 3

$$MD_{it} = \beta_1 + \beta_2 DA_{it} + \beta_3 dumFD_{it} + \beta_4 dumRI_{it} + \epsilon_{it} \quad (3)$$

Where:

- RS_{it} : Rate Spread or difference between credit interest rates and savings interest rates (%) company i in year t
- C_{it} : Collateral or dummy collateral (1 if secured credit, 0 unsecured) company i in year t
- MD_{it} : Maturity Date or credit term (1 if long term, 0 short term) company i in year t
- DA_{it} : Discretionary Accruals company i in year t
- dumFD_{it} : Dummy Financial Distress (1 if the company is in sound financial condition, 0 if the company is approaching bankruptcy) company i in year t
- dumRI_{it} : Dummy Rating Investment (1 if the company has an investment rating, 0 if not) company i in year t
- β₁ : Intercept
- β₂, β₃, β₄ : Independent variable coefficient
- ε_{it} : Error term

There are three types of testing models in the panel data regression model, namely Pooled Least Square (PLS), where the intercept and slope are considered the same for each individual. The Fixed Effect Model (FEM) assumes differences in the intercept where each intercept only varies with the individual. At the same time, the time is constant, and the Random Effect Model (REM) considers the residuals that are thought to have a relationship between individuals and over time. Selecting the best estimation model among the three can be done through several tests, including the Chow test, Hausman test, Lagrange Multiplier test.

The next step is to perform a classical assumption test to assess whether the Ordinary Least Square (OLS) linear regression model has problems with classical assumptions. Classical assumption tests are essential to test a regression model’s feasibility to create the BLUE (Best Linear Unbiased Estimator) estimate. The classical assumption test is carried out when the selected estimation models are the Pooled Least Square (PLS) and Fixed Effect Model (FEM). The classical assumption test consists of a multicollinearity test, heteroscedasticity test, and autocorrelation test.

Finding and Discussion

Table 2: Statistical Description

Variable	n	Mean	Min	Max	Std. Deviation
Variable					
Rate Spread	400	0.0587117	-0.48	0.1325	0.0276391
Discretionary Accrual	400	0.0216806	-0.5287389	-0.4549152	0.0999421
Dummy Variable					
Variable	Frequency 1		Frequency 0		
	Frequency	Percentage	Frequency	Percentage	
Collateral	291	72.75	109	27.25	
Maturity Date	126	31.5	274	68.5	
Financial Distress	305	76.25	95	23.75	
Investment Rating	45	11.25	355	88.75	

Source: STATA 13 regression results

The statistical descriptions in Table 2 are intended to determine the mean, minimum, maximum, and standard deviation values for the rate spread and discretionary accrual variables during the 2010-2017 research period. Table 2 also explains the frequency and percentage of collateral dummy variables, maturity date, financial distress, and investment rating. Furthermore, this study consists of 400 observations and consists of fifty manufacturing companies as the research sample.

The estimation model used in this research is the panel data estimation model and panel logit. In the first model (dependent rate spread), the method used is the panel data regression method (PLS, FEM, or REM), during the second model (dependent collateral) and the third model (dependent maturity date) use panel logit regression. Furthermore, the dependent variable rate spread is replaced with a loan interest variable to test the first model's robustness. In contrast, the regression method is changed to panel data regression in the second and third models. The first model (dependent rate spread) required testing to determine the best estimation model between PLS, FEM, or REM. Also, testing the best models is needed to check the robustness of the second and third models. The test results for selecting the best model are listed in Table 3 as follows.

Table 3: Best Model Selection Results

Dependent	Chow test	Hausman Test	Langrange Multiplier Test	Selected Model
<i>Rate Spread</i>	0.0000	0.5220	0.0000	REM
	(FEM)	(REM)	(REM)	
<i>Collateral</i>	0.0000	0.4635	0.0000	REM
	(FEM)	(REM)	(REM)	
<i>Maturity Date</i>	0.000	0.5531	0.0000	REM
	(FEM)	(REM)	(REM)	

Source: STATA 13 regression results

Table 3 shows that the best model for estimating the first model is the random effect model. In contrast, in the second and third models, the estimation method used is logit panel regression. Apart from the logit panel, this study also uses a random effect regression model to check for robustness. The estimation results of the three models can be seen in Table 4 as follows.

Table 4: Estimation Result of Random Effect Model and Panel Logit

Independent Variable	Dependent Variable					
	<i>Rate Spread</i>		<i>Rate Spread</i>		<i>Maturity Date (dummy)</i>	
	REM	Loan Rate	Logit	REM	Logit	REM
Constanta	0.0586***	0.1078***	13.0564***	0.7431***	-4.9328***	0.3001***
	(0.0038)	(0.0031)	(1.76236)	(0.0630)	(1.2333)	(0.0660)
<i>Discretionary Accruals</i>	-0.00013	-0.0005	8.6113**	0.2148**	-2.9617	-0.1866
	(0.0106)	(0.0091)	(4.0080)	(0.0948)	(2.2510)	(0.1242)
<i>Financial distress (dummy)</i>	0.00046	-0.0015	-1.3977	-0.0186	0.6372	0.0329
	(0.0030)	(0.0026)	(1.5197)	(0.0281)	(0.6977)	(0.0366)
<i>Rating (dummy)</i>	-0.0023	-0.0033	-0.6779	-0.0547	-0.6799	-0.0553
	(0.0054)	(0.0046)	(1.3307)	(0.0537)	(1.2898)	(0.0691)

Independent Variable	Dependent Variable					
	Rate Spread		Loan Rate		Maturity Date (dummy)	
	REM	Logit	REM	Logit	REM	Logit
<i>R-squared</i> (Wald Chi- ²)	0.0007	0.0044	0.0408	0.0408	0.0015	0.0044
F	0,9780	0.8143	0.1024	0,0692	0.4578	0.8143
Observation (<i>n</i>)	400	400	400	400	400	400

Source: Results of panel data regression and panel logit STATA 13

Note: Numbers in brackets () indicate the standard error value; ***, **, and * show statistically significant variables at α 1%, 5%, and 10%, respectively. R-squared is used for REM model while Logit model uses Wald-Chi²

The simultaneous test regression results show that REM estimation for the dependent variable model rate spread and loan rate in Table 3 shows the probability value of F-statistics of 0.9780 and 0.8143. This probability value is not significant at the 5% significance level, so it can conclude that the discretionary accruals, financial distress, and rating variables simultaneously do not affect the rate spread and loan rate. Meanwhile, the logit estimate for the dependent variable collateral and maturity date model shows F-statistics's probability value of 0.1024 and 0.4578. This probability value is not significant at the 5% significance level, so it can conclude that the discretionary accruals, financial distress, and rating variables simultaneously do not affect collateral and maturity date.

A partial test compares each model's value on the dependent variable between the probability value of the regression results with the criteria for the degree of significance. The partial test results of the dependent variable rate spread show that the independent variables of discretionary accruals and ratings have a negative and insignificant impact on the rate spread. Financial distress has a positive and insignificant effect on rate spreads. Discretionary accruals, financial distress, and ratings have a negative and insignificant impact on the loan rate. All variables do not significantly affect interest rate spreads and loan rates, which means that the company's financial condition's criteria do not considerably affect banking decisions in determining the magnitude of the interest rate spread and loan interest rates.

The partial test for the dependent variable collateral shows that the independent variable discretionary accruals have a positive and significant effect at the 5% significance level, both on REM and logit estimates. That affects banking decisions in determining the number of assets that become collateral for credit by the company. The logit regression estimation results show that when the DAC increases by one unit, a company's opportunity to pledge its assets to obtain bank credit is 8.6 times greater, assuming other variables are constant. Financial distress and rating have a negative and insignificant effect on collateral. Logit estimation is preferred for the dependent variable collateral because the collateral value is a dummy or binary dependent.

The partial test of the dependent variable on maturity date shows that the discretionary accruals and rating variables have a negative and insignificant effect on the maturity date, both on REM and logit estimates. Financial distress has a positive and insignificant impact on REM and Logit estimates on the maturity date. All independent variables do not significantly affect banking decisions in determining the company's repayment period for credit. In the dependent variable, the maturity date is preferred to use logit estimation because the maturity date's value is a dummy or binary dependent.

The regression results in Table 4 show the R-squared value of the rate spread model of 0.00007, which means that the independent variable can explain the variance of the de-

pendent variable by 0.007%; the rest is defined outside the model. This conclusion can be interpreted that banks have various policies and ways of assessing the feasibility and setting interest on deposits and loans, limiting the study's independent variables. Then, Wald-chi² in the collateral dependent model is 0.0408, which means that the independent variable can explain the variance of the dependent variable by 4.08%; the rest is presented outside the model. In the dependent maturity date model, Wald-Chi² is 0.0015, which means that the independent variable can explain the variance of the dependent variable by 0.15%; the rest is defined outside the model.

The analysis results carried out using panel data estimation techniques and panel logit prove that the variables discretionary accruals positively impact rate spreads. Financial distress has a positive effect on rate spreads where these results are not following the hypothesis. In comparison, the rating variable has a negative impact on the rate spread, which is proven by the hypothesis. To the dependent variable of credit guarantees, the discretionary accruals variable positively affects credit guarantees. In contrast, financial distress and ratings negatively impact the existence of credit guarantees, so it can conclude that the three hypotheses are proven. Furthermore, the discretionary accruals variable has a negative effect on the credit period, and the financial distress variable has a positive impact on the credit period, where the two estimation results follow the research hypothesis.

The estimation results show that discretionary accruals have a negative effect on the interest rate spread and the loan rate but do not have a significant impact. It indicates a difference in the regression results with the research hypothesis and previous research by [Bharath et al. \(2008\)](#) and [Spiceland et al. \(2016\)](#). This study's earnings quality and rate spreads are consistent with the results of this study [Li & Richie \(2016\)](#), which concludes that companies that perform income smoothing or earnings management get a lower rate spread. Earnings management arises because of conflicts between agents and principals to manipulate earnings in the financial statements to suit management's interests, so that this triggers asymmetric information ([Ontoraël & Geraldina, 2017](#)). According to [Richardson \(2000\)](#), when there is high asymmetric information, stakeholders do not have sufficient resources to oversee management's actions in conducting earnings interventions, thus encouraging managers to present adequate information. The estimation results show that the bank reduces the interest rate spread for companies that carry out earnings management, although low.

The company is in default if it has high leverage (debt is more significant than its assets) and cannot fulfil its debt obligations on time. The estimation results of the financial distress variable have a positive effect on the rate spread. This regression is different from the research hypothesis and previous research by [Strahan \(1999\)](#), which states that companies with good financial conditions get a lower interest rate. [Huang & Kuo \(2014\)](#) concluded that banks lowered lending rates for companies in unhealthy economic conditions, while companies with good financial conditions received lower loan interest rates. Hence, the rate spread tended to increase. It occurred as one of the authorities' policies to overcome or improve economic conditions after the 2007-2008 financial crisis. This study focuses on the post-monetary crisis period, so there is a difference between the hypothesis and the study results. After the 2008 crisis, the Central Bank issued a policy of lowering the benchmark interest rate, which resulted in a reduction in loan interest rates. As in 2011, the decline in various lending rates was much more significant than the decrease in deposit rates ([Bank Indonesia, 2011](#)).

The regression results on the dependent rate spread model produce a rating coefficient of -0.0023. If the company gets an investment rating from the rating agency, the rate spread will decrease by 0.0023 units compared to companies that do not have a rating; other

variables are constant. Therefore, it can conclude that the results of the estimation of the effect of rating on the rate spread in this study follow the hypothesis and previous research, which states that companies that receive investment ratings from rating agencies tend to get a lower rate spread. (Drago & Gallo, 2017; Huang & Kuo, 2014). It is because the company's rating reduces the opportunity for asymmetric information regarding the company's credit-worthiness.

The logit regression results show that the discretionary accrual variable has a significant positive effect on credit guarantees. It is supported by the DAC coefficient, which is positive and significant in the random effect model's regression results. The discretionary accrual variable is used as a proxy to detect earnings management's existence carried out by the company. Discretionary accruals and earnings quality have the opposite relationship. If the DAC value is high, then there is an opportunistic practice of earnings management, and it can conclude that the quality of company earnings is low, and vice versa. The estimation results in this study state that the company's low quality impacts the guarantee of assets on credit that the company provides to the bank (Bharath et al., 2008). Banks offer a sizeable guarantee decision to take preventive action through the principle of prudence, significantly minimizing the occurrence of lousy credit (Badruzaman, 1994).

The regression random effect model is done as a robustness check, and the conclusion is the same as a logit regression. It can be assessed financial quality by analyzing financial statements to find out the company's economic development from the past, present, and future. The report's study can also determine the indication of company bankruptcy (financial distress), so it is essential to maintain its health to increase efficiency in running a business and increase profits (Zakkiyah, 2014). Banks will undoubtedly consider companies that have low financial difficulties in deciding to provide guarantees for credit. The estimation results show that the company's financial distress factor on bank credit guarantees does not significantly affect the logit regression. Based on this study, results indicate an excellent financial condition, the opportunity to get an unsecured loan. This conclusion is in line with several previous studies (Berger & Mester, 1999; Booth & Booth, 2006; Strahan, 1999).

The estimation results show that the investment rating factor has a negative effect on collateral for bank credit, but it is not significant for both methods, REM and logit regression. This study's results follow the hypothesis and previous research by Gonas et al. (2002) and Strahan (1999). Investment rating is one factor that indicates how well a company is in managing its economic problems. The investment rating also shows the information on the company's ability to pay off its loan obligations. The ability to pay loans will consider creditors in providing lending and creditworthiness analysis (Booth & Booth, 2006). Ratings are formed based on information provided by the rating agency or data from other reliable sources. According to Ashbaugh-Skaife et al. (2006), a rating agency is determined by analyzing the probability distribution of future cash flows. This study shows that the results of companies that have an investment rating are guaranteed lower bank credit than companies that do not have an investment rating. Thus, the assessment of future cash flows will sufficiently cover the cost of principal payments and debt repayments so that the company can gain the lenders' trust.

The estimation results show that the discretionary accrual factor negatively affects the repayment period of bank credit but does not have a significant impact on the REM method and logit regression. The relationship of discretionary accruals to the credit period follows the hypothesis and previous research, which states that low earnings quality (indicated by a high DAC value) impacts the shorter or shorter the credit maturity set by the bank (Bharath et al., 2008; De Meyere et al., 2018; García - Teruel et al., 2010; Rey et al., 2020). Hope et al. (2017)

concluded that a better quality of earnings could result in a more accurate forecast of future cash flows. The repayment period of the credit can be extended as needed and based on both parties' trust. However, due to the grace period, there is a risk of bad credit. The longer the repayment period, the greater the risk (Sutojo, 1995). This risk is borne by the lender or the bank, caused by the untimely repayment of the customer's credit. This study concluded that if the quality of the company's earnings is low, then the bank's period tends to be more short-term than long-term. It is because the bank reduces the risk of being borne. The risk of providing a loan or credit to a company of considerable value requires analysis and assessment of potential customers, especially financial reports related to determining whether or not to get credit (Diamond, 1992).

The estimation results of this study indicate that the company's financial distress factor has a positive effect on the repayment period of bank credit. Still, the regression does not have a significant impact on the REM method and logit regression. The relationship between financial distress and the dependent variable on the credit repayment period follows the hypothesis and previous research. Strahan (1999) argued that in smaller companies with unhealthy economic conditions or few funds to repay loans, the smaller companies would obtain credit in a shorter period than large companies with healthy financial needs. Kirschenmann & Norden (2012) state that companies with high negotiation skills and good financial conditions get credit with a longer term.

The estimation results show that the investment rating variable has a negative effect on the repayment period of bank credit but does not significantly impact both the REM method and the logit regression. This estimate's results are different from the hypothesis but have the same results (Strahan, 1999). It can view the difference in the results of this study in terms of the company's choice of funding. If we pay attention to the research object's data, companies with good investment ratings choose to borrow funds from banks in short or short terms. Large companies with a long business life with high investment ratings and low leverage prefer to issue bonds / Sukuk rather than borrow from banks (Denis & Mihov, 2003). Besides, when the company is in a financial condition that is not good, the bank will consider increasing the credit period or restructuring the debt contract. According to Chan & Jegadeesh (2004), some incidents caused the rating that Indonesia's rating assessed to be inaccurate and thus biased. The rating agency does not monitor the company's performance every day, and the rating agent only considers the occurrence of an event. It can indicate that banks provide credit repayment decisions in the short term, which aim to reduce the risk of inaccurate information by the institution rating.

Conclusion

Based on the results of the estimation and discussion that has been carried out. This study concludes that the company's earnings management has a negative and insignificant impact on the rate spread and maturity date but has positive and significant effects on collateral variables using logit estimation and robustness check through REM estimation. The company's financial distress has a positive and insignificant impact on the rate spread and maturity date but negatively affects the collateral variable. The company's investment rating has negative and insignificant effects on the three dependent variables: rate spread, collateral, and maturity date. The estimation results show that The low quality of company earnings or earnings management actions impact the guarantee of assets on bank credit that the company bears. Companies with a healthy financial condition (common financial distress) will gain trust from banks by obtaining a more extended repayment period for credit, which results in a reasonably high-interest rate spread. Likewise, companies with healthy financial conditions

have the opportunity to guarantee their assets are lower than companies with high risks. Companies that have an investment rating have the chance to reduce the occurrence of information asymmetry.

This research can be used as material for consideration and evaluation of the bank in providing provisions in the design of debt contracts. Debtor companies that carry out earnings management will receive lower interest rate spreads, but this can impact the occurrence of bad credit, which causes a decrease in bank profits over low-interest-rate spreads due to asymmetric information. In addition, companies with investment ratings prefer bonds over bank loans for long-term funding. Thus, banks can consider the decision to provide credit to companies that have investment ratings with better debt contract terms or facilities to choose to apply for funding to the bank. For companies, this research is expected to be an additional scientific reference that companies can use to determine each research variable's effect on facility decisions in debt contracts. The company wants to get a lighter debt contract to get a lower interest rate spread and does not guarantee assets. Then the company can consider applying for a rating by the institution.

Future research is expected to increase the research sample because the number of samples used in this study is quite limited due to data availability during the study period. In addition, further research is expected to increase the use of control variables outside the company's realm, such as the crisis dummy. As a renewal, further research is expected to differentiate bank credit based on ownership, private or state-owned enterprises, and differentiate from the company's side, state-owned or private ownership, and foreign or domestic ownership.

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