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Hedging Decisions and Its Affecting Factors on Mining Companies Listed in the Indonesian Sharia Stock Index (ISSI)

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Abstract

International trade encourages increased competition as well as volatility in market prices, which causes uncertainty or increased business risk in maintaining business. The risk of fluctuations in foreign exchange rates is the biggest risk that affects international trading activities, so to reduce the impact of this risk a company needs to carry out risk management by carrying out hedging activities. This study aims to determine and explain the effect of leverage (Debt to Equity Ratio), liquidity (Current Ratio), firm size, and profitability (Return On Asset) on hedging decisions in companies listed on the Indonesian Sharia Stock Index (ISSI) for the period 2016- 2018. The sample selection in this study used a purposive sampling method and obtained a sample of 12 mining companies. The method of analysis used in this research is logistic regression method. Based on the research results, it shows that the Debt to Equity Ratio, Current Ratio, and firm size have an effect on hedging decisions, while Return on Assets has no effect on hedging decisions.

Keywords
hedging decision; debt to equity ratio; current ratio; firm size; and return on asset

I. Introduction

Hedging is an action taken to protect a company from exposure to exchange rates. Exposure to exchange rate fluctuations is the extent to which a company can be affected by exchange rate fluctuations (Madura, 2000). The exposures that can be faced by international trading companies are in the form of foreign exchange exposure, transaction exposure, economic exposure and accounting exposure (Hanafi, 2009). Exposure is the rate at which the company's cash flow is affected by changes in exchange rates. The biggest risk faced by multinational companies comes from foreign exchange exposure (Paranita, 2011). If the company fails to manage the risks it faces, the consequences it will experience will be quite significant.

International trade encourages increased competition and fluctuations in market prices that increase business uncertainty or risk in maintaining business (Putro and Chabachib, 2012). Risk is something that absolutely exists, so risk cannot be eliminated. Companies often deliberately take certain risks because they see the potential benefits behind these risks (Hanafi, 2009). Risk is important to manage so that the company is able to survive and minimize the risks it faces. Risk can be identified by first measuring the exposure faced by the company.

Changes in foreign currency values resulting from fluctuations in foreign exchange rates can be seen in Figure 1.

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Figure 1*.The fluctuation of the rupiah exchange rate against the dollar from 2016 - 2019*

In Figure 1 the rupiah exchange rate against the dollar is very volatile. The rupiah exchange rate in 2016 began to weaken and continues to depreciate. If a company has entered into a transaction agreement during that period, such as importing raw materials or obtaining debt in foreign currency, then the company must exchange Rupiah and pay a higher nominal value, if the due date for payment is in that period.

This exchange rate fluctuation condition can affect the company's cash flow value. The value of cash flows received by the company in various currency units can be affected by the current exchange rates of those currencies converted into domestic currency, as well as the value of the company's cash out, which depends on the value of each money. The effect of exchange rate fluctuations on future cash values is called the transaction exposure. Transaction exposure can have a significant impact on company profits (Madura, 2006).

One of the efforts to minimize the adverse effects of exchange rate fluctuations is by hedging. According to Hanafi (2012), hedging or hedging basically transfers risk to other parties who can better manage risk through derivative instruments. According to Hanafi (2012), derivative instruments are instruments whose value is derived from the value of the underlying asset (underlying asset). Types of derivative instruments include: forward, futures, options and swaps.

The reason behind implementing hedging is to prevent bankruptcy so that managers don't lose their jobs. According to Brigham & Houston (2013), the implementation of Hegding itself costs money, so managers are considered to be using company funds to protect their own work. In addition, every investor has an investment portfolio that is well identified and can avoid risks. So that investors do not feel the need to bear hedging costs for certain risks. However, there are several legitimate reasons why companies should hedge, namely: better debt and cost decisions, smoother budget funding, reduced extreme cases of poor financial performance, better comparative advantage in hedging, and allows the company to be in a lower tax range.

This study focuses on the ratios that are identified as being able to explain the hedging decision variables, namely the ratio of Leverage, Liquidity, Company Size, and Profitability (Brigham & Hauston, 2010). The leverage ratio is proxied by the Debt to Equity Ratio (DER). Leverage is the use of debt to finance its investment. The higher the Debt to Equity Ratio (DER), the greater the total debt to total equity, which means that it also shows the

company's dependence on outsiders (creditors), so that the company will also bear a high risk. The higher the leverage, the greater the hedging actions taken to reduce the adverse effects of risk so that hedging activities are positively related to leverage (Ang, 1997).

The company's liquidity ratio shows the ability to pay short-term financial obligations on time (Sartono, 2014). Liquidity Ratio, which is proxied by Current Ratio, is a ratio to measure the ability of a company to pay short-term obligations or debts that are due immediately when they are collected as a whole (Kasmir, 2014). The higher the current ratio, the greater the company's ability to meet its short-term obligations. The more liquid the condition of a company is, the company can meet its short-term obligations.

The next ratio is the size of the company which is proxied by the natural logarithm of total assets. The bigger a company is, the company's activities not only involve domestic trade, but also use foreign business links (Putro, 2012). Such activities of foreign companies will face transaction exposure and exchange rate risk. One way that can be done to manage this risk is by doing hedging activities.

The profitability ratio is proxied by Return on Assets (ROA). According to Jiwandhana (2016), the level of profitability affects hedging decisions. This is because companies with a high level of profitability tend to expand their business more quickly, because the international market is dynamic, so each company can cause losses to companies that make large transactions. Companies will need hedging to reduce this risk.

Table 1. Hedging indicator of several companies listed on the Index Sharia Shares of Indonesia for the period 2016-2018

Company Code	Hedging Factors												Information
	DER			*Current Ratio*			*Firm Size*			ROA			
	201	201	201	201	2017	201	201	2017	201	201	201	201	
ADRO	0,72	0,66	0,64	2,47	2,55	1,96	15,6	15,73	15,7	0,05	0,07	0,06	1
ANTM	0,63	0,62	0,68	2,44	1,62	1,54	24,1	24,12	24,2	0,00	0,00	0,01	0
GEMS	0,42	1,02	1,21	3,77	1,68	1,35	19,7	20,19	20,3	0,09	0,20	0,14	1
PTBA	0,76	0,59	0,48	1,65	2,46	2,37	16,7	16,90	17,0	0,10	0,20	0,21	0

Source: IDX processed data

This study uses a dummy variable where companies that hedge will be given a value of 1 and companies that do not hedge will be given a value of 0. The more the debt to equity ratio increases, the greater the hedging action that must be taken to reduce the risk impact of exchange rate fluctuations. The higher the Current Ratio of a company, then we can know that the company is able to pay the company's short-term liabilities, so that the company avoids risks. Even though in reality the company can avoid risk if viewed from its liquidity ratio, the company is still hedging. The size of the company is increasing, which indicates that transactions at the company involve foreign transactions, so that the company will really need hedging activities to minimize the risk of fluctuations that will occur later. However, in reality the company has not yet hedged it. When viewed from the size ratio of the company, this company requires hedging because it involves foreign transactions that have the risk of volatile exchange rates over time. The higher the Return on Asset ratio, the faster the business expansion will be, because the international market is dynamic, so each company can cause losses for companies that carry out large transactions. Table 1 shows that there are companies that have experienced an increase in ROA, but have not yet hedged. When viewed in terms of the profitability ratio, the company really needs hedging to avoid the risk of volatile exchange rate fluctuations.

Previous research studies conducted by Hilda et al. (2018) stated that firm size, leverage, growth opportunity, profitability had an effect on hedging decisions. Research

conducted by Jang (2011), linking the ratio of profitability to hedging decisions states that profitability has a negative relationship with the company's hedging activity, because the higher the profitability of a company, the company faces a smaller risk of financial distress costs and results in the company not doing hedging activities. However, it is different from research conducted by Shaari et al (2013) which states that profitability has no effect on hedging activity.

Based on the data phenomenon and the results of previous studies, there is a gap between one researcher and another. So the authors are interested in examining whether leverage, liquidity, financial distress, profitability and firm size affect hedging activity with the title "Hedging Decisions and Factors Affecting Mining Companies Listed on the Indonesian Sharia Stock Index (ISSI)"

II. Review of Literatures

2.1. Risk Management

Risk management is identifying events that can have adverse financial consequences and then taking action to prevent or minimize losses (Brigham and Houston, 2006). Risk is related to uncertainty. This uncertainty is due to insufficient or insufficient information about what will happen. Something that is uncertain (uncertain) can result in either beneficial or detrimental.

The objective of implementing risk management is to reduce the varying risks associated with the selected areas to a level that is acceptable to society. This can take the form of various types of threats caused by the environment, technology, humans, organizations and politics. On the other hand, the implementation of risk management involves all means available to humans, especially for risk management entities (human, staff and organizations). According to Ahmad Rodoni and Herni Ali (2010), there are several meanings about risk, namely (a) as an uncertain condition (uncertainty) in the future, (b) a change in expected return variability or a value that is not in line with expectations. . According to Arthur J. Keown (2009), risk is the prospect of an unfavorable outcome (operational as standard deviation). Risk arises because there are conditions of uncertainty, for example an investment can bring profit (price increases), it can also cause loss (price falls). It is this uncertainty that causes risk to arise. Risk can also be interpreted as an uncertainty that will occur in the future or in the future which has 2 possibilities, namely loss or gain.

2.2 Hedging in Islamic View

Heading or hedging is a strategy used to protect the value of assets owned by the company from losses incurred due to existing risks and aims to reduce risk by limiting the possibility of losses arising from volatility in commodity prices, currency values or securities. Valuable (Suryani, 2017). In the MUI DSN fatwa Number 96 / DSN-MUI / IV / 2015, Sharia Hedging Transactions (al-tahawwut al-Islamiy / Islamic Hedging) are methods or techniques of hedging for exchange rates based on sharia principles. Among the forms of hedging transactions are Forward Agreements (al-muwa'adat li 'aqd al-sarf al-fawri fi al-mustaqbal), namely: mutual promises to spot foreign currency transactions in a certain amount in the future with a value exchange rate or the exchange rate calculation agreed upon at that time.

Risk management is something that is required by sharia and is in line with the objectives of sharia (maqasid al-shariah), which is to protect property (hifz al-mal) from everything that causes it to be lost or destroyed (Zainil Ghulam, 2016). Allah Almighty instructs people to always try to get good luck and avoid actions that can cause harm, as

explained in the verse of the Al-Qur'an QS. Al 'Asr: 1-3, “By the time. In fact, humans are truly at a loss, except for those who believe and do righteous deeds and advice to obey the truth and advice to fulfill patience. " In this verse, Allah SWT. Commanded that people should always advise one another in an effort to practice truth and patience. In this context, hedging transactions can be interpreted as a joint effort of related parties in mitigating potential risks that are feared to arise and may harm one of the transacting parties. The agreement in mitigating this risk can be interpreted as an effort to advise each other in carrying out the truth.

Buying and selling foreign currency has been known in classical fiqh studies with the sharf contract. The scholars of fiqh agreed that the sale and purchase had to fulfill two conditions, namely a different currency (for example, the rupiah and the dollar) and was carried out in cash. Sharf, namely the exchange or buying and selling of different currencies with immediate or spot delivery based on a price agreement according to the market price at the time of exchange. The legal basis for the legality of buying and selling currencies at market prices at the time of exchange. The legal basis for the validity of currency trading is also found in the hadith of the Prophet Muhammad SAW in HR. Muslim, Abu Daud, Tirmizi, Nasa'i, and Ibn Majah, with the Muslim text of 'Ubadah bin Shamit. (Baqi, 2013), as follows: "(Sell) gold with gold, silver for silver, wheat with wheat, sya'ir with sya'ir, dates with dates, and salt with salt (with the condition that it must be) the same and the same and in cash. If it's a different kind, sell what you want if it's done in cash."

As for the haram of usury for all of these, it is the opinion of the entire scholars. Whereas if the goods being traded are of different types, then it is permissible for the amount and content to be different from the conditions for the goods being delivered at the time of the contract, for example buying and selling in Rupiah currency in dollars at the exchange rate prevailing at the time the transaction was made and delivered at the time of the contract. Meanwhile, buying and selling between ribawi goods and non-ribawi goods is not required to be submitted at the time of the contract.

On the money market, foreign exchange speculation activities such as swap, forward and option transactions always occur. All these transactions are against sharia, because they contain usury. In essence, it is a prohibition against virtual or derivative transactions. Allah says, "Allah makes trading (real sector) legal and prohibits usury (virtual transactions).” In a virtual transaction, there is no real sector (goods and services) that are traded. They only trade valuable paper and currency for speculative purposes. The addition obtained from the sale and purchase includes usury, because the gain is obtained by bighari wadhin, that is, without any real sector being exchanged, except for currency or paper itself. also there is no ma "kud" alaih, in the form of goods / services that become harmonious in business transactions. This business transaction is what is prohibited by the Koran and hadith with the terms usury and gharar.

Meanwhile, the Islamic economy is an economy that seeks to balance the financial sector and the real sector (or it can be called a 1 on 1 economy). This means that the economy is closely linked between the monetary sector and the real sector. Strictly speaking, one monetary unit one real asset. Within that framework Islamic Economics teaches real business activities through buying and selling for the results and ijarah.

All scholars have almost the same definition of hedging, which is a method of reducing the risk of price movements by taking the opposite position in the derivatives market to offset losses in liquidity markets (futures market) with reasonable gains in the futures market (liquidity market). Hedging activities are closely related to speculation activities in the form of margin trading and short selling on the capital market is usury, because it is not based on real underlying transactions. Derivative transaction activities on the futures exchange and

commodity exchanges are all usury. Forex speculation activities with the motive for speculation, not for transactions are ribawi activities, while to guard against the penalty is permissible.

2.3. Hedging Indicator

a. Leverage

Leverage ratio is a measure of how much a company is financed with debt (Munawir, 2007). The leverage of this research is measured by the Debt to Equity Ratio (DER). This ratio is used to compare sources of capital originating from debt (long-term debt and short-term debt) with own capital (Kasmir, 2014).

DER is calculated using the following formula:

$$DER = \frac{Total\ Debt}{Total\ Equity}$$

b. Liquidity

Company liquidity shows the company's ability to pay short-term liabilities on time as indicated by the size of current assets, namely assets that are easy to convert into cash which includes cash, securities, accounts receivable, inventory. The liquidity that a company can use to measure the company's ability to meet its obligations is the Current Ratio, which is a ratio to measure the company's ability to pay short-term obligations or debts that are due immediately when they are collected as a whole (Kasmir, 2014). In other words, how many current assets are available to cover short-term liabilities that are due soon". The higher the liquidity risk figure, the more liquid the bank.

According Sutrisno (2012) liquidity is the company's ability to pay its obligations which must be fulfilled immediately. The obligation that must be fulfilled immediately is short-term debt, therefore this ratio can be used to measure the level of security of short-term creditors, and to measure whether the company's operations will not be disrupted if these short-term obligations are immediately billed.

Current Ratio (CR) is calculated using the following formula:

$$Current\ Ratio = \frac{Current\ Asset}{Current\ Liability}$$

c. Firm Size

Firm size is the size of a company that describes the size of a company's assets shown in total assets, total sales, and average sales (Jogiyanto: 2013, Bambang Rianto: 2012). The purpose of the firm size is to obtain a source of funding, obtain a probability in industrial competition, and increase the company's sales growth so that the company's total assets also increase (Sujianto: 2001).

Firm Size is calculated using the following formula:

Firm Size = Ln total assets

d. Profitability

Profitability is the ratio to assess the company's ability to seek profit. This profitability provides an overview of how effectively the company operates so that it provides benefits for

the company. The profitability of a company can be measured by connecting the profit obtained from the company's main activities with total assets, sales, and own capital to generate company profits (Kasmir, 2014) which is important for investors in seeing how much profit is obtained in the form of dividends. Munawir: 2007).

According to Hery in Angelia (2013) Profitability is the ratio used to measure a company's ability to generate profits with the company's resources. Companies that have stability in obtaining profits can give signals to the public about the ability to pay dividends.

The profitability that a company can use to measure the company's ability to generate profits is return on assets (ROA), where ROA is the ratio that shows the results (return) on the total assets used in the company, return on assets is often referred to as return on investment, because this ROA see to what extent the investment that has been invested is able to provide returns as expected and the investment is actually the same as the company's assets that are invested or placed (Kasmir, 2014).

ROA is calculated using the following formula:

$$\textit{Return On Asset} = \frac{\textit{Jumla Asset Laba Bersi (Net Income)}}{\textit{jumla aset}}$$

III. Research Methods

3.1 Population and Sample

a. Populasi

The population for this study was mining companies listed on the Indonesian Sharia Stock Index (ISSI) for the period 2016-2018. The population in this study amounted to 27 companies.

b. Sample

The sample selection in this study using purposive sampling method, namely taking samples from a population with certain criteria. The criteria used are as follows:

1. Mining companies listed on the Indonesian Sharia Stock Index (ISSI) from 2016 to 2018.
2. Mining companies submit continuous financial reports that have been published in the 2016-2018 period.
3. Mining companies that have transaction exposure (having debt and receivables in foreign currencies) during the 2016-2018 period.

   Based on these criteria, there are 12 companies that will be the samples in this study.

3.2 Technique of Collection Data

The data collection method is carried out by means of documentary studies of the annual financial reports and their notes from the Indonesian Sharia Stock Index for 2016-2018. And the data that meet the criteria are 12 samples. For the purposes of analysis, 3 years of pooled data were used from the sample companies, thus obtaining 12 x 3 = 36. This study uses the Dictomic Response Model (MRD). This model is measured using dummy variables. Dummy variable. The value of 1 is used for companies that are hedging with derivative instruments, while the value of 0 is for companies that are not hedging with derivative instruments. The sample used for companies that hedged using self-explanatory instruments and did not hedge were mining companies registered with the ISSI for 3 consecutive years in the 2016-2018 periods.

IV. Result and Discussion

4.1 Descriptive Statistical Analysis

The results of the research data analysis will be described with descriptive statistics. The results of the descriptive statistical analysis will be described as follows:

Table 2. Descriptive Statistics

	N	Minimum	Maximum	Mean		Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic
HEDGING (Y)	36	0	1	.50	.085	.507
DER (X1)	36	.0000	9.0000	.833333	.3224411	1.9346465
CR(X2)	36	17.0000	545.0000	201.416667	20.8535093	125.1210557
FS(X3)	36	11.0000	1848.0000	66.000000	50.9149774	305.4898642
ROA(X4)	36	-10.0000	20.0000	5.250000	1.2449103	7.4694616
Valid N (listwise)	36					

Source: Appendix

Based on table 1 shows the descriptive statistics of each research variable, it can be explained as follows:

1. Debt to Equity Ratio
   The results of the analysis using descriptive statistics on DER show a minimum value of 0.0000 with a maximum value of 9.0000. These results indicate that the DER in the study sample ranged from 0.0000 to 9.0000, with an average value of 0.833333. The average value is smaller than the standard deviation of 1.9346465 which means that the DER value is not good. The average value of the company is closer to the minimum value, which means that the company does not use much debt.
2. Current Ratio
   The results of descriptive statistical analysis of the current ratio show a minimum value of 17.0000 and a maximum value of 545.0000. These results indicate that the current ratio that is the research sample ranges from 17.0000 to 545.0000, with an average value of 201.416667. The average value is greater than the standard deviation, namely 125.1210557, which means that the value of the current ratio is good.
3. Firm Size
   The results of descriptive statistical analysis of the firm size show a minimum value of 11.0000 and a maximum value of 1.848.0000. These results indicate that the firm size which is the sample of the study ranges from 11.0000 to 1.848.0000, with an average value of 66,000000. The average value is smaller than the standard deviation, namely 305.4898642, which means that the firm size value is not good.
4. Return on Asset
   The results of descriptive statistical analysis of return on assets show a minimum value of -10.0000 and a maximum value of 20.0000. These results indicate that the ROA of the study samples ranged from -10.0000 to 20,0000, with an average value of 5.250.000. The average value is smaller than the standard deviation, namely 7.469.461, which means that the ROA is not good.

4.2 Logistic Regression

The first step is to assess the overall model fit (assessing the entire model) against the data. Several tests were performed to assess this. The first way is to use the likelihood function, which is to compare the -2 log likelihood numbers at the start (block 0) and the -2 log likelihood numbers in block 1. If there is a decrease in numbers, it shows a good regression model.

Table 3. Block 0: Beginning Block
Iteration History[a,b,c]

Iteration		-2 Log likelihood	Coefficients
			Constant
Step 0	1	49.907	.000

Table 4. Block 1: Method = Enter
Iteration History a,b,c,d

Iteration		-2 Log likelihood	Coefficients				
			Constant	DERX1	CRX2	FSX3	ROAX4
Step 1	1	35.135	-2.476	.608	.007	.002	.094
	2	33.345	-3.391	.978	.010	.002	.123
	3	32.909	-3.860	1.268	.011	.003	.137
	4	32.863	-3.994	1.357	.011	.004	.141
	5	32.851	-4.012	1.362	.011	.004	.141
	6	32.838	-4.037	1.363	.011	.006	.141
	7	32.728	-4.289	1.368	.011	.022	.141
	8	32.016	-7.626	1.444	.012	.233	.140
	9	32.011	-7.875	1.467	.012	.245	.144
	10	32.011	-7.880	1.468	.012	.246	.144
	11	32.011	-7.880	1.468	.012	.246	.144

Tables 3 and 4 show the comparison between the -2 log likelihood value in the initial block and the -2 log likelihood value in the final block. It can be seen that the value of the calculation in block 0 is 49.907 and the value in block 1 is 32.011, which indicates that the regression model is good.

The second step is via Nagelkerke's R Square. Nagelkerke's R Square is a modification of the Cox and Snell coefficient to ensure that the value varies from zero (0) to one (1). The value of negelkerke's R Square can be interpreted as the value of R2 in multiple regression. The goal is to find out how much the combination of the independent variables is able to explain the dependent variable.

Table 5. Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	32.011[a]	.392	.522

Based on table 5, it can be seen that the negelkerke's R Square value is 0.522. This shows that the model has a predictive power of 52.2% which is explained by four variables, namely: DER, CR, FS, ROA. Meanwhile, 47.8% was explained by other variables outside the model.

The third step is the Hosmer and Lemeshow's Goodness of Fit Test, which is a null hypothesis that the empirical data fits or fits the model (there is no difference between the model and the data so that the model can be said to be fit).

Table 6. Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	7.329	7	.395

Based on the table 6 shows that the value of the Hosmer and Lemeshow Goodness of Fit statistic is 7.329 with a significance probability of 0.395 whose value is above 0.05 so that H0 is accepted. This means that the regression model is suitable for further analysis.

Table 7. Classification Table[a]

Observed			Predicted		
			HEDGING (Y)		
			Did not Hedging	Did Hedging	Percentage Correct
Step 1	HEDGING (Y)	Did not Hedging	16	2	88.9
		Did Hedging	3	15	83.3
Overall Percentage					86.1

The companies that are the samples of this study are 12 companies. The years used are 3 years (2016-2018). So that it can be obtained 36 samples of observations consisting of 18 observation units from companies included in the category of hedging and 18 companies that are included in the category of not hedging. Based on the classification table, it shows that the prediction of observations does not do hedging activity as much as 18 while the observation results are 16 with classification accuracy of 88.9%. Then the prediction of observations that did hedging was 18 while the observation results were 15 with a classification accuracy of 83.3%. So the level of prediction accuracy in this model reaches 86.1%, so there are 13.9% unpredictable variables.

4.3. Interpretation of Logistic Regression Analysis Results

Table 8. Logistic Regression Analysis

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	DERX1	1.468	.692	4.503	1	.034	4.340
	CRX2	.012	.006	4.359	1	.037	1.012
	FSX3	.246	.273	.808	1	.369	1.278
	ROAX4	.144	.079	3.314	1	.069	1.155
	Constant	-7.880	4.696	2.816	1	.093	.000

The equation obtained from the test results of the Logistic Regression Model can use the formula: Zi = -7,880 + 1,468 DER + 0.012 CR + 0.246 FS + 0.144 ROA
From the logistic regression analysis equation above, the explanation is as follows:

1. A constant value of -7,880. This shows that the independent variable is considered constant, so the hedging activity will decrease by -7,880.
2. The regression coefficient value is 1.468, which means that the DER variable increases by one unit, and then the hedging activity increases by 1.468 on the assumption that the other variables are constant.
3. The regression coefficient value is 0.012, which means that the current ratio variable increases, the hedging activity increases by 0.012.
4. The regression coefficient value is 0.246, which means that the firm size variable increases, so hedging activity will increase by 0.246.
5. The regression coefficient value is 0.144, which means that the ROA variable increases, the hedging activity will increase by 0.144.

4.3 Research Hypothesis Test

a. Hypothesis 1

Table 8 shows that the DER variable has a Wald value of 4.503 with a significance value of 0.034. The resulting significance value DER <0.05. The regression coefficient on the DER variable is 1.468 and is positive. It can be concluded that DER affects the hedging decisions of mining companies in ISSI. Based on this explanation, H1 is proposed

b. Hypothesis 2

Table 8 shows that the curren ratio variable has a wald value of 4.359 with a significance value of 0.037. The resulting significance value is the current ratio <0.05. The regression coefficient on the current ratio variable is 0.012. It can be concluded that the current ratio has an effect on hedging decisions in mining companies listed on the ISSI. Based on this explanation, the proposed H2 is accepted.

c. Hypothesis 3

Table 8 shows that the firm size variable has a wald value of 0.808 with a significance value of 0.369. The significance value generated by the firm size <0.05. The regression coefficient on the firm size variable is 0.246. It can be concluded that firm size has an effect on hedging decisions in mining companies listed on the ISSI. Based on this explanation, the proposed H3 is accepted.

d. Hypothesis 4

Table 8 shows that the Return On Asset variable has a wald value of 3,314 with a significance value of 0.069. The resulting significance value ROA> 0.05. The regression coefficient on the ROA variable is 0.144. It can be concluded that ROA has no effect on hedging decisions in mining companies listed in ISSI. Based on this explanation, the proposed H4 was rejected.

4.4 Evaluation of Data

a. Effect of Leverage on Hedging Decisions

The first hypothesis states that "There is an effect of the Debt to Earning Ratio (DER) on hedging decision making". Seen in table 4.7, the regression coefficient value is 1.468 and the Wald statistical value is 4.503 with a significance value of 0.034. The significance value

is smaller than 5%, and then H1 is accepted. This condition shows that DER has an influence on hedging decision makers.

The results of this study are in line with research conducted by Muhammad Fuad Arrozi Piliang (2018) in his research showing that DER affects hedging decisions. A high leverage ratio indicates that the company uses high debt which means it can increase profitability but on the other hand also increases risk. Companies that have transaction exposure will have debt denominated in foreign currencies so that they have the risk of currency exchange rate fluctuations. When the local currency depreciates, the value of the debt denominated in foreign currency will increase. An increase in the value of debt can harm the company in fulfilling its debt obligations. With the risk of financial difficulties due to greater difficulties in fulfilling obligations, companies need to take hedging measures to reduce the adverse impact of these risks on the company.

b. Effect of Liquidity on Hedging Decisions

The second hypothesis states that "Current Ratio (CR) has an effect on hedging decision making." It can be seen in table 8 that the regression coefficient is 0.012 and the Wald statistic value is 4.359 with a significance value of 0.037. The significance value is smaller than 5%, and then H_2 is accepted. These conditions indicate that the Current Ratio has an influence on hedging decision makers.

The results of this study are in line with research conducted by Ida Ayu Putu, Luh Putu Wiagustini, and Luh Gede Sri Artini (2016) in their research which shows that the current ratio affects hedging decisions. The greater the threat of financial distress will have an impact on the increase in hedging activities that can be carried out by the company to reduce the risks that may occur. If the liquidity ratio of the company is high, it means that the company is smooth in fulfilling its short-term obligations. Companies that have large funds will make spot transactions at the time of payment of their debts, so the possibility of hedging is low.

c. The Effect of Firm Size on Hedging Decisions

The third hypothesis states that "There is an influence of Firm Size on hedging decision making." As seen in table 8, the regression coefficient value is 0.246 and the Wald statistic value is 0.808 with a significance value of 0.369. The significance value is smaller than 5%, and then H3 is accepted. This condition shows that the firm size has an influence on hedging decision makers.

The results of this study are in line with research conducted by Fahmi Nur Rizal (2017) in his research which shows that firm size affects hedging decisions. Large companies have broad operational activities and can be more risky. The company will use different currencies in its activities. To reduce the risk of currency exchange rates that may arise, companies can do this by using hedging. Large companies are also more likely to use derivatives to hedge their risk exposure than smaller companies because they have the necessary resources and knowledge to do so.

d. The Effect of Profitability on Hedging Decisions

The second hypothesis states that "There is an effect of Return On Asset ROA on hedging decision making." It can be seen in table 8 that the regression coefficient value is 0.144 and the wald statistical value is 3.314 with a significance value of 0.069. The significance value is smaller than 5%, so H4 is rejected. This condition shows that ROA has no effect on hedging decision making.

The results of this study are in line with research conducted by Hilda Utami, Sriyanto, Intan Purbasari (2018) which states that ROA has no influence on hedging decisions. This is

because a company with a higher level of profitability can increase the prosperity of the owner of the company and indicate the company is not experiencing financial difficulties. And the company tends not to need hedging activities.

V. Conclusion

1. The leverage ratio, which is proxied by the debt to equity ratio, affects the hedging decision. This is because the increased leverage will indicate the probability of hedging by the company with increased transaction exposure.
2. The liquidity ratio as proxied by the current ratio has an effect on hedging decisions. The more liquid the condition of a company is, the more it can fulfill its short-term obligations. So that the company can avoid the risk of default and financial difficulties. This makes the need for the use of hedging as a means of dealing with decreased risk.
3. Company size as proxied by Natural Logarithm of total assets has an effect on hedging decisions. When a larger company conducts foreign transactions involving differences in currency exchange rates, the greater the risk it faces, so it is necessary to carry out hedging activities to protect the company from the risk of exchange rate fluctuations.
4. The profitability ratio, which is proxied by Return on Assets, has no effect on hedging decisions. A company with higher profitability can increase the prosperity of the company owner and indicates that the company does not experience financial difficulties, and tends not to need hedging activities.

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