Evaluation Of Policies Hedging Transactions with Derivative Instruments

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Abstract

The study aims to analyze and obtain empirical evidence to test the effect of internal and external factors on the decision to use derivative instruments in hedging transactions and the disclosure of hedging transactions in the company's annual report. This research is important to obtain data on the determining factors that can encourage companies to carry out hedging transactions and their disclosure in the financial statements. This research was conducted using Logistic Regression analysis. Data were collected from IDX LQ45 from February to June 2023 with purposive sampling so that 34 companies or 170 samples were obtained from 2018-2022. Profitability, leverage, and exchange rate have a significant positive effect on hedging decisions. Thus, the higher the profitability and leverage obtained by the company and the exchange rate also increases, the higher the possibility that the company will make hedging decisions. Meanwhile, liquidity, firm value, and growth opportunity have a significant negative effect on hedging decisions, which indicates that the possibility of hedging transactions will increase if the three variables decrease.

Keywords: Hedging, Profitability, Liquidity, Leverage, Firm Value, Exchange Rate

Abstrak

Penelitian ini bertujuan untuk menganalisis dan memperoleh bukti empiris guna menguji pengaruh faktor internal dan eksternal terhadap keputusan penggunaan instrumen derivatif dalam transaksi lindung nilai serta pengungkapan transaksi lindung nilai dalam laporan tahunan perusahaan. Penelitian ini penting untuk memperoleh data mengenai faktor-faktor penentu yang dapat mendorong perusahaan melakukan transaksi lindung nilai dan pengungkapannya dalam laporan keuangan. Penelitian ini dilakukan dengan menggunakan analisis Regresi Logistik. Data dikumpulkan dari IDX LQ45 pada bulan Februari sampai dengan Juni 2023 dengan metode purposive sampling sehingga diperoleh 34 perusahaan atau 170 sampel pada tahun 2018-2022. Profitabilitas, leverage, dan nilai tukar memiliki efek positif signifikan terhadap keputusan lindung nilai. Dengan demikian, semakin tinggi profitabilitas dan leverage yang diperoleh perusahaan serta nilai tukar juga meningkat, maka semakin tinggi pula kemungkinan perusahaan akan mengambil keputusan lindung nilai.

Kata kunci: Lindung Nilai, Profitabilitas, Likuiditas, *Leverage*, Nilai Perusahaan

INTRODUCTION

Indonesia's economic development is currently increasingly integrated with the world economy (Diana, 2020). Integration occurs through international trade or cross-border interstate trade carried out by companies in Indonesia through export and import transactions. Since the enactment of the ASEAN Economic Community (AEC), national borders no longer exist, thus encouraging the rate of economic growth of a region (Suartha, 2016). Foreign trade transactions continue to increase along with the increasing need for a product from one country to another.

International trade transactions are carried out using agreed foreign currencies (currencies). The use of foreign exchange causes the exchange of foreign exchange rates to fluctuate from time to time. This can cause the risk of changes in currency exchange rates arising from the uncertainty of the exchange rate itself (Herawati, 2021). In addition, international trade activities also face various challenges and risks due to government political decisions, such as agreements between countries and distribution channels (Ansari, 2017). Plus, very high complexity and uncertainty often haunt the business environment in various sectors. (Aditya &; Naomi, 2017). The uncertainty itself causes business entities to be exposed to various financial risks. (Mahendra 2019). To deal with uncertainty in the future, companies should develop a risk management strategy.

One alternative to the risk management strategy is to use derivative instruments for hedging purposes due to fluctuations in the value of protected items (Niansyah, 2018). *Hedging* or hedging is a way to avoid the risk of loss caused by price fluctuations (Setiawan, 2019). *Hedging* usually transfers risk to other parties who can better manage risk through financial instrument transactions (Zeinora, Z, 2017). Hedging in the financial world can be interpreted as an investment to reduce, minimize, or eliminate risk in another investment. Furthermore, Hedging or hedging is a strategy chosen to protect the value of company assets from possible losses due to existing risks.

Hedging is a strategy created to reduce the emergence of unexpected business risks; besides that, it is still possible to benefit from investments made to minimize risks in another investment (Widyagoca & Lestari, 2016). Hedging is carried out to protect company assets against future price changes through the use of derivative instruments (Dewi & Purnawati, 2016). Hedging is something done by companies to protect companies from exposure to foreign exchange. Hedging means protecting all investments that are being carried out or reducing or eliminating the risk of investments that are being carried out (Ramdani & Oktaviani, 2021). Hedging serves as a risk control instrument in the form of losses due to exchange rate fluctuations, the benefits of which can be felt by both the government and business actors, including SOEs.

Hedging activities can be carried out using derivative instruments, which are contract agreements between two parties to sell and buy a number of goods, both commodities, and securities, on a certain date in the future at an agreed price at the current agreed price. Financial derivatives are derivative instruments where the underlying variables are financial instruments, which can be stocks, bonds, stock indices, bond indices, currencies, interest rates, and other financial instruments. Derivative instruments are often used by market participants (financiers and efeek companies) as a means to hedge their portfolios (www.idx.co.id). Bank Indonesia requires companies with

external debt to *hedge* at least 25% of their total foreign currency liabilities with a liquidity ratio of 70%. (No 16/21/PBI/2014).

Table 1 List of Companies Not Hedging Strategy

Information	**2018**	**2019**	**2020**	**2021**	**2022**
Companies that do not hedge	16	19	17	17	14
Companies that do not do Hedging %	36%	42%	38%	38%	31 %

Source: data processed (2022)

Table 1 shows that there are still many companies that have not carried out *hedging* activities and do not comply with the regulation issued by Bank Indonesia No.16/21/PBI/2014 Bank Indonesia which requires companies with external debt (external debt) to *hedge* at least 25% of their total foreign exchange liabilities with a liquidity ratio of 70%. In 2018 there were 36% of companies were not hedging. Experienced an increase in the number of companies that do not hedge to 42%. Furthermore, in 2020 and 2021 there were 38%. There was a decrease in 2022 to 31% of companies that did not do hedging. Although from year to year, it has decreased, there are still many companies that are at risk because they do not hedge to protect the company. Several factors can influence the company in determining *hedging activities*, including internal and external factors. Internal factors are factors originating from within a company, for example, *leverage*, company size, liquidity, and so on. At the same time, external factors are factors from outside the company, such as the BI Rate, foreign exchange rates, and interest rate fluctuations (Muslim & Puryandani, 2017).

Profitability is a ratio to measure the level of effectiveness of company management indicated by the amount of profit generated from sales and investment. (Fauzan Haqiqi et al., 2020). The profitability ratio is a ratio to measure the level of effectiveness of the management (management) of the company as indicated by the amount of profit generated from sales. The use of profitability ratios can be done by comparing various components in the financial statements, especially the balance sheet financial statements and income statements. (Priatna et al., 2021). This ratio measures the effectiveness of the company with the overall funds invested in assets that will be used for the company's operations to generate profits (Dina et al., 2021). *Return on assets* as a proxy of profitability has a positive and statistically significant effect on *hedging* decisions with *derivative* instruments (Jiwandhana & Triaryati, 2016). The higher the level of profitability of the company, the greater the company will be to encourage the company to *hedge* because of the company's ability to *hedge* and overcome market risks that may occur in the international market. This shows that a higher profitability ratio in the company will tend to increase the likelihood of using *hedging* by the company. (Sudiarta &; Setyawan, 2022) *(*A.saraswati &; N.Suryatini, 2019), (Megawati, et al, 2016). Companies with small, medium, and large sizes and have a level of profitability it is expected to use a *hedging policy* when conducting international scale transactions so that companies can avoid foreign exchange risk (Putri & Santi, 2017)

LITERATURE REVIEW AND HYPOTHESIS

H1: Profitability affects *hedging* decisions with *derivative instruments*

Liquidity is the ability of a company to meet obligations or pay its short-term debts. Liquidity ratios are commonly used to measure how liquid a company is. Investors, in making decisions in investing for a company, need to know the liquidity capabilities of prospective companies to be invested (Prabowo &; Sutanto, 2019). The liquidity ratio is a ratio used to measure a company's ability to settle its maturing short-term debt (Muh. Arif, 2020). The company's high liquidity indicates that the company can meet its short-term obligations and the company has reserve funds to face risks or avoid the risk of financial *distress*. The more liquid the company, the company will avoid risk is; therefore, the possibility of the company applying *hedging* is very low. Liquidity risk arises when the company is unable to fulfill its obligations on time, which means the company will be faced with *financial distress costs*. The higher the liquidity ratio, the lower the *hedging* decisions applied by the company. The more liquid the company, the smaller the possibility of the company *hedging*. Research conducted by (Ariani et al., 2017) (and Reni et al. 2016) shows that the company's high liquidity indicates that the company is able to meet its short-term obligations and the company has reserved funds to deal with risks so as to avoid the risk of financial *distress*.

H2: Liquidity negatively affects *hedging* decisions with *derivative instrument*

Leverage describes the ability of a company to fulfill its obligations in the short and long term and to find out how much a company is funded by debt (Kinasih & Mahardika, 2019). A company with a higher leverage ratio indicates that the company is facing the risk of financial distress. In other words, companies will tend to default on loans when borrowing more than creditors (Jiwandhana & Triaryati, 2016). According to (Hery, 2016**, p.** 166)**,** leverage is measured using debt to asset ratio, which is a comparison between total liabilities and total assets. Leverage is used to measure a company's ability to meet long-term obligations. The higher the leverage charged by a company, the higher the hedging actions taken to reduce the impact of bad risks because the debt used is greater than the quantity of capital of a company**,** which will result in the risk of bankruptcy. The risk is getting bigger**; the** company needs to overcome it by hedging. Based on signal theory, companies that have debt have obligations for the costs they have, namely interest and principal expense of debt loans. If the company cannot complete its obligations, it will result in losses and may go bankrupt. This means that the higher the company's leverage, the more likely the company is to make hedging decisions. Research conducted (Aqilah & Siti, 2019) (Pangestuti et al.**,** 2020) (A. **et al.**, 2019) (**Kristian** & Badjra, 2017) shows that the higher the level of leverage, the higher the company will use hedging to protect the company from foreign exchange risk.

H3: *Leverage* affects *hedging decisions* with *derivative instruments*

Company value is the market value of a company's equity plus the market value of debt. Thus, the addition of the amount of company equity with company debt can reflect the value of the company (Situmeang & Wiagustini, 2018). The value of this company uses a benchmark of the market value of a stock. The higher the stock price, the higher the value of the company. The market price of shares represents the

wealth of shareholders and companies. Company value indicates market confidence in the company, where increased confidence is indicated by the stock price above book value due to market appreciation. (Pramana &; Yasa, 2020). Company value is an investor's perception of the company using the stock price. The high value of the company indicates that investment in assets produces returns that provide a higher value than investment expenditures. This will create investment opportunities so that companies tend to expand. One of the financing for expansion can rely on internal sources or external sources of the company. (Kurniawan &; Asandimitra, 2018), Companies prefer internal company funding to finance company expansion, so the company's chances of making *hedging* decisions are getting smaller. Research conducted (by Edon & Putri, 2021) (Kurniawan & Asandimitra, 2018) the results of the analysis in testing shows that when the company's value tends to increase, it triggers the company to expand. One of the financing for expansion can rely on internal sources or external sources of the company so that the company's chances of making *hedging decisions* are getting smaller.

H_4: Company value negatively affects *hedging* decisions with *derivative instruments*

Growth opportunity is a ratio that measures the company's opportunity to develop its business in the future. High growth opportunity, the opportunity for companies to experience underinvestment problems (Na'imatul Hidayah, 2016). Companies with high growth opportunities will tend to require large amounts of funds to finance this growth in the future (Bodroastuti, 2019). The development of a good company can be seen from the need for funds that are large enough to finance the company's growth in the future (Muslim & Puryandani, 2017). Companies that have high growth opportunities tend to invest with their capital to avoid the risk of under-investment, namely the non-implementation of all investment projects with positive value by the company (Raodah & Pratiwi, 2020).

With *high growth opportunities*, companies will finance the growth that is being experienced by the company using internal funding because if you use external funding, it will be more risky when there are foreign currency fluctuations. So as to minimize the risks faced by the company. Companies with high *growth opportunities* can maintain *retained earnings* to strengthen capital and not allocate unemployment to carry out *hedging* policies (Bodroastuti, 2019); in this case, management will try to maximize welfare for itself by minimizing various agency costs. This is because companies that have high *growth opportunities* are likely not to make *hedging decisions.* Research conducted (T. Bodroastuti, 2019) (Melissa Aristya, 2020) and (Pangestuti et al., 2020) the results of testing the *Growth Opportunity* variable show results that state *growth opportunity* does not affect *hedging* decisions in manufacturing companies listed on the Indonesia Stock Exchange in a positive direction

H_5: *Growth Opportunity* negatively affects *hedging decisions with* derivative *instruments*

The Exchange Rate of a currency is the price of a domestic currency against a foreign currency. The foreign exchange rate system will depend largely on the nature of the market. In a free market, the exchange rate will change according to changes in demand and supply. Economists divide the exchange rate into

two types (Mankiw: 2012), namely the nominal exchange rate and the rill rate. The exchange rate (exchange rate) is positively related to interest rates, where rising exchange rates (rupiah appreciates against the dollar) will increase interest rates. Then, people will be encouraged to increase the amount of savings by reducing spending on consumption and releasing the Dollars they have. This is done to benefit from increased interest on savings. An increase in the amount of savings will also affect the increase in the amount of quasi-money. (Mankiw:2012). Exchange Rate Exposure is an important source of risk for multinational companies. Exchange rate risk is one of the factors of financial risk. Exchange rate risk is the possibility of deviations in expected outcomes or exposures due to exchange rate fluctuations. To mitigate the impact of exchange rate fluctuations, it has been claimed that multinationals can implement risk management strategies not only through financial derivatives. Research produced by Ito, Koibuchi, Sato and Shimizu (2015). Chiang and Lin (2002) revealed that foreign exchange rates have a significant positive effect on operational hedges. Like Chiang and Lin's (2002) research, Du's (2010) research also found that foreign exchange has a significant positive effect on hedges.

H_6: *Exchange rate* positive affects on decisions *Hedging* with instruments *Derivatives*

The purpose of this study is to analyze and obtain empirical evidence in testing the model influence of internal factors and external factors on the decision to use derivative instruments in 3.

hedging transactions and disclosure of hedging transactions in the company's annual report. This research is important to obtain data on determining factors that can encourage companies to carry out hedging transactions and their disclosure in financial statements. This topic is an important part of the leading field research topics on the topic of finance and digital banking. In the future, the results of this research will be simplified in people who carry out export transactions to protect their transactions by conducting hedging transactions to mitigate the occurrence of risks.

RESEARCH METHOD

This research is a quantitative research conducted on IDX LQ45 which is listed on the Indonesia Stock Exchange (IDX) in 2018-2022. This research starts by collecting data related to profitability, Liquidity, Leverage, Company Value, growth opportunity, exchange rate, and hedging with derivative instruments. This research was conducted using Logistic Regression analysis. The population used in this study is companies incorporated in IDX LQ45 from February to June 2022 listed on the Indonesia Stock Exchange (IDX) in 2018-2022, with as many as 45 companies. Research Sample The sampling technique used in this study is purposive sampling, which uses certain criteria in sample selection. These criteria are:

1. Companies listed on IDX LQ45 listed on the Indonesia Stock Exchange (IDX) in 2018-2022.
2. A complete company publishes financial statements

Table 2 Sampling

No.	Criteria	Number of Companies
1	Companies listed on the Stock Exchange Indonesia 2018–2022	45
2	Incomplete company financial statements from 2018 – 2022	(11)
3	Companies that are the object of research	34
	34 x 5 research periods	170

The logistic regression model to be used in this study is as follows :

$$Ln_{1-P} = + \beta \text{ PR} + \beta 2\text{LQ} + \beta 3 \text{ LV} + \beta 4 \text{ NP} + \beta 5 \text{ GO+}$$

Information:

P : *Hedging*
Ln : Natural logarithm
$\beta 0$: Regression coefficient of constant
$\beta 123456$: Regression coefficient of each indicator
PR : Profitability
LK : Liquidity
LV : *Leverage*
FV : Firm Value
GO : *Growth Opportunity*
ER : *Exchange Rate*
E : *Error*

RESULT AND DISCUSSION

The descriptive statistical test used in the early stages of the study aims to determine the description or distribution of data from the dependent and independent variables.

Table 3 Descriptive Statistical Test Results

Hosmer and Lemeshow Test			
Step	Chi-square	f	ay.
1	9.557		.298

The test results on *Hosmer and Lemeshow's Goodness Test* shown in Table 4 obtained a *Chi-square value of* 9.557 with a significance value of 0.298. Based on these results, it can be seen that 0.298 > 0.05 is accepted, meaning that the null hypothesis is accepted, and there is no difference between the predicted classification and the observed classification. So, it can be concluded that the logistic regression used has met the adequacy of *fit* so that hypothesis testing can be accepted.

Table 4 Regression Model Feasibility Results

Variable	Minimum	Maximum	Mean	Standard Deviation
PR	-0,057	0,790	0,082	1,898
LQ	0,180	124,660	4,902	31297,704
LV	0,030	8,040	0,734	233,772
PER	-0,260	0,216	0,047	0,513
GO	10,000	48,687	20,540	2844,102
Exchange	13.548	14.265	14.001	268,411
Hedging	0,000	1,000	1,047	92,288

Testing the entire model aims to determine if the model gets better if it is added with independent variables. This test is done by comparing the value of – 2 *initial Log likelihood* (block number = 0 I) *with -2* final Log Likelihood *(*block number = 1). Here is the result of the initial – 2 *Log Likelihood* value (*block number = 0)* as shown in the table below:

Table 5 Block 0 Test Results

Iteration Historya,b,c			
Iteration		-2Log likelihood	Coefficients
			Constant
Step 0	1	209.428	.776
	2	209.361	.819
	3	209.361	.819

Furthermore, for the results of calculating values based on the table above, the results of calculating values – 2 *Log Likelihood* last (*block number = 1)* amounted to 169.103.

Table 6 Test Results Block 1

Iteration Historya,b,c,d								
Iteration		-2 Log likelihood	Coefficients					
			Constant	TWO PEOPLE	CR	To give	PER	THERE
Step 1	1	173.744	1.174	.748	-.342	-1.045	-11.244	-.031
	2	169.321	1.169	1.077	-.417	-1.416	-15.348	-.072
	3	169.104	1.118	1.140	-.433	-1.502	-16.335	-.095
	4	169.103	1.110	1.143	-.434	-1.507	-16.389	-.097
	5	169.103	1.110	1.143	-.434	-1.507	-16.389	-.097

Table 7 Model Summary

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	169.103a	.211	.298

In testing the overall *model (overall model fit*) using -2 Log Likelihood, if there is a decrease *in the last -2 Log Likelihood (block number = 1) compared*

to -2 initial Log Likelihood *(block number = 0),* it can be concluded that the regression model is a good regression as shown in the table above. In the initial block (block number = 0), the value of – 2 Log Likelihood is 209.361, while in the last block (*block number* = 2), *the value of – 2* Log Likelihood *is 169.103.* With a decrease in the value of -2 *Log Likelihood* between the beginning and last, the model is accepted because it matches the data and it can be concluded that the regression model is a good regression to predict *hedging.* Furthermore, a regression model will be formed that aims to determine whether profitability, liquidity, *leverage*, company value, *growth opportunity, and exchange rate* have a significant effect on *hedging* decisions. Here are the results of the regression model formed:

Table 8 Test Results of Logistic Regression Analysis

Variables in the Equation							
		B	H.E.	Forest	df	Say.	Exp(B)
Step 1a	PR	1.143	.527	4.711	1	.030	3.137
	LQ	-.434	.163	7.068	1	.008	.648
	LV	1.507	.445	11.490	1	.001	.222
	FV	-16.389	5.143	10.156	1	.001	.000
	GO	-.546	.259	4.456	1	.035	1.726
	ER	-.025	.028	4.026	1	.037	1.025
	Constant	1.110	1.006	1.219	1	.270	3.035

So, the results obtained from the calculation of the logistic regression model in this study are as follows:

$Ln\frac{P}{1-P} = 1{,}110 + 1{,}143\ ROA - 0{,}434\ CR + 1{,}507\ DAR$ -16.389FOR -0.546 GROWTH+0.025 EXCHANGE +e

Information:

P	: *Hedging*
Ln	: Natural logarithm
$\beta 0$	: Regression coefficient of constant
$\beta 123456$	: Regression coefficient of each indicator
PR	: Profitability
LK	: Liquidity
LV	: *Leverage*
FV	: Firm Value
GO	: *Growth Opportunity*
ER	: *Exchange Rate*
E	: *Error*

Interpretation of logistic regression analysis results in the constant regression coefficient of 1.110, meaning that if profitability, liquidity, leverage, company value, *and* growth opportunity *are considered constant (0), then the regression coefficient value of 1.110 means that the company prefers to hedge* amounted to 1,110. The profitability coefficient of 1.143 can be interpreted if profitability increases assuming other independent variables are constant, then the possibility of the company *hedging* increases by 1.143. The liquidity coefficient of -0.434 can be interpreted if liquidity decreases assuming other

independent variables are constant, the possibility of the company *hedging* decreases by -0.434. The leverage coefficient *of 1.507 can be interpreted if the* leverage increases, *assuming the other independent variables are constant, then the possibility of the company* hedging increases by *1.507.* The company's value coefficient of -16.389 can be interpreted if the company's value decreases, assuming other independent variables are constant, then the possibility of the company *hedging* decreases by -16.389. The growth opportunity coefficient *of -0.546 can be interpreted if the growth opportunity* decreases *assuming other independent variables are constant, then the possibility of the company* hedging decreases by *-0.546. The Exchange rate coefficient of 0.025 can be interpreted if the* exchange rate *increases assuming other independent variables are constant, then the possibility* of the company hedging *increases by 0.025*

Testing the coefficient of determination aims to determine how much influence the dependent variable is involved in the study. The coefficients *of Cox and Snell R Square and Nagelkerke's* R Square are found *in the summary model table,* which can be interpreted as the same as the coefficient of determination R2 in multiple linear regression. However, there are differences because the maximum *values of Cox and Snell R Square are smaller than one; as in the table below, the values of* Cox and Snell R Square are 0.211 smaller than one, thus making it difficult to interpret as in R2 and rarely used.

Table 9 Results of the Coefficient of Determination

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	169.103a	.211	.298

The value of Nagelkerke's R Square coefficient in the table above is a modification of the Cox and Snell R Square coefficients so that the maximum value can reach one and can ensure that it has a value that varies in the range of 0 to 1 and is the same as the R2 determination coefficient in multiple linear regression. Based on the table above, Nagelkerke's R Square value of 0.298 or 29.8%, which means profitability, liquidity, leverage, company value, and *growth opportunity* can explain *hedging.*

The simultaneous test aims to determine the overall relationship between the variables of profitability, liquidity, *leverage*, company value, *growth opportunity* and exchange rates simultaneously affect the *hedging* variable. The significance level used is 0.05, which can be seen in the table of the Omnibus Test of Model Coefficient, *which is equivalent to test F. If the value* of the Omnibus Test of Model Coefficient *is less than 0.05, it means that the independent variable simultaneously affects the dependent variable.*

Table 10 Simultaneous Test Results

Omnibus Tests of Model Coefficients				
		Chi-square	Df	Say.
Step 1	Step	40.257	5	.000
	Block	40.257	5	.000
	Model	40.257	5	.000

Based on the table, it can be explained that *the value of chi-square is 40.257* with degree of freedom *(df) 5, while the significant level is 0.000 and the value of G-* p-value $< \chi^3_{\alpha,p}$ α with α is a significant level of 0.05. Then, it can be seen that 0.000 < 0.05, meaning that H0 is rejected and Ha is accepted. If H0 is rejected, it means that the model can be said to be statistically significant that it is 0.000, which means less than 0.05. This shows that profitability, liquidity, *leverage*, company value *growth opportunity, and exchange rate* together significantly affect *hedging.* In logistic regression analysis, partial regression coefficient testing is performed using the *Wald test*, which can be seen in the Variables in *The Equation table*. This test is conducted to test how much influence the variables of profitability, liquidity, *leverage*, company value, *growth opportunity*, and *exchange rate* on *hedging*. Here is a summary table of logistic regression coefficients and significant levels of independent variables:

Table 11 Logistic Regression Coefficients and Significant Level of Independent Variable

Variable	B	Say	Result
Profitability	1.143	0.030	Accepted
Liquidity	-0.434	0.008	Accepted
Leverage	1.507	0.001	Accepted
Company Value	-16,389	0.001	Accepted
Growth opportunity	-0,546	0,035	Accepted
Exchange Rate	0,025	0,037	Accepted

1. **The Effect of Profitability, Liquidity, *Leverage*, Company Value, and *Growth Opportunity* on *Hedging Decisions***

The results of the simulation test in this study show that profitability and *leverage* simultaneously have a positive effect. At the same time, liquidity, company value, and *growth opportunity* simultaneously negatively affect decisions *Hedging.* So, the results of this study show that only 2 (two) variables have a positive effect on decision *Hedging.* This is in accordance with previous research conducted by (Pangestuti et al., 2020), which states that leverage affects decision *Hedging*,

while liquidity, *leverage*, and *growth opportunity negatively* affect decision *Hedging.* Previous research conducted by (Jiwandhana & and Triaryati, 2016) states that profitability positively influences decision *Hedging.* Previous research conducted by (Kurniawan Asandimitra, 2018) states that the value of the company has a significant negative effect on decision *Hedging.*

2. The Effect of Profitability on *Hedging Decisions*

The partial test results show that profitability has a positive and significant effect on decision *Hedging.* A positive influence on profitability variables indicates that companies with a high level of profitability will be more likely to do *Hedging.* Profitability is the net result based on decisions applied by a company or the company's ability to make profits based on the sale of products or services produced by the company. High profitability can show the company's ability to earn profits from its business, and obtaining high profits can make the company able to do *Hedging*. Significant means that the results of this study can be generated or, in general, in members of the population as a whole. Based on *signaling theory* explains that management's perception of the company's future growth will affect investors toward the company. Information describing the state of affairs of the company gives certain signals to investors. The company can use information about the state of company profitability to be the basis for making decisions *Hedging* What the company does and becomes important information is also to attract investors. When the company is in a state of high profitability, the company has the flexibility to reserve part of the retained earnings with the permission of the GMS to conduct *Hedging* of all foreign currency transactions with the aim of mitigating the risk of company losses that occur due to foreign currency fluctuations. So that these conditions can be a good signal for investors that the company will not experience financial pressure caused by changes or fluctuations in foreign exchange rates because the company has anticipated Various risks by making transactions *Hedging* Using instruments *Derivatives.* The implication is that the disclosure of hedging transactions will also be higher. This is in accordance with research conducted by (Jiwandhana & Triaryati, 2016) (Saraswati & Suryantini, 2019), (Megawati et al., 2016), and (Sudiarta & Setyawan, 2022), suggesting that taxes positively affect a company's likelihood of performing *Hedging.*

3. The Effect of Liquidity on *Hedging Decisions*

The partial test results show that liquidity negatively affects decisions *Hedging.* The negative influence shows that the liquidity variable shows that the company with higher liquidity, the lower the company performs *Hedging.* Significant means that the results of this study can be generated or, in general, in members of the population as a whole. Liquidity is a sign that the company can meet its short-term obligations and that the company has reserve funds to deal with risks. The more liquid the company, the company will be. Therefore, the possibility of the company applying

Hedging is very low. Based on agency theory, there are differences in interests between management and shareholders, where shareholders want to minimize risk by doing *Hedging*. However, the management minimizes the risk by using trading funds from the company. The high liquidity of the company indicates that the company can meet its short-term obligations and the company has reserve funds to face risks or avoid the risk of financial difficulties (*financial distress*). The more liquid the company, the company will be; therefore, the possibility of the company applying *Hedging is* very low. The size *current ratio* indicates the company's ability to pay its short-term obligations and finance its operating activities, as a result of which the risk of failure is reduced. Therefore, the company does not need to do *Hedging* to manage the risk. Because the company has a reserve fund that is able to handle risks so as to avoid financial difficulties. This is in accordance with research conducted by (Ariani &; Sudiartha, 2017; Reni et al. &; Purnawati, 2016) suggests that liquidity negatively affects the likelihood of companies doing so *Hedging*

4. The Influence of *Leverage* on *Hedging Results*

The partial test results show that *leverage has a* Positive response to the results of *Hedging.* A positive influence on liquidity variables indicates that companies with levels of *leverage have* a high likelihood of the company doing *Hedging.* Significant means that the results of this study can be generalized or applied generally to members of the population as a whole. *Leverage* is an asset and source of funds by companies that have fixed costs in order to increase shareholder profits. *Leverage* Is the potential use of finance costs on growing the effect of increased changes in profits before interest and taxes. Based on signal theory, companies that have debt have obligations for the costs they have, namely interest and principal expense of debt loans. If the company cannot complete its obligations, it will result in losses and may go bankrupt. This is in accordance with research conducted by (Muslim Puryandani, 2017)and (Saraswati & Suryantini, 2019) suggests that *leverage* positively affects the company's likelihood to do *Hedging.*

5. The Effect of Company Value on *Hedging Decisions*

The partial test results show that the company's value has a negative and significant effect on decisions *Hedging.* The negative influence on the variable value of the company indicates that the lower the company will make fewer decisions *Hedging.* The value of the company is the present value of a series of cash inflows that the company will generate in the future. Company value is an investor's perception of the company related to using stock prices. According to *signaling theory*, The higher the value of the company, the company's internal funding to allow the company's expansion to be available sufficiently so that the possibility of the company doing *Hedging* is declining. This is in accordance with research conducted by (Ramdani Oktaviani, 2021), (and Kurniawan; Asandimitra, 2018) suggests that company value negatively affects decision *Hedging*.

6. Influence *of Growth Opportunity* on *Hedging Results*

The partial test results show that *growth opportunity* negatively affects decision *Hedging.* Negative influence on variables *growth opportunity* the lower the less the company does *Hedging*. Significant means that the results of this study can be generalized or applied generally to members of the population as a whole. *A growth opportunity* is a company investment opportunity that can increase the value of the company in the Future. A company has greater growth opportunities in order to get large profits. Based on agency theory, management will try to maximize welfare for itself by minimizing various agency costs. This is in accordance with what is done by (Bodroastuti, 2019) and (Melissa Aristya, 2020), fattening that *growth opportunity has a* negative influence on results *Hedging*.

CONCLUSION

The purpose of this study is to analyze and obtain empirical evidence in testing the model influence of internal factors and external factors on the decision to use derivative instruments in hedging transactions and disclosure of hedging transactions in the company's annual report. This research is important to obtain data on determining factors that can encourage companies to carry out hedging transactions and their disclosure in financial statements. This topic is an important part of the leading field research topics on the topic of finance and digital banking. In the future, the results of this research will be simplified in people who carry out export transactions to protect their transactions by conducting hedging transactions to mitigate the occurrence of risks. This study using Agency Theory as a literature review that discusses factor internal dan eksternal yang mempengaruhi kemungkinan perusahaan melakukan transaksi hedging. Meanwhile, Profitability, leverage and Exchange rate have a significant positive effect on decisions *Hedging.* Thus, the higher the profitability and leverage obtained by the company and the exchange rate also increases, the more likely the company will make decisions *Hedging* getting higher. Meanwhile, liquidity, company value, and growth opportunity have a significant negative effect on decisions *Hedging, which shows that the possibility of hedging transactions will increase if the three variavels decrease.* This study's limitation is that the coefficient of determination test results is 29.8 Percent. These results reflect that other factors influence the research model. Researchers can use other variables predicted to influence kemungkinan hedging dengan transaksi derivative in a further study.

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