



The Effect of Solvency, Liquidity, Firm Size, Market to Book Value, Institutional Ownership, And Financial Distress on Hedging Decision Making

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Abstract

Hedging is an act by the companies to minimize the risks from exchange rate fluctuations by using derivative instruments. This study aims to analyze the effect of solvency, liquidity, firm size, market to book value, institutional ownership, and financial distress on hedging decision making. This study uses quantitative methods and secondary data from annual reports and financial reports. The objects of this study are manufacturing companies in various industrial sectors listed on the Indonesia Stock Exchange for the 2020-2023 period. The sample of this study was selected using purposive sampling which resulted in 19 companies. The data analysis method used in this study is logistic regression analysis. The results of the study indicate that solvency, liquidity, market to book value, and financial distress do not affect hedging decision making. While firm size has a positive effect and institutional ownership has a negative effect on hedging decision making.

Introduction

The Indonesian economy is growing rapidly in this modern era due to increasingly advanced technology. This condition provides an opportunity for companies to develop their businesses not only in the domestic market but also in the international market. Expanding market share for companies helps increase income, competition, investment, and the company's development. Companies in the international market carry out activities such as exports and imports to expand their market share. Many companies export raw materials from other countries that are cheaper to reduce their production costs and carry out import activities to distribute their company's products.

One of the Indonesian companies that joined international trade is a company in the various industrial sectors, which is part of a manufacturing company. This sector comprises the components and automotive, garment and textile, cable, and electronics sub-sectors. This sector has a sub-sector which, according to BPS, is included as the primary commodity export for Indonesia for the January-October 2023 period, which joins the rubber and rubber products, palm oil, shrimp, cocoa, and coffee sub-sectors, which contributed USD 69.96 billion or 34.76% of Indonesia's non-oil and gas exports.

The enormous profits that can be taken from international trade also have significant risks that impact the company. An economy that is not always stable causes international trade activities to be at significant risk for companies. Trade activities such as exports and imports are related to foreign currencies used in buying and selling. This can trigger the risk of changes in currency exchange rates. The imbalance in demand and supply in currencies results in exchange rate fluctuations, resulting in uncertainty about the exchange rate, which results in these risks. Exchange rate fluctuations are rising and falling levels of demand and supply caused by rising domestic prices for capital flows, export and import goods, and rising overall prices (Triaryati & Jiwandhana, 2016).

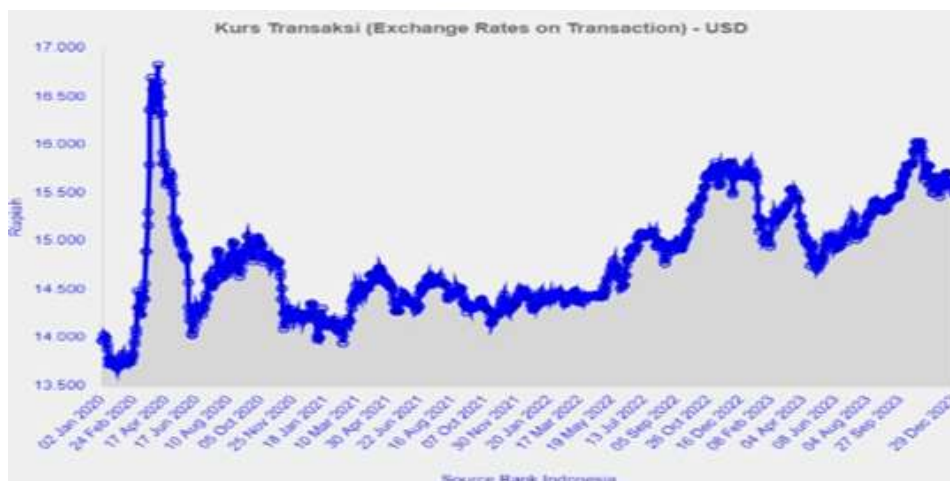


Figure 1. Exchange Rates on Transaction-USD
Source: <https://www.bi.go.id>

The time series graph illustrates the US Dollar exchange rate fluctuation from 2020 to 2023. The graph above shows the highest decline in the rupiah exchange rate against the US Dollar, which was in early 2020, reaching Rp. 16,825 per US Dollar. This is due to unexpected events that occurred throughout the world, namely the COVID-19 pandemic. This event impacted the world economy, including Indonesia, in 2020. The government issued a policy to restrict people's movement to reduce the spread of the virus as regulated in PERMERKES No. 9. This policy also had an impact on reducing investors entering Indonesia because these investors preferred to store their wealth in the form of US Dollar foreign currency to reduce the risks that would be received which then also had an impact on the depreciation of the rupiah exchange rate.

Foreign exchange rate fluctuations will also impact the company; because of this condition, the company can manage risk to minimize the risks that will occur. The company can make hedging decisions to manage risk to overcome these problems. Hedging is an action that protects the company and minimizes foreign exchange risks caused by business transactions (Guniarti, 2014). The use of this method is done with the aim of minimizing risk but still gaining profit in business transactions. This method can be done by using derivative instruments. Derivative instruments are contracts between two parties, namely buyers and sellers, for specific commodities and securities at an agreed time and price. (Setiawan 2019). Derivative instruments consist of several types: option contracts, forward contracts, future contracts, and swap contracts. Hedging decision making can be explained through the theory of shareholder value maximization. This theory focuses on reducing transaction costs that can trigger financial distress. (Sprčić 2007). Transaction costs are at risk of foreign exchange fluctuations due to transactions from international trade companies carry out.

In addition to external factors such as exchange rates, hedging can also be triggered by internal factors. Internal factors are factors that concern the company's financial condition. Internal factors influencing hedging decisions are solvency, liquidity, firm size, market to book value (MTBV), and financial distress. The first factor is solvency, the ratio used to measure the company's ability to use funding through its debt. The higher the company's solvency ratio, the greater the probability of the company taking a hedging decision. This is because a company's high solvency ratio indicates its debt level compared to its capital. A high level of debt has a risk to the company, especially if the company has funding from foreign debt, which has a risk to the exchange rate. With this event, the company will likely take a hedging decision. This aligns with the research by Purwanto and Putra (2022), which shows significant

positive solvency towards hedging decisions. Different results are shown in the study by Putri and Mahardika (2023) that negative solvency significantly impacts hedging decisions.

The second factor is liquidity, a ratio measuring a company's ability to pay off its short-term debts. The lower the liquidity value of a company, the higher the probability of hedging. Likewise, the opposite condition, the higher the liquidity value, the lower the hedging activity. Companies with high current assets will avoid the company from the risk of default on fulfilling its obligations. So that in this condition, hedging activities will decrease. Some studies that align with this statement are those of Karlinda and Merah (2023) And Condronogoro and Hasibuan (2023) stated that liquidity significantly negatively affects hedging decision-making. However, the research Rosalin, Kurniati, and Pratiwi (2023), Triasiwi and Priantilianingtiasari (2023) and Revelation Wahyu Mustofa and Kurnia Rina Ariani (2024) liquidity does not influence hedging decision making.

The third factor is firm size, which is an assessment of the size of a company based on the number of assets owned. Companies with large sizes also have significant operational activities. In this case, the company cannot avoid transaction exposure, which will result in the risk of foreign exchange fluctuations. To minimize this risk, the company's probability of carrying out hedging will be greater. The research that agrees with the statement above is Nanda, Muchtar, and Bahri (2022) firm size has a significant positive effect on hedging decisions. However, the research Arugan, Then Iqbal. Santoso (2023) And Widyati et al. (2021) show that firm size does not influence hedging decisions.

The fourth factor is market to book or abbreviated MTBV, which describes the company's value from the investor's point of view (Agung et al., 2019). Market to book value measures how much a company will grow. Companies with rapid growth tend to choose debt as their source of funding. This is because debt is a source of funding that can be obtained quickly but also impacts the company. The more excellent the opportunity for a company to grow, the higher the debt required. This high debt will risk financial difficulties if the company is not good at managing the debt. High debt will increase the possibility of the company protecting itself with hedging. The statement above is in line with Listiana and Risa. Primasari (2022) and Pirmansyah the Story of Pirmansyah Hasim and Holiawati (2022) market to book value positively affects hedging decisions. However, according to Agung et al. (2019) And Muslih and Puspitasari (2022), market to book value has no effect on hedging decisions.

The fifth factor is institutional ownership, which is one of the good corporate governances. Institutional ownership is a ratio that shows the size of shares owned by institutions or institutions in the company. The greater the institutional ownership, the lower the company's probability of making hedging decisions. This is because investors prefer to focus on long-term investments, believe that short-term market fluctuations do not need to be faced with hedging, and prefer to hold their positions and ignore short-term risks. The research statement is supported by Ekadjaja, Ekadjaja, and Henny (2020), who argue that institutional ownership has a negative effect on hedging decision-making. This is different from research conducted by Hadiyah and Prasetiono (2016), who argue that institutional ownership has a significant positive effect on hedging decision-making making, and different research results were conducted by Yustika, Cheisviyanny, and Helmayunita (2019) state that institutional ownership does not influence hedging decision making.

The sixth factor is financial distress, a condition where a company is experiencing financial difficulties and cannot fulfill its obligations (Triasiwi & Priantilianingtiasari, 2023). The condition of a company in financial difficulty will make it more careful in managing its finances. One of the decisions to protect against risks caused by foreign exchange transactions is to increase hedging decision making. Research M.S. Putri supports this statement, and Sukarmanto (2023) financial distress significantly negatively affects hedging decisions. At the same time, Hanifah and Riyanti's (2023) financial distress significantly positively affects hedging decisions. According to Mauliana et al. (2024), financial distress does not affect hedging decision-making.



This research attempts to update the research W.T.I. Putri et al. (2024), entitled "The Effect of Financial Distress, Growth Opportunity, and Leverage on Hedging Decisions in Consumer Goods Industry Sector Companies on the IDX in 2019-2022" changing the research object to the various industrial sectors, the observation period to the 2020-2023 period, and adding other independent variables, namely liquidity and firm size. Based on this description, a research gap exists between one study and another. Therefore, the researcher is interested in conducting further research entitled "The Effect of Solvency, Liquidity, Firm Size, Market to Book Value, Institutional Ownership and Financial Distress on Hedging Decision Making".

According to Trimulato (2017), Risk increases the chance of an undesirable event occurring and becoming a threat to assets and financial profiles. Sunaryo (2012) classifies risks based on the factors that cause them, namely the risk due to market price movements. The risk is due to default caused by borrowers (default), which is called credit risk (default). Moreover, an operational risk is due to human error, systems, processes, or errors caused by external factors. The existence of risks in a company can be handled by implementing risk management. Risk management is a systematically organized method for handling risks (Trimulato, 2017). Systematic risk management will contribute to efficiency and consistency, providing comparable impacts and improvements (Rilnaenil, Roils, and Ramadhanil 2019).

Shareholder value maximization theory is the theory behind hedging decision-making (Aretz & Bartram, 2010). This theory maximizes shareholder value by overcoming problems such as financial distress, underinvestment, and asset substitution (Lilstilana, Rilsa. Prilmasari 2022). The problem of financial distress is related to the costs of bankruptcy administration, which decreases the company's value (Sprčilc, 2007), according to Listiana Risa. Primasari's (2022) shareholder value maximization theory emerged due to three factors: (1) The first factor is the drive to overcome financial distress, (2) The second factor is underinvestment, (3) The third factor is asset substitution.

Hedging is an action that protects a company and minimizes the risk of exchange rate fluctuations caused by business transactions (Guniarti, 2014). The ever-changing exchange rate of foreign currencies will affect the profits and sales of companies that carry out export and import activities. The principle of helping is to minimize losses arising from certain investments by entering into derivative instrument agreements. If the initial investment results in a loss, the derivative instrument will work like insurance that can protect the company from the loss. According to Madura (2009), the hedging indicators with derivative instruments are forward contracts, futures contracts, swap contracts, and options contracts.

Solvency is a valuable ratio for measuring a company's capability and using funds through debt (Rilzvil, Satrila, and Saliilm, 2023). Solvency describes how much debt a company has, so this ratio shows its ability to utilize the money it borrows. The solvency ratio in this study is DER (Debt to Equity ratio). This ratio compares the company's total debt to its capital. This ratio's function is to determine how much of the company's assets are financed by debt (Kasmir, 2009). The ratios for measuring solvency are as follows:

$$DER = \frac{\text{Total Liabilities}}{\text{Total Equity}}$$

Liquidity is a measure to assess a company's capability to pay off its short-term debts (Kasmir, 2009). A company will be considered liquid if its financial obligations can be met on time by having current assets than its current liabilities. If the company cannot pay its current liabilities when due, the opposite condition indicates that it is illiquid. Liquidity in this study uses the current ratio (CR). This ratio compares the current assets and current liabilities owned by the company. According to Kasmir (2009), The ratio for analysing a company's working capital position is the current ratio:

$$CR = \frac{\text{Aktiva Lancar}}{\text{Hutang Lancar}}$$

Firm size is a measure of a company that is assessed through the total assets owned (Setiawan, 2019). The larger the total assets a company owns, the larger the company's size will be. Companies with large sizes will conduct their trading activities not only in the domestic scope but also in the international scope. According to Guniarti (2014), Firm size is measured using the formula:

$$\text{Firm Size} = \ln (\text{Total Assets})$$

Market-to-book value is a depiction of the company's value based on the views of investors (Agung et al., 2019). If the company is considered reasonable by investors, the company's stock price will increase compared to the book value of the stock (Dewil & Purnawati, 2016). According to Rildha et al. (2023), MTBV can also describe how much the market values a company to utilise its capital to meet the company's goals. The bigger the company and the better it can manage its capital, the higher the opportunity to grow and attract investors to fund the company. According to Gunilartil (2014), The statement is presented with the formula:

$$\text{Market to Book Value} = \frac{\text{Market Value of Equity}}{\text{Book Value of Equity}}$$

Institutional ownership is one of the good corporate governances. Institutional ownership is a ratio that shows how much stock institutions own in the company. Institutional ownership is a tool that can be used to reduce agency conflict because it can control management through an effective monitoring process. A high level of institutional ownership will lead to more extraordinary monitoring efforts by institutional investors, thereby reducing opportunistic manager behaviour. Institutional ownership compares the number of shares owned by institutions and the number of shares outstanding. This comparison will describe how much institutional ownership there is in a company. The formula for institutional ownership is as follows Hadilyah and Prasetilono (2016):

$$\text{Institutional Ownership} = \frac{\text{Total Saham Institusi}}{\text{Jumlah Saham Beredar}}$$

Financial distress is when a company faces financial difficulties and cannot fulfil its obligations (Triasiwi & Priantilianingiasari, 2023). This condition will occur before the company goes bankrupt. This condition can be assessed based on the company's inability or the unavailability of funds to pay off liabilities due soon. According to Altman et al. (2017), to measure financial distress, use the Altman z-score calculation with the formula:

$$Z = 1.2X_1 + 1.4X_2 + 3.3X_3 + 0.6 X_4 + 1.0X_5$$

Information:

Z	= Overall company health index	X ₃	= $\frac{\text{Earning before interest and tax}}{\text{Total assets}}$
X ₁	= $\frac{\text{Working capital}}{\text{Total assets}}$	X ₄	= $\frac{\text{Market value of equity}}{\text{Total liabilities}}$
X ₂	= $\frac{\text{Retained earning}}{\text{Total assets}}$	X ₅	= $\frac{\text{Penjualan}}{\text{Total aset}}$

Solvency is a ratio used to measure a company's ability to use funding through debt (Rilzvil, Satrila, and Salilm, 2023). This study uses the DER (Debt to Equity ratio) in the solvency measurement. This ratio describes the comparison between the amount of debt and the amount of capital. The higher the DER ratio value, the higher the value of the company's debt compared to the capital owned by the company. This high debt value can be a loss for the company regarding efforts to fulfil obligations, which will then become a risk of default on debt. Another risk that



can occur is if the company has obligations in foreign currency, which can cause a risk of exchange rate fluctuations. Risk management can make hedging decisions to reduce the risk of default and exchange rate fluctuations. This statement is reinforced by the results of previous research conducted by Purwanto and Putra (2022) and Asfrianto et al. (2021), which states that solvency has a positive effect on hedging decisions.

H₁: Solvency has a positive effect on hedging decision making.

The liquidity ratio is a financial ratio used to measure a company's ability to meet its short-term obligations. This study uses the current ratio (CR) to measure the company's liabilities. The ratio is measured by comparing current assets with current liabilities. The company's ability to meet its short-term obligations will be more difficult when the debt is dominated by debt in foreign currency. The exchange rate that continues to fluctuate will affect foreign debt following the movement of the rupiah exchange rate against the US dollar. unexpected events such as COVID-19 will cause a decline in the world economy. The depreciation of the Indonesian currency will impact increasing the company's debt. This event is a significant risk for the company. In dealing with this event, the company can protect its assets by making hedging decisions. Companies with low liquidity have a high risk, so hedging activities will also increase. Likewise, the opposite condition is that companies with liquidity have a lower risk of default, so hedging activities will also decrease. The results of previous research reinforce this statement conducted by Karliinda and Marah (2023) And Condronogoro and Hasibuan (2023), which state that the liquidity variable has a negative and significant effect on hedging decisions. Based on the description that has been explained, the hypothesis of this study is:

H₂: Liquidity has a negative effect on hedging decision making.

Firm size which is large indicates that the company has extensive operational activities; this can pose a risk due to the increasingly wide market reach of the company. Companies with large sizes are generally involved in foreign trade, which then transacts involving several different currencies. In these activities, transaction exposure will occur due to fluctuations in foreign exchange rates against the rupiah. This condition encourages companies with large sizes to further increase hedging decision-making by using derivative instruments to minimize the risk of exchange rate fluctuations. This statement is reinforced by the results of previous research conducted by Agung et al. (2019) And Nanda, Muchtar, and Bahril (2022), which states that the firm size variable positively affects hedging decisions.

H₃: Firm size has a positive effect on hedging decision making

Market to book value measuring the company's growth opportunities in future business development. Market-to-book value is useful for describing the company's value to investors, creditors, and stakeholders about the company's achievements (Liltilana, Rilsa. Prilmasari 2022). A high MTBV indicates that the company's advancement opportunity is also high. Making a company grow quickly also requires large amounts of money and finance for its growth and development. Companies with rapid growth tend to choose debt as their source of funding. This is because debt is a source of funding that can be obtained quickly, but it also impacts the company. The greater the opportunity for company growth, the higher the debt required. This high debt will risk financial difficulties if the company is not good at managing the debt. High debt will encourage companies to protect themselves with hedging. This is also by research conducted by Listiana and Risa. Primasari (2022) and The Story of Pirmansyah Hasim and Holiawati (2022) state that market-to-book value positively affects hedging decisions.

H₄: Market to book value has a positive effect on hedging decisions making

institutional ownership is calculated by comparing the number of shares owned by institutions in a company with the number of shares outstanding. This comparison determines how much institutional ownership there is in a company. The higher the institutional ownership in a company, the greater the probability of the company hedging because the higher the ownership, the more institutions will be encouraged to supervise and motivate managers to hedge to

protect the investment owned by institutional investors. This statement aligns with research conducted by (Hadilyah & Prasetyono, 2016).

H₅: Institutional ownership has a positive effect on hedging decision-making

Financial distress is when a company faces financial difficulties and cannot fulfil its obligations (Trilaswil & Prilantillanilngtilasaril, 2023). Companies experiencing financial difficulties will be more careful in managing their finances (Annilyatil, Hermanto, and Hildayatil 2019). The condition of a company experiencing financial difficulties will encourage the company to be more careful in managing its finances. Activities to protect against risks in facing risks caused by foreign exchange transactions will also increase the probability of hedging decisions being made. This statement is supported by research by Putril and Sukarmanto (2023), which states that financial distress has a negative effect on hedging decision making.

H₆: Financial distress has a negative effect on hedging decision-making

Methodology

This study uses a quantitative method with secondary data from financial and annual reports. The data was obtained from the official website of the Indonesia Stock Exchange, www.idx.co.id. The population of this study was all manufacturing companies in various industrial sectors listed on the Indonesia Stock Exchange (IDX) for the period 2020-2023, totalling 53 companies. The sampling technique for this study was purposive sampling. 19 companies met the criteria in this study. The criteria for determining the sample in this study are as follows: (1) Manufacturing companies in various industrial sub-sectors listed on the IDX for the 2020-2023 period, (2) Manufacturing companies in various industries that did not publish annual financial reports consecutively during the 2020-2023 period, (3) Manufacturing companies in the various industrial sub-sectors do not present financial reports using the rupiah currency. This research data uses descriptive analysis by conducting logistic regression test. The dependent variable used in this study, namely hedging, will be measured using a dummy variable (1.0). Companies that use derivative instruments will be valued at 1 and vice versa; companies that do not use derivatives will be valued at 0.

Result And Discussion

Results

Table 1. Descriptive Statistical Analysis

	N	Minimum	Maximum	Mean	Std. Deviation
Likuiditas	76	.1543	486.1110	22.799396	89.4390424
Solvabilitas	76	-30.1534	114.2896	1.353653	14.0676560
Firm Size	76	22.7572	33.7306	28.062907	2.4148068
MTBV	76	-5.0058	11.4965	1.090864	1.7704347
Kepemilikan Instiusional	76	.3219	.9497	.690489	.1868234
Financial Distress	76	-.3472	1181.4337	66.472321	213.4027660
Valid N (listwise)	76				

Source: Data processed in 2024

Based on the results of the analysis above, the liquidity variable has a minimum value of 0.15 and a maximum of 486.11. The solvency variable has a minimum value of -30.15 and a maximum of 114.29. The firm size variable has a minimum value of 22.76 and a maximum of 33.73. The MTBV variable has a minimum value of -5.006 and a maximum of 11.49. The institutional ownership variable has a minimum value of 0.32 and a maximum value of 0.95. The financial distress variable has a minimum value of -3.47 and a maximum of 1181.43.



Table 2. Descriptive Statistical Analysis of Independent Variables

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Tidak Melakukan Hedging	56	73.7	73.7	73.7
	Melakukan Hedging	20	26.3	26.3	100.0
	Total	76	100.0	100.0	

Source: Data processed in 2024

Based on the following table, it can be described that the dependent variable, namely hedging, is a nominal scale which is a dummy variable, marked with the code "1" for companies that hedge and the code "0" for companies that do not hedge. Of the 76 data samples in this study, there were 56 data or 73.7% that did not hedge in the 2020-2023 period and there were 20 data or 26.3% that did hedge in the 2020-2023 period.

Table 3. Value -2 Log Likelihood (Initial)

Iteration		-2 Log likelihood	Coefficients
			Constant
Step 0	1	87.704	-.947
	2	87.603	-1.028
	3	87.603	-1.030
	4	87.603	-1.030

Source: Data processed in 2024

Table 4 -2 Log Likelihood (End)

Iteration		-2 Log likelihood	Coefficients						
			Constant	Likuiditas	Solvabilitas	Firm Size	MTBV	Kepemilikan Institusional	Financial Distress
Step 1	1	50.444	-14.538	-.006	-.012	.530	.110	-2.461	.007
	2	39.687	-25.938	-.011	-.028	.942	.266	-3.768	.012
	3	35.854	-36.802	-.016	-.040	1.345	.398	-5.388	.018
	4	34.970	-42.808	-.022	-.043	1.575	.452	-6.604	.022
	5	34.593	-44.176	-.035	-.043	1.633	.451	-7.073	.024
	6	32.529	-41.920	-.166	-.033	1.596	.329	-8.040	.026
	7	31.520	-41.424	-.322	-.029	1.614	.280	-8.889	.028
	8	31.375	-42.103	-.399	-.032	1.646	.307	-9.106	.031
	9	31.370	-42.332	-.415	-.033	1.655	.316	-9.144	.032
	10	31.370	-42.342	-.415	-.033	1.656	.316	-9.145	.032
	11	31.370	-42.342	-.415	-.033	1.656	.316	-9.145	.032

Source: Data processed in 2024

Based on table 4.4, the initial -2 Log Likelihood value and 4.5, the final -2 Log Likelihood value obtained the -2 LL value. The initial -2 LL value is 87.603 and the final -2 LL value is 31.370, both values indicate a decrease. So it can be concluded that the regression model is getting better or the hypothesized model fits the data.

Table 5 Hosmer and Lemeshow's test

Hosmer and Lemeshow Test			
Step	Chi-square	df	Sig.
1	9.101	8	.334

Source: Data processed in 2024

Based on the table above, the chi-square value is 9.101 and the significance value is 0.334. The test results show a probability value (P-Value) > 0.05 (significance value) which is 0.334 > 0.05, so H0 is accepted. It can be concluded that the empirical data with the regression model used has a good match so that it is able to predict the observation value.

Table 6. Nagelkerke's R square test

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	31.370 ^a	.523	.764

Source: Data processed in 2024

From the table above, it is known that the Nagelkerke's R square value is 0.764, which means that independent variables such as liquidity, solvency, firm size, MTBV, institutional ownership, and financial distress have an influence on hedging decision making of 76.4%. While the other 23.6% is influenced by other variables not used in this study.

Table 7. Classification Matrix

	Observed	Predicted		
		Hedging		Percentage Correct
		Tidak Melakukan Hedging	Melakukan Hedging	
Step 1	Hedging	52	4	92.9
	Tidak Melakukan Hedging	3	17	85.0
Overall Percentage				90.8

Source: Data processed in 2024

Based on the results of the classification matrix table above, it shows the predictive power of the regression model to predict the possibility of samples hedging is 85%. This shows that when using the regression model, there are 15 samples predicted to hedge out of a total of 20 samples. While the predictive power of the regression model to predict samples that do not hedge is 92,9%. This shows that when using the regression model, there are 52 samples out of a total of 56 samples. Based on the table above, it can also be seen that the overall percentage is 90,8% which illustrates the accuracy of the model in this study in 2020-2023.

Table 8. Hypothesis Test (Wald Test)

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	Likuiditas	-.415	.270	2.365	1	.124	.660
	Solvabilitas	-.033	.065	.262	1	.609	.967
	Firm Size	1.656	.448	13.658	1	.000	5.238
	MTBV	.316	.453	.488	1	.485	1.372
	Kepemilikan Institusional	-9.145	3.896	5.511	1	.019	.000
	Financial Distress	.032	.038	.721	1	.396	1.033
	Constant	-42.342	12.101	12.243	1	.000	.000

Source: Data processed in 2024

Based on the table above, the logistilc regressiobn equatilon ils formulated ih the following form:

$$Y = (-43.342) + (-0.415) LD + (-0.33) SOLV + 1.656 FS + 0.316 MTBV + (-9.145) KI + 0.032FD + e$$

Information:

- Y = Variable *dummy* Hedging
- α = Constant
- β = Regression coefficient
- LD = Liquidity
- SOLV = Solvency



FS = Firm Size
MTBV = Market to book value
KI = Institutional Ownership
FD = Financial Distress
e = Residual error

Discussion

The first hypothesis (H_1) states that solvency positively affects decision making. Hedging in this study cannot be supported or, in other words, rejected. As shown in Table 4.9, solvency has a regression coefficient value of -0.415 with a significance level of 0.124, which is greater than $\alpha = 5\%$. Based on these results, the solvency variable does not have a partial effect on hedging decision making. These results indicate that the first hypothesis cannot be accepted. According to the hypotheses, the results of this study indicate that the size of the DER ratio in a company does not affect hedging decision making. This is likely because the company's debt is lower in foreign currency than its domestic debt. So, the company's risk management with these conditions does not take hedging decisions because it does not yet need protection from the risk of foreign exchange exposure to its company's assets. This is also shown in companies in the various industrial sectors, namely the Arkha Jayantil Persada Tbk. which obtained the highest solvency ratio but did not carry out hedging activities. Similar research was conducted by Nanda, Muchtar, and Bahril (2022).

The second hypothesis (H_2) states that liquidity positively affects decision making. Hedging in the analysis cannot be supported or, in other words, rejected. Based on table 4.9 shows the regression coefficient value of -0.033 with a significance level of 0.609, which is greater than $\alpha = 5\%$. So, based on the study's results, the liquidity variable does not have a partial effect on hedging decision making. This indicates that the rise and fall of liquidity values in companies in the various industrial sectors do not affect hedging decision making. In this study, liquidity calculations use the current ratio while comparing the value of current assets with its current liabilities. Companies with a significant asset value compared to the value of current liabilities are in a liquid condition. This indicates that the company can pay its short-term debts. With a high liquidity ratio, it allows the company to minimize the financial risk in the case of default on its short-term debts so that the company does not take hedging decisions. This statement is in line with the results of research conducted by Trilasilwil and Prilantillanilngtilasaril (2023), Rosaliln, Kumilatil, and Pratilwil (2023), And Revelatilon Amiln Mustofa and Kurnila Rilna Arilanil (2024).

The third hypothesis (H_3) states that firm size positively affects hedging decision making. Based on the hypothesis testing, firm size has a regression coefficient value of 1.656 with a significance level of 0.000, which is smaller than $\alpha = 5\%$. So, in this study, the third hypothesis that can be accepted is that the firm size variable has a positive effect on hedging decision-making. This study shows that the larger the firm size of a company, the larger the company makes hedging decisions. This is because the larger the size of a company, the greater its assets are. A large company certainly carries out operational activities that are not only domestic but also international. Various transactions carried out, both exports and imports, can certainly pose a risk to foreign exchange rate fluctuations, so the company will carry out risk management to minimize these risks by making hedging decisions to protect its assets. This is in line with the theory of shareholder value maximization which states that the larger the size of a company, the wilder the trading activity, thus requiring hedging to minimize the risk of exchange rate fluctuations. The results of this study are supported by Nanda, Muchtar, and Bahril (2022) and Agung et al. (2019), which state that liquidity positively affects hedging decision-making.

The fourth hypothesis (H_4) states that the market-to-book value positively affects hedging decision-making. Based on the hypothesis testing, the market-to-book value has a regression coefficient value of 0.316 with a significance level



of 0.453 which is greater than $\alpha = 5\%$. So based on the research, the fourth hypothesis is rejected, which results in Market to book value having no effect on hedging decision making.

Companies with high MTBV values will increase the probability of taking hedges. This is because companies with high growth tend to obtain funding sources from debt. High debt also has the potential to pose risks to the company through financial distress risks and currency fluctuation risks. To increase shareholder value and protect themselves from these risks, companies will manage risk by making hedging decisions. However, the results of this study indicate that the market-to-book value ratio of companies in various industrial sectors does not affect hedging decisions. This is because a high market-to-book value rates indicates a large opportunity for a company to grow. This condition will minimize the risk of foreign exchange exposure because the company has sufficient funds to minimize the existing risk to meet the needs of operating and investment funds. Therefore, companies with a market-to-book value ratio do not need hedging activities. The study results that align with this statement are studies conducted by Agung et al. (2019) And Musliih and Puspiltasari (2022).

The fifth hypothesis (H_5) states that institutional ownership has a positive effect on hedging decision-making. Based on the hypothesis testing, institutional ownership has a regression coefficient value of -9.145 with a significance level of 0.019 while being smaller than $\alpha = 5\%$. So, in this study, the fifth hypothesis is rejected.

Based on research on companies in the various industrial sectors, institutional ownership has a negative effect on hedging decision making. In this condition, institutional particles, such as investors, tend to prioritize long-term risks over short-term risks, one of which is exchange rate fluctuations. The position of investors will oversee managerial decisions so that companies tend not to make hedging decisions. Thus, the relationship between institutional ownership and hedging in companies in the various industrial sectors has a significant negative relationship. The same study's results were conducted by researchers Ekadjaja, Ekadjaja, and Henny (2020).

The sixth hypothesis (H_6) states that financial distress positively affects hedging decision making. Based on the hypothesis testing, financial distress has a regression coefficient value of 0.032 with a significance level of 0.396, greater than $\alpha = 5\%$. In this case, the significance level is greater than 0.05, so it can be interpreted that H_5 cannot be accepted. Financial distress does not affect hedging decision making in companies in the various industrial sectors. This shows that companies in the various industrial sectors do not experience financial difficulties, so they do not need hedging in their operational activities. These results align with research (Maulilana et al., 2024).

Conclusions

Based on the results of data analysis and hypothesis testing conducted in this study, it can be concluded that:

1. Solvency has no influence on hedging decision making in manufacturing companies in the various industrial sectors for the 2020-2023 period.
2. Liquidity has no influence on hedging decision-making in manufacturing companies in the various industrial sectors for the 2020-2023 period.
3. Firm size has a positive influence on hedging decision making in manufacturing companies in various industrial sectors for the period 2020-2023.
4. Market to book value has a positive influence on hedging decision making in manufacturing companies in various industrial sectors for the period 2020-2023.
5. Institutional ownership has a negative influence on hedging decision making in manufacturing companies in the various industrial sectors for the period 2020-2023.
6. Financial distress has no influence on hedging decision-making in manufacturing companies in the various industrial sectors for the 2020-2023 period.



Limitations

The suggestions that researchers can provide based on the limitations in this study are:

1. Further researchers can use other independent variables such as profitability.
2. Further researchers can use or choose other measurements for related variables with the aim of proving the hypothesis carried out by the researcher.
3. Further researchers can change or add sample criteria to make them more specific.
4. Further researchers can extend the research period to the most recent year to be able to describe the actual situation

Research Contribution

The results of this research can provide information regarding hedging as a consideration in making decisions for company development. This research is also expected to provide additional information for readers regarding what can and does not influence hedging decisions. This research can also be a source of information for further research and new discussions according to the conditions studied.

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