The Impact of Managerial Ownership and Financial Performance on Hedging Decisions

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ABSTRACT

Hedging as a derivatives instrument is one of the practices in risk management. The hedging decision, among other things, comprises forwards, futures, options, and swaps. This study analyzes managerial ownership, financial distress, leverage, liquidity, profitability, and company size on hedging decisions. This study was conducted in a mining sector company listed on the IDX in 2016-2020. The samples were 27 listed companies that were selected based on the purposive sampling method. The logistic regression model was implemented to test the hypothesis. The results of this study are as follows: managerial ownership, financial distress, and company size significantly affected hedging decisions; liquidity variables have a significant adverse impact on hedging decisions; other variables, namely leverage, and profitability, do not affect hedging decisions because they are insignificant. This study suggests that the management prefers implementing hedging to reduce future risks.

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Introduction

The International markets provide more excellent market opportunities for companies through export and import activities, business expansion, or funding from abroad. In addition to providing opportunities, the risks faced by companies in international markets will be more complex, including language issues, legal policies, territorial boundaries, and currency differences (Sianturi and Pangestuti, 2015). Some risks companies face in international markets include changes in exchange rates, interest rates, and commodity prices (Eiteman et al., 2016).

One way that can be done to anticipate, manage and minimize the negative impact of these risks is to hedge. According to Hanafi (2016), hedging transfers risk to other parties, better managing risk through financial instruments. The decision to hedge can be made by utilizing various derivative instruments. According to Hanafi (2016), derivative instruments are derived from the underlying asset's value. The underlying assets include securities (stocks, bonds), commodities (gold, olefins), foreign exchange, and other derivative instruments. The derivative instruments include forward, futures, options, and swaps. In the same perspective, according to Smith and Stultz (1985), a firm can hedge by trading in a particular future, forward, or options market.

The application of hedging causes a difference in perception between shareholders and management. Shareholders are often suspicious when management makes hedging decisions. According to Brigham and Houston (2016), problems will arise quickly when the company's financial department uses hedges to earn relatively high returns by utilizing derivatives for speculation. In contrast to shareholders, Eiteman et al. (2016) explained that management prefers to apply hedges because hedging can reduce the risk of future cash flows and the possibility that the company's cash flow will fall below insufficient debt payments and for the company's operational activities.

Much research on hedging decisions has been done before. However, from the results of the study, there are still many differences in empirical results (research gap*), so the topic of hedging decisions is still interesting to research again. Here is an explanation of some of the company's internal factors influencing hedging decisions from previous research.

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Managerial ownership is a factor that can influence hedging decisions. If the level of managerial ownership is higher, then the company implements hedging more because management needs to protect its investments from risk. Spircic and Sevic’s (2012) findings and Anniyati et al. (2020) show that managerial ownership affects hedging decisions. However, Arnold et al. (2014), Kussulistyanti, and Mahfudz (2016) found that managerial ownership did not affect hedging decisions.

Financial distress conditions can be used as a consideration for companies to hedge. Companies that have low financial distress calculation results will encourage management to implement hedging policies to reduce and protect the company from the risk of bankruptcy (Sasmita & Hartono, 2019) Research from Sianturi and Pangestuti (2015), Mediana and Muharam (2016), Krisdian and Badjra (2017), Aditya and Asandimitra (2019) obtained results that financial distress affects hedging decisions. At the same time, research from Spircic and Sevic (2012) and Bodroastuti et al. (2019) found that financial distress does not affect hedging decisions.

Debt levels are also an essential factor that encourages companies to hedge. The more outstanding the company’s total debt is than its equity, its dependence on debt is much higher. If this condition occurs, the need for hedging increases to minimize the impact of risks (Kurniawan & Asandimitra, 2018). Based on research conducted by Guniarti (2014), Kurniawan and Asandimitra (2018), and Windari and Purnawati (2019), leverage is projected with variable Debt to Equity Ratio (DER) has a significant positive effect on hedging decisions. In comparison, the results of research from Ahmad and Haris (2012), Mediana and Muharam (2016), and Utami et al. (2018) showed that DER variables do not affect hedging decisions.

Liquidity is another factor that influences hedging decisions. The better the liquidity, the better the company to fulfill short-term debt and the lower the threat of financial difficulty, which decreases need for hedging facilities (Windari & Purnawati, 2019). Research results from Ahmad and Haris (2012), Aditya and Asandimitra (2019), and Windari and Purnawati (2019) show that the company’s liquidity affects hedging decisions. However, different results were shown by research from Sianturi and Pangestuti (2015) and Seng and Thaker (2018), which stated that the company's liquidity did not influence hedging decisions.

The profitability can affect the hedging decisions of a company. According to Jiwadhana and Triaryati (2016), profitability affects business expansion positively. It requires hedging to reduce the negative impact of various risks. Jiwadhana and Triaryati (2016) and Fransisca and Natsir (2019) show that profitability affects hedging decisions. While the findings from Kurniawan and Asandimitra (2018), Utami et al. (2018), and Setiawan and Mahardika (2019) show that profitability does not affect hedging decisions.

Another factor that can also influence hedging decisions is the company’s size. The larger the company's size, the higher its possibility of entering the global market, so it will face more significant risks. One way to deal with these risks is by hedging. Research from Guniarti (2014), Bodroastuti et al. (2019), and Anniyati et al. (2020) obtained the results that the size of the company affects hedging decisions. In comparison, the research results from Krisdian and Badjra (2017) showed that the size of the company did not affect hedging decisions.

This study analyzed the effect of managerial ownership, financial distress, leverage, liquidity, profitability, and size of the company on hedging decisions in mining companies listed on the IDX for 2016-2020. Indonesia is included among the ten largest mining-producing countries in the world. In 2021, Indonesia ranked as the 9th largest in the world after China, Russia, Australia, Canada, the United States, Ghana, Peru, and Mexico.

**Literature Review and Hypothesis Development**

**Hedging and Derivative Instruments**

Hedging is an action taken with the aim of protecting the company from exposure to exchange rate fluctuations (Madura, 2000:240). The way hedging works is the same as insurance, that is, if you experience a loss due to a certain risk, you will receive compensation from another contract. If in insurance, insurance is provided by the insurance company. At the same time, for hedging transactions on derivative instruments, other parties (counter parties) selling derivative contracts provide compensation. Meanwhile, according to Eiteman et al., (2016) hedging is a company’s activity to take a position to acquire an asset, contract, or derivative whose value will increase or decrease by offsetting an increase or decrease in value from the existing position. Brigham and Houston (2016:194-223) explain that derivatives are securities whose value is determined by the market value or interest rate of other assets. Derivatives consist of options, the value of which depends on the price of the underlying asset, forwards, futures and swaps.

**The hypothesis of Managerial Ownership (MO) and Hedging Decisions (HD)**

With the existence of management, who is also a shareholder of the company, it is hoped that it can improve the company's performance and increase the returns received by investors. According to Anniyati et al., (2020) managers will try to minimize the risks that occur so that companies do not experience unexpected losses, especially in international markets. One effort to minimize risk is through hedging. The higher the level of managerial ownership in a company, the higher the influence on hedging decisions. This is in line with the findings from Spircic and Sevic (2012), Bodroastuti et al., (2019), and Anniyati et al., (2020), who obtained the result that managerial ownership has a positive effect on hedging decisions. Based on this framework, the following hypotheses can be developed:

H1: Managerial ownership has a significant positive effect on hedging decisions
The hypothesis of Financial Distress (FD) and Hedging Decisions (HD)

One method of measuring financial distress is to use the Altman Z-Score calculation. If the results of the Z-Score analysis show a low number, then the company is experiencing financial difficulties and is threatened with bankruptcy. To reduce the problem of financial difficulties, companies are better off making hedging decisions. In addition, by making hedging decisions, the company will obtain certainty of the costs that must be incurred in the future. So when the value of Altman Z-Score decreases, it will encourage the company to hedge. It is known that the relationship between hedging decisions and Altman Z-Score values has a negative relationship (Guniarti, 2014).

The results of research conducted by Guniarti (2014), Mediana and Muharam (2016), and Sianturi and Pangestuti (2015) showed results that financial distress negatively affects hedging decisions. Based on this frame of mind, the hypothesis can be arranged as follows:

H2: Financial distress has a significant negative effect on hedging decisions.

The hypothesis of Leverage (Lev) and Hedging Decisions (HD).

According to Sartono (2017: 120), leverage shows the proportion of a company’s debt used to finance its investments. National and multinational companies use their capital to fund their activities and require additional money from external parties in debt. Apart from domestic loans, external capital also is obtained from foreign loans. An increase in the amount of debt will increase the risk faced by the company, so this condition requires financial managers to balance the amount of debt with the amount of capital itself. The higher the amount of debt held compared to its capital, the higher the possibility of the company hedging to avoid the risks posed by debt.

Sianturi and Pangestuti (2015) and Kurniawan and Asandimitra (2018) show that leverage positively affects hedging decisions. This also aligns with Windari and Purnawati’s (2019) findings that leverage positively affects hedging decisions. With this, it is obtained that the higher the level of debt of a company, the higher the level of hedging needs. Based on the findings, the following hypotheses can be compiled:

H3: Leverage has a significant positive effect on hedging decisions.

The hypothesis of Liquidity (Liq) and Hedging Decisions (HD).

According to Brigham and Houston (2016: 127), liquidity is a ratio that indicates the relationship between the company's cash and other current assets with its current liabilities. The more liquid the company’s condition, the smaller the risk of its failure to meet its short-term obligations to avoid the threat of financial difficulties. These conditions will impact the decline of hedging activities carried out by the company. On the other hand, liquid companies will have a more significant opportunity to develop their business. The funds owned will be used for activities other than hedging using derivative instruments (Guniarti, 2014).

Those statements are in line with the results of research from Ahmad and Haris (2012), Aditya and Asandimitra (2019), and Sasmita and Hartono (2019), which stated that liquidity hurts hedging decisions. Based on the findings, the following hypotheses can be compiled:

H4: Liquidity has a significant negative effect on hedging decisions.

The hypothesis of Profitability (Prof) and Hedging Decisions (HD).

According to Sartono (2017: 122), profitability is the company's ability to use its total assets and capital to earn profits. Companies with a high level of profitability tend to be faster in expanding their business. One of the goals of business expansion is to enter the international market. In addition to providing opportunities, global markets also present high threats and risks, potentially harming companies. Therefore, companies must always reduce risk by hedging (Jiwadhana and Triaryati, 2016).

The above statement is evidenced by the research conducted by Jiwadhana and Triaryati (2016) and Fransisca and Natsir (2019), which stated that profitability positively affects hedging decisions. Based on this frame of mind, the hypothesis can be arranged as follows:

H5: Profitability has a significant positive impact on hedging decisions.

The hypothesis of the Size of the Company (Size) and Hedging Decisions (HD).

According to Riyanto (2008: 313), the size of a company is a scale used to measure its size based on its total assets. Large companies certainly have broader operational activities compared to small companies. When companies of such large sizes enter the international market, they face more complex risks than in the domestic market. The higher the Firm Size of the company, the higher the chance it meets, so the higher the probability of the company implementing a hedging policy (Bodroastuti et al., 2019).

The findings from Anniyati et al. (2020) show that the company’s size has a positive influence on hedging decisions. This is in line with the results of Guniarti (2014) and Bodroastuti et al. (2019), which also show that the company’s size positively affects hedging decisions. Based on this frame of mind, the hypothesis can be arranged as follows:
H6: The company’s size significantly positively affects hedging decisions.

**Research Methods**

**Population and Sample**

The population in this study is mining sector companies listed on the Indonesia Stock Exchange (IDX) from 2016 to 2020. Samples were selected by purposive sampling method with the following criteria: (1) mining sector companies listed on the Indonesia Stock Exchange (IDX) during the period 2016-2020; (2) companies that submit financial statements continuously during the period 2016-2020; (3) companies that have transaction exposure (have debts and receivables in foreign currency) during the period 2016–2020.

**Data Types and Sources**

The data used in this study is secondary data. The data used in this study is in the form of financial statements and records of the company's financial information obtained from the official website of the Indonesia Stock Exchange (IDX), www.idx.co.id, and the official website of each company.

**Dependent Variables**

The hedging decision is the dependent variable. Hedging decision comprises contracts in futures and forward, swaps, and options. The proxy of the hedging decision is a dummy variable, 1 for the company uses derivative instruments to hedge and 0 otherwise.

**Independent Variables**

**Managerial Ownership (MO)**

MO is the percentage or proportion of shares owned by the management. The MO is formulated as follows:

\[ MO = \frac{\text{shares owned by the manager}}{\text{shares outstanding}} \times 100\% \]

**Financial distress**

Z-Score formulated by Edward I. Altman is implemented to measure financial distress. The Financial Distress is calculated based on the following rewrite formula:

\[ Z = 0.717 \frac{WC}{TA} + 0.847 \frac{RE}{TA} + 3.107 \frac{EBIT}{TA} + 0.420 \frac{BVE}{TL} + 0.998 \frac{S}{TA} \]

Where:

- WC = Working Capital
- TA = Total Asset
- RE = Retained Earnings
- EBIT= Earning Before Interest and Taxes
- BVE = Book Value of Equity
- TL = Total Liabilities
- S = Sales

**Leverage**

The leverage implemented to measure the capability of a company can meet all its obligations, proxied by the Debt to Equity Ratio (DER). The DER formula is as follows:

\[ \text{Debt to Equity Ratio} = \frac{\text{Total Debt}}{\text{Total Equity}} \]

**Liquidity**

According to Brigham and Houston (2016), a company’s liquidity is a ratio that indicates the relationship between its cash and other Current Assets (CA) and its Current Liabilities (CL). CR was calculated based on this formula:

\[ \text{Current Ratio} (CR) = \frac{CA}{CL} \]

**Profitability**

Profitability is an indicator that shows the company's ability to manage and utilize all its resources to make a profit. The Return on Asset (ROA) was calculated as follows.
Return On Asset = \( \frac{Earning \ After \ Tax}{Total \ Asset} \)

**Company size**

The company size is measured based on the natural log of total assets as follows:

\[
Firm \ Size = \text{Ln} \Total \ Assets
\]

**Data Analysis Methods**

**Logistic Regression Analysis (LRA).**

This study implemented LRA. According to Ghozali (2018), LRA is implemented to test whether the probability of the occurrence of a dependent variable can be predicted with its independent variable. This test determines the likelihood of a company "making hedging decisions" or "not making hedging decisions." The LRA can be expressed based on the following formula.

\[
\ln(Hedging) = \frac{\varphi}{1-p} + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5\text{LnX}_5 + \epsilon
\]

Where:

- Hedging= dummy variable, 1 for the company that is making the hedging decision, 0 otherwise
- \( X_1 \) = Managerial Ownership (MO)
- \( X_2 \) = Financial Distress (FD)
- \( X_3 \) = Debt To Equity Ratio (DER)
- \( X_4 \) = Current Ratio (CR)
- \( X_5 \) = Return On Assets (ROA)
- \( X_6 \) = Total Assets (TA) as the proxy of Company Size

**Results**

**Description of Samples**

The samples comprise twenty-seven samples that were selected from 135 listed companies in mining industries. Of the 27 samples, some companies hedged while the most did not hedge, as shown in Figure 1.

![Hedging Comparison](image)

**Figure 1: Hedging Comparison**

Table 1 shows that in 135 observation data, there is an average sample of companies that hedge as much as 35%. The managerial ownership variable shows an average value of 0.044 with a standard deviation of 0.129. The financial distress variable projected with the Altman Z-Score shows an average value of 1.848 with a standard deviation of 1.712.

<table>
<thead>
<tr>
<th>X</th>
<th>Number</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Standard. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>MO</td>
<td>135</td>
<td>0.000</td>
<td>0.663</td>
<td>0.044</td>
<td>0.129</td>
</tr>
<tr>
<td>FD</td>
<td>135</td>
<td>-4.777</td>
<td>5.826</td>
<td>1.848</td>
<td>1.712</td>
</tr>
<tr>
<td>DER</td>
<td>135</td>
<td>-15.817</td>
<td>24.849</td>
<td>1.137</td>
<td>4.157</td>
</tr>
<tr>
<td>CR</td>
<td>135</td>
<td>0.009</td>
<td>10.074</td>
<td>1.918</td>
<td>1.626</td>
</tr>
<tr>
<td>ROA</td>
<td>135</td>
<td>-1.538</td>
<td>0.456</td>
<td>0.047</td>
<td>0.183</td>
</tr>
<tr>
<td>LnTA</td>
<td>135</td>
<td>24.041</td>
<td>32.258</td>
<td>29.719</td>
<td>1.456</td>
</tr>
<tr>
<td>HEDGING</td>
<td>135</td>
<td>0</td>
<td>1</td>
<td>0.350</td>
<td>0.478</td>
</tr>
</tbody>
</table>
Logistic Regression Analysis (LRA)

Overall model fit

According to Hair et al., Agresti and Finlay (in Gio and Rosmaini, 2016: 231) if the -2log likelihood (-2 Log LH) statistic in the logistic regression model that uses a set of independent variables is smaller than the model that only uses constants, then the logistic regression model that uses a set independent variables are better at describing data than models that only use constants.

Table 2: Value -2 Log LH

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>-2 Log LH</td>
<td></td>
</tr>
<tr>
<td>Beginning (Block 0: Beginning Block)</td>
<td>174.511</td>
</tr>
<tr>
<td>End (Block 1: Method = Enter)</td>
<td>92.332</td>
</tr>
</tbody>
</table>

Table 2 shows the calculation of -2log LH in the starting block (block 0) of 174.511, which uses only constants. If an independent variable is inserted into the model, the value of -2log LH in the final block (block 1) is smaller than 92.332. This means that entering independent variables can improve the model and be more suitable and fit with the data.

Cox dan Snell’s R Square (C & S R²)

To find out how much influence the independent variables have in explaining the hedging decision variable, the Nagelkerke's R square value is used which is interpreted like the R² value in multiple regression.

Table 3: C & S R² Results

<table>
<thead>
<tr>
<th>Step</th>
<th>-2 Log-LH</th>
<th>C &amp; S R²</th>
<th>Nagelkerke R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>92.332</td>
<td>0.456</td>
<td>0.628</td>
</tr>
</tbody>
</table>

Based on the test results in Table 3, it shows that the value of Nagelkerke's R square is 0.628. This means that the ability of the six independent variables to influence hedging decisions is 62.8%. While the remaining 37.2% is explained by other variables outside the model.

The magnitude of The Statistics Hosmer and Lemeshow's Goodness of Fit Test value is 4.835 with a significant probability of 0.775, whose weight is more critical than 0.05, so H0 is accepted, means that the Logistic Regression Model can predict the value of its observations or the model matches its observation data and is worth using for subsequent analysis.

Classification Table (CT)

The CT table aims to determine the accuracy of independent variables in predicting hedging decisions.

Table 4: CT results

<table>
<thead>
<tr>
<th>Observed</th>
<th>Predicted</th>
<th>Percentage Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hedge</td>
<td>No Hedge</td>
<td>Hedge</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 1</td>
<td>Hedge</td>
<td>81</td>
</tr>
<tr>
<td></td>
<td>No Hedge</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Hedge</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td></td>
<td>36</td>
</tr>
<tr>
<td>Overall Percentage</td>
<td></td>
<td>86.7</td>
</tr>
</tbody>
</table>

Based on Table 4, the prediction of observations that do not require a hedge is as much as 88. Then, the observation prediction that hedges as many as 47. The model’s overall accuracy in predicting a company's hedging decisions is 86.7%.

Hypothesis Test

This test is used to identify whether there is an influence between the independent variables (managerial ownership, financial distress, leverage, liquidity, profitability, and company size) on the dependent variable (hedging decision).

Table 5: Logistic Regression Equation (LRE) Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MO</td>
<td>0.861</td>
<td>0.002</td>
</tr>
<tr>
<td>FD</td>
<td>1.064</td>
<td>0.022</td>
</tr>
<tr>
<td>DER</td>
<td>-0.074</td>
<td>0.296</td>
</tr>
<tr>
<td>CR</td>
<td>-1.289</td>
<td>0.014</td>
</tr>
<tr>
<td>ROA</td>
<td>-0.502</td>
<td>0.900</td>
</tr>
<tr>
<td>Size</td>
<td>1.568</td>
<td>0.000</td>
</tr>
<tr>
<td>Constant</td>
<td>-48.169</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Based on the analysis results in Table 5, the LRE logistics regression can be formulated as follows.
Hedging = \frac{P}{1-P} \cdot 48.169 + 0.861MO + 1.064FD - 0.074DER - 1.289CR - 0.502ROA + 1.568Size

The LRE results show that the six variables that significantly affect hedging decisions are managerial ownership, financial distress, liquidity, and the company’s size, with a 5% confidence level. The variable leverage and profitability do not affect hedging decisions because they are insignificant.

**The influence of Managerial ownership (MO) on Hedging Decisions (HD)**

The MO variable of the regression coefficient value is 0.861, with a significance value of 0.002 < 0.05. This means that MO variable is positive and significantly affects HD. The analysis results suggest that H1 is accepted. The results of this study are consistent with the results of research from Anniyati et al. (2020), Bodroastuti et al. (2019), and Sprcic and Sevic (2012) who stated that MO has a significant positive effect on HD.

Companies operating globally will face more significant risks that can harm the company and lower the reputation of management and the returns received by investors. Therefore, the risk management applied must be better. Managers who also act as shareholders can support better risk management efforts. The company will have better control over the shares owned by the management. The manager will try to protect the company from various risks while protecting its investment, then the Companies with high MO are more likely to hedge to keep the company from danger.

**Effect of Financial Distress (FD) on Hedging Decisions (HD)**

The results of logistic regression testing show that the coefficient value of FD is 1.064, significance at α 5%. Then the FD is positive and significantly affect on hedging decisions. The analysis results contradict the Hypothesis 2 (H2), that FD variables significantly adversely impact hedging decisions, so H2 is rejected. The results of this study support the research from Krisdian and Badjra (2017) and Aditya and Asandimitra (2019), which stated that financial distress has a significant positive effect on hedging decisions. However, the results of this study are not consistent with Sprcic and Sevic (2012), Bodroastuti et al. (2019) that stated that FD does not affect HD.

This study indicates that companies tend to take hedging steps when the company does not experience financial distress or are still in a safe state. Researchers suspect the relationship between financial distress and hedging decisions is positive because companies with safe conditions continue to hedge to prevent bankruptcy, so the increasing value of Z-Score will increase the possibility of companies hedging. Risk management practices will be better and more profitable for the company. Since hedging is done when the company has experienced financial distress, it will be more challenging. It will increase its financial burden because hedging also requires enormous costs. Companies in a state of financial distress are better off making improvements in terms of managerial rather than hedging by replacing management because new management is expected to improve the company's condition.

**The effect of Leverage (Lev) on Hedging Decisions (HD).**

The regression coefficient of Lev is -0.074 with a sig value of 0.296 > 0.05, which means that H3 is rejected because there is no effect between Lev on HD. These results support Ahmad and Haris (2012), Mediana and Muharam (2016), and Utami et al. (2018) that leverage variables do not affect hedging decisions.

The probable explanation for this finding is that high leverage ratio does not have a significant risk impact. When balanced with good management, a high level of debt is expected to increase the company's profit to pay off the debt and increase the return investors receive. In addition, high levels of debt can also be beneficial for tax deductions due to increased interest expense. With this, high debt levels do not affect hedging decisions.

**The effect of Liquidity (Liq) on Hedging Decisions (HD)**

The regression coefficient of Liq is -1.289 with a sig. value of 0.014 (less than 0.05), suggests that Liq variable negatively and significantly affects HD. Based on this result, H4 is accepted because liquidity variables significantly adversely impact hedging decisions. The result supports Ahmad and Haris (2012), Aditya and Asandimitra (2019), and Sasmita and Hartono (2019), which stated that liquidity has a negatively significant effect on HD.

The level of Liq indicates the ability of the company to meet its short-term obligations. The higher the Liq, the better it can meet its short-term obligations to avoid liquidity risks. In addition, the company also has a sufficient level of working capital to meet the operational company’s activities. With these conditions, the need for hedging decreases. Liquid companies can use their funds for activities other than hedging, such as business expansion.

**The effect of Profitability (Prof) on Hedging Decisions (HD).**

Based on the statistical test result, the regression coefficient of Prof variable is -0.502 with a sig. value of 0.900 > 0.05, means that H5 is rejected because the Prof variable does not affect HD. The results are consistent with Kurniawan and Asandimitra (2018) and Utami et al. (2018) that profitability variables do not affect hedging decisions. Unlike the research results from Jiwadhana and Triaryati (2016), Fransisca and Natsir (2019) showed that profitability variables significantly positively affected hedging decisions. The difference in the results of this study occurs because the risks caused by increased profitability can be anticipated by doing natural hedging. This study supports Setiawan and Mahardika (2019).
One of the things that cause profitability not to affect hedging decisions is that many companies have done natural hedging that comes from sales and costs in the same currency. These conditions resulting in every company's currency value do not significantly impact the company because all matters related to the company's finances will change. In addition, the company's profits can be used to pay dividends to shareholders. The company can also use its profits as reserve funds in the form of profit balances so that it does not require hedging.

**The Effect Size of the Company (Size) and Hedging Decisions (HD).**

The Size has a positive regression coefficient of 1.568 with a sig. value of 0.000 (less than 0.05). This result suggests that Size significantly positively affects hedging decisions. The analysis results support the sixth hypothesis, which means H6 is accepted. The study supports Anniyati et al. (2020), Bodroastuti et al. (2019), and Guniarti (2014), who stated that the company's size significantly positively affects hedging decisions.

The larger the size of the company, the broader operational activity and the greater possibility of entering the international market, so the risks faced are higher. The company will use a lot of various currencies in each transaction and likely also have to bear different interest rates. To reduce the negative impact of multiple risks that may arise, companies can overcome them by making hedging decisions using derivative instruments. Large companies also have more resources and knowledge to use derivative instruments than small companies.

**Conclusions**

This study implements logistic regression to test several factors influencing Hedging Decisions (HD). The factors comprise Managerial Ownership (MO), Financial Distress (FD), Leverage (Liq), Profitability (Prof), and Company Size (Size). MO variable significantly positively affects hedging decisions. This result suggests that the higher the MO, the probability of HD is higher.

FD variable that is proxied by the Z score has a positive impact on HD. The greater the Z score indicates, the smaller the company is predicted to experience distress. The significant positive regression coefficient indicates that the smaller the possibility of distress, the higher the influence on HD. Then, there is a negative impact between FD and HD. Lev variables do not affect hedging decisions. One of the possible explanations that the hypothesis is rejected is that high debt levels can also benefit tax deductions due to increased interest expense. With this, high debt levels do not affect HD.

Liq variables have an adverse effect on HD. These results indicate that if the company is more liquid, then it is less likely to experience distress. The implication is that companies that are less liquid should hedge. Prof variables do not affect hedging decisions. One of the possible explanations is that many companies already hedge naturally, originating from sales and costs in the same currency.

The size has a positive impact on HD, suggesting that if the company’s size is larger, then the possibility of HD is higher. Large-sized companies will have higher opportunities for expansion, including entering international markets and using different currencies for transactions and interest rates. The risk from using multiple currencies and interest rates can be reduced by hedging.

For the limitations of this study, some suggestions can be conveyed: first, the subsequent research is expected to increase the sample used for analysis to obtain more accurate results. Second, researchers are expected to add other variables suspected of affecting hedging decisions to better explain the factors that can influence hedging decisions.

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**References**


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