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THE INFLUENCE OF FIRM SIZE, LEVERAGE AND PROFITABILITY ON HEDGING DECISIONS IN COMPANIES REGISTERED CONSUMPTION GOODS INDUSTRY ON BEI FOR THE 2021-2022 PERIOD

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Abstract

International trade activities cannot be separated from various risks that may arise in its operations. The risk that often arises in companies that carry out international trade is fluctuating foreign exchange rates. One way to deal with foreign exchange rate risk is by hedging. The aim of this research is to determine the influence of firm size, leverage and profitability on company hedging decisions. This type of research uses quantitative research. The sample is companies in the Consumer Goods Industry Sector listed on the Indonesia Stock Exchange for the 2021-2022 period which were selected using a purposive sampling technique. The data collection method documentation uses methods sourced from the company's official website. The data analysis technique uses logistic regression analysis. The research results show 1) there is no significant influence between firm size on the company's hedging decisions, because the sig value is $0.221 > 0.05$; 2) there is no significant influence between leverage and the company's hedging decisions, because the sig value is $0.262 > 0.05$; and 3) there is a significant influence between profitability and the company's hedging decisions, shown by a sig value of $0.002 < 0.05$.

Keywords: Firm Size, Leverage, Profitability, Company's Hedging Decisions.

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INTRODUCTION

The economic situation in Indonesia shows better development than the previous year. Not a few industries were founded to meet needs. one of them is an industry that operates in the field of consumer goods. The consumer goods industry is part of the industrial sector and has an important role in the economy, because it produces products that society needs. In carrying out these company activities, quite a few companies in the consumer goods industry sector carry out international trade activities. In carrying out international trade, it will be related to the use of foreign currency in its operations, for example raw material import activities, export activities of industrial products, purchasing machinery and so on. These activities automatically use foreign currency, whether carried out in cash or debt. Not a few manufacturing companies have debt and receivable transactions in US Dollars. Among them, PT Indofood Sukses Makmur Tbk, in 2020 had receivables from foreign customers of 1,987,178 (in millions of rupiah) and debts with

foreign suppliers of 441,792 (in millions of rupiah). PT Ultrajaya Milk Industry & Trading Company Tbk in 2020 had trade receivables in US Dollars amounting to 5,088.

International trade activities cannot be separated from various risks that can arise in their operations. This risk arises because international trade involves the exchange of foreign currencies, and the value of foreign currencies themselves often fluctuates. Hanafi and Halim (2018) stated that the higher the fluctuations, the higher the level of uncertainty.

The risk that often arises in companies that carry out international trade is fluctuating foreign exchange rates. Differences in exchange rates are caused by fluctuations in the exchange rate of the Indonesian currency for foreign currencies during international trade. One way to deal with foreign exchange rate risk is by hedging. Fahmi (2017) explains that risk management is how organizations group problems by using various comprehensive and systematic management approaches. Risk management can be interpreted as how a company manages risks by placing them with various approaches in order to minimize losses resulting from possible risks that occur, namely by transferring risks, namely by hedging, so risks can be minimized.

Factors from within the company are factors related to the company's financial condition. Aspects from within the company that have an impact on decision making on company hedging activities include growth opportunities, leverage, profitability, liquidity, and firm size (Dewi, 2023; Sholekhah et al., 2021). This research will focus on firm size, leverage and profitability factors.

The size of the company can have an impact on the ease with which the company can obtain funding sources, both external and internal. Company size can also create barriers for companies to enter a particular industry. Large companies are also very careful in managing the company and will carry out higher hedging activities than small companies. This condition is caused by large companies carrying out operations across many countries, thereby involving various different foreign currencies. This activity creates a risk of fluctuating exchange rates (Guniarti, 2014).

Bonita's research (2019) shows that firm size influences hedging decisions positively. Saraswati and Suryantini (2019) also show that firm size influences hedging decisions positively. However, Rinanti (2018) in his research shows that company size does not affect hedging activities.

Muslim and Puryandani (2019) in their research show that leverage influences hedging decisions. Bonita's research (2019) also proves that leverage influences hedging decisions. Different results were found by Zahra and Tjahjono (2020) which prove that leverage does not influence hedging decisions.

Yavas's (2016) research shows that profitability influences hedging decisions positively. Saraswati and Suryantini's (2019) research shows that profitability influences hedging decisions positively. However, different results were obtained by Rinanti (2018) in his research which proved that profitability had a negative influence on hedging decisions. Ariani and Sudiarta (2017) also prove that profitability has a negative and insignificant effect on hedging decisions.

Based on the background that has been explained. The aim of this research is to determine the influence of firm size, leverage and profitability on company hedging decisions.

THEORETICAL BASIS

Hedging is the behavior of protecting a company in order to avoid or minimize the risk of losses experienced in foreign exchange caused by business transactions (Zahra and Tjahjono, 2020). Hedging is a company activity to reduce or minimize the effects of changes in currency exchange rates when the company will transact business in

international trade. Hedging transfers risk to other parties who are better at managing risk (Hanafi and Halim, 2018). Hedging activities carried out by companies can minimize the risk of changes in currency exchange rates that are too large, because they can result in losses for the company. Hedging is defined as a company's protective action to avoid or minimize the risk of suffering losses related to foreign exchange due to business transactions (Guniarti, 2014). The value of foreign exchange obtained in the future is not determined by foreign exchange rates which often change if hedging is used as a financial strategy (Muslim & Puyandani, 2019).

Hedging actions are carried out using derivative instruments and in the use of derivative instruments there are several factors that influence the use of hedging. This condition causes not all companies to decide to take hedging action. The company can minimize the risk of foreign exchange transactions by making sacrifices, namely by paying costs due to implementing hedging. The company evaluates what aspects within the company influence the decision to hedge (Bonita, 2019). Derivative instruments consist of futures contracts, forward contracts, options and swaps contracts (Muslim & Puyandani, 2019).

Firm size is defined as the grouping of issuers as seen from total assets or sales into categories of large companies or small companies (Krisnando & Novitasari, 2021; Khoirunnisa, 2022; Jaya, 2020). A company with a large size means that its activities will also be wider and therefore have higher risks, which ultimately influences the company to choose a hedging policy to avoid risk (Saraswati & Suryantini, 2019).

Leverage is defined as a ratio that describes whether or not a company is able to fulfill its debt, whether long-term or short-term (Ariani & Sudiartha, 2017). The high level of debt owned by companies generally has or is facing difficult financial conditions so they have to choose hedging policies when economic conditions decline. High leverage also makes it difficult for businesses to obtain new loans because lenders do not feel confident that the company can fulfill its obligations with the assets it owns. If a company wants to expand its business, it will require large costs, so the company can borrow funds from foreign debt. On the other hand, borrowing funds from foreign debt in large amounts will create risks, namely the risk of changes in currency exchange rates, so to reduce this risk issuers need to hedge. Companies that use too much debt in managing their finances will experience problems related to paying off debt and interest. Companies that have high leverage show that the issuer is facing difficult problems in managing its finances (Muslim and Puyandani, 2019).

Profitability is defined as a ratio that describes the company's ability to earn profits. Companies that have high profits are assumed to have good performance, it is possible that the company will not choose hedging decisions. However, companies with low profits are assumed to perform less well, so it is possible that they will choose hedging decisions to minimize the risk of exchange rate fluctuations (Yavas, 2016).

Profitability is a ratio that measures whether or not the issuer is able to make a profit from sales, total assets and own capital. Ismawati and Nuswantara (2014) stated that profitability is an appropriate measuring tool for banking performance. The profitability ratio is a ratio that aims to see the company's effectiveness in managing its sales and investments to obtain overall profits. Profitability also means whether or not a company is able to make a profit in relation to sales, total assets or equity (Anisa and Airawaty, 2017). For investors, profitability is still the best measuring tool, because profitability describes the financial health condition of the company.

RESEARCH METHOD

The type of research is quantitative research. The sample used was Consumer Goods Industry Sector companies listed on the Indonesia Stock Exchange for the 2021-2022 period with a total of 43 companies selected using a purposive sampling technique. This type of data uses secondary data sourced from the company's official website. The data collection technique uses the documentation method. The data analysis technique uses logistic regression analysis.

The hedging decision variable is measured using a dummy variable. The value 1 is for companies that implement hedging decisions and the value 0 for companies that do not implement hedging decisions. Firm size is measured by the natural logarithm of total assets.

The leverage ratio is proxied by the Debt to equity ratio. The formula:

$$DER = \frac{TH}{MS} \times 100\%$$

Information:

DER = Debt to equity ratio

TH = Total debt

MS = Own capital

Profitability is proxied by return on assets (ROA), the formula is

$$ROA = \frac{EBIT}{TA} \times 100\%$$

Information:

ROA = Return on Assets

EBIT = Earnings before interest and tax

TA = total assets

RESULTS AND DISCUSSION

Descriptive Statistics

Table 1. Descriptive Statistics

| Variable | Minimum | Maximum | Mean | Std. Deviation |
|----------------------|---------|---------|-------|----------------|
| <i>Firm size</i> | 11.58 | 30.73 | 15.93 | 3,974 |
| <i>Leverage</i> | 0.11 | 13.55 | 1.07 | 1,578 |
| <i>Profitability</i> | -27.93 | 30.19 | 5.46 | 10,067 |

Source: Processed Secondary Data

Table 1 shows the average value of the firm size variable is 15.93 with a standard deviation of 3.974. This means that the standard deviation value is less than the average value. This shows that the firm size variable data has low variability, meaning that the data is grouped around the average value and the deviation is small. The leverage variable proxied by DER has a mean of 1.07 with a standard deviation of 1.578. This means that the standard deviation value is more than the average value. This shows that the leverage variable data has high variability, meaning that the data is spread far from the average value and the deviation is large. The profitability variable is proxied by ROA, has a mean value of 5.46 with a standard deviation of 10.067. This shows a standard deviation that is more than the average value. This means that the profitability variable data has high

variability, meaning the data is spread far from the average value and the deviation is large.

Table 2. Hedging Decisions

| | 2021 | 2022 |
|-------------------|------|------|
| Hedging (1) | 3 | 3 |
| Not hedging (0) | 40 | 40 |
| Number of samples | 43 | 43 |

Source: Processed Secondary Data

Table 2 shows that during the 2021 period, of the 43 companies in the sample, there were 3 companies that carried out hedging. The companies are PT Unilever Indonesia Tbk with derivative instruments in the form of forward contracts, PT Multistar Indonesia Tbk with futures contracts and PT Sunindo Adiperkasa Tbk with forward contracts. Likewise, the same thing applies in the 2022 period.

Logistic Regression Test Model Feasibility Testing (Goodness of Fit)

Table 3. Hosmer and Lemeshow Test Results

| Step | Chi square | df | Sig. |
|------|------------|----|-------|
| 1 | 9,590 | 8 | 0.295 |

Source: Processed Secondary Data

Table 3 shows a chi square value of 9.590 and a significance value of $0.295 > 0.05$, meaning that the prediction results and observation results are not different. This means that the regression model is feasible because the model matches the observation results.

Assessing the Overall Model (Overall Model Fit)

Table 4. Initial -2LL Values

| Iteration | -2 Log likelihood | Coefficients |
|-----------|-------------------|--------------|
| | | Constant |
| Step 0 1 | 48,959 | -1,721 |
| 2 | 43,845 | -2,358 |
| 3 | 43,525 | -2,569 |
| 4 | 43,522 | -2,590 |
| 5 | 43,522 | -2,590 |

Source: Processed Secondary Data

Table 4 shows the initial -2LL values which only contain constants. The initial -2LL value is 43.522. This initial -2 LL value will later be compared with the final -2LL value. If there is a decrease in the -2LL value then the regression model is good.

Table 5. Final -2LL Value

| Iteration | S | -2 Log likelihood | Coefficients | | | |
|-----------|--------|-------------------|--------------|-------|-----|-----|
| | | | Con stant | x1 | x2 | x3 |
| tep 1 | 1 | 44,013 | - | - | 0.0 | 0.0 |
| | 2 | 33,497 | 1,527 | 0.032 | 94 | 39 |
| | | | - | - | 0.1 | 0.0 |
| | 3 | 30,464 | 1,885 | 0.086 | 84 | 94 |
| | | | - | - | 0.2 | 0.1 |
| | 4 | 29,672 | 1,341 | 0.182 | 36 | 41 |
| | | | 0.39 | - | 0.2 | 0.1 |
| | 5 | 29,529 | 5 | 0.330 | 59 | 65 |
| 1,81 | | | - | 0.2 | 0.1 | |
| 6 | 29,525 | 2 | 0.441 | 78 | 76 | |
| | | 2,05 | - | 0.2 | 0.1 | |
| 7 | 29,525 | 8 | 0.461 | 83 | 78 | |
| | | 2,06 | - | 0.2 | 0.1 | |
| 8 | 29,525 | 4 | 0.462 | 83 | 78 | |
| | | 2,06 | - | 0.2 | 0.1 | |
| | | | 4 | 0.462 | 83 | 78 |

Source: Processed Secondary Data

Table 5 shows the initial -2LL value of 43.522, while the final -2LL value is 29.525. The difference between the initial -2LL value and the final -2LL is 13.997 which is in line with the chi square value distribution of 13.997, as seen in the Chi Square table below.

Table 6. Comparison of -2LL Values

| | | Chi-square | df | Sig. |
|-------|------|------------|----|------|
| tep 1 | S | 13,99 | 3 | ,00 |
| | lock | 13,99 | 3 | ,00 |
| | odel | 13,99 | 3 | ,00 |
| | | 7 | 3 | |

Source: Processed Secondary Data

Table 6 shows a comparison of the initial -2LL values with the final -2LL values. The initial -2LL figure (Table 4) is greater than the final -2LL figure (Table 5), meaning that the regression model shows a good regression model.

Coefficient of Determination

Table 7. Coefficient of Determination

| Step | -2 Log likelihood | Log Cox & Snell R Square | Nagelkerke R Square |
|------|-------------------|--------------------------|---------------------|
| 1 | 29,525 | 0.150 | 0.378 |

Source: Processed Secondary Data

The table above shows the Nagelkerke R Square value of 0.378, which means that the variability of the hedging decision variable can be explained by the firm size (X1), leverage (X2), and profitability (X3) variables of 37.8%, and the remaining 62.2% is explained by other variables outside this research model.

Cross Tabulation Table

Table 8. Cross Tabulation

| Observation | | Prediction | | Perc centage |
|---------------------------|-------------|-----------------|---------|-----------------|
| | | Non- hedging | hedging | |
| Hedging decisions | Non-hedging | 80 | 0 | 100.0 |
| | hedging | 3 | 3 | 50.0 |
| amount | | 83 | 3 | 86 |
| <i>Overall percentage</i> | | | | 96.5 |

Source: Processed Secondary Data

Table 8 above shows that according to predictions there are 80 companies that do not hedge, and observation results also show that there are 80 companies. So the classification accuracy is 100.0%. Meanwhile, the prediction results show that there are no companies that are hedging, while the observation results show that there are 3 companies that are hedging. So the classification accuracy is 50.0% or the overall classification accuracy is 96.5%.

Testing Hypotheses

Table 9. Wald test

| | | B | S.E | Wald | df | Sig. (B) | Exp |
|---------|----------|-------|-------|-------|----|----------|-----|
| Step 1a | x1 | -.462 | .378 | 1.495 | 1 | .220 | .63 |
| | x2 | .283 | .255 | 1.207 | 1 | .269 | 1.3 |
| | x3 | .178 | .057 | 9.378 | 1 | .003 | 1.1 |
| | Constant | 2.064 | 5.179 | .151 | 1 | .697 | 7.8 |
| | | 64 | 75 | 9 | 0 | 79 | |

Source: Processed Secondary Data

From Table 9, the logit regression equation can be prepared:

$$\ln = 2.064 - 0.462X_1 + 0.283X_2 + 0.178X_3 \frac{p}{1-p}$$

The regression equation above can be explained as follows:

$\alpha = 2.064$, if firm size, leverage and profitability are constant, then hedging decisions will likely increase by 2.064.

$\beta_1 = -0.462$, if the firm size variable (X1) increases by one unit, it will reduce the possibility of making a hedging decision by 0.462 assuming there is no change in the other variables.

$\beta_2 = 0.283$, if the leverage variable (X2) increases by one unit, it will increase the possibility of making a hedging decision by 0.283 assuming there is no change in the other variables.

$\beta_3 = 0.178$, if the profitability variable (X3) experiences an increase of one rupiah, it will increase the possibility of making a hedging decision by 0.178 assuming there is no change in the other variables.

Table 9 also shows the partial test results, where the sig value of the firm size variable is $0.221 > 0.05$, meaning there is no significant influence between firm size and hedging decisions. This shows that hedging decisions are not only made by large-scale companies, but also small-scale companies, with the aim of avoiding losses due to transactions carried out by the company. In accordance with the regulations issued by the Minister of BUMN which states that all state-owned companies in Indonesia, both large-scale companies and small-scale companies, are required to carry out hedging. Thus, company size is not the main factor for an issuer to implement hedging decisions. Rinanti's (2018) research supports this research where the results prove that company size does not influence hedging activities. Due to the high total assets of an issuer, the issuer does not have a tendency to use derivative instruments, but prefers to use excess liquidity to absorb unpredictable changes in risk from international trade transactions.

The sig value of the leverage variable is $0.262 > 0.05$, meaning there is no significant influence between leverage and hedging decisions. This shows that companies that realize company goals by using debt have no influence on hedging activities. This situation is because most companies have domestic debt or the company only has a small amount of foreign debt, which causes the company not to need protection from foreign exchange exposure (Rinanti, 2018). Research by Zahra and Tjahjono (2020) supports the results of this research where the results show that there is no influence between leverage on hedging decisions. This is also in accordance with research by Rinanti (2018) which shows that leverage does not have a positive effect on a company's hedging activities

The sig value of the profitability variable is $0.002 < 0.05$, meaning there is a significant influence between profitability and hedging decisions. Profitability is a ratio that describes whether a company is able to make a profit. A company with a high ROA shows that the company is able to gain profits from the company's operational activities and can minimize costs because it is able to manage assets effectively. Companies that have high profitability can generally expand their business quickly. On the other hand, the international market, which has a dynamic nature, can encourage losses due to transactions carried out by companies in large numbers, so that the risks accepted by issuers are greater. This high risk encourages issuers to implement hedging when expanding the market. The research results are in accordance with Yavas's (2016) research that profitability influences hedging decisions positively. Saraswati and Suryantini's (2019) research also shows that profitability influences hedging decisions positively.

CONCLUSION

The conclusions of this research are first, there is no significant influence between firm size on the company's hedging decisions. Second, there is no significant influence between leverage on the company's hedging decisions. Third, there is a positive influence between profitability on the company's hedging decisions. The suggestion that can be conveyed is that the results of this research show that profitability influences hedging decisions. Therefore, it is hoped that companies, when determining policies related to

hedging, will pay attention to the company's profitability factors. Apart from that, the next research is expected to increase the research period. Apart from that, future research is expected to add other company sectors, for example the manufacturing sector, so that the research results can be generalized more widely.

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