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The Effect of Leverage, Managerial Ownership, And Dividend Policy On Hedging Decisions In Manufacturing Companies

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ABSTRACT : *Companies that have risks due to exchange rate fluctuations need to manage these risks, one of which uses hedging with derivative instruments. The use of hedging with derivative instruments can reduce exposure to the exchange rate so that it does not interfere with the value of the company's assets and liabilities. This study aims to determine the effect of leverage, managerial ownership, and dividend policy on hedging decisions with derivative instruments. This research was conducted at manufacturing companies on the Stock Exchange in the 2016-2018 period with 133 companies as sample. Logistic Regression Analysis was used. Leverage and managerial ownership have negative but not significant effect on hedging decisions with derivative instruments, while dividend policy has a significant positive effect on hedging decisions with derivative instruments. Companies with high dividend payout ratios can hedge if the company has exposure to changes in exchange rates.*

Keywords *-leverage, managerial ownership, dividend policy, hedging*

I. INTRODUCTION

The company in carrying out its activities is not free of risk. The risk arises because of the uncertainty. In running a company's operations, managers will often be exposed to risks such as market risk, liquidity risk, credit risk and operational risk. The risk is vulnerable for companies engaged in the national sphere, but for companies that have expanded their business internationally such as exporting and importing, of course, the risk of companies will increase. The risk is increased because of differences between countries. According toGuniarti (2015)these differences can be seen from culture, law, to currency. One risk for companies that carry out international transactions is the risk due to changes in exchange rates or what is often referred to as currency risk or exchange rate risk.

Changes in exchange rates will create exchange rate risk. Exchange rate risk is the risk of loss when an appreciation or depreciation of a foreign currency occurs due to an open position. Exchange risk for companies conducting international transactions will be one of the biggest risks because companies cannot control the fluctuation in the exchange rate. The way that can be done to anticipate risks due to exchange rate fluctuations is by hedging policies(Tiwari, 2019). Hedging is an effort that can be done to protect companies against exchange rate exposures. Exchange rate exposure is how big the impact of exchange rate fluctuations on the company. Exposures to changes in exchange rates can be divided into several types, namely accounting exposures, economic exposures and transaction exposures.

Accounting exposure arises when a company prepares consolidated financial statements of all of its subsidiaries that are spread across various countries. Economic exposure is the rate of change in the present value caused by changes in cash flow, due to unexpected changes in foreign exchange rates. Transaction exposure measures the changes that occur in the transaction value of both sales and purchases. Transaction exposures include differences in currency values when the transaction is agreed upon and when the transaction is carried out

Indonesia as one of the countries that has quite high exchange rate fluctuations. The rupiah exchange rate (IDR) often depreciates against the US dollar (USD). That is because Indonesia uses a free floating rate system so that the rupiah (IDR) always fluctuates due to internal or external factors and government macroeconomic policies (Ariani & Sudiartha, 2017). The exchange rate of the rupiah against the dollar fluctuates and tends to weaken. In 2014 the exchange rate of the rupiah against the dollar was in the range of IDR 11,000-Rp 12,000 per one US dollar. In October 2015, the rupiah exchange rate against the dollar was very weak, reaching IDR 14,700 per one US dollar. In 2016 to 2017 the exchange rate of the rupiah against the dollar began to strengthen again at around IDR 13,000 per one US dollar. In 2018, the exchange rate of the rupiah against the dollar weakens again to reach IDR 14,350 per one US dollar.

The condition of the rupiah exchange rate which often fluctuates and tends to weaken during the last four years is very vulnerable for manufacturing companies in Indonesia who rely on raw materials from abroad. Purchasing raw materials can be done in cash or credit. Purchases made in cash certainly will not be exposed to exchange rate risk, but transactions made on credit will be vulnerable to exchange rate risks due to the weakening of the rupiah. Companies that carry out foreign transactions on credit need to do hedging to lock in future exchange rates so as not to incur losses due to rising debt costs when the rupiah depreciates against foreign currencies.

Hedging is a strategy to reduce business risk, one of which is exposure to changes in exchange rates. According toIsmiyanti & Sasmita (2011)revealed that hedging policy with derivative instruments is one way to reduce the risk of foreign exchange fluctuations. The importance of using derivative instruments has been felt by every economic actor throughout the world and is a hedging tool that is widely accepted by companies (Sahoo, 2016).

Hedging strategies using derivative instruments become one of the alternative capital markets that can be used. Hedging with derivative instruments has proven to be the most popular hedging technique since its use continues to increase. Many non-financial companies have managed business and financial risks with the use of derivatives (Nguyen, 2018). Derivatives are contracts for the sale and purchase of goods between two parties in the future at an agreed price at the moment. There are various types of derivative instruments, namely options, futures contracts, forward contracts, and swaps. Hedging activity with derivative instruments tends to increase in recent years. This was driven by the increasing trend of using foreign currency debt as a source of corporate funding (Nyamweya &Ali, 2016).

Companies with fast and rapid growth rates will rely more on external funding sources (debt) compared to companies that have a slow growth rate. Most companies finance business activities and carry out long-term debt in foreign currencies (Ahmad et al., 2017). The use of foreign currency debt as a source of external funding for the company is indeed very popular, but the use of foreign currency debt also adds to the risk for the company. Companies must provide sufficient cash in foreign currencies to pay interest costs and obligations when due, so that exposure to the exchange rate will increase. If significant foreign exchange fluctuations occur in the future, the company will have difficulty meeting its obligations, so the company is advised to hedge to reduce the risk.

The hedging company, besides being influenced by exchange rate risk, is also determined by the company's internal factors(Sasmita & Hartono, 2019). Some researchers have conducted studies on the determinants of hedging decisions, including leverage (Astyrianti & Sudiartha, 2017; Saraswati & Suryantini, 2019), managerial ownership (Ameer, 2010; Korkeamäki *et al*., 2016; Butt *et al*., 2018), and dividend policy (Iqbal, 2015; Korkeamäki *et al*., 2016; Vural-Yavas, 2016)

Research conducted bySaraswati & Suryantini (2019)found that debt ratios (leverage) have an influence on hedging decisions. A high debt ratio causes an increase in company risk so that the use of hedging will also increase. These results indicate that leverage has a positive and significant effect on hedging decisions. The results of the study are relevant toWei *et al*. (2017), Bhagawan & Lukose (2017), Krisdian and Badjra (2017), Windari & Purnawati (2019), Hidayah & Prasetiono (2016).

Research conducted by Gilje & Taillard (2017), Widyagoca & Lestari (2016), Ayuningtyas & Warsini (2019)find the opposite results. Researchers found that the higher the leverage the lower the use of hedging, it means that leverage has a significant negative effect on hedging decisions. A high corporate leverage ratio may not necessarily have an impact on large risks. If the increase in interest costs does not exceed the increase in income from the use of external funds (leverage increases), the leverage ratio does not result in a large risk. The use of debt as the leverage of the company leads to an increased leverage ratio, increasing leverage is also useful to reduce corporate taxes due to increased interest costs. Based on this description, increasing leverage can reduce the probability of a derivative hedging decision.

Managerial ownership is the ownership of company shares by the company's management. Managers who are also shareholders certainly expect profits from the ownership of these shares, therefore managers will maximize company profits and minimize company risks. The higher managerial ownership, the company will increasingly maximize its company performance, including in managing the possibility of risks experienced by the company. Companies that are exposed to the exchange rate will be vulnerable to risks due to changes in the exchange rate, so companies can do hedging to reduce these risks.

Research conducted byButt *et al*. (2018) found that a high percentage of managerial ownership would improve risk management through hedging using derivative instruments. These results indicate that managerial ownership has a significant positive effect on hedging decisions. The same research results were also found by Ameer (2010), Bettis *et al*. (2015), Korkeamäki *et al*. (2016), Wei *et al.* (2017), andLee (2019).

Research conducted by Ahmad & Haris (2012), Seng *et al.* (2018)found that managerial ownership had a negative and significant effect on hedging decisions. Increased managerial ownership will reduce the use

of hedging by companies. Stocks owned by managers are worth more if the company is at higher risk, so managers get a smaller incentive when reducing the risk faced by their company.

Dividend policy is also a determining factor for hedging decisions. Dividend policy is the company's financial decision after receiving profits from the company's operational activities. The company will consider what proportion of net income will be paid to investors and what proportion of net income will be reinvested in the company. The higher the dividend payout ratio, the company will have a limited availability of funds so the company is likely to experience financial difficulties in the future. Companies that are exposed to exchange rates and have limited availability of funds will hedge to minimize exchange rate risk. Research conducted byVural-Yavas (2016)found that high dividend payout ratios resulted in increased financial difficulties, the possibility of hedging companies also increased. These results indicate that dividend policy has a positive and significant effect on hedging decisions. These results are consistent with research conducted by Iqbal (2015) and Korkeamäki *et al*. (2016).

Research conducted by Astyrianti & Sudiartha (2017)find the opposite results that the dividend policy has a negative and significant impact on hedging decisions. The company distributes dividends to investors and the remaining dividends that are not distributed to investors are retained earnings. Retained earnings are a source of company funds used by companies to finance investments, so the availability of company funds is limited to hedging using derivative instruments.

Based on the background and results of previous studies, there is a research gap about the effect of leverage, managerial ownership, and dividend policy on hedging decisions so that researchers are interested in doing research again. This research will be conducted on manufacturing companies listed on the Indonesian Stock Exchange in 2016-2018. Manufacturing companies were selected as research objects because most manufacturing companies in Indonesia imported raw materials from abroad and over the past four years the rupiah exchange rate against the dollar has continued to weaken so manufacturing companies are vulnerable to exchange rate risks.

II. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Leverage is an analysis to find out how much a company is financed by debt. The higher the use of debt, the higher the risk faced and borne by the company. Corporate debt can be made in both functional and foreign currencies. Companies that use foreign currency debt as a source of funding will increase the risk of the company. If the company's functional currency depreciates against foreign currencies, the cost of debt will increase and the company will have difficulty meeting its obligations, so the company needs to hedge to minimize the risk.

Research conducted bySaraswati & Suryantini (2019)found that a high debt ratio would increase company risk so that the use of hedging would increase. These results indicate that leverage has a significant positive effect on hedging decisions. The results of the study are relevant toWei *et al*. (2017), Bhagawan & Jijo Lukose (2017), Astyrianti & Sudiartha (2017), (Hidayah & Prasetiono, 2016). Based on literature review and empirical study the following hypotheses can be made,

H1: Leverage has a positive and significant effect on hedging decisions with derivative instruments

Managerial ownership is the ownership of company shares by the company management. Managers who own company shares will have a dual role, namely as executives and as shareholders. Managers who are also shareholders certainly expect benefits from the ownership of these shares, therefore managers will maximize company profits and minimize company risks. The higher managerial ownership, the company will increasingly maximize its company performance, including in managing the possibility of risks experienced by the company. Companies that are exposed to the exchange rate will be vulnerable to risks due to changes in the exchange rate, so companies can do hedging to reduce these risks. Based on this description, the higher managerial ownership, the probability of using hedging for companies that are exposed to the exchange rate will increase.

Butt *et al*. (2018)found that a high percentage of managerial ownership would improve risk management through hedging with derivative instruments. These results indicate that managerial ownership has a significant positive effect on hedging decisions. The results of the study are in accordance with research conducted by Ameer (2010), Bettis *et al*. (2015), Korkeamäki *et al*. (2016), Wei *et al*. (2017), andLee (2019). Based on the literature review above, the following hypotheses can be made,

H2: Managerial ownership has a positive and significant effect on hedging decisions with derivative instruments

Dividend policy is a policy on the use of profits derived by the company, whether the profits will be distributed to shareholders or retained for investment financing. Companies that distribute dividends in a proportion greater than the proportion of retained earnings will have limited cash availability. Companies that have limited cash availability are likely to experience financial difficulties, so companies that have assets and

liabilities in foreign currencies need to do hedging so that the value of the company's assets and liabilities does not change in an adverse direction that will increase the risk of financial difficulties in the future.

Vural-Yavas (2016)found that the higher the dividend payout ratio, the higher the financial difficulties so that the use of hedging by companies would increase. These results indicate that dividend policy has a positive effect on hedging decisions. The results of the study are in accordance with research conducted by Iqbal (2015), Korkeamäki *et al*. (2016), . Based on the literature review above, the following hypotheses can be made,

H3: Dividend policy has a positive and significant effect on hedging decisions with derivative instruments

III. METHODS

The research design used in this study is associative in form to determine the effect of leverage, managerial ownership, and dividend policy on hedging decisions in the manufacturing sector. This study uses a quantitative approach. The systematic research can be seen in Figure 3. The scope of this research is on manufacturing companies listed on the Indonesia Stock Exchange (BEI) in the 2016-2018 period.

The quantitative data used in this study is the annual financial statements of manufacturing companies listed on the Indonesia Stock Exchange in the 2016-2018 period that made the hedging decision. The secondary data source from this study is the annual financial statements of manufacturing companies in the 2016-2018 period, which are published through the Indonesia Stock Exchange. The population of this study are all manufacturing companies that have exposure to the exchange rate during the 2016-2018 period. The number of companies that became the population in this study were 133 companies. The sampling method in this research is the census or saturated sample method. The sample in this study amounted to 133 companies with 399 firm years of observation. Data collection methods used are observation.

Hedging in this research is a strategy used to minimize exchange rate risk. Hedging activities in manufacturing companies during the 2016-2018 period were carried out using derivative instruments such as forward contracts, future contracts, options and options. Hedging is stated in the dummy variable as follows: 1 = if the manufacturing company is hedging and 0 = if the manufacturing company is not hedging Leverage in this study is a ratio to find out how much the company is financed by debt to manufacturing companies on the IDX during the 2016-2018 period . The more debt owned by the company, the company will tend to hedge. The leverage ratio used in this study is a debt to equity ratio (DER) which is used to assess the ratio of debt to equity.

Managerial ownership in this study is the proportion of shares owned by management companies in manufacturing companies during the period 2016-2018. The greater the proportion of shares held by internal parties, the manager will tend to hedge to minimize risk. Dividend policy in this study concerns the decision to use company profits in manufacturing companies during the 2016-2018 period. The company can adopt a policy to distribute profits to investors or it can hold the profits to be reinvested in order to obtain greater profits. Companies that distribute a fairly large proportion of dividends tend to hedge with derivative instruments because they have little cash available.

IV. RESULTS AND DISCUSSION

Manufacturing companies in Indonesia have exposure to foreign currencies because they have assets and liabilities denominated in foreign currencies. IDR (Rupiah) as the Indonesian currency has fluctuated exchange rates over the past four years. Therefore, it is important for manufacturing companies exposed to exchange rate fluctuations to minimize these risks in order to maintain the value of the company.

The observational data used in this study was 378. The research sample should have amounted to 399, but there were seven outlier data so the researcher excluded the company from the study sample. This was done by researchers because it resulted in a bias in the results of the study.

Table 1. Results of Descriptive Statistics Analysis

	N	Minimum	Maximum	Mean	Std. Deviation
DER	378	-5.36	52.12	1.3721	3.24468
MO	378	.00	87.33	6.4456	15.83530
DPR	378	-12.61	100.00	13.0148	23.72100
Valid N (listwise)	378				

The leverage variable measured by the DER ratio has an average (mean) of 1.3721 with a standard deviation of 6.4456. The mean value is smaller than the standard deviation which means that the DER data used in this study is quite variable. The minimum value shows the lowest value of the DER variable which is -5.36 which is the DER value of the Eterindo Wahanatama Tbk company in 2018, while the highest value of the DER

variable obtained from the maximum value of 52.12 found in the Eterindo Wahanatama Tbk company in in 2016.

Managerial Ownership (MO) obtained the lowest value of 0 which is found in most sample companies, while the highest value of the MO variable is 87.33 found in Gunawan Dianjaya Steel Tbk in 2016-2017. These results indicate that the range of managerial ownership values in manufacturing companies is in the range of 0 to 87.33. The average value of the managerial ownership variable is 6.4456 with a standard deviation of 15.83530. The mean value is smaller than the standard deviation which means that the managerial ownership data used in this study is quite variable.

Dividend policy variables as measured by the DPR formula. In the table above, it can be seen that the lowest value of the DPR variable is -12.61 which is the DPR's value from Indomobil Sukses Internasional in 2017, while the highest value is 100.00 which is the DPR's value from the Multi Bintang Indonesia Tbk company. The mean value of the DPR variable is 13.0148 and the standard deviation is 23.72100. The mean value is smaller than the standard deviation which means that the DPR data are used in the study

Table 2 Partial Tests

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	DER	-.006	.045	.018	1	.892	.994
	MO	-.020	.012	2.585	1	.108	.981
	DPR	0.23	.005	22.483	1	.000	1.023
	Constant	-1.523	.178	74.031	1	.000	.216

The first line shows the effect of leverage on hedging. The coefficient of the leverage variable is negative with a significance value greater than 0.05. These results indicate that the variable leverage has a negative but not significant effect on hedging decisions. The second line shows the effect of managerial ownership on hedging. The value of the beta coefficient of managerial ownership variable shows negative results with a significance value above 0.05. These results mean that managerial ownership variables have a negative but not significant effect on hedging decisions. The third line shows the effect of dividend policy on hedging. The beta coefficient in the third line is positive with a significance value less than 0.05. These results state that the dividend policy variable has a significant positive effect on hedging decisions.

The leverage variable measured using DER shows a regression coefficient of -0.006 with a variable probability value of 0.49. This means that with an increase in DER of one unit, the probability of a company to hedge will decrease by 0.49 assuming other factors are constant. The significance value is greater than 0.05 and the regression coefficient value shows the results that are inversely proportional to the hypothesis of the leverage variable, the results mean that H1 is rejected. The leverage variable has a negative but not significant effect on hedging decisions in manufacturing companies in Indonesia.

Managerial ownership variables measured using a proxy for the percentage of share ownership by company management show a regression coefficient of -0.020 with a probability value of 0.49. This means that with increasing managerial ownership will reduce the probability of the company to hedge down by 0.49 assuming other factors are constant. Significance value is greater than 0.05 and the regression coefficient value shows the results that are inversely proportional to the hypothesis of managerial ownership variable then H2 is rejected. The managerial ownership variable has a negative but not significant effect on hedging decisions in manufacturing companies in Indonesia.

Dividend policy variables measured using the DPR's ratio show a regression coefficient of 0.023 with a probability value of 0.50. This means that increasing the DPR by one unit will increase the probability of companies to hedge by 0.50 assuming other factors are constant. Significance value greater than t0.05 t and the value of the regression coefficient shows the results of t which is directly proportional to the hypothesis then H3 is accepted. Dividend policy variables have a positive and significant effect on hedging decisions in manufacturing companies in Indonesia.

The test results from logistic regression states that the leverage variable which is proxied by the DER ratio has a negative but not significant effect. This means that assuming other factors are constant, increasing the DER ratio will reduce the probability of the company to hedge but not significantly. The results of this study are consistent with research conducted byAmeer (2010), Ahmad & Haris (2012), Jiwandhana & Triaryati (2016), andMediana & Muharam (2016).

Manufacturing companies in Indonesia use debt as a source of external funding. Most of the company's debt is domestic debt so it does not increase the risk of exchange rate fluctuations. If the risk of exchange rate fluctuations does not increase due to increased use of debt, the company does not need to hedge. This means that the use of high debt will not increase the probability of using hedging with derivative instruments.

The test results from logistic regression stated that the managerial ownership variable which is proxied by the percentage of share ownership by the company management has a negative but not significant effect on hedging decisions. This means that assuming other factors are constant, increasing managerial ownership will reduce the probability of the company to hedge but not significantly. The results of this study are consistent with research conducted byHidayah & Prasetiono (2016), Sutarja & Cholid (2017)and Wahyudi *et al*. (2019).

Managers will maximize company profits and minimize company risks. For companies operating on an international scale will be vulnerable to exchange rate risk, one way that managers can use to reduce these risks is by hedging. Increased managerial ownership does not necessarily increase the use of hedging by companies. The difference between each manager's chart will give a different decision on the use of hedging. There are managers who have an optimistic attitude and dare to take risks and there are also those who prefer to avoid risk. The use of hedging that is not effective and efficient can increase company costs.

The test results from the logistic regression state that the dividend policy variable which is proxied by the DPR ratio shows a significant positive effect on hedging decisions. This means that increasing the ratio of the DPR will not increase the probability of the company to hedge it assuming other factors are constant. These results indicate that the triple hypothesis which states that dividend policy has a significant positive effect on hedging decisions is accepted. The results of this study are in accordance with the research conducted byIqbal (2015), Korkeamäki *et al*. (2016), andVural-Yavas (2016)significant positive effect on hedging decisions using derivative instruments.

If the DPR's ratio is high, the company will have limited cash availability so that the possibility of the company experiencing financial difficulties in the future increases, thus the use of hedging will also increase for companies that are exposed to the exchange rate. The company conducts hedging to maintain the value of assets and liabilities in foreign currencies so that they do not turn towards harm that can increase the probability of financial difficulties when there is fluctuation in the exchange rate in the future.

Based on the results of research that has been done, it can be seen that theoretically only dividend policy variables that support the previous theory. Variable leverage and managerial ownership get results that are not in accordance with previous theories. Research on the effect of leverage, managerial ownership, and dividend policy on hedging decisions is expected to be a new piece of evidence with different results from the hypothesis. This research is expected to be able to contribute empirically about the effect of leverage, managerial ownership, and dividend policy on hedging decisions in manufacturing companies.

For companies that have exposure to changes in exchange rates, can use hedging with derivative instruments to reduce risk due to changes in exchange rates. Before making the decision to hedge with derivative instruments, managers need to analyze the company's internal factors such as leverage, managerial ownership, and dividend policy. Based on the results of this study the dividend policy variable has a significant effect on hedging decisions, while the leverage and managerial ownership variables have no significant effect

V. CONCLUSION

The results of testing the effect of leverage, managerial ownership, and dividend policy on hedging decisions in manufacturing companies on the IDX for the period 2016-2018 are leverage variables that have a negative but not significant effect on hedging decisions with derivative instruments, ownership variables have a negative but not significant effect on hedging decisions with Derivative instruments and dividend policy variables have a positive and significant influence on hedging decisions with derivative instruments.

Further researchers are advised to be able to investigate further about the factors that influence hedging decisions other than the variables in this study, such as liquidity, profitability, financial distress, and growth opportunity in the same sector or do the same research again with the variable leverage and managerial ownership variables in different sectors. Companies with high dividend payout ratios are advised to hedge if the company has exposure to changes in exchange rates.

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