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Analysis of Factors Affecting Leverage in Manufacturing Companies Listed on the Indonesia Stock Exchange

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ABSTRACT

This study aims to examine the factors that affect leverage, as measured by profitability, liquidity, asset tangibility, growth opportunity, company size, business risk, and free cash flow. Profitability is measured by return on assets, and liquidity is measured by the current ratio in influencing leverage. The population used in this study were 438 manufacturing companies listed on the Indonesia Stock Exchange for the period 2012-2015. The research sample was selected using a purposive sampling method so that 208 manufacturing companies were found that met the criteria. Data analysis in this study used multiple regression. The results showed that profitability and liquidity had a significant negative effect on leverage, growth opportunity had a positive effect on leverage, and firm size has a positive effect on leverage. Meanwhile, asset tangibility, business risk, and free cash flow do not affect leverage.

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1. INTRODUCTION

Funding is a very important thing for companies in carrying out operational activities. Growing companies always need funding for the purchase of new assets that can be used to generate income in the future. Along with the development of a company, the company needs more funds which have an impact on the company's debt position. The capital structure is very important for the company because whether or not the capital structure has a direct impact on the company's finances which in turn can affect the value of the company [1]. The capital structure is a combination of long-term funding within the company which can be seen in the company's balance sheet [2]. Based on the origin, the company's funding sources can be divided into internal sources and external sources. Funds originating from internal are funds generated by the company in the form of retained earnings, while funds obtained from outside parties are funds originating from creditors in the form of loans which are debts for the company. Companies that are too large in using debt will have an impact on the fixed burden that must be borne by the company.

One thing that is thought to affect the company's leverage is profitability. Great profitability shows the company can generate greater retained earnings, this will make the company more ownership of using internal company funds. This is in line with the pecking order theory which states that companies will prefer to use their internal sources of funds, while for shortcomings they

can choose sources of funds from outside parties. Conversely, if the profitability of the company is small, this will make the company look for additional funds. During the two decades before the economic crisis, the role of the industrial sector in the national economy was almost 25 percent. In general, Indonesia's economic sectors experienced an increase in growth.

Companies that want to maintain a going concern cannot be separated from the need for funds for additional capital in carrying out their expansion, companies need additional funding either from internal capital or by borrowing from external parties. The increasing proportion of debt owned by the company can have an impact on the company's financial ratios, one of which is liquidity. Another variable that can affect leverage is liquidity. Liquidity is a ratio that can show the amount of capital available to be invested or used to finance company expenses [3]. The liquidity ratio reflects the company's ability to pay all short-term financial obligations at maturity using available current assets. Companies that have high liquidity tend not to choose to use debt in company financing. This is because high liquidity illustrates that the company has large internal funds [4]. A good level of liquidity reflects the company's capacity to pay off its obligations promptly [5]. Usually, companies that have high risks tend to avoid funding from loans, compared to companies that have small risks. The business risk of a company has an impact on the capital structure. Firm size affects leverage[4], and firm size affects leverage [6]. The size of the company has an impact on the risks that will be faced by the company, companies that have large corporate risks tend to use external funding. This shows that companies that have large risks will also provide large returns for investors [7]. Risk has a positive effect on leverage [4].

Another variable is free cash flow, debt policy is one of the ways the company chooses to resolve agency conflicts caused by the free cash flow generated by the company. Companies that have large free cash flows tend to have large debt levels. Free cash flow has a positive impact on debt policy [8]. The sources of funding chosen by the company, both internal and external, both have an impact on the company's leverage structure. The company's leverage is a ratio that describes how much the company relies on debt in its capital structure. Many factors can affect the leverage structure. The greater the leverage ratio, meaning that the proportion of assets is smaller than the total liabilities owned, this will make the company's fixed burdens bigger, if the company cannot pay off its obligations, it will have an impact on bankruptcy.

2. LITERATURE REVIEW

2.1 *Capital Structure Theory*

The capital structure is part of the financial structure which can also be interpreted as a permanent expenditure that describes the balance between long-term debt and own capital. Capital reflects the ownership rights of a company.

2.2 *Modigliani-Miller approach without tax effect*

Theories related to capital structure began in 1958, Professor Franco Modigliani and Professor Merton Miller published theories related to capital structure.

2.3 *Trade-off theory*

The trade-Off theory explains the relationship between taxes, bankruptcy risk, and the use of debt caused by capital structure decisions taken by the company.

2.4 *Pecking Order Theory*

Pecking order theory is a sequence in funding decisions where managers will first choose internal financing in the form of retained earnings, debt, and share issuance as a last resort.

2.5 *Agency Theory*

Managers (agents) running the company should manage the company as mandated by the shareholders (principles). However, in reality, the agent or manager often has other goals that are contrary to the main goal of company management which does not

always maximize the welfare of shareholders. This difference in interests often triggers the emergence of conflicts between management and shareholders, which is commonly referred to as agency conflict.

2.6 *Asymmetric Information Theory*

An explanation of the definition of asymmetric information or information inequality is a condition where company managers have much better information in terms of quantity and quality than the information held by investors.

2.7 *Leverage*

The capital structure decision is one of the most important decisions for the company because it is related to its effect on profits and company value in the future. The company's capital structure policy can affect the company's rate of return and risk[9].

2.8 *Profitability*

In general, profitability is a description of the company's ability to generate profits or profits. The use of profitability ratios can be done by comparing the components in the financial statements. The results of profitability can be used as an evaluation in decision-making for the manager.

2.9 *Liquidity*

The ratio related to the company's ability to meet its obligations is liquidity. In general, liquidity is a ratio that describes a company's ability to pay off its short-term debt.

2.10 *Tangibility Assets*

Asset Tangibility is how big the number of fixed tangible assets owned by the company is. Fixed tangible assets are easy to be used as collateral, so companies with lots of fixed tangible assets will have a low agency cost of debt and higher use of debt.[10].

2.11 *Growth Opportunities*

It is a growth opportunity for a company in the future[11]. Companies that have a prediction that they will experience high growth in the future will prefer to use shares in funding the company's operations.

2.12 *Company Size*

How big or small the scale of the company is related to the company's finances is described by the size of the company. One of the indicators that the auditor considers in assessing the management plan. Company size is a measure of the total assets owned by the company that can provide economic benefits in the future.

2.13 *Business Risk*

Risk is the courage to take action, which can result in uncertain results, and can be higher or lower than planned [12]. Risk is seen as a possibility faced, which can cause losses that are not calculated.

2.14 *Cash Flow*

Statement of Financial Accounting Standards Number 2 of 2009, states that cash flow is the inflow and outflow of cash or cash equivalents [13].

3. METHODS

This research is classified as causative research. This study aims to explain the characteristics of the problem in the form of a causal relationship between two or more variables. This research includes correlation regression research which is included in the pooling data group. This study explains systematically the factors that can affect leverage which in this study is measured by the Debt ratio. The type of data in this study is secondary data for four periods from 2012 to 2015. The data obtained were obtained from the Indonesia Stock Exchange (IDX) and the website www.idx.com. The analytical method used in this research is descriptive statistical testing, normality test, classical assumption test, hypothesis testing through the coefficient of determination, F test, and t-test.

4. RESULTS AND DISCUSSION

4.1 *Descriptive Statistics*

Descriptive statistical analysis shows the following results:

a. *Leverage*

The leverage variable has a minimum value of 0.00027 and a maximum value of 0.882 with an average value of 0.407 and a standard deviation of 0.184. The minimum value of 0.00027 is the company PT. Semen Indonesia (Persero) Tbk, shows that the company has the lowest leverage value compared to other companies. While the maximum value of 0.882 lies in the company PT. Jembo Cable Company Tbk., which shows that the company has greater leverage than other companies.

b. Profitability

The profitability variable has a minimum value of 0.04210 and a maximum value of 40.377 with an average value of 9.721 and a standard deviation of 8.477. The minimum value of 0.04210 is at the company Star Petrochem Tbk., which shows that the company has the lowest profitability compared to other companies. While the maximum value of 40.377 lies in the company PT Unilever Tbk., which indicates that the company has a larger company size than other companies.

c. Liquidity

The liquidity variable has a minimum value of 0.40314 and a maximum value of 13.871 with an average value of 2.723 and a standard deviation of 2.364. The minimum value is 0.40314, namely the company PT. Nusantara Inti Corpora Tbk., which shows that the company has the lowest liquidity compared to other companies. While the maximum value of 13,871 lies in the company PT. Intanwijaya International Tbk., which shows that the company has greater liquidity than other companies.

d. *Asset Tangibility*

Tangibility asset variable has a minimum value of 0.04490 and a maximum value of 0.843 with an average value of 0.342 and a standard deviation of 0.176. The minimum value of 0.04490 is the company PT. Duta Pertiwi Nusantara Tbk., which shows that the company has the lowest asset tangibility compared to other companies. While the maximum value of 0.843 lies in the company PT. Holcim Indonesia Tbk., which shows that the company has greater asset tangibility compared to other companies.

e. *Growth Opportunity*

The growth opportunity variable has a minimum value of -0.299 and a maximum value of 0.592 with an average value of 0.109 and a standard deviation of 0.139. The minimum value is -0.299, namely the company PT. Lionmesh Prima Tbk., which shows that the company has the lowest growth opportunity compared to other companies. While the maximum value of 0.592 lies in the company PT. Akasha Wira International Tbk., which shows that the company has a greater growth opportunity than other companies.

f. Company Size

The firm size variable has a minimum value of 25.57957 and a maximum value of 33.134 with an average value of 28.413 and a standard deviation of 1.771. The minimum value is 25.57957, namely the company PT. Lionmesh Prima Tbk., which shows that the company has the lowest company size compared to other companies. While the maximum value of 33.134 lies in the company PT. Astra International Tbk., which shows

that the company has a larger company size compared to other companies.

g. Business Risk

The business risk variable has a minimum value of 19.250 and a maximum value of 31.736 with an average value of 24,459 and a standard deviation of 2.176. The minimum value of 19.250, namely the company PT. Ricky Putra Globalindo Tbk., which shows that the company has the lowest company size compared to other companies. While the maximum value of 31,736 lies in the company PT. Gudang Garam Tbk., which shows that the company has a greater business risk than other companies.

h. *Free Cash Flow*

The free cash flow variable has a minimum value of 21,241 and a maximum value of 30,842 with an average value of 26,690 and a standard deviation of 1,978. The minimum value of 21,241 is the company PT. Kabelindo Murni Tbk., which shows that the company has the lowest free cash flow compared to other companies. While the maximum value of 30,842 lies in the company PT. Hanjaya Mandala Sampoerna Tbk., which shows that the company has a greater free cash flow compared to other companies.

4.2 Research Result Data Analysis

1. **Test Results of the Effect of Profitability on Leverage**

The first hypothesis of this study is that profitability hurts leverage. Based on the partial regression test results shown in table 4.6, it is known that the profitability variable has a sig value of 0.0015 < alpha 0.05 and a beta of -0.004 this means that the profitability variable has a significance at the 5% level, so this study can reject H0. It can be concluded that the profitability variable has a significant negative effect on leverage.

2. **Test Results of the Effect of Liquidity on Leverage**

The second hypothesis of this study is that liquidity hurts leverage. Based on the partial regression test results shown in table 4.6, it is known that the liquidity variable has a sig value of 0.000 < alpha 0.05 and a beta of -0049, this means that the liquidity variable has a significance at the 5% level, so this study can reject H0. It can be concluded that the liquidity variable has a significant negative effect on leverage.

3. **Test Results of the Effect of Asset Tangibility on Leverage**

The third hypothesis of this study is that asset tangibility has a positive effect on leverage. Based on the partial regression test results shown in table 4.6, it is known that the asset tangibility variable has a sig value of 0.000 < alpha 0.05 and a beta of -0.245, this means that the asset tangibility variable has a significance at the 5% level, but this result is contrary to the hypothesis stated. mentions that asset tangibility has a positive effect on leverage so this study cannot reject H0. It can be concluded that the asset tangibility variable has no positive effect on leverage.

4. **Test Results of the Effect of Growth Opportunity on Leverage**

The fourth hypothesis of this study is that growth opportunity has a positive effect on leverage. Based on the partial regression test results shown in table 4.6, it is known that the growth variable has a sig value of 0.003 < alpha 0.05 and a beta of 0.187, this means that the growth variable has a significant value at the 5% level,

so this study can reject H0. It can be concluded that the growth variable has a significant positive effect on leverage.

5. **Test Results Effect of Size on Leverage**

   The fifth hypothesis of this study is that size has a positive effect on leverage. Based on the results of partial regression testing shown in table 4.6, it is known that the size variable has a sig value of 0.045 < alpha 0.05 and a beta of 0.021, this means that the size variable has a significance at the 5% level, so this study can reject H0. It can be concluded that the variable size has a significant positive effect on leverage.

6. **Test Results of the Effect of Risk on Leverage**

   The sixth hypothesis of this study is that risk has a positive effect on leverage. Based on the results of partial regression testing shown in table 4.6, it is known that the risk variable has a sig value of 0.155 > alpha 0.05, this means that the risk variable has no significance at the 5% level and the beta is -0.007, so this study cannot reject H0. It can be concluded that the risk variable has no significant negative effect on leverage.

7. **Test Results of the Effect of Free Cash Flow on Leverage**

   The seventh hypothesis of this study is that free cash flow has a positive effect on leverage. Based on the results of partial regression testing shown in table 4.6, it is known that the free cash flow variable has a sig value of 0.046 < alpha 0.05 and a beta of -0.015, but this result is contrary to the hypothesis that free cash flow has a positive influence on leverage so that the research This cannot reject H0. It can be concluded that the free cash flow variable has no positive effect on leverage.

4.3 Discussion of Research Results

a. **Hypothesis 1: The Effect of Profitability on Leverage**

   Measurement of profitability variable is measured by using return on assets (ROA) by dividing net income by total assets. Profitability is used to measure how big the company is in generating profits.

   Based on the results of partial regression testing (t-test) shown in table 4.6, it is explained that the significant value is 0.0015 <0.05 so the decision is Ho is rejected (Ha is accepted), meaning that the profitability variable has a significant negative effect on company leverage. This is possible because a company that can generate large profits shows that the company has a balance that can be used to finance all company activities so that the company limits external funding. The results of this study are in line with the pecking order theory which states that companies that have higher profits prefer to use internal funds rather than debt in financing all company activities. Funding in the form of debt can make outsiders get asymmetric information [14]. The profitability variable has a negative and significant effect on leverage. Profitability has a negative effect on leverage[15].

b. **Hypothesis 2: Liquidity has a Negative Effect on Leverage**

   Measurement of the liquidity variable is measured using the current ratio (CR) by dividing current assets by current liabilities. Liquidity is used to describe the company's ability to settle its short-term obligations. Based on the results of partial regression testing (t-test) shown in table 4.6, it is explained that the significant value is 0.000 <0.05 so the decision is Ho is rejected (Ha is accepted), meaning that the liquidity variable has a significant negative effect on company leverage.

Companies that have high liquidity tend not to use debt as an option in their funding because companies with the highest number of current assets have sufficient internal funds to run the company.

In addition, companies with high liquidity have larger internal funds so companies prefer to use internal funds to finance their investments before using external funding through debt or issuing shares. The liquidity variable has a negative and significant effect on leverage[16].

c. Hypothesis 3: Asset Tangibility has a Positive Effect on Leverage

Measurement of variable asset tangibility is measured by dividing total fixed assets divided by total assets. Asset tangibility is defined as how large the number of tangible fixed assets owned by the company is. Based on the results of partial regression testing (t-test) shown in table 4.6, it is explained that the significant value is 0.000 <0.05 so the decision is Ho is rejected (Ha is accepted), meaning that the asset tangibility variable has a significant effect on the company's leverage but because it does not support the hypothesis which states that asset tangibility has a positive effect on leverage. The results of the study are not in line with the research conducted[15]which shows the results of his research that the asset tangibility variable has a positive and significant effect on leverage. This is possible because companies that have larger fixed assets tend to describe the state of companies that are more established and have small business risks. Fixed assets owned by the company make it easier for companies to seek additional external funds, namely loans.

These assets can be used as collateral to creditors because tangible fixed assets provide higher guarantees than intangible assets. The more assets that can be guaranteed by the company, the easier it is for companies to get loans so companies tend to have large debts. However, in contrast to the results of this study which show that the asset tangibility variable has no effect on leverage, it can be said that companies that have large assets do not only have large debts. It is possible that companies that have large assets make the company more trusted by investors so that companies use more capital structure through shares from investors rather than using debt.

d. Hypothesis 4: Growth Opportunity Has Positive Effect on Leverage

Measurement of growth opportunity variable is measured by dividing sales growth by asset growth. Growth opportunity is defined as an opportunity or opportunity for a company's growth in the future. Based on the results of partial regression testing (t-test) shown in table 4.6, it is explained that the significant value is 0.003 <0.05 so the decision is Ho is rejected (Ha is accepted), meaning that the growth opportunity variable has a significant positive effect on company leverage. The increased growth experienced by the company forced the company to require more additional funds to finance its operations. The increasing demand for production makes the company increase the need for human resources,

The amount of funds required tends to make companies prefer to seek external sources of funds through debt. In addition, creditors tend to see sales growth as one of the considerations in providing loan funds. The better the growth rate of the company, the greater the opportunity for the company to develop and survive in the market competition so that creditors can have more confidence in providing loans to

companies. This is in line with signaling theory which states that the greater the company's growth rate, the better the company's prospects in the future.

e. **Hypothesis 5: Firm Size Positively Affects Leverage**

The measurement of firm size variable is measured by performing the natural logarithm (ln) of the total assets owned by the company. Company size is defined as how big or small the company scale is related to company finances. Company size is a measure of the total assets owned by the company, the larger the size of the company, the greater the belief that the company will be more likely to be a going concern and far from bankruptcy. Based on the partial regression test results shown in table 4.6, it is explained that the significant value is 0.0455 <0.05 so the decision is Ho is rejected (Ha is accepted), meaning that company size has a significant effect on leverage.

This can be explained that large companies tend to require large funds, which makes the company look for additional funds by choosing through debt. Larger companies tend to be easier to get external funds. This is because investors and creditors are more confident in providing their funds. It is easier for creditors to provide loans to larger companies because larger companies tend to have large amounts of assets so that creditors are not worried about default by the company, because large companies tend to have sufficient assets to be used as collateral.

f. **Hypothesis 6: Business Risk Positively Affects Leverage**

Business risk is defined as the courage to take action, which can result in uncertain results, which can be higher or lower than planned by the company. Based on the partial regression test results shown in table 4.6, it is explained that the significant value is 0.155 > 0.05 so the decision is Ho is accepted (Ha is rejected), meaning that business risk has no effect on leverage.

This can be explained that companies that have low risk tend to make company management less consider business risk in determining the amount of debt. Companies that have high business risk tend not to reduce debt levels, companies still choose to use debt to meet their funding needs. The results of this study are in line with the trade-off theory which states that companies that have large profits that have a large risk will try to reduce their taxes by increasing the proportion of their debts.

g. **Hypothesis 7: Free Cash Flow Has a Positive Effect on Leverage**

Free cash flow is defined as cash flow available for distribution to investors (shareholders and debt owners). Based on the partial regression test results shown in table 4.6, it is explained that the significant value is 0.046 > 0.05 so the decision is Ho is rejected (Ha is accepted), meaning that free cash flow has no effect on leverage.

This can be explained through the pecking order theory which explains that the company will prioritize the use of internal funds for all the needs of the company's activities. Companies that have sufficient internal funds will not use external funds through debt. Free cash flow is more funds owned by the company's internals that have been deducted from the company's costs. The greater the free cash flow owned by the company, it can be said that the company has sufficient internal funds so that the company uses its internal funds as much as possible. However, with the excess funds, the shareholders asked for dividends to be distributed. If this happens.

5. CONCLUSION

From the results of the analysis and discussion of the previous chapter, it can be concluded that the results of the study are as follows:

1. Profitability has a negative effect on leverage.
2. Liquidity has a negative effect on leverage.
3. Asset tangibility does not have a positive effect on leverage.
4. Growth opportunity has a positive effect on leverage.
5. Firm size has a positive effect on leverage.
6. Business risk does not have a positive effect on leverage.
7. Free cash flow has no positive effect on leverage.

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