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RESEARCH ARTICLE

PROFITABILITY RATIO ANALYSIS OF THE LEATHER TANNING INDUSTRY WITH CAPITAL STRUCTURE OF INTEREST LOAN SYSTEM

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Abstract

Financial distress that could lead to bankruptcy occurred in the leather tanning industry in Sukaregang-Garut. This condition can be observed from the decline in the number of the leather tanning industry. This study aimed to analyze the impact of loans with the interest system on the financial performance (profitability ratio) of the leather tanning industry. The research data were obtained by interview and analyzed using profitability ratio analysis, namely Gross Profit Margin (GPM), Net Profit Margin (NPM), Return on Investment (ROI), and Return on Equity (ROE). The analysis showed that GPM decreased by 3.65 percent, NPM decreased by 8.25 percent, and ROI decreased by 8.05 percent along with the increase in capital structure due to the increase in the number of loans with the interest system. ROE increased to 227 percent with the increasing capital structure due to the increasing number of loans with the interest system. DuPont ROE analysis shows that the increase in ROE was not caused by an increase in profitability but by an increase in the capital structure due to an increase in the number of loans with the interest system.

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Introduction:-

A company is a business entity established by certain individuals or institutions with the foremost goal of maximizing profits. Furthermore, other goals are to survive in business competition, growing, and perform other social functions in society. In practice, these assumptions do not always occur. Often companies that have been operating for a certain period experience financial distress and lead to bankruptcy. Financial distress occurs before bankruptcy and occurs when the company has suffered losses for several years (Hapsari 2012).

Financial distress that could lead to bankruptcy occurred in the leather tanning industry in Sukaregang-Garut. This condition can be observed from the decline in the number of tanneries. In 2008 350 tanneries were employing 1750 workers. In 2011 the number decreased to 340 business units with a total workforce of 1595 (Hutagalung 2010; Gomulia and Dewi 2011). In 2015 the number decreased to 300 tanneries (Sukoco and Muhyi 2015). On the other hand, the number of tanneries that use loan facilities with an interest system is increasing. Gomulia and Dewi (2011)

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found that 85 percent of the leather tanning industry only relies on internal capital, and 15 percent uses loans with an interest system. Based on preliminary survey research, currently, there are only 220 tanneries left in Sukaregang-Garut. The number of tanneries that used loan capital with an interest system increased to 96 percent and only 4 percent continued to use their internal capital.

The number of tanneries in Sukaregang-Garut has decreased due to bankruptcy. This bankruptcy was caused by a decrease in business profitability. Profitability decreased from 6.5 million IDR to 2.3 million IDR per tonne of raw material. This decrease in profitability was caused by changes in the capital structure. The tanneries use loan capital with an interest system rather than its internal capital (Kurniawan et al, 2020).

Determining the capital structure of a company is a complex decision, one of which is because it involves several factors and antagonists, such as risk and profitability. Decisions are even more complicated when the company's economic environment is unstable. Therefore, the ideal proportion of debt and equity can affect the value of the firm (Mesquita and Lara, 2003).

Company's profitability is influenced by various factors, one of which is the company's capital structure. Capital structure is the ratio between total assets obtained from external capital (loans) and the amount of internal capital (from the owners). Changes in capital structure occur due to reduced internal capital and increased external capital or borrowed capital. The addition of external capital here is the addition of capital that originates from bank loans. The additional company capital from the bank must be returned along with the determined interest in each period (Yulia and Mayasari, 2008).

The presence of interest highly affects the customer's ability to return the loans. The cost of borrowing interest affects profitability because it is one of the elements of non-operating costs that are fixed. Consequently, high or low, the cost of borrowing interest will affect the profitability of a certain period (Pramesti H and Satyawati E, 2007). The high loans and interest expenses that are burdening the tanneries in Sukaregang-Garut are the causes of the decline in profits in the area. Against this background, this study aimed to analyze the impact of the interest system loan on the profitability ratio of the leather tanning industry in Sukaregang-Garut.

Research Method:-

This study adopted the interview method. Interviewing is the process of obtaining information for research purposes with face-to-face question and answer between the interviewer and the informant using a tool called an interview guide. Interviews were conducted with the owners of the leather tanning industry in Sukaregang-Garut.

The obtained data were analyzed using profitability ratio analysis (Purwanti and Wibowo 2018).

Profit Margin calculates the company's ability to generate net income at a certain sales level.

$$\text{Profit Margin} = \frac{\text{Net Margin}}{\text{Sales}}$$

- a. Return On Investment (ROI) measures the company's ability to generate net income based on certain asset levels.

$$\text{ROI} = \frac{\text{Net Margin}}{\text{Asset}}$$

- a) Return On Equity (ROE) measures the company's ability to generate net income based on certain capital.

$$\text{ROE} = \frac{\text{Net Margin}}{\text{Equity}}$$

Results:-

The profitability ratio is a ratio or comparison to determine the company's ability to get profit from earnings related to sales, assets, and equity, based on certain measurement bases. The types of ratios used to measure the profitability

of the leather tanning industry in Sukaregang-Garut were gross profit margin (GPM), net profit margin (NPM), return on investment (ROI), and return on equity (ROE).

Gross Profit Margin (GPM) and Net Profit Margin (NPM)

The results indicate that the GPM and NPM of the leather tanning industry decreased with the increase in the number of loans used in the capital structure (Figure 1).

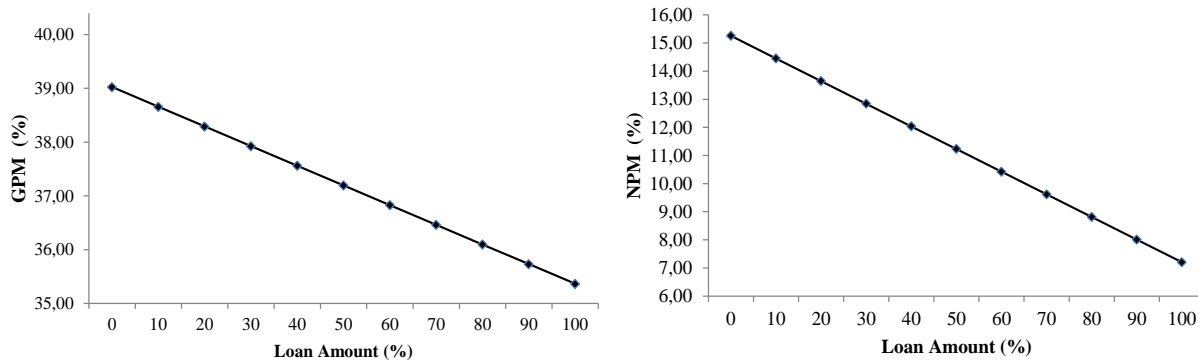


Figure 1:- Effect of the loan amount on GPM and NPM.

Return on Investment (ROI)

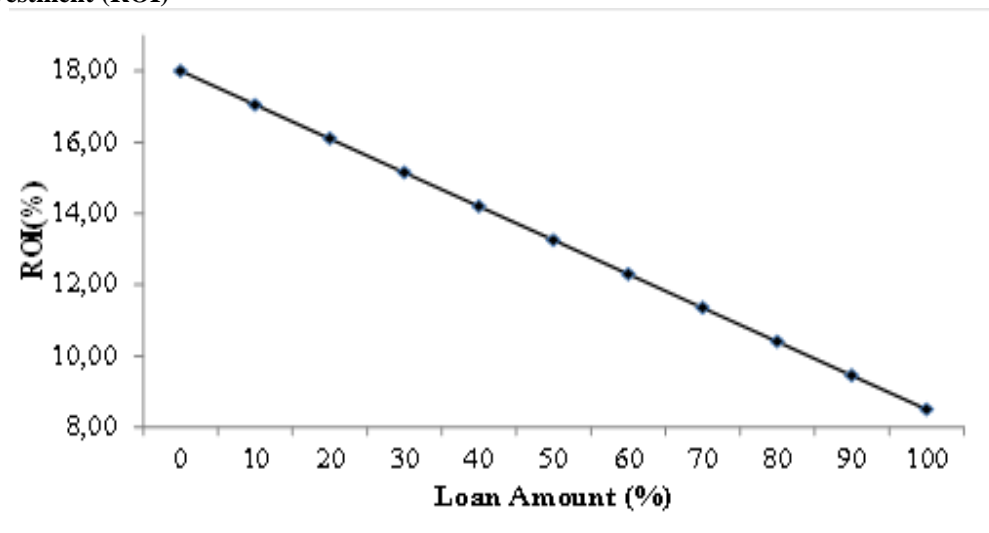


Figure 2:- Effect of the loan amount on ROI.

The results indicate that the ROI of the leather tanning industry decreased with the increase in the number of loans used in the capital structure (Figure 2).

Return on Equity (ROE) and ROE DuPont

The results indicate that the ROE of the leather tanning industry increased with the increase in the number of loans used in the capital structure (Figure 3).

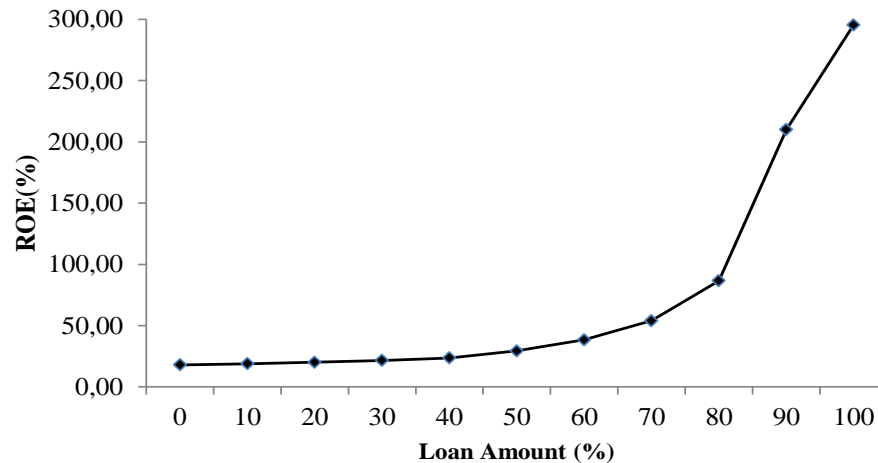


Figure 3:- Effect of the loan amount on ROE.

ROE increases with the rise of the loan amount, so a DuPont ROE analysis is carried out. The DuPont ROE analysis indicates that the increase in ROE is not due to the growth in profitability but to an expansion in the capital structure along with the rise in the loans (Table 1).

Table 1:- DuPont ROE Analysis.

Loan Ratio	Net Profit	Sales	Asset	Equity	NPM	TATO	FLM	ROE Duppon
0	6.254.688	41.000.000	34.745.313	34.745.313	15,26%	1,18	1,00	18,00%
10	5.924.438	41.000.000	34.745.313	31.270.782	14,45%	1,18	1,11	18,95%
20	5.594.188	41.000.000	34.745.313	27.796.250	13,64%	1,18	1,25	20,13%
30	5.263.938	41.000.000	34.745.313	24.321.719	12,84%	1,18	1,43	21,64%
40	4.933.688	41.000.000	34.745.313	20.847.188	12,03%	1,18	1,67	23,67%
50	4.603.438	41.000.000	34.745.313	17.372.657	11,23%	1,18	2,00	26,50%
60	4.273.188	41.000.000	34.745.313	13.898.125	10,42%	1,18	2,50	30,75%
70	3.942.938	41.000.000	34.745.313	10.423.594	9,62%	1,18	3,33	37,83%
80	3.612.688	41.000.000	34.745.313	6.949.063	8,81%	1,18	5,00	51,99%
90	3.282.438	41.000.000	34.745.313	3.474.531	8,01%	1,18	10,00	94,47%
95	2.952.188	41.000.000	34.745.313	1.000.000	7,20%	1,18	34,75	295,22%

Discussion:-

Each company has a different capital structure. Capital structure is the total amount of debt and total assets owned by a company and is crucial in determining the operationalization of the company (Shubita et al, 2012). Companies can determine the composition of the capital structure to be used, whether using debt with a larger proportion or using current assets that are higher than the total debt.

Determining the company's capital structure is a complex decision because it involves several factors and antagonists, such as risk and profitability. Decisions are made more difficult when the company's economic environment is unstable. Therefore, the decision between the ideal proportion of debt and equity can affect the value of the firm.

The financial stability of a company is related to its ability to generate profits, increase the value of invested capital, and at the same time, payback its short and long term liabilities. Assessment of financial performance is primarily based on various methods of financial analysis, including Profitability Ratios (Myskova and Hajek, 2017).

The profitability ratio is a ratio that aims to determine the company's ability to generate profits during a certain period and also to provide an overview of management effectiveness in executing its operational activities. In this event, management effectiveness is observed from the profit generated on the company's sales and investment. This ratio is also known as the rentability ratio (Botutihe 2017).

Syafri H and Sofyan (2008) added that the profitability ratio is a ratio that describes the company's ability to earn profits through all available capabilities and resources such as sales activities, cash, capital, number of employees, and number of branches. The profitability ratio is a ratio to determine the company's ability to obtain profit from earnings related to sales, assets, and equity, based on certain measurement bases. The types of ratios that can be used to measure profitability are gross profit margin (GPM), net profit margin (NPM), return on investment (ROI), and return on equity (ROE) (Purwanti and Wibowo 2018).

Gross Profit Margin (GPM) and Net Profit Margin (NPM)

Gross Profit Margin (GPM) is a ratio that measures the efficiency of controlling the product cost. The higher the GPM, the better the company's operating condition, because this shows that the cost of goods sold is relatively lower than sales. Net Profit Margin (NPM) exhibits the company's ability to generate profits from a certain level of business volume. NPM can be interpreted as the level of efficiency of the company, namely the extent to which the company can reduce costs. The higher the NPM, the more effective a company is in carrying out its operations (Saragih 2017).

The results indicate that the GPM decreases with the increase in the number of loans used in the capital structure (Figure 1). The decline in GPM was due to lower profitability in the leather tanning industry caused by increased interest costs. The expand in interest costs occurred due to an increase in the capital structure, caused by the rise in the number of loans with interest system. GPM will decrease with the increase in the loan ratio with the interest system, from 39.02 percent to 35.37 percent if the tannery uses loans with an interest system with a ratio of 100 percent, or decreases to 3.65 percent. The GPM ratio decreased due to a decrease in profitability caused by an increase in the loan ratio. This caused an increase in the interest cost that must be borne by the company. Consequently, there was a decrease in business profitability. This is supported by Pramesti and Satyawati (2007), who state that loans with an interest system will have consequences called interest costs.

The results also reveal that NPM decreased with the increase in the number of loans with an interest system. The decline in NPM was also caused by a decrease in business profitability. This happened in line with the increase in the loan ratio in the capital structure. NPM will further decrease with the increase in the loan ratio with the interest system from 15.26 percent to 8.26 percent if the tannery uses loans with an interest system with a ratio of 100 percent, or decreases to 8.06 percent. The NPM ratio decreased due to the rise in the loan ratio caused by an increase in interest costs that must be borne by the company. The increase in interest costs will further reduce the profitability of the leather tanning industry in Sukaregang-Garut.

Net Profit Margin (NPM) is the ratio applied to show the company's ability to generate a net profit. This ratio is crucial for operations managers because it reflects the strategy in setting the selling price and its ability to control operating expenses. The higher the Net Profit Margin, the more efficient the company is in issuing costs related to its operating activities. NPM continues to decline along with the increase in the number of loans with the interest system.

Mohammadzadeh et al. (2013) examined the relationship between capital structure and profitability in pharmaceutical companies in Iran. The data used for analysis were financial data from 2001 to 2010 with a sample of 30 pharmaceutical companies. In that study, net profit margin and debt to asset ratio were used as indicators for measuring capital structure and profitability. The results showed a significant negative relationship between profitability and capital structure, meaning that pharmaceutical companies have adopted the pecking order theory and internal funds use policies, which determine the company's profitability. The pecking order theory states that companies will borrow, not issue shares when internal cash flows are not sufficient to fund capital expenditures, thus the amount of debt will reflect the company's cumulative need for external funds.

The decrease in NPM is far higher than the decrease in GPM. It is because, at GPM, the tannery only bears the interest costs resulting from their loans. GPM continues to decline following the decrease in profitability due to loan interest payments. The decline in NPM is far higher due to the decline in profitability caused by loan interest payments and increased costs. Besides having to pay the interest due to its own loans, the tannery also has to bear the interest on the loan from the owner of the auxiliary material shop and the owner of the tanning equipment, which is charged for the increase in the price of the supplies and the rental price of the tanning equipment. Capital structure has a negative relationship with profitability, meaning that the bigger the capital structure, the smaller the profitability, and vice versa (Caballero et al. 2012; Abeywardhana, 2015). It is also confirmed by the research of Mohammadzadeh et al. (2013), which states that there is a significant negative relationship between profitability and

capital structure. Short-term debt does not cause profitability, while long-term debt causes a decrease in profitability. So they prefer financing from inside than from outside.

In Malaysia, Hamid et al. (2015) examined Capital Structure and Profitability in Family and Non-Family Firms, which aimed to examine the effect of capital structure on profitability in family and non-family firms. The samples were companies listed on the Malaysian stock exchange from 2009 to 2011. The research model used the generate multivariate model as the basis for empirical analysis to test the hypothesis, and the data analysis was performed using Descriptive Statistics, Mann-Whitney U Test, Correlation Matrix, and Multivariate Analysis. The results showed that the debt ratio has a negative effect on profitability, the company is more profitable if it is financed by greater equity in the financing policy, and the addition of debt reduces profitability.

Return on Investment (ROI)

Return on investment (ROI) is a comparison between net income after tax and total assets. ROI is a ratio that measures the overall ability of the company to generate profits with the total number of assets available. The higher the ratio, the greater the condition of the company. ROI is a ratio that shows the net income generated by the company when measured by asset value (Syafri and Sofyan 2008).

The profitability ratio analysis of the leather tanning industry using ROI shows that ROI will decrease along with the increase in the number of loans used in the capital structure (Figure 2). ROI decreases due to a decrease in net income caused by an increase in interest costs as the amount of loan used increases. ROI decreases with the increase in the loan ratio with an interest system from 18.00 percent to 8.05 percent if the leather tanning industry uses loans with an interest system with a ratio of 100 percent, or decreases to 9.50 percent. The decrease in ROI was caused by the decline in business profitability due to an increase in loan interest costs and an increase in prices for auxiliary materials and rental of tanning equipment. The increase in the price of auxiliary materials and the rental of tanning equipment was due to an increase in the loan ratio, which in turn increased the interest costs borne by the tanneries. Therefore, an increase in interest costs will further reduce business profitability.

In India, Singh and Gurrmeet (2013) analyzed the extent to which capital structure affects profitability in Manufacturing Industry companies listed on the Bombay Stock Exchange. They confirmed that there is a strong relationship between the Capital Structure variable and the Profitability variable; ROI and Capital Structure have a significant effect on profitability; and the increase in the use of debt funds in the capital structure tends to minimize the net profit of manufacturing companies

Return on Equity (ROE) and ROE DuPont

Return on Equity (ROE) is a profitability ratio to assess a company's ability to generate profits from the investment of the company's shareholders expressed as a percentage. ROE is calculated from the company's income against the capital invested by the shareholders (common shareholders and preferred shareholders). ROE indicates the success of a company in managing its capital. Therefore the profit is measured from the investment of the owner of capital.

ROE is a comparison between net profit after tax and total equity. ROE is a measurement of the income available to shareholders (both common shareholders and preferred shareholders) on the capital they invest in the company. (Syafri and Sofyan, 2008).

In contrast to ROI, the analysis of the profitability ratio with ROE increases with the increase in the number of loans in the capital structure (Figure 3). Based on the research results, ROE increases with the increase in the number of loans with an interest system. The ROE increase is very high, from 18.00 percent to 295.22 percent if the company uses loan capital with a ratio of 100 percent, or an increase of 277.22 percent. It raises the question of why the ROE ratio increases with the increase in the loan to interest ratio. DuPont ROE analysis was conducted to find out this. DuPont ROE analysis (Table 1) shows that the increase in ROE is not caused by an increase in business profitability, but is caused by an increase in the capital structure due to a rise in the number of loans with an interest system on its capital structure. The profitability of the leather tanning industry (NPM) has decreased, but the capital structure (the ratio of loan capital to own capital) has increased significantly due to the increase in the number of loans up to 100 percent.

Negasa (2016) investigated the effect of capital structure on profitability in private companies in Ethiopia using the linear regression analysis method. Negasa found that the total debt ratio has a positive effect on profitability.

Furthermore, Ejupi and Ferati (2010) examined the Capital Structure and Profitability using the OLS (Ordinary Least Square) method to estimate the functions related to ROE with the Long-term debt index and short-term debt to Owners' Equity. The results reveal that the rate of return presents a positive correlation with short-term debt and equity and an inverse correlation with long-term debt.

Velnampy and Niresh (2012) studied banks and insurance listed on the Colombo Stock Exchange–Sri Lanka during period 2002 - 2009 using descriptive statistical methods and correlation analysis to test the relationship between variables. Their analysis showed a negative relationship between capital structure and profitability, except for the relationship between Debt to Equity (comparing total debt to equity) and Return on Equity (ROE). About 89% of total assets in the banking sector in Sri Lanka are represented by the debt (Velnampy and Niresh 2012).

Research by Rahimian and Mesam (2016) on The Relationship between Capital Structure and Profitability of Companies Listed in the Tehran Stock Exchange, shows that capital structure has a negative effect on profitability. This result is also confirmed by the research of Shubita et al. (2012) who found a significant negative relationship between capital structure and profitability. The findings of Shubita et al. imply that an increase in debt position decreases profitability, the higher the debt, the lower is the company's profitability.

Conclusion:-

Increasing loans with an interest system will cause a decline in financial performance (profitability ratio) of the leather tanning industry in Sukaregang-Garut. The ratio of GPM, NPM, and ROI decreased consistently with the increase in the number of loans with an interest system. GPM decreased from 39.02 percent to 35.37. NPM decreased from 15.26 percent to 8.26 percent. ROI decreased from 18.00 percent to 8.05 percent. Conversely, ROE increased with the increase in the number of loans in the capital structure. DuPont ROE analysis indicated that the increase in ROE was not caused by the growth in profitability, but by an expansion in the capital structure due to a rise in the amount of outside capital or loan capital using the interest system.

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