

SALES GROWTH, LIQUIDITY, LEVERAGE AND FINANCIAL DISTRESS: TESTING THE INTERACTION EFFECT OF PROFITABILITY

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ABSTRACT

Financial Distress is an important issue and requires deep attention, especially in the Consumer Goods Industry with high competition. This quantitative research aims to test the impact of Sales Growth, Liquidity, and Leverage on Financial Distress with Profitability as moderation. The research data was collected from companies listed on the Indonesian Stock Exchange (IDX) and then tested using logistical regression analysis techniques. Research results show that Leverage influences Financial Distress. In addition, Profitability can also moderate the influence of Liquidity and Leverage on Financial Distress. Other findings suggest that Sales Growth and Liquidity do not affect Financial Distress when tested in person. Thus, this research confirms the role of Profitability as moderation.

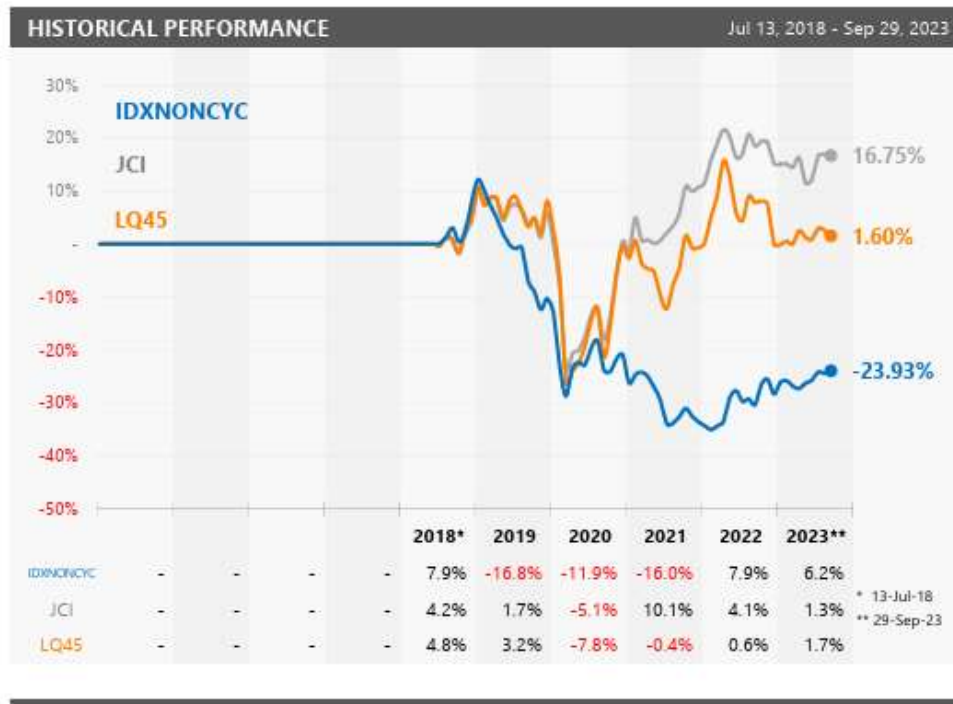
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1. INTRODUCTION

Along with the progress of the times and technological developments in the current global economy, it has shown rapid progress. The globalization and spread of the economy are reflections that indicate that the world economy is getting better. The conveniences of this era must be utilized in business activities supported by effective and efficient management to gain profits. In today's competitive business world, maintaining financial stability for companies is the most important thing so that the company becomes more successful and can continue to run the company, especially in the Consumer Goods Industry sector. Due to the intense level of competition, every business must continuously improve its basic management system to compete with other competitors and anticipate Financial Distress.

In addition, in recent years the world, especially in Indonesia, has faced significant economic problems due to the COVID-19 pandemic, which has significantly impacted business in Indonesia. This has a great deal to do with a company's survival, even though almost all companies in various industries have the same problem, namely financial difficulties commonly known as Financial Distress conditions. People experience a decline in purchasing interest, which leads to a decrease in company sales volumes and difficulties in competition, as well as the existence of social interaction regulations that reduce production capacity.



Source: Indonesia Stock Exchange

Figure 1. Indonesian Stock Exchange Consumer Goods Sectoral Index level

Based on Figure 1. above shows that the index on the Consumer Goods sector in 2019 has a share price percentage at a negative figure of -16,80%. In 2020, the price index is still at a negative level of -11.9%. While in 2021, the percentage is still at a negative level of -16.0%. It shows that the market conditions in the Consumer Goods Industry are slow and unstable. The rate also indicates that the value of companies in the Consumer Goods Industry sector is relatively low. However, from 2022 to 2023, the sector shows a better development direction as it is already at a positive level of 7.9% and 6.2%. Today's consumer Goods Industry has impacted the economy throughout Indonesia. This industry provides many jobs for the general public and shows commitment to the government with taxes paid [1]. Companies can experience bankruptcy due to long-term financial problems. A company will experience financial difficulties before bankruptcy occurs, called Financial Distress.

Financial Distress is a complicated situation due to a decrease in a company's financial rate, resulting in its inability to pay its obligations at the time of payment [2]. Before a company undergoes liquidation, a decrease in a company's financial rate can be seen as a signal of Financial Distress. Under these conditions, investors may be considering making investments. The initial symptoms of the bankruptcy of a juvenile are characterized by the inability to pay its obligations at the time of maturity [3]. According to [4], the influence of Financial Distress generally comes from within the company and is micro. A company is crucial in understanding the factors that contribute to financial disruption and finding ways to address the negative impacts that hinder the business. The company can manage effectively by dealing with and understanding the appropriate strategy. To determine a company's Financial Distress level, an analysis can be done on its financial report [5]. The financial statements published by a company are a set of transactions carried out during a specific period. This report also describes information about financial position, performance, and changes in financial position [6]. Financial report analysis is used to describe the financial aspects of a company in the future to prevent the presence of Financial Distress [7].

Literature Review And Hypothesis Development

Signaling Theory

Signaling Theory explains how financial statements can describe the financial condition of external parties, whether it will move in a positive or negative direction [8]. The information in the financial statements is expected to help investors determine their investment steps [6]. Signaling theory explains the main reasons a company discloses information to the public. This information comes from financial

reports, company policy information, or other information provided by a company. Financial reports help a company in decision-making. The purpose of the presentation of financial statements is to show information that is assessed to influence decisions made by stakeholders. In this case, the presentation of the financial report, for example, allows an investor to know whether a company's financial condition is stable [9].

Financial Distress

In Financial Distress, three different terms are used: bankruptcy, failure, and default. Bankruptcy is a business that faces financial problems and requires a legal declaration involving a court. The definition of failure means that the industry's investment takes less than its investment returns because the revenue it generates is less than the cost it spends. The default condition is when a business breaks a loan agreement and causes legal problems for failing to pay it [10].

Financial Distress is a situation that leads to the likelihood of a company going bankrupt and collapsing, caused by its inability to meet its financial obligations [11]. Financial Distress can describe a company's problems, whether Liquidity problems or more severe ones that potentially lead to bankruptcy [12]. When the value of the operating profit, net profit, and equity value of a company falls in its financial statements, the company can be said to be in a condition of Financial Distress [13]. Companies with high debt are often identified as Financial Distress because cannot pay the obligations [14]. There are several internal and external factors that are causing the financial crisis. Internal factors include cash flow problems, debt, and a decline in company operations over a long period. External factors include the risk of rising loan interest rates [15]. In predicting financial problems, one can use financial reports to know the financial conditions that the company will face [16].

Sales Growth and Financial Distress

Sales Growth is a ratio in describing future sales, as well as the growth of profits generated by the products and services generated [17]. Sales Growth can also be an indicator used to measure sales performance to determine the revenue increase over a certain period [18]. According to [19], Sales Growth is essential for a company's survival and financial growth. If the Sales Growth rate is high, then the company can be considered successful. It shows that the company's management has effectively implemented marketing and sales strategies [20]. A high Sales Growth rate may indicate that the company can maintain its operations because of the relatively high profits [21]. Studies conducted by [22], [23], and [24] support this hypothesis with the statement that Sales Growth negatively and significantly affects Financial Distress.

H₁ : Sales Growth has a negative and significant impact on the occurrence of Financial Distress.

Liquidity and Financial Distress

The term Liquidity refers to a company's ability to generate cash flows to meet its obligations smoothly [25]. A high level of Liquidity is a sign that the company is in a healthy state, it assumes that the corporate finances are in a great and liquid state [26]. According to [27], the Liquidity rate is a critical component in the decision-making process for investors. One way to assess a business's liquidation level is to see how well a company can pay its debt smoothly using its smooth assets [28]. With a low level of fulfilling its obligations, the company will likely suffer Financial Distress [29]. A company's Liquidity level is shown as the Liquidity ratio. This ratio describes the capacity of the company during the repayment of short-term loans [30]. Studies conducted by [31], [32], and [22] support this hypothesis with the statement that Liquidity negatively and significantly affects Financial Distress.

H₂ : Liquidity negatively and significantly affects the occurrence of Financial Distress.

Leverage and Financial Distress

The Leverage level indicates the ability of a company to meet its obligations, both in the short and long term. The Leverage ratio can show the strength of a company in determining the level of fulfillment of its obligations [33]. This ratio describes how well a company can meet its obligations. If undergoing liquidation, this ratio can indicate how much of the company's assets are funded by debt [5]. According to [34], Leverage can describe how risky a company is. The degree of Leverage directly impacts the amount of debt utilized, consequently leading to financial risk. High Leverage rates indicate that the company may experience a situation in which it cannot pay its future obligations due to the high rate of interest returns. If things happen regularly, the company can suffer Financial Distress [2]. Companies must regulate their assets to pay their liabilities quickly and reduce the risk of failure to pay [35]. Studies conducted by [36], [37], and [38] support this hypothesis with the statement that Leverage negatively and significantly affects Financial Distress.

H₃ : Leverage negatively and significantly affects the occurrence of Financial Distress.

The Interaction Effect of Profitability

Profitability is an analysis of financial information because it is essential for the user of information to compare financial data in the company, the realization of which uses financial reports with financial ratios [21]. Profitability describes the ability of a company to generate profits from its operations [39]. If a company's Profitability is high, it indicates that the company can generate profits. The consequences of the increase in assets can also protect companies from financial problems [5]. Profitability also shows how efficiently a business uses its assets because this ratio measures how well a business can profit from its use of assets [40]. The cost burden can be reduced if an asset is used effectively and efficiently. Therefore, it can describe a stable financial condition for carrying out the business [41]. Studies conducted by [42], [43], [44], and [45] support this hypothesis with the statement that Profitability can moderate Liquidity and Leverage against Financial Distress.

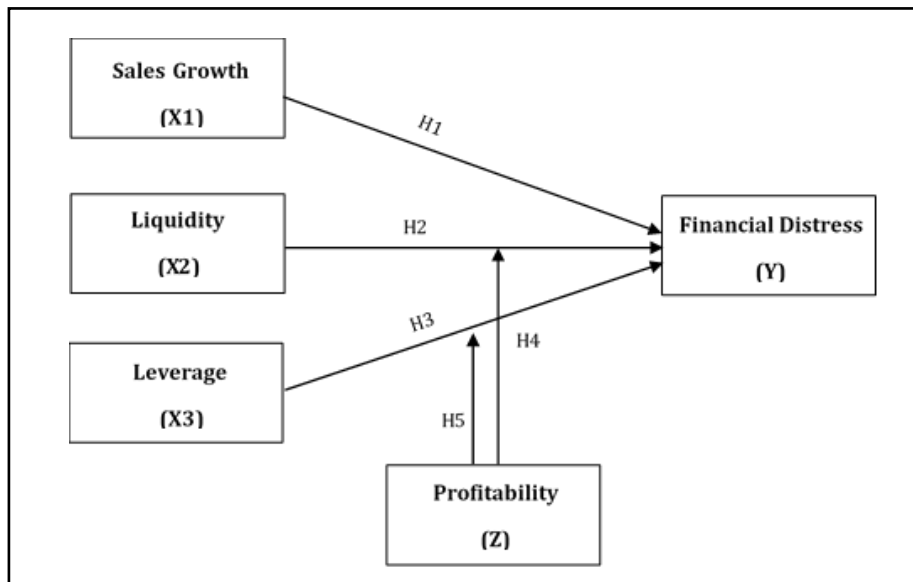
H₄ : Profitability can be a moderation of Liquidity over the occurrence of Financial Distress

H₅ : Profitability can be a moderation of the Leverage over the occurrence of Financial Distress.

Conceptual framework

This research will analyze Sales Growth, Liquidity, and Leverage to Financial Distress mediated by Profitability to see how much impact each variable has. Based on the above language, we get a conceptual picture that indicates intervariable relationships. Here is the conceptual framework structure:

Table 1. Research Framework



2. METHOD

This research uses quantitative methodology because of the data and analysis using panel data. According to [46], quantitative research is a type of research that collects data in numerical form and analyzes it using statistical techniques. The testing in this study uses logistical regression analysis to determine how Sales Growth, Liquidity, Leverage, Financial Distress, and Profitability relate. Here is a summary of the operationalization of each variable studied and presented in the following table:

Table 2. Operational Summary

No	Variable	Defintion	Measurement	Scale
1.	Sales Growth (X1)	Sales Growth can measure a company's sales rate over a particular period [17].	$SG = \frac{Sales(t) - Sales(t-1)}{Sales(t-1)}$	Ratio
2.	Liquidity (X2)	The ability of a corporation to pay its financial commitments according to the payment period is referred to as Liquidity [17].	$CR = \frac{Current Assets}{Current Liabilities}$	Ratio
3.	Leverage (X3)	Leverage is an indicator showing the level of risk faced by the company [17].	$DAR = \frac{Total Liabilities}{Total Assets}$	Ratio

No	Variable	Defintion	Measurement	Scale
4.	Financial Distress (Y)	The Financial Distress arises due to the successive decline in the company's financial rate [17].	$ICR = \frac{EBIT}{Interest\ Expense}$	Ratio
5.	Profitability (Z)	Profitability describes a company's capability to generate income in a certain period [47].	$ROA = \frac{Net\ Profit}{Total\ Assets}$	Ratio

This study includes corporations registered on the Indonesia Stock Exchange (IDX) in the Consumer Goods Industry during the last five years, from 2018 to 2022. This study focuses on financial information on the Indonesia Stock Exchange (IDX) and the corporation's official websites. Secondary data in this research comes from the company's financial reports, which can be accessed via the company's official website and the Indonesian Stock Exchange (IDX). According to [48], indirectly collected information is called secondary data because the information is obtained through an intermediary through documents or other persons.

The sample is a small portion of the population with specific characteristics [46]. This research uses a purposive sampling methodology. Methodology purposive sampling in sample-taking is based on the presence of considerations [46]. After classification and elimination, 29 companies were obtained from the total of companies, which is 89 companies in the Consumer Goods Industry sector. This study uses four models of equations presented in the equations of the econometric model. Intervariable relationships and their measurements are shown in the respective equation model, which is presented systematically below:

$$FD = \alpha + \beta_1.PROF + \varepsilon \dots\dots\dots \text{Model (1)}$$

$$FD = \alpha + \beta_2.SG + \beta_3.LIQ + \beta_4.LEV + \varepsilon \dots\dots\dots \text{Model (2)}$$

$$FD = \alpha + \beta_5.SG + \beta_6.LIQ + \beta_7.LEV + \beta_8.PROF + \beta_9.(LIQ*PROF) + \beta_{10}.(LEV*PROF) + \varepsilon \dots\dots\dots \text{Model (3)}$$

Information:

- FD = Financial Distress
- PROF = Profitability
- SG = Sales Growth
- LIQ = Liquidity
- LEV = Leverage
- ε = Residual Error

3. RESULT AND DISCUSSION

Analysis Results

This study uses four models of equations presented in the equations of the econometric model. Intervariable relationships and their measurements are shown in the respective equation model, which is presented systematically below:

Tab 3. Analysis Results Using Descriptive Statistics

Definition	SG	LIQ	LEV	PROF	FD
Mean	0.056	2.363	0.523	0.054	0.344
Median	0.060	1.630	0.470	0.050	0.000
Max	1.270	9.220	4.070	0.920	1.000
Min	-1.000	0.000	0.150	-2.030	0.000
Std. Dev	0.241	1.913	0.433	0.232	0.476
Skewness	0.397	1.579	5.262	-4.400	0.652
Kurtosis	9.382	5.007	38.703	47.828	1.426
Observasi	145	145	145	145	145

Information: SG = Sales Growth, LIQ = Liquidity, LEV = Leverage, PROF = Profitability, FD = Financial Distress

Based on descriptive statistics, the ratio of the entire variable (Sales Growth, Liquidity, Leverage, Profitability, and Financial Distress) is at a vulnerability of 0.05 to 2.36. The data spread indicates a relatively good value variation and is supported by the Std. Dev values (being in the range of 0.23 to 1.57), so outlier data is not found in this study. The data also suggests that some variables have a higher value of Std. Dev than the Mean values such as the Sales Growth variables (0.0056 < 0.241), Profitability (0.054 < 0.232), and Financial Distress (0.334 < 0.476), this indicates that the variables are fluctuative. The

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situation also supports the subsequent adoption process, which will be discussed in the following sections.

Tab 4. Chow Examiner

Effect Test	Stat.	d.f	Prob.
<i>Cross-Section F</i>	9.088	(28.113)	0.000
<i>Cross-Section Chi-square</i>	170.996	28	0.000

From the table, the Fixed Effect Model (FEM) has superior values in decision-making compared to the Common Effect Model. (CEM). The Prob level shows the result. Chi-Square is at the value of 0,000, meaning ($0,000 < \alpha = 0.05$).

Tab5. Hausman Examiner

Test Summary	Chi-Sq. Stat.	Chi-Sq. d.f.	Prob.
<i>Cross-Section random</i>	18.716	3	0.000

From this table, the Fixed Effect Model (FEM) is better than the Random Effect Model (REM). The Hausman test results showed a prob cross-section level of 0,000 ($0,000 < \alpha = 0.05$). Therefore, the FEM model is used for further testing. Three models are tested in this study, and the results of each test are shown in Table 6. Model -1 tests the impact of Profitability as moderation on Financial Distress. Model -2 tests the influence of the dependent variable Sales Growth, Liquidity, and Leverage on Financial Distress. At the same time, Model -3 tests the effects of Profitability interactions as moderation with the Liquidity and Leverage variables over the Financial Distress variables.

Profitability serves as the moderation analyzed in this research. A healthy Profitability affects Liquidity and Leverage to lower the company's Financial Distress level. A good understanding of profit and finance is expected to help decision-makers deal with financial issues more rationally. As a result, this variable is positioned as a quasi-moderator. The moderation variable is expected to have a significant influence on Financial Distress. Based on the analysis of Moderated Regression Analysis (MRA) of several given equation models, the results are as follows:

Tab 6. Research Model Equation Test Results

No.	Definition	Model -1	Model -2	Model -3
1	Constant	0.344	0.401	0.368
	<i>Prob-Value</i>	(0.000)*	(0.000)*	(0.000)*
2	PROF	-7.030	-	0.913
	<i>Prob-Value</i>	(0.983)	-	(0.000)*
3	SG	-	0.000	0.035
	<i>Prob-Value</i>	-	(0.487)	(0.019)*
4	LIQ	-	-9.040	0.015
	<i>Prob-Value</i>	-	(0.905)	(0.005)*
5	LEV	-	-0.107	-0.152
	<i>Prob-Value</i>	-	(0.000)*	(0.000)*
6	LIQ*PROF	-	-	-0.399
	<i>Prob-Value</i>	-	-	(0.000)*
7	LEV*PROF	-	-	-0.914
	<i>Prob-Value</i>	-	-	(0.000)*
	F	272	243	411
	<i>Prob-Value</i>	(0.000)*	(0.000)*	(0.000)*
	Adjusted R	0.999	0.999	0.998

*Description: Dependent Variable = FD: *sig.5%*

Test results from Table 6. show the model equation results. In Model -1, it shows Profitability with a coefficient of -7,030 and a probability rate of ($0,983 > 0,05$). Based on its value, Profitability has a negative influence but does not affect the significance of Financial Distress. These results show that Profitability does not play a significant role in moderating Financial Distress. This conclusion suggests that Profitability plays a moderating role in this study.

The Model-2 test results showed that the Sales Growth and Liquidity variables had no significance over the Financial Distress variables, and only the Leverage variable had a significant influence over the Financial Distress variable. Sales Growth shows a regression coefficient 0,000 and a probability rate of value ($0.487 > 0.05$). The results show that the Sales Growth variable has a positive influence and no significance. On the Liquidity variable, the regression coefficient is -9,040 and the probability value is ($0.905 > 0.05$). Based on these results, Liquidity affects negatively and has no significance to the Financial

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Distress. Further, the variable Leverage shows a significance level of -0.107 and a probability level of $(0.000 < 0.05)$. On the variables, Leverage indicates a negative and significant influence on Financial Distress.

Meanwhile, Model -3 describes the test results of the effect of moderation of Profitability, Profitability positioned as a moderation variable is expected to explain the impact of Liquidity and Leverage on Financial Distress. From the moderation effect test results, there is support for the Profitability variable as moderation. On a Liquidity variable moderated by Profitability, the regression coefficient rate is -0.339, and the probability rate $(0,000 < 0.05)$. In other words, there is a negative and significant impact on Financial Distress. The Leverage variable moderated by Profitability indicates a regression rate of -0.914 and probability $(0,000 < 0.05)$. The analysis shows that Leverage negatively and significantly impacts Financial Distress.

Hypotheses Testing

Sales Growth and Financial Distress

The significance test results showed that Sales Growth had a positive impact, with the bound variable having no significance. The results suggest that high or low Sales Growth rates do not indicate the likelihood of Financial Distress. This study states that **H1 is rejected**. So, the decline in Sales Growth value is due to the price fall, while the profit margin does not necessarily rise. A high burden could follow increased Sales Growth because the profits earned do not contribute significantly to the financial condition of a company. This result is adjusted by the findings made by [49], [50], [51], and [52] argue that low Sales Growth does not always indicate that companies are facing Financial Distress because companies usually only focus on increasing profits to reduce the likelihood of financial problems.

Liquidity and Financial Distress

Results of the significance test, show that Liquidity has a negative impact, with the bound variable having no significance. It suggests that a high or low level of Liquidity cannot indicate the likelihood of Financial Distress. This study states that **H2 is rejected**. Companies are in financial trouble, not just because of the company's low Liquidity rate. The problem is due to inappropriate allocation, where most rely only on their funding to pay their short-term obligations. Since the companies have sufficient funding, they will not hesitate to sell or obtain their proper assets to pay the company's liabilities. If a company is undergoing a financial crisis, it is obliged to fulfill all its obligations, be they short-term or long-term. This result is adjusted by the findings made by [53], [27], [54], and [55] argued that payment of liabilities is not only focused on the short term but also needs fulfillment of long-term obligations to minimize failure to pay.

Leverage and Financial Distress

The significance test results showed that the Leverage had a negative impact, significantly impacting the Financial Distress. This shows that an increase in Leverage can reduce the probability of Financial Distress. Companies need to pay attention to the level or position of debt to maintain and effectively use it. The results prove that **H3 was accepted**. The use of high debt in a company is quite risky because the company will be burdened by the interest that must be paid. However, it is also necessary to pay attention to the level or value of Leverage because if it is still at a level that is not too high (moderate), then the company will be able to obtain a Leveraging effect from the effective use of debt. It also proves the Signal theory that debt is one aspect of describing the health of a company. This result is adjusted by the findings made by [36], [37], and [38] argued that increases in Leverage and debt optimization, could reduce the probability of possible Financial Distress and could be accompanied by high asset rates.

The Effect of Profitability as a Moderating Liquidity on Financial Distress

The significance test results showed that Profitability has a negative impact, with significance on Financial Distress, and marking the debited variable can strengthen Liquidity. These results illustrate that a high level of Profitability indicates that the company is better at gaining profits to pay off its short-term obligations when they fall due and minimize the probability of Financial Distress. The results show that **H4 is accepted**. The degree of Profitability of a company indicates the extent to which the company makes a profit in running its business. According to the theory, the high level of Profitability signals good news for the outside so that the outside will be interested in making investments. High Profitability can increase Liquidity because it can pay its obligations on time, signal that the company is in a Liquid state, and reduce the likelihood of Financial Distress. This result is adjusted by the findings made by [45], [56], [22], and [57] stated that high levels of Liquidity combined with high Profitability can reduce the risk of corporate financial problems.

The Effect of Profitability as a Moderating Leverage on Financial Distress

The significance test results show that Profitability has a negative impact, The test results showed that the high rate of profit generated by the company can affect its ability to pay its obligations to third parties. The probability of Financial Distress will be reduced. This result indicates that **H5 was accepted**. Statistically, it has been shown that increased Leverage can reduce the likelihood of Financial Distress. This finding is in line with the trade-off theory that shows on descriptive statistics that the value of the debt ratio is at 52%, indicating a relatively moderate Leverage ratio so that the company can still obtain the Leveraging effect to maintain stability and shift the debts in a productive direction in generating profits. In addition to having a good level of Profitability, it can reduce the likelihood of Financial Distress in a company. This result is adjusted by the findings made by [43], [58], and [59] stated that increases in Profitability in generating profits so that such liabilities can be paid correctly and lower the probability of Financial Distress.

4. CONCLUSION

This research aims to determine the impact of Sales Growth, Liquidity, and Leverage on Financial Distress and the role of Profitability in moderating it. This study uses 29 companies (145 observations) in the Consumer Goods Industry sector listed on the Indonesia Stock Exchange (IDX) over the last five years, from 2018 to 2022. The conclusions of this research are explained in several points, namely as follows: Sales Growth does not significantly influence Financial Distress where the high or low value of the company's Sales Growth does not impact the probability level of Financial Distress events. If the increase in Sales Growth occurs due to price and is not accompanied by good match margins, it does not guarantee that the company can generate optimal profits. Financial Distress is not significantly influenced by Liquidity. Where the high or low value of a company's Liquidity does not impact the probability level of Financial Distress, it is not just a high or low level of Liquidity that describes predicting Financial Distress conditions. Leverage negatively and significantly influences Financial Distress. Increasing Leverage it can reduce the probability of Financial Distress. Because if it is still at a level that is not too high (moderate), the company will be able to obtain a Leverage effect from the effectiveness of using debt. Profitability can strengthen the influence of Liquidity because it shows a significant negative influence on Financial Distress. The high level of Profitability indicates that the company is better at making profits to pay off its short-term debt during the payment period. This indicates that a company is in a liquid state and can reduce the probability of Financial Distress conditions. Profitability can strengthen the influence of Leverage because it shows a significant negative influence on Financial Distress. A high level of Profitability (a company's ability to generate income) can affect its ability to pay off its obligations to other parties, thereby reducing the probability of Financial Distress conditions occurring.

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