FACTORS AFFECTING FINANCIAL DISTRESS IN MANUFACTURING COMPANIES LISTED ON IDX

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ABSTRACT

This study empirically examines the factors influencing financial distress from 2018-2020. The independent variables used in this study are profitability, liquidity, sales growth, firm size, and firm activities. This study uses quantitative research methods with secondary data obtained from the annual financial statements of manufacturing companies listed on the BEI. There are 102 data from 64 companies selected as research samples based on the purposive sampling method. The data processing in this study was tested using the EViews 12. The results of the regression test showed that company size had a negative and significant effect on financial distress, while profitability and liquidity had a significant positive effect on financial distress and sales growth and activity had no effect on financial distress.

Keywords: financial distress, profitability, liquidity, sales growth, firms size, activity

1. INTRODUCTION

The current economic conditions create tight competition between companies in the industry. Economic conditions that are constantly changing rapidly, of course, affect the performance of a company. One of the industries with fairly tight competition is the manufacturing industry. This industry is engaged in the production of raw goods into finished goods. In this industry, many things affect the company's operations, such as raw material prices, market prices, competition between companies, and much more. Until 2021, 29 thousand medium and large-scale manufacturing industry companies are listed in the Indonesian Central Statistics Agency. Therefore, the company must pay attention to its financial condition and remain stable to survive the intense competition.

Every company must pay attention to all factors affecting its financial condition, so they do not experience bankruptcy. The initial symptom that occurs before the company goes bankrupt is financial distress [1]. Financial distress is when the company's finances are getting worse daily, so it cannot pay debts to creditors [2]. If this cannot be solved correctly, the company will fail to fulfill its obligations and evolve bankrupt. Therefore, several parties need to know what factors influence financial distress in the company so that the company's management can determine the right strategy to maintain and improve performance that reduces the risk of bankruptcy. This study was conducted to determine factors affecting financial distress in manufacturing companies listed on the Indonesia Stock Exchange in 2018-2020. The ratios that used in this study are profitability, liquidity, sales growth, firm size, and activity.

Profitability is the ability to generate profit from the company's operational activities [3]. Profitability can be achieved through the company's strategy in selling the products and effective asset management. With the profit generated, the company's ability to pay its obligations will increase, and the risk of bankruptcy will decrease. The resulting profitability is critical information investors can use to monitor the company's growth.

Liquidity is a measurement that shows the company's short- term ability to repay current liabilities from current assets owned by the company [4]. The company's inability to pay its short-term obligations indicates that its operating activities are not going well. If the value of the resulting liquidity ratio is greater, it can be said that the company has sufficient current assets to meet its current liabilities.

Sales growth is a measurement used to predict company growth based on revenue generated from services and sales of company products [5]. If sales growth shows a positive change, the company has implemented good sales management from the previous year. The better the sales growth, the higher the profit opportunities generated. Sales growth is also an indicator of the company's competitiveness in the midst of business competition. So that if this achievement is met, sales growth will be a benchmark for investors to invest.

Firm Size is a scale that can be classified as a small company measured by total assets [6]. With the size of the company, the company can obtain funds quickly from the market and have bargaining power in financial contracts that support the company in generating profits [7].

Activity is a measurement that shows the effectiveness of the company in managing assets and available resources. When the activity ratio is large, the better company's management in maximizing existing assets [8]. When the effectiveness of the company's assets is higher, it indicates that the company can generate greater sales than the assets invested.

2. LITERATURE REVIEW

Signalling Theory

Signaling theory is a theory that explains that a signal can reduce information asymmetry from both parties. The signal is obtained from relevant information used by the parties involved in making decisions [9]. *For example, financial statements* are a signal used by investors to avoid asymmetric information. This signal will act as a guide regarding the company's activities that the company has achieved in meeting the interests of stakeholders. Relevant information can give positive or negative signals to investors. With the signal given by the company, investors can get an idea of the company's finances, whether they are classified as safe, gray, or in financial distress areas.

Agency Theory

Agency theory explains the agency relationship of the principal and agent related to the contribution made when achieving company goals [10]. The company's owner, as the principal, will give authority to the company manager as an agent in managing the company and making the best decisions. So from the grand theory, the agent must be responsible for all the principal's actions. Information asymmetry can generally lead to principal-agent problems [11], such as a conflict of interest between the two parties. In theory, the objectives of management (agent) are, of course, in line with the company's owner (principal). However, because of different positions, there are often problems between the two. The agency that tends to be in the specialization has a different mindset from the company owner. Due to the great responsibility of the agent on the principal who has chosen or appointed him as the decision maker in achieving the target, the agent often optimizes financial conditions that are different from applicable standards, which can result in financial distress. Thus, financial analysis is required to assess the company's financial condition through financial ratios such

as profitability, liquidity, sales growth, firm size, and activity.

The Effect of Profitability on FinancialDistress

Profitability ratios will confirm the company's success in the company's ability to profit from each sale generated [3]. With this profitability ratio, investors can quickly assess the performance of the company's management and predict the company's sustainability in the future. In this study, the profitability ratio is proxied by return on assets (ROA) which is calculated through the company's ability to generate net income from the total assets owned by the company. From the profit generated, the company is expected to be able to pay short-term obligations and operational needs. Therefore, the company is less likely to experience financial distress when the profitability ratio is higher.

The Effect of Liquidity on Financial Distress

Liquidity is a ratio that shows the company's short-term ability to repay current liabilities from current assets owned [4]. Current assets generally consist of cash, receivables, inventories, and others. If the company can quickly convert receivables into cash in a time, the ability to pay short-term obligations can be adequately fulfilled. The conversion will support greater availability of funds to meet their short-term needs. In this study, liquidity is proxied by the current ratio (CR), which is calculated by comparing current assets with short-term liabilities owned by the company. The higher the liquidity ratio, the stronger the company's financial position, and the lower the risk of financial distress.

The Effect of Sales Growth on Financial Distress

Sales growth is a measurement that shows the level of achievement of income for the current year compared to the previous year [5]. When sales growth shows growth, it is indicated that the company has the right strategy to maintain its operational continuity. If the company's growth ratio is higher, the sales will be higher, which is a signaling theory for investors. In addition, when the company shows growing sales growth, the company's financial condition is indicated to be healthy so that financial distress can be avoided. This is because companies with increased sales growth have the opportunity to generate higher profits so that companies can avoid financial distress.

The Effect of Firm Size on Financial Distress

Firm size is measured by the number of assets owned by the company. The greater the assets owned, the greater the size of a company. In terms of assets owned, the resulting capital and sales will also be greater for companies with larger assets. With capital, the assets owned by the company can meet its short-term obligations. If the assets owned by a company are small, the company tends to find it easier to meet its short-term obligations due to a lack of resources or funds within the company. In addition, large-sized companies tend to encourage bargaining power in the market. This bargaining power will help increase investor confidence in the company. So, with a larger size, the risk of financial distress can be avoided.

The Effect of Activity on Financial Distress

Activity shows the level of effectiveness of the company in managing its assets in generating income in the form of sales. The greater the activity ratio, the greater the profit generated, so

the probability of financial distress is lower. With this level of effectiveness, the company can allocate the required expenses and the profits that need to be generated in order to be able to pay its short-term obligations. When the sales generated are higher, the company's tendency to have a profit also increases. This profit will encourage sufficient funds for the company. It is hoped that the company can fulfill its obligations with these funds. When a company can fulfill its obligations, the risk of financial distress can be avoided.

3. FRAMEWORK AND RESEARCH METHODOLOGY

Theoretical Framework

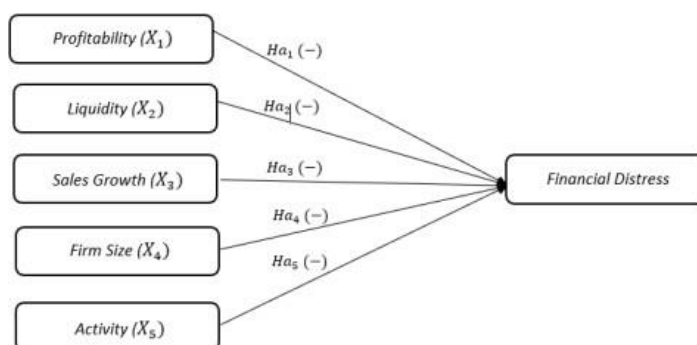The framework of this study as presented in Figure 1:

Figure 1 Theoretical Framework

Based on the previous explanation, the hypotheses developed are as follows:

H1: Profitability has a significant and negative effect on Financial Distress
H2: Liquidity has a significant and negative effect on Financial Distress
H3: Sales growth has a significant and negative effect on Financial Distress
H4: Firm size has a significant and negative effect on Financial Distress
H5: Activity has a significant and negative effect on Financial Distress

Research Methodology

In this study, the population used is a manufacturing company listed on the Stock Exchange Indonesia during the 2018-2020 period. Furthermore, the sample selection in research uses a purposive sampling technique with this following sample criteria: (1) Manufacturing companies listed on the Stock Exchange in succession in the period 2018-2020; (2) Manufacturing companies that report the financial statements do not expire as of December 31; (3) Companies by category not experiencing financial distress (healthy) according to the model calculation Altman Z- score for the period 2018-2020. The selected sample is 34 companies with 102-panel data (34 samples times three periods) that were analyzed using multiple regression analysis and proceeded using EViews software. The dependent variable is financial distress. On the other hand, the independent variable are profitability, liquidity, sales growth, firm size, and activity which explained in the Table 1 as follows:

Table 1 The Operationalization of Research Variables

Variable	Proxy	Scale	References
Financial Distress	Z-score = 1,2 T1 + 1,4T2 + 3,3 T3 + 0,6 T4 +1,0 T5	Rasio	Jafaar *et al.* (2018) [12]
Profitabilitas	$ROA = \dfrac{Net\ Income}{Total\ Asset}$	Rasio	Jafaar *et al.* (2018)
Likuiditas	$CR = \dfrac{Current\ Assets}{Current\ Liabilities}$	Rasio	Jafaar *et al.* (2018)
Sales Growth	$SG = \dfrac{Sales\ year_2 - Sales\ year_1}{Sales\ year_1}$	Rasio	Jafaar *et al.* (2018)
Firm Size	$SIZE = Ln(Total\ Assets)$	Rasio	Jafaar *et al.* (2018)
Activity	$TATO = \dfrac{Net\ Sales\ revenue}{Total\ Assets}$	Rasio	Yudiawati dan Indriawti (2016) [8]

4. RESULT AND DISCUSSION

Here is the result descriptive statistical test of 102 samples of dependent and independent variable data manufacturing companies used in research that can be seen in the following table.

Table 2 Descriptive Statistics

	FD	ROA	CR	SG	SIZE	TATO
Observations	102	102	102	102	102	102
Mean	1.430692	0.011068	1.249030	0.012897	29.14870	0.718516
Maximum	2.894510	0.090300	2.468900	0.584900	32.72560	1.661800
Minimum	-1.143460	-0.095200	0.266700	-0.500700	26.73070	0.261500
Std. Dev	0.745546	0.034450	0.439826	0.195166	1.522054	0.311524

As seen below, the chow test shows the cross-section chi- square probability value is 0.0000, smaller than the level 5% significance. Therefore, it indicates Ha is accepted, and thus, the estimation model chosen from the Chow test or likelihood is the fixed effect model.

Table 3 Chow Test Result

Redundant Fixed Effects Tests
Equation: MODEL_FEM
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	14.683446	(33,63)	0.0000
Cross-section Chi-square	220.557239	33	0.0000

Source: Data Processing using EViews 12

When the fixed effect model is selected, the next test performed is the Hausman test. Table 4 shows that the probability value of a random cross-section is 0.0000 < 5%. From these results, Ha is accepted, and the fixed effect model is the model chosen from the Hausmann test. The fixed effect model is the suitable model for this research from the two tests that have been carried out.

Table 4 Hausman Test Result

Correlated Random Effects - Hausman Test
Equation: MODEL REM
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	28.658772	5	0.0000

Source: Data Processing using EViews 12

The following are the results of multiple regression analysis based on the selected fixed effect model.

Table 5 Result of Multiple Regression Analysis

Dependent Variable: Y
Method: Panel Least Squares
Date: 05/06/22   Time: 13:16
Sample: 2018 2020
Periods included: 3
Cross-sections included: 34
Total panel (balanced) observations: 102

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	25.90220	7.538265	3.436095	0.0010
ROA	3.907355	1.336032	2.924597	0.0048
CR	0.370551	0.145898	2.539798	0.0136
SG	0.158722	0.177802	0.892692	0.3754
SIZE	-0.868949	0.254843	-3.409743	0.0011
TATO	0.485871	0.286737	1.694480	0.0951

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.952689	Mean dependent var	1.430692
Adjusted R-squared	0.924152	S.D. dependent var	0.745546
S.E. of regression	0.205327	Akaike info criterion	-0.045556
Sum squared resid	2.656035	Schwarz criterion	0.958110
Log likelihood	41.32334	Hannan-Quinn criter.	0.360863
F-statistic	33.38444	Durbin-Watson stat	2.544154
Prob(F-statistic)	0.000000		

Source: Data Processing using EViews 12

The regression equation can be formulated as follows using the test result above.

FD = 25.90220 + 3.907355 ROA + 0.370551 CR + 0.158722 SG – 0.868949 SIZE + 0.485871 TATO + e

Notes:
FD   = Financial Distress
ROA   = Return on Aset (Profitability)CR = Current Ratio (Liquidity)
SG   = Sales GrowthSIZE = Firm Size
TATO   = Total Asset Turn Over (Activity)
E   = error

5. CONCLUSION

Based on the results shown previously, the conclusions obtained are as follows.

The Profitability's Effect on Financial Distress

Based on the test results of the fixed effect model in Table 5, it is known that the profitability variable has a positive t- statistics of 2.924597 means that the effect of profitability on the return on assets proxy is positive. This signifies that when profitability increases, financial distress will also be increased. On the other hand, if profitability decreases, then financial distress also decreases. Furthermore, in the test results, it is also known that the value of the probability of profitability is 0.0048, which is smaller than the level significance of 5% (0.0048 < 0.05). Therefore, it indicates that profitability's effect on financial distress has the following characteristics: significant. Therefore, based on the t-statistic and probabilities described previously, it can be concluded that profitability positively and significantly affects financial distress.

In this study, the average ROA produced by the sample companies is sufficiently low that they are vulnerable to financial distress, especially if they earn profit using third- party funds. The high-interest rates will lead to high-interest costs, while the company's average profits are still low. The company will find it difficult to fulfil its obligations from this phenomenon. With profitability produced but accompanied by an increase in expenses increasingly an increase from year to year, the company is not free from financial distress.

The Liquidity's Effect on Financial Distress

In Table 5, the liquidity proxy is a current ratio with a positive t-statistics value of 2.539798. It indicates that when liquidity increases, financial distress also increases. On the other hand, if liquidity decreased, financial distress also decreased. While the probability value is generated by a value of 0.0136, which is smaller than the 5% significance level, indicating that the liquidity variable's influence on the financial distress variable is significant. Based on the t- count value and the profitability that has been generated previously, it can be concluded that liquidity has a positive effect on financial distress.

The results of this study indicate that liquidity has a positive effect on financial distress. Components in Current assets generally consist of cash, inventories and accounts receivable. Conversion of inventories and accounts receivable to cash frequently takes quite a long time. In addition, the Covid-19 pandemic has resulted in a decrease in sales so that inventory settles in the company. From this phenomenon, it can be concluded that the higher the current ratio, the greater the risk of financial distress.

The Sales Growth Effect on Financial Distress

Table 5 shows that the t-statistics value of sales growth has a positive value of 0.892692. The value indicates that the relationship between sales growth and financial distress is direct or positive. It means that if sales growth experiences increase, financial distress will also increase. On the other hand, if sales growth decreases, financial distress also decreases. Furthermore, on the probability value of sales growth, the resulting value of 0.3754 is greater than the 5% significance level. Score This indicates that sales growth does not have a significant effect significant to financial distress. So from these two results, it can be concluded that sales growth has no significant effect to financial distress. Companies with

high sales growth rates do not guarantee high profits or increase capabilities of debt repayment and free the company from financial risk distress. This is due to other supporting factors such as the size of the burden that affects the company's profit. Increased sales tend to increase operating expenses, cost of goods sales, and other expenses required for production. If The company has a high level of sales with a high cost, resulting in lower profit due to payment of company expenses. As a result, the company faces a risk of financial distress.

The Firm Size Effect on Financial Distress

Table 5 shows the t-statistics value of the resulting firm size is 3.409743 with a negative value. From this value, firm size has the opposite effect or negative to financial distress. When firm size experiences an increase, financial distress will decrease. On the contrary, when firm size decreases, financial distress increased. Furthermore, the probability of firm size generated a value of 0.0011, which is smaller than the 5% significance level. This signifies that firm size has a significant influence on financial distress. The two explanations concluded that firm size has a negative effect on financial distress.

Firm size is a scale that can be classified as small as the size of the company as measured by total assets owned by the company. When the company gets bigger, the greater the number of assets owned by a company. The number of total assets will prevent the company from possibility of financial distress. This is because the large total assets will increase the ability to pay off obligations in the future. Large companies also tend to have more favourable conditions stable. This is due to the tendency of the company's stock price to quite high in the capital market. With the size owned, investors have high expectations for large companies. With these expectations, the demand for company shares will increase stock prices in the capital market. Therefore, from capital adequacy, companies can avoid the risk of financial distress.

The Activity Effect on Financial Distress

Based on the results of the fixed effect model presented in Table 5, it is shown that the t-statistics value of the activity variable with the proxy total asset turnover is 1.694480, with a positive value. The number indicates that the activity positively or negatively influences financial distress. So that when the activity experiences an increase, then financial distress also increases. On the other hand, when activity decreases, financial distress will also decrease. From the probability side of the activity variable, the probability value is generated of 0.0951, which is greater than the 5% significance level. This indicates that the activity does not significantly affect financial distress. From the two explanations regarding t-statistic and probability, it can be concluded that activity does not significantly affect financial distress.

In this study, the activity did not influence financial distress. It means a company with a proxied activity with high total asset turnover or low cannot predict the level of financial distress. The higher the company's activity, the higher the effectiveness of the company in making sales. But the thing that must be considered is how the costs generated from the sale. When the operating cost, selling cost and the cost of goods sales not appropriately controlled will affect the company's profitability. It can be concluded that increased activity does not guarantee the level of financial distress because there are still many other factors that need to be considered, such as expenses and profits generated from the sale.

6. LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

In conducting this research, there are still limitations that found, including the following.
1. The limitation of the research period was only carried out from 2018 to 2020. The three-year period is relatively short, so the study results cannot be applied to subsequent periods or for a more extended period.
2. Limitations of research subjects conducted only in the sector manufacture. The narrowness of research subjects to make research results can only be generalized to some industrial sectors.
3. The limitation of the independent variable is that it only uses profitability, liquidity, sales growth, firm size, and activity. The independent variable's limitations allow other more accurate variables to predict financial distress.

Several suggestions can be given to companies, investors, and researchers based on these limitations.
1. For the companies studied, based on the results of this study that company size has a negative and significant influence to financial distress, the larger the size of the company, it is expected that the company can manage assets effectively;
2. For investors, this research is expected to be the basis for consideration and description of the financial condition through factors that affect the company's financial distress before making investment decisions

For further research: (a) It is hoped that it can extend the research period so that the results obtained more accurately and describe the company's position in the long-term; (b) Can add other independents such as leverage, solvency, inflation rate, or capital structure; (c) Using moderating variables; (d) Expanding research subjects other than manufacturing companies so that they can find out the factors that affect financial distress in different industries.

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