

## Analysis of Financial and Non-Financial Factors on Financial Distress in Brick Industry Energy Sector Companies

**Desy Mariani<sup>1</sup> Desy Anggraeni<sup>2</sup> Said<sup>3</sup>**

Accounting Study Program, Faculty of Economics, Budi Luhur University

E-mail: desy.mariani@gmail.com, desy.anggraeni@gmail.com, said@gmail.com

### Keywords

*Leverage, Operating Capacity, Operating Cash Flow, Audit Committee, Institutional Ownership, Financial Distress*

### ABSTRACT

*This study aims to predict the incidence of financial distress in a company using financial and non-financial in coal industry energy sector companies listed on the Indonesia Stock Exchange for the 2017-2021 period.. The data used in this study was obtained from financial statements. The sampling technique used was the purposive sampling method and obtained 120 sample data from 24 companies. The analysis technique used in this study is a multiple linear regression analysis by using the Statistical Product and Service Solution (SPSS) version 22 program. The results of this study indicate that leverage has a negative and significant effect on financial distress, operating capacity and operating cash flow has a positive and significant effect on financial distress, while audit committees and institutional ownership have no effect on financial distress.*

### INTRODUCTION

The world's economic conditions after the 2008 crisis have developed quite well for the global economy. This positive improvement was caused by many factors including government policies in helping the country's economic development. But on the other hand, government policies also make businesses in a country experience difficulties in conducting business operations, the impact is that many businesses experience bankruptcy as a result of government policies. The global economy in 2016 experienced an economic acceleration but this year became a year of many challenges because global economic growth had not fully recovered after the 2008 economic crisis, there was economic consolidation which resulted in Indonesia's exports abroad also weakening. However, the economy in Indonesia in 2019 experienced an increase of 5.02 percent (BPS 2020).

Financial distress can be experienced by every company, so both small, medium and large companies need to have good company management. If management is unable to manage the company properly, it can cause a decrease in company performance so that it has a negative impact on the health of the company. Financial distress starts from the company's inability to fulfill obligations, especially short-term obligations. For this reason, by knowing the potential possibility of financial distress, it is hoped that the company can take actions that are able to anticipate problems that lead to bankruptcy. According to Faldiansyah et al., (2020) states that financial distress is a stage of decline in financial conditions that occurs before bankruptcy or liquidation. In bankruptcy, the company does not necessarily experience this immediately, but goes through several stages that can be seen signs. Financial distress starts from the company's inability to fulfill obligations, especially short-term obligations. Telaumbanua and Budiantara (2020) state that financial distress

is a problem that needs to be considered by companies. For this reason, by knowing the potential possibility of financial distress, it is hoped that the company can take actions that are able to anticipate problems that lead to bankruptcy.

Financial statement analysis can be one of the tools to predict bankruptcy. Financial reports can be used as a basis for measuring the health of a company through existing ratios. In this study, the authors observed the financial statements of coal industry energy sector companies in the 2017-2021 period. Based on the financial statement data published by the Indonesia Stock Exchange, with the calculation of the amount of financial distress using the springate model as a benchmark for companies experiencing this condition. The company can be said to be experiencing financial distress if the S-Score acquisition value is smaller than 0.862, which means that the company is in an unhealthy condition (financial distress) and is likely to lead to bankruptcy, while if the S-Score value is greater than or equal to 0.862, the company is said to be in a healthy condition (non-financial distress) (Khanza and Muslih, 2020).

Coal industry energy companies in the 2017-2021 period experienced a significant decrease in S-Score value in 2020 and a significant increase in S-Score value in 2021. In 2017 the coal industry energy company has an average S-Score value of 0.967, meaning that the company is in good health. In 2018 the coal industry energy company has an s-score value of 1.065, meaning that the company is in good health, experiencing an increase in the average S-Score value of 0.098 with a percentage increase of 10%. In 2019 the coal industry energy company has an S-Score value of 0.867, meaning that the company is in good health, experiencing a decrease in the average S-Score value of 0.198 with a percentage decrease of 19%. Then in 2020 there was a significant decrease in the average S-Score value of coal industry energy companies with an S-Score value of 0.610, meaning that the company was in an unhealthy condition, experiencing a decrease in the average S-Score value of 0.257 with a percentage decrease of 30%. Meanwhile, in 2021 there was a significant increase in the average S-Score value of coal industry energy companies with an S-Score value of 1.680, meaning that the company was in a healthy condition, experiencing an increase in the average S-Score value of 1.050 with a percentage increase of 172% (Author, 2022).

Financial distress problems can occur in companies that experience a significant decrease in sales or revenue from the previous year. For example, PT Adaro Energy Tbk in 2019 had revenue generated of \$3,457,154, while in 2020 PT Adaro Energy Tbk's revenue was \$2,534,842, which means that the company experienced a decrease in revenue of 15.39%. When calculated with the Springate model, the resulting S-Score value is only 0.519, which means that the number of S-Score is smaller than 0.862 so that the company can be said to be experiencing unhealthy conditions that year. However, in 2021 PT Adaro Energy Tbk experienced non-financial distress with an S-Score value of 1.750 so that it was greater than 0.862, with the company's revenue of \$3,992,718 increasing 22.33% from the previous year. With this it can be concluded that if there is a decrease in income, it can cause the company to experience financial distress. Then, in 2017-2020 PT Atlas Resources Tbk, Bina Buana Raya National Shipping Tbk then PT Bumi Resources Tbk with an S-Score value below 0.862 which indicates that the company is not healthy (Author, 2022).

The cause of these three companies experiencing financial distress is because the current assets owned by the company are smaller than the company's current debt, indicating that the company is unable to finance the operational needs of a company in one accounting period, thus allowing the company to experience financial problems leading to bankruptcy. And in 2020, the company experienced a significant decline in its revenue compared to the previous year, causing the S-Score value to be far below the criteria for a healthy company. So, it is likely that the company is experiencing financial distress problems not only from a significant decline in sales or income, but also from other financial elements and factors that have an important influence on the company.

Financial distress conditions can occur before the company experiences bankruptcy, where various factors can affect financial distress conditions. Factors that affect the occurrence of financial distress conditions include leverage, operating capacity, operating cash flow, audit committee and institutional ownership.

Based on the explanation above, the purpose of this study is to test, analyze and prove the effect of leverage, operating capacity, operating cash flow, audit committee and institutional ownership on financial distress.

## METHODS

### Population and Research Sample

The population in this study were coal industry energy sector companies listed on the Indonesia Stock Exchange (IDX) during the 2017-2021 period, totaling 33 companies.

In this study, the determination of the amount of sampling using purposive sampling technique. The sampling criteria in this study are:

1. Coal industry energy sector companies listed on the Indonesia Stock Exchange (IDX) for the period 2017-2021.
2. Coal industry energy sector companies that publish financial reports consistently and completely for the 2017-2021 period.
3. Coal industry energy sector companies that IPO before the 2017-2021 period.

Based on the predetermined criteria, 24 companies producing raw materials for the mining sector were obtained with a research period of 5 years so that the total observation data was 120 data.

ADRO Adaro Energy Indonesia Tbk 2. ARII Atlas Resources Tbk 3. BBRM Bina Buana Raya National Shipping Tbk 4. BSSR Baramulti Suksessarana Tbk 5. BUMI Bumi Resources Tbk 6. BYAN Bayan Resources Tbk 7. CNKO Exploitation Energy Indonesia Tbk 8. DSSA Dian Swastatika Sentosa Tbk 9. DWGL Dwi Guna Laksana Tbk 10. FIRE Alfa Energi Investama Tbk. 11. GEMS Golden Energy Mines 12. HRUM Harum Energy Tbk 57 (Continued Table 4.2 List of Company Names used as Research Samples) No. Issuer Code Issuer Name 13. INDY Indika Energy Tbk 14. ITMG Indo Tambangraya Megah Tbk 15. KEGI Resource Alam Indonesia Tbk 16. MBAP Mitrabara Adiperdana Tbk 17. MBSS Mitrabahtera Segara Sejati Tbk 18. PSSI Pelita Samudera Shipping Tbk 19. PTBA Bukit Asam Tbk 20. PTIS Indo Straits Tbk 21. RIGS Rig Tenders Tbk 22. SMMT Golden Eagle Energy Tbk 23. TOBA TBS Energi Utama Tbk 24. TPMA Trans Power Marine Tbk.

### Research Model

In analyzing the effect of independent variables on the dependent variable in this study, a multiple linear regression analysis research model was used. The structural relationship between variables in this study can be expressed in the following model:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + e$$

Keterangan :

Y	= <i>Financial Distress</i>	X3	= Operating Cash Flow
$\alpha$	= Constant	X4	= Audit Committee
$\beta$	= Coefficient	X5	= Institutional Ownership
X1	= <i>Leverage</i>	E	= error
X2	= <i>Operating Capacity</i>		

## RESULTS AND DISCUSSION

### Descriptive Statistic Table

	N	Minimum	Maximum	Mean	Std. Deviation
Leverage (X1)	120	,048	2,036	,50523	,337203
Operating Capacity (X2)	120	,005	2,249	,74686	,533979
Arus Kas (X3)	120	-1,383	3,950	,67395	,753835
Komite Audit (X4)	120	3	5	3,21	,483
Kep. Institusional (X5)	120	,100	,970	,65919	,234957
Financial Distress (Y)	120	-2,084	5,297	1,03396	1,289597
Valid N (listwise)	120				

Based on the results of the SPSS output above, it can show the descriptive statistics of each research variable with samples that have been processed using SPSS Version 22, resulting in the following descriptive statistics:

The leverage variable has a minimum value of 0.048 and a maximum value of 2.036. The average value is 0.50523 with a standard deviation of 0.337203.

1. The operating capacity variable has a minimum value of 0.005 and a maximum value of 2.249. The average value is 0.74686 with a standard deviation of 0.533979.
2. The operating cash flow variable has a minimum value of -1,383 and a maximum value of 3,950. The average value is 0.67395 with a standard deviation of 0.753835.
3. The audit committee variable has a minimum value of 3 and a maximum value of 5. The average value is 3.21 with a standard deviation of 0.483.
4. The institutional ownership variable has a minimum value of 0.100 and a maximum value of 0.970. The average value is 0.65919 with a standard deviation of 0.234957.
5. The financial distress variable has a minimum value of -2,084 and a maximum value of 5,297. The average value is 1.03396 with a standard deviation of 1.289597.

### Classical Assumption Test Normality Test

#### One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		120
Normal Parameters <sup>a,b</sup>	Mean	,0000000
	Std. Deviation	,67771526
Most Extreme Differences	Absolute	,079
	Positive	,048
	Negative	-,079
Test Statistic		,079
Asymp. Sig. (2-tailed)		,065 <sup>c</sup>

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

Based on the Kolmogorov-Smirnov test results, it can be seen that the unstandardized residual value has an Asymp. Sig. (2-tailed) 0.065 which shows the significance value of unstandardized residual > 0.05 so it can be concluded that the data in this study is normally distributed.

### Multicollinearity Test

#### Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-,350	,572		-,612	,542		
	Leverage (X1)	-,940	,242	-,246	-3,883	,000	,605	1,653
	Operating Capacity (X2)	1,350	,121	,559	11,195	,000	,972	1,029
	Arus Kas (X3)	,678	,102	,396	6,649	,000	,682	1,466
	Komite Audit (X4)	,129	,136	,048	,945	,347	,927	1,078
	Kep. Institusional (X5)	-,030	,303	-,005	-,099	,922	,796	1,257

a. Dependent Variable: Financial Distress (Y)

Based on the Multicollinearity test results, it can be concluded that multicollinearity testing in this regression model does not occur correlation between independent variables because the tolerance value of leverage, operating capacity, operating cash flow, audit committee and institutional ownership is above 0.10 and the VIF value is below 10.

**Heteroscedasticity Test**

**Correlations**

			Leverage (X1)	Operating Capacity (X2)	Arus Kas (X3)	Komite Audit (X4)	Kep. Instiusional (X5)	Unstandariz ed Residual
Spearman's rho	Leverage (X1)	Correlation Coefficient	1,000	-,108	-,694**	-,081	-,273**	,049
		Sig. (2-tailed)	.	,242	,000	,378	,003	,598
		N	120	120	120	120	120	120
Operating Capacity (X2)	Operating Capacity (X2)	Correlation Coefficient	-,108	1,000	,263**	,163	,030	,131
		Sig. (2-tailed)	,242	.	,004	,076	,741	,152
		N	120	120	120	120	120	120
Arus Kas (X3)	Arus Kas (X3)	Correlation Coefficient	-,694**	,263**	1,000	,170	,244**	,086
		Sig. (2-tailed)	,000	,004	.	,063	,007	,351
		N	120	120	120	120	120	120
Komite Audit (X4)	Komite Audit (X4)	Correlation Coefficient	-,081	,163	,170	1,000	-,279**	,023
		Sig. (2-tailed)	,378	,076	,063	.	,002	,801
		N	120	120	120	120	120	120
Kep. Instiusional (X5)	Kep. Instiusional (X5)	Correlation Coefficient	-,273**	,030	,244**	-,279**	1,000	,004
		Sig. (2-tailed)	,003	,741	,007	,002	.	,966
		N	120	120	120	120	120	120
Unstandardized Residual	Unstandardized Residual	Correlation Coefficient	,049	,131	,086	,023	,004	1,000
		Sig. (2-tailed)	,598	,152	,351	,801	,966	.
		N	120	120	120	120	120	120

\*\* . Correlation is signifcant at the 0.01 level (2-tailed).

Based on the results of the spearman's rho test, the variables of leverage, operating capacity, operating cash flow, audit committee and institutional ownership have a significance value greater than 0.05. Because all independent variables have a significance value greater than 0.05, it can be concluded from the results of the spearman's rho test that there is no heteroscedasticity problem in this study.

**Autocorellation Test**

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,841 <sup>a</sup>	,707	,694	,64537	2,032

a. Predictors: (Constant), Lag\_X5, Lag\_X2, Lag\_X4, Lag\_X3, Lag\_X1

b. Dependent Variable: Lag\_Y

Based on the results of the durbin watson test, the durbin watson value is 1.277. When compared with the durbin watson table for N = 120 and the number of variables 5, dL is 1.6164, dU is 1.7896 and the 4-dU value is 2.2104 (4-1.7896). So it can be concluded that the durbin watson value in this study is dU < DW < 4-dU or 1.7896 < 2.032 < 2.2104 which means that there is no autocorrelation problem.



## Multiple Linear Regression Analysis Model F-Test

ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	143,248	5	28,650	59,756	,000 <sup>b</sup>
	Residual	54,656	114	,479		
	Total	197,904	119			

a. Dependent Variable: Financial Distress (Y)

b. Predictors: (Constant), Kep. Instiusional (X5), Operating Capacity (X2), Komite Audit (X4), Arus Kas (X3), Leverage (X1)

Based on the table above, the obtained F value of 59.756 is greater than F table 2.29 with a significance value of  $0.000 < 0.05$  significant level, then this regression model can be used for financial distress variables. When viewed from these results it can be said that leverage, operating capacity, operating cash flow, audit committee and institutional ownership simultaneously have a significant effect on financial distress variables.

## T-Test

Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-,350	,572		-,612	,542
	Leverage (X1)	-,940	,242	-,246	-3,883	,000
	Operating Capacity (X2)	1,350	,121	,559	11,195	,000
	Arus Kas (X3)	,678	,102	,396	6,649	,000
	Komite Audit (X4)	,129	,136	,048	,945	,347
	Kep. Instiusional (X5)	-,030	,303	-,005	-,099	,922

a. Dependent Variable: Financial Distress (Y)

Based on the results in the table above, the interpretation of the results of the calculation of the significance value of the independent variable can be explained as follows.

1. The t value for the leverage variable (X1) is -3.883 with a significance value of 0.000. The t table value ( $(0.05, df = n-k-1 (120-5-1) = 114)$ ) is obtained at 1.980. So -t count (-3.883) < -t table (-1.980) and sig value  $0.000 < 0.05$ , so it can be concluded that H0 is rejected and Ha is accepted. This indicates that the leverage variable has a negative and significant effect on the financial distress variable.
2. The t value for the operating ratio variable (X2) is 11.195 with a significance value of 0.000. The t table value ( $(0.05, df = n-k-1 (120-5-1) = 114)$ ) is obtained at 1.980. So t count (11.195) > t table (1.980) and sig value  $0.000 < 0.05$ , so it can be concluded that H0 is rejected and Ha is accepted. This indicates that the operating capacity variable has a positive and significant effect on the financial distress variable.
3. The t value for the operating cash flow variable (X3) is 6.649 with a significance value of 0.000. The t table value ( $(0.05, df = n-k-1 (120-5-1) = 114)$ ) is obtained at 1.980. So t count (6.649) > t table (1.980) and sig value  $0.000 < 0.05$ , so it can be concluded that H0

is rejected and  $H_a$  is accepted. This indicates that the operating cash flow variable has a positive and significant effect on the financial distress variable.

4. The  $t$  value for the audit committee variable ( $X_4$ ) is 0.945 with a significance value of 0.347. The  $t$  table value ( $(0.05, df = n-k-1 (120-5-1) = 114)$ ) is obtained at 1.980. Then  $t$  count ( $0.945$ ) >  $t$  table ( $1.980$ ) and sig value  $0.347 > 0.05$ , so it can be concluded that  $H_0$  is accepted and  $H_a$  is rejected. This indicates that the audit committee variable has no significant effect on the financial distress variable.

The  $t$  value for the institutional ownership variable ( $X_5$ ) is -0.099 with a significance value of 0.922. The  $t$  table value ( $0.05, df = n-k-1 (120-5-1) = 114$ ) is obtained at 1.980. So  $-t$  count ( $-0.099$ ) >  $-t$  table ( $-1.980$ ) and sig value  $0.922 > 0.05$ , so it can be concluded that  $H_0$  is accepted and  $H_a$  is rejected. This indicates that the institutional ownership variable has no significant effect on the financial distress variable.

## Discussion

### The Effect of Leverage on Financial Distress

The results of this study indicate that the leverage variable has a negative and significant effect on the financial distress variable. This indicates that the higher the level of funding sourced from debt owned by the company, the lower the possibility of the company experiencing financial distress problems. The use of large debt is indeed very risky for the company because the company will be charged by the interest that must be paid. However, if the funds sourced from debt can be used properly and effectively such as expanding or developing its business so that it will be able to improve the company's performance which will have a smaller impact on the possibility of financial distress that may be experienced by the company.

Based on signal theory, which states that if the leverage owned by the company is high, the possibility of financial distress is greater, so that it will reduce the attractiveness for capital owners, stakeholders or investors to invest because the company is considered unable to utilize its assets to carry out funding which will provide negative signals (bad news).

This research is in line with research conducted by Kanza and Muslih (2020) which states that leverage has a negative and significant effect on financial distress. However, it is different from the results of research by Khasanah et al., (2021) which states that leverage has a significant positive effect on financial distress.

### Effect of Operating Capacity on Financial Distress

The results of this study indicate that the operating capacity variable has a positive and significant effect on the financial distress variable. This indicates that the higher the operating capacity, the higher the possibility of the company experiencing financial distress. Although there is an increase in operating capacity in this study, many coal industry energy sector companies in this study show lower sales values than their assets, meaning that the company has not been able to maximize its assets to increase sales so that it illustrates the criteria for a company that is not good and can affect the company's financial condition so that it can trigger financial distress in the company. Therefore, companies must be able to increase sales so that the company's effectiveness continues to increase (Khasanah et al., 2021).

Based on signal theory, the more inefficient the company is in managing assets, the greater the chance that the company will experience financial distress so that capital owners, stakeholders or investors do not get positive signals (good news) but refer to negative signals (bad news) because the company is considered unable to manage its assets properly to increase sales.

This research is in line with research conducted by Khasanah et al., (2021) which states that operating capacity has a positive and significant effect on financial distress. However, it is different from the results of research by Sianturi et al. (2021) which states that operating capacity has no significant effect on financial distress.

### **Effect of Operating Cash Flow on Financial Distress**

The results of this study indicate that the operating cash flow variable has a positive and significant effect on the financial distress variable. This indicates that the greater the company's operating cash flow, the greater the possibility of the company experiencing financial distress. There is an increase in operating cash flow in this study, but many companies in the energy sector of the coal industry show a lower operating cash flow value than their current debt so that it shows that the company's criteria are not good and can affect the company's financial condition so that it can trigger financial distress in this coal industry energy sector company. This means that the capability of cash flow from operations to settle current liabilities is low or less. The high operating cash flow is not a guarantee that the company can avoid financial distress problems.

Based on signal theory, the company will provide negative signals (bad news) for capital owners, stakeholders or investors to invest, because the ability of cash flow from operating activities to settle current obligations to creditors is low, so the company is considered to be experiencing financial difficulties or financial distress.

This research is in line with research conducted by Kanza and Muslih (2020) which states that operating cash flow has a positive and significant effect on financial distress. However, in contrast to the results of research by Irmayanti and Almurni (2020), money states that operating cash flow has a negative and significant effect on financial distress.

### **Effect of Audit Committee on Financial Distress**

The results of this study indicate that the audit committee variable has no significant effect on the financial distress variable. This indicates that the large or small number of audit committees in the company does not affect the existence of financial distress problems. Companies that have a large number of audit committees may not necessarily reduce financial difficulties for the company. Vice versa, a small number of audit committees are not expected to cause the company to experience financial difficulties. Because financial distress is more caused by managerial decisions in managing the company, not from the large number of audit committees in a company.

The results of this study are not in line with agency theory which explains that the audit committee can reduce the problem of financial difficulties or financial distress in the company. The audit committee is part of the owner whose job is to assist in supervising and evaluating the performance of company management carried out by management so that it can prevent the company from experiencing financial distress.

This research is in line with research conducted by Fransisca et al., (2021) which states that the audit committee has no significant effect on financial distress. However, it is not in line with the results of research by Irmayanti and Almurni (2020) which state that the audit committee has a positive and significant effect on financial distress.

### **Effect of Institutional Ownership on Financial Distress**

The results of this study indicate that the institutional ownership variable has no significant effect on the financial distress variable. This indicates that how large or small the amount of institutional share ownership in a company does not guarantee that the company can avoid financial distress problems. Even companies that have a large number of institutional share ownership do not guarantee that the company can avoid financial distress problems. Vice versa, even a small amount of institutional ownership is not expected to cause the company to experience financial distress problems. Due to the factor of good and strict supervision of managers who are able to minimize the possibility of financial distress, institutional ownership will encourage supervision of managers so that managers can manage company performance more optimally.

The results of this study are not in line with agency theory which explains that institutional ownership can reduce the problem of financial difficulties or financial distress in the company. Because institutional ownership should be able to function as an agent that monitors company performance which allows more optimal supervision of management so as to prevent the actions of selfish company managers.

This research is in line with research conducted by Atika et al., (2020) which states that institutional ownership has no effect on financial distress. However, it is not in line with the results



of research by Telaumbanua and Budiantara (2020) which state that institutional ownership has a negative and significant effect on financial distress.

## CONCLUSION

The results of this study indicate that leverage has a negative and significant effect on financial distress, operating capacity and operating cash flow have a positive and significant effect on financial distress, while the audit committee and institutional ownership have no effect on financial distress.

This study has implications in the form of suggestions for companies, namely management is expected to be able to use funding sources derived from debt effectively and efficiently, maximize its assets to increase its sales, increase its operating cash flow or reduce its current debt usage, ensure and select a competent audit committee and tighten supervision of managers in order to minimize the possibility of financial distress in the company. And for investors, if they make an investment, they should pay attention and analyze the information in the financial statements as a whole, starting from the statement of financial position, statement of changes in capital, income statement to notes to the financial statements as a consideration in making investment decisions.

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