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The Board of Directors, Firm Size, Capital Structure, Financial Performance During the Covid-19 Crisis: Evidence from Indonesia

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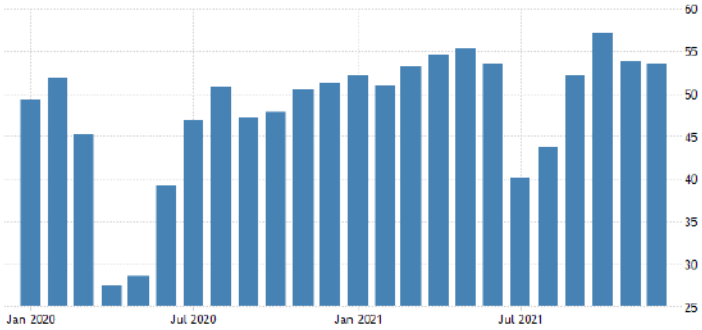
ABSTRACT

This study investigates the impact of the board of directors, and firm size on financial performance with capital structure as intervening variable in manufacturing companies listed on the Indonesia Stock Exchange during the Covid-19 pandemic specifically in the period 2020-2021. The sample in this study was 114 companies determined by using purposive sampling. The board of directors in this study was measured using the number of the board of directors, company size using Ln Total Assets, capital structure using DER, and financial performance using ROA. We find that the board of directors has no effect on financial performance and capital structure, company size has a positif significant influence to financial performence and capital structure, and capital structure has a negative significant influence to financial performence. In addition, capital stucture is able to mediate the relationship of firm size on financial peformance, but fails to mediate the relationship of the board of directors on financial peformance.

INTRODUCTION

The Covid-19 pandemic is currently sweeping the world, including Indonesia. This pandemic was caused by the Corona virus or SARS-CoV-2. The Corona virus was first discovered in Wuhan in December 2019, then spread to various countries including Indonesia. The Corona virus began to Indonesia on March 2020. As a result of the Covid-19 pandemic, almost every country in the world has a policy to restricting public mobility. This can affect business performance and economic activities. The Covid-19 pandemic has made the performance of the industry, especially the manufacturing sector, experience a significant decline (Ahmed & Kumari, 2022; Basriani et al., 2021; Iskamto, 2015; Iskamto et al., 2020; Jatmiko, 2022; Lubis & Irawati, 2022; Nurhayana, 2022; Ratnawati, 2022). This was marked by a decrease in the Manufacturing PMI (Purchasing Managers' Index) which reached level 45 in March 2020, which was the beginning of the pandemic. Picture 1 shows the Manufacturing PMI (Purchasing Managers' Index) index for 2020 to 2021.



Picture 1. PMI Index in 2020 and 2021)
(Sources : Trading Economics)

The agency theory explains the relationship between the company's financial performance and disclosure of information. Companies that have good financial performance will certainly have increased profits, this affects the extent of disclosure of financial information so reduce agency costs.

The decision to determine the capital structure is important, because it is related to the emergence of capital costs. Determining the optimal capital structure makes the company run effectively and efficiently. In terms of determining the capital structure, there are often conflicts between shareholders and managers due to differences in interests. Financing options through debt can reduce the firm's cash flow available to managers, thereby reducing agency costs. Therefore, debt can prevent managers from financing unprofitable investment projects. This is supported by the results of Kristianti's research (2018), which found that the capital structure has a significant positive relationship to financial performance.

The board of directors has a very important function in the company. The role of the board of directors is to establish the company's resource and strategy. Research by Ratnasari (2016), Coleman (2020) and Rahmawati (2017) found that the board of directors has a significant positive effect on financial performance. However, research of Intia (2021) shows the opposite, that the board of directors has no effect on company performance.

The occurrence of fluctuations in the company's performance, also can be influenced by the size of the company because large companies are usually easier to obtain debt. This is supported by research by Evita (2019), Denziana (2017) and Dewi (2018) which found that company size had a positive and significant effect on performance. However, this study is not in line with the results of Epi (2017) which shows that company size has no effect on performance.

Based on the description that has been described, there are inconsistencies of previous research and the phenomena that occur. The purpose of this study is to investigate the effect of the board of directors and company size on financial performance with capital structure as an intervening variable in manufacturing sector companies during the Covid-19 pandemic in the 2020-2021 period.

LITERATURE REVIEW

Agency Theory

Agency theory studies the relationship that occurs because one or more people (principals) employ another person (agent) to provide a service and then delegate decision-making authority to the agent (Jensen and Meckling, 1976). The principal and the agent , both of them have a bargaining position. The principal as the owner of the company has the access about the company's internal information. Meanwhile, the agents who run the company's operations have real and comprehensive information about the company's operations and performance. However, agents do not have absolute authority in making decisions, especially regarding strategic, long-term and global decisions.

Pecking Order Theory

Pecking Order Theory explains why companies have the most preferred level of funding sources. Companies prefer to use internal funding sources (retained earnings) rather than external funding. If external funding is required, the company issues debt first, while issuing equity is the last step. Bond issuance was

chosen because it incurs lower costs than issuing new shares. Pecking Order Theory explains that companies with high levels of profitability have low debt. Because companies with high profitability have abundant internal funding sources.

Signaling Theory

Signaling theory (signaling theory) is based on the idea of managers having good information about trying to convey that information to outside investors so that the company's stock price increases. According to Ross (1977) shows that Companies with good performance can give a signal in the form of a high debt share in their capital structure. Companies that are not performing well will not dare to use large amounts of debt because bankruptcies will be high (Sugiarto 2009: 49).

METHOD

An empirical research was conducted with a quantitative approach using panel regression OLS to estimates the dirrect effect and Partial Least Squares Structural Equation Modeling (PLS-SEM) to estimates indirect effect, by using STATA statistical software. Sample selection method in this study used purposive sampling, and the sample was 114 manufacturing companies listed on the Indonesia Stock Exchange during the Covid-19 pandemic in the period 2020-2021. Sample selection criteria presented in Table 1.

Table 1. Sample Criteria

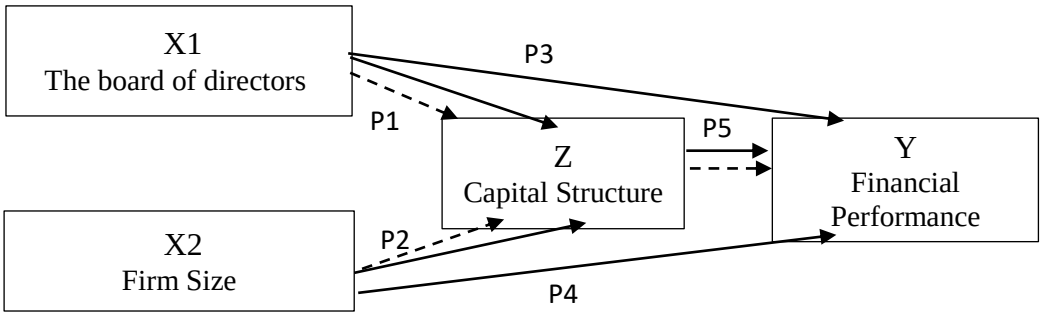
No	Sample Criteria	Sample
	Manufacturing companies listed on the Indonesia Stock Exchange in 2020-2021.	176
	Manufacturing companies that do not consistently present annual financial reports for the 2020-2021 period and are not in IDR.	(38)
	Manufacturing companies that do not present data that support the variables used.	(24)
	Total Sample	114

In this study a brief description of the measurement of variables is presented in Table 2.

Table 2. Measurement of variables

Variable Code	Variable Name	Measurement	Sources
Y	Financial Performance	$\text{ROA} = \frac{\text{EAT}}{\text{Total Assets}}$	Sulistiana, 2018
M	Capital Structure	$\text{DER} = \frac{\text{Total Debt}}{\text{Total Equity}}$	Sulistiana, 2018
X1	The board of directors	The number of board of directors	Rahmawati, 2017 and Itan, 2021
X2	Firm Size	Ln (Asset)	Susanto, 2019

Pictures 2 show the path analysis design of this study.



Picture 2. Path Analysis Design

RESULT AND DISCUSSION

Descriptive Statistics

Table 3 demonstrates descriptive statistics for the whole sample that consists of 114 manufacturing firms or 228 data observation. The results show that the mean values of return on assets and DER are 0,040 and 0,951, respectively. Regarding the board of directors and Ln Assets are 4,053 and 14,319, respectively.

Table 3. Descriptive Variable

	VAR_Y (ROA)	VAR_M (DER)	VAR_X1 (The board of directors)	VAR_X2 (Ln Assets)
Mean	0,040	0,951	4,053	14,319
Maximum	0,599	4,948	10	16,883
Minimum	-0,253	-1,340	1	12,032
Std. Dev.	0,098	0,941	1,949	1,129

Classical Assumption Test

Before the model analysis is running, it is necessary to test the feasibility of the model. Therefore, we performed the classical assumption test. Therefore, we performed the classical assumption test which is multicollinearity and heteroscedasticity test.

Table. 4 Multicollinearity Test (1)

	VIF
VAR_M	1,03
VAR_X1	1,40
VAR_X2	1,43
Mean VIF	1,29

Table. 4 Multicollinearity Test (2)

	VIF
VAR_X1	1,40
VAR_X2	1,40
Mean VIF	1,40

Based on Tables 4 and 5 we find that the model analysis does not have a multicollinearity problem, because the number of VIF > 10.

Table. 5 Heteroscedasticity Test

Persamaan	Chi2	Prob > Chi2
1	0,93	0.3338
2	0,89	0.3445

In the heteroscedasticity test we used the Breusch Pagan. Based on Table 6 we find that the model analysis does not have a heteroscedasticity problem, because the number of (Prob>chi2) > 0,10.

Direct Test

To test the research hypothesis, the analysis model was evaluated using OLS to determine the direct relationship.

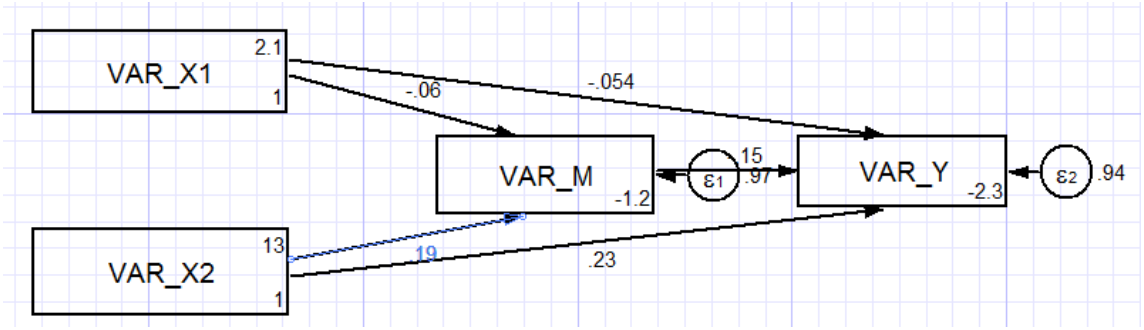
Table 7. Direct Test

VARIABLES	(1) VAR_Y	(2) VAR_M
VAR_M	-0.016***	
	(0.007)	
VAR_X1	-0.003	-0.029
	(0.004)	(0.038)
VAR_X2	0.020***	0.156***
	(0.007)	(0.065)
Constant	-0.221***	-1.161
	(0.090)	(0.867)
Observations	224	224
R-squared	0.056	0.027

NOTE: Significance level: *** = p < 0.001; ** = p < 0.01; * = p < 0.05; NS= Non-significant.

Indirect Test

After using OLS to test the direct relationship of research hypothesis, the structural model was evaluated using PLS-SEM to determine the indirect relationship.



(Picture 2. Structural Model)

Table 8. Indirect Test

	Coef.	Std. Err.	z	P>|z|	Std. Coef.
Structural					
VAR_Y <-					

VAR_M	0	(no path)			0
VAR_X1	0,004	0,006	0,73	0,467	0,091
VAR_X2	-0,0024	0,014	-1,67	0,095***	-0,0286

NOTE: Significance level: *** = p < 0.001; ** = p < 0.01; * = p < 0.05; NS= Non-significant.

DISCUSSION

Table. 3 show the result of descrptif variables. As can be seen, there are four variables in this study. The mean of variable financial performance, which the proxy ROA is 0,040, minimum ROA is -0,253 and maximum ROA is 0,599. A negative ROA show that the firm has a negative return. The mean of capital structure, which the proxy DER is 0,951, minimum DER is -1,340 and maximum DER is 4,948. A negative DER show that the firm has a negative equity. The mean of the board of directors are 4, minimum is 1 and maximum 10. The mean of firm size, which the proxy Ln Assets is 14,319, minimum Ln Assets is 12,032 and maximum Ln Assets is 16,883.

Relationship between capital structure on financial performance

The results obtained and are presented in previous Table 7 direct test, indicate that the capital structure has negative and significant effects on financial performance. These results are not consistent with the study of Krstianti (2018), but supported by the study of Le, Thi & Thi Bich (2017) who suggested that underestimating bankruptcy costs of liquidation may lead firms to have more debt than the appropriate level. Therefore, a high debt ratio would decrease firm performance. In addition, large cash flow from debt can lead managers to undertake discretionary behaviour or negatively affect firm performance. Furthermore, Stulz (1990) argued that interest payments from issuing debt may exhaust firm cash flow and reduce available funds for profitable investment, which negatively affects firm performance.

Relationship between the board of directors on financial performance

The results obtained and are presented in previous Table 7 direct test, indicate that the board of directors has negative but not significant effects on financial performance. These results are not consistent with the studies of Ratnasari (2016), Coleman (2020) and Rahmawati (2017) found that the board of directors has a significant positive effect on financial performance. But this result of this study was supported by Intia (2021), this happened because number of board of directors different can affect the differences in the characteristics of the company so that effectiveness of the board of directors in manage management performance less than optimal resources.

Relationship between firm size on financial performance

The results obtained and are presented in previous Table 7 direct test, indicate that firm size has positive and significant effects on financial performance. These results are consistent with the studies of Evita (2019), Denziana (2017) and Dewi (2018) which found that firm size had a positive and significant effect on financial performance. Company size can affect the company's ability in making a profit. Because big companies, usually they has its own strength in dealing with business problems and the company's ability to generate high profits because it is supported by large assets so that company constraints such as adequate equipment can be overcome. Company size can also affect performance company finances, because the larger the size of the company, the greater the opportunity for the company to obtain funding sources, both internal and external.

Relationship between the board of directors on capital structure

The results obtained and are presented in previous Table 7 direct test, indicate that the board of directors has negative but not significant effects on capital structure. This result supported by Detthamrong

(2017) this happened because number of the board of directors different can affect the differences in the characteristics of the company.

Relationship between firm size on capital structure

The results obtained and are presented in previous Table 7 direct test, indicate that firm size has positive and significant effects on capital structure. These results are consistent with the studies of Denziana (2017), Laut (2018), Andika (2019) and Utami (2019) which found that firm size had a positive and significant effect on capital structure. This means that the size of the company is very influential on the decision to use debt in the capital structure, especially with regard to the ability to obtain debt. The results of this study support the signaling theory where the use of debt is a positive signal to creditors and investors.

Capital structure as intervening variable

The results obtained and are presented in previous Table 8 indirect test, indicate that capital structure is fails to mediate the relationship of the board of directors on financial peformance. But capital stucture is able to mediate the relationship of firm size on financial performance. This means that companies with large company sizes have easy access to funding (debt). With the funds obtained, if the company uses debt that exceeds the optimal level, it will reduce the company's performance. These results support the trade-off theory which states that the company uses an optimal capital structure, if the company in managing the capital is not optimal it will affect the company's performance decline. This study was supported by Utami (2019), who found similar results.

CONCLUSION

This paper aimed to find out the impact of the board of directors, and firm size on financial performance with capital structure as intervening variable. Oject of this study is manufacturing companies listed on the Indonesia Stock Exchange during the Covid-19 pandemic specifically in the period 2020-2021. The sample in this study was 114 companies determined by using purposive sampling. This piece of research relies on secondary data collected from different web sources and annual reports from idx, covering the period from 2020 to 2021. Results indicate that : Capital structure has negative and significant effects on financial performance. The board of directors has negative but not significant effects on financial performance. Firm size has positive and significant effects on financial performance. The board of directors has negative but not significant effects on capital structure. Firm size has positive and significant effects on capital structure. Capital structure is fails to mediate the relationship of the board of directors on financial peformance. But capital stucture is able to mediate the relationship of firm size on financial performance.

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