

**FINANCIAL DISTRESS DETERMINANTS DURING COVID-19 PANDEMIC:
EVIDENCE FROM NON-FINANCIAL FIRMS IN INDONESIA**

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ABSTRACT

The COVID-19 pandemic has caused massive bankruptcy for companies in the world. Companies should be aware of variables signalling aggravated financial distress to give an early-warning system. The objective of this study is to investigate the influence of prospector strategy, corporate investment, and corporate governance to the financial distress. We collect data from the non-financial sector companies in Indonesia. We use logistic regression to test the hypothesis. This research finds that prospector strategy and female board negatively significant at distress probability, whereas corporate investment and board meeting positively significant at the likelihood of financial distress. Further researchers can broaden their scope of investigation to the financial industry and other developing countries.

Keywords: COVID 19; Corporate governance; Financial distress; Prospector strategy

INTRODUCTION

Firm bankruptcy has long been of considerable subject in academics because it imposes large costs on market participants and the economy as a whole (Liang et al., 2020). Company bankruptcy risk has also become a popular topic in accounting, business, and management literature because of its consequences for decision-making (Agustia et al., 2020). The risk of business bankruptcy is the circumstance of a corporation unable to pay its obligations so that it requires legal action either by reorganizing its debts or liquidating its assets (Bryan et al., 2013). Creditors, managers, employees, the community, and shareholders are all affected when a business goes bankrupt.

The COVID-19 pandemic has caused massive bankruptcy for companies all across the world. The World Health Organization proclaimed COVID 19 as a global epidemic on March 11, 2020. In the short time, many countries implement strict quarantine policies so that their economic activities are significantly limited. As a result, the company faced low demand and experienced a significant decline in performance. According to Demmou et al. (2022), the COVID-19 shock reduced profitability of enterprises in OECD countries by 40% to 50%.

The COVID-19 pandemic has a substantial impact on the sustainability of the firm's activities and performance in Indonesia. Around 88 percent of Indonesia firms suffered losses due to the effects of the outbreak in 2020. Many companies are slowly going bankrupt. During the last three semesters since the pandemic, there have been 1,298 applications for Postponement of Debt Payment Obligations (PKPU) and bankruptcy. The data refers to the District Court Case Investigation Information System in five commercial courts as of August 2021. According to data obtained from the IDX, six companies delisted from the Indonesia Stock Exchange during 2020.

Based on these data, the COVID-19 pandemic increases the risk of bankruptcy for many companies, both nationally and globally. Large companies from various business sectors that went public on the Indonesia Stock Exchange (IDX) were also affected by this outbreak. Therefore, a study is needed to analyze the determinants of financial distress during the pandemic. Through this study, the company can make a strategy to be able to maintain the company's viability and overcome the risk of bankruptcy.

Companies with good corporate governance tend to be able to survive during recession. This is due to market confidence and market integrity. Several previous studies have examined the impact of corporate governance on the likelihood of financial distress (Bredart, 2014; Fathi & Jean-Pierre, 2001; Freitas Cardoso et al., 2019; Juniarti, 2013; Liang et al., 2020; Luqman et al., 2018; Manzanegue et al., 2016; Shahwan & Habib, 2020). The majority of previous researchers concern about board characteristics such as board size and board independence as variables that represent corporate governance. Meanwhile, the impact of female board members and board meetings on financial distress is less documented.

The issue of female boards effect on financial distress is still debated. Some researchers (García & Herrero, 2021; Mittal & Lavina, 2018) have reported the presence of females in the board lowers the probability of financial distress. Meanwhile, Salloum et al. (2013) have concluded the opposite result where gender diversity has a positive effect on the likelihood of bankruptcy on firm. On the other hand, Kristanti et al. (2016), Salloum & Azoury (2012), and Santen & Donker (2009) discover women boards do not have a significant relationship with financial distress.

Previous research on the effect of the number of meetings on financial distress also showed different results. Jensen (1993) explains that there are doubts about the effectiveness of meetings. Vafeas (1999) argued that the board increases the number of meetings more frequently in response to the company's poor performance. (Brick & Chidambaran, 2008) argue that boards protect themselves from being blamed for not taking action when necessary. This research fills the existing research gap by supplying more information regarding the relationship between the number of board meetings and financial difficulty.

Financial distress can also be reduced with a good business strategy. Business strategy can increase productivity and profitability while lowering the likelihood of future insolvency (Agustia et al., 2020). Corporates should evolve strategy of business in order to manage their resources and remain competitive in a rapidly changing market and environment. Business strategy is concerned with improving the company's competitive position in a particular industry by maximizing its

strengths and overcoming its weaknesses in order to survive and take advantage of opportunities. They must select strategy that is suited for their organization in order to increase its performance (Dalwai & Salehi, 2021). Therefore, this study focuses on determining the relationship between prospector strategy and financial distress because previous researchers rarely examined it.

In the pandemic, companies also need to pay attention to large expenditures such as corporate investment. Previous research examining the impact of corporate investment on financial distress is still very rarely done. Past studies mostly examine the effect of corporate investment to the firm value (Purwani, 2019). In the early stages, corporate investment may have a detrimental effect on the financial firms and cause distress. Uncertain economic conditions may also prevent investment success. Unexpected market conditions like COVID-19 influence customer behaviour and demand. These unforeseen factors may cause investment failure and distress. Therefore, this study sees the urgency to investigate the relationship between corporate investment and financial distress during pandemic.

We analyze the impact of corporate investment, prospector strategy, female board, and board meeting on the financial distress in Indonesia's non-financial sector companies during COVID-19 pandemic. The sample comprises data from 2017 and 2020 of the non-financial sectors listed on the Indonesia Stock Exchange. Financial distress prediction models used in this study include Altman Z-Score (1993), EMS Model (2006), Springate Model (1978).

The remaining parts of the paper are structured as described below. The methodology is discussed in section 2. The findings and interpretation are presented in section 3. In the final section, we draw some conclusions, limits of the study, and recommendations for further study.

METHODOLOGY

Data collection

The sample consists of companies in the non-financial sector listed on the Indonesia Stock Exchange. Financial firms were not included in this study because they have different financial, operating, and risk characteristics compared to companies in other industries. The data used is sourced from the company's annual reports in 2017 to 2020 on their website. Table I, gives the sample size.

Table 1. Sample size

| Description | Number of firms |
|--|-----------------|
| Total Firms in Indonesia | 775 |
| Financial firms | (137) |
| Companies with unavailable annual reports from 2017 and 2020 | (259) |
| Companies with insufficient data | (101) |
| Final sample | 278 |

Variable measurement

This study uses financial distress as dependent variable. Financial distress can be estimated by using accounting-based data approach. Following (Boubaker et al., 2020), we use three common accounting-based measurement, which are the Z-score (Altman, 1968), Springate (Springate, 1978), and EMS model Altman (2005).

The Altman model (1968) is one of the most widely used bankruptcy prediction models by previous literature. Altman's model chooses five ratios that are deliberated the best for predicting distress. If the Z-score is less than 1.8, the company is in financial distress. The Springate model (1978) is an extension of the Altman bankruptcy prediction model. Springate uses 4 financial ratios to identify companies that experienced financial distress. If the Springate score is less than 0.862, it is classified as financial distress firm. The EMS model fixes the weaknesses of the previous models including the Z, Z' and Z''-score models. The EMS model uses four variables that are similar to the Z''-score model and adds a constant term 3.25. If the EMS score is less than 4.15 then firms fall into financial distress.

Z-score, Springate, and EMS model is calculated using the following formula:

$$Z = 0,0012 \frac{WC}{TA} + 0,014 \frac{RE}{TA} + 0,033 \frac{EBIT}{TA} + 0,066 \frac{MV}{TL} + 0,999 \frac{SAL}{TA} \quad (1)$$

$$EMS = 6,56 \frac{WC}{TA} + 3,26 \frac{RE}{TA} + 6,72 \frac{EBIT}{TA} + 1,05 \frac{BVE}{TL} + 3,25 \quad (2)$$

$$S = 1,03 \frac{WC}{TA} + 3,07 \frac{EBIT}{TA} + 0,066 \frac{EBT}{CL} + 0,40 \frac{SAL}{TA} \quad (3)$$

where:

WC: working capital, RE: retained earnings, EBIT: earnings before interest and taxes, MV: market value of equity, SAL: sales, TA: total assets, TL: total liabilities, BVE: book value of equity, EBT: earnings before taxes, CL: current liabilities.

The independent variables comprise corporate investment (capital expenditure), prospector strategy (selling, general, and administrative expense), and corporate governance (female commissioner, female director and board meeting).

Table 2. Summary of variables

| Variables | Definition | Signal Expected | References | Unit |
|----------------------|---|-----------------|---|---------|
| Dependent variable | | | | |
| Financial distress | Dummy variable takes value 1 when a company is in the bankruptcy area and 0, otherwise, based on Z-score, EMS model, and Springate. | | (Altman, 1968; Freitas Cardoso et al., 2019; Pham et al., 2018; Zmijweski, 1984) | Nominal |
| Independent variable | | | | |
| Capex | Total capital expenditure of firms/ Total asset | + | (Erhemjamts et al., 2013; Lew, 2015; Pindado & Rodrigues, 2005; Ullah et al., 2021) | Ratio |

| | | | | |
|------------------|--|---|---|---------|
| SGA | Total selling, general, and administrative expense of firms | - | (Anwar & Hasnu, 2016; Dalwai & Salehi, 2021; Erhemjamts et al., 2013) | Rupiah |
| Female BoC | Female commissioners / Total board of commissioners | - | (Adams & Ferreira, 2009; Ali et al., 2021; García et al., 2021; Guizani & Abdalkrim, 2022; Mittal & Lavina, 2018; Zhou, 2019) | Ratio |
| Female BoD | Female directors / Total board of directors | - | (Adams & Ferreira, 2009; García et al., 2021) | Ratio |
| Board Meeting | Total joint meeting commissioner and director | + | (Jensen, 1993; Nasir & Ali, 2018; Vafeas, 1999) | Nominal |
| Control variable | | | | |
| High Impact | A dummy variable of one if from non-pharmacy and technology industries, zero otherwise | + | (Davis et al., 2020; Jakub et al., 2020) | Nominal |
| Profitability | Net profit/average total assets | - | (Balasubramanian et al., 2019; Isayas, 2021). | Ratio |
| Leverage | Book value of total liabilities divided by total assets | + | (Dalwai & Salehi, 2021; Elkhail, 2019; Khafid et al., 2019; Yazdanfar & Ohman, 2020) | Ratio |
| Age | Age of firms after IPO | - | (Astebro & Winter, 2012; Isayas, 2021). | Nominal |

Research design

To determine the relationship between corporate investment, prospector strategy, and corporate governance and financial distress, we ran the logistic regression model. This paper uses logistic regression analysis as the main model because financial distress is a binary variable. Many studies of financial distress prediction models (Balasubramanian et al., 2019; Bredart, 2014; García & Herrero, 2021; Khafid et al., 2019; Khurshid et al., 2019; Mittal & Lavina, 2018; Nasir & Ali, 2018; C. C. Salloum et al., 2013; Yazdanfar & Ohman, 2020) also used this method to test. This approach poses fewer assumptions about normal distribution of observations, linearity, normal distribution of error terms, and homogeneity of variance than the ordinary least squares (OLS) regression model does. Furthermore, it also reduces the impact of outliers. Following Lakshan & Wijekoon (2012), the data were collected three years prior to the occurrence of corporate failure. Model specification in this study:

$$Financial\ Distress_t = \alpha_0 + b_1CorporateInvestment_{t-3} + b_2ProspectorStrategy_{t-3} + b_3-4FemaleBoard_{t-3} + b_5BoardMeeting_{t-3} + b_6-9Control_{t-3} + e$$

Where: α_0 : constant, t-3: lagged of three years, and e: random error.

RESULTS AND DISCUSSIONS

This study uses three measures to distinguish financial distress firms and non-financial distress firms. Model 1 used Z-score as a measure of financial distress. If the Z-score is less than 1.8, the company is in financial distress. Model 2 was developed using EMS as a measurement of financial distress. If the EMS score is less than 4.15 then firms may fall into financial distress. Model 3 was developed using Springate as a measurement of financial distress. If the Springate score is less than 0.862, it is included in financial distress firms. The dependent variable is represented by the indicator binary variable using the values 1 (sick observation) and 0 respectively (healthy observation). Table 3 shows the description statistics of the dependent variable. The table divides the research objects into two groups.

In model 1, there are 28 companies that do not experience financial distress with a percentage of 10.07% and 250 companies that experience financial distress with a percentage of 89.93%. Model 2 shows as many as 142 observations including non-financial distress firms (51.08% of the total observations) and 136 observations including financial distress firms (48.92% of the total observations). As for model 3, there are 82 companies that do not fall into financial distress (accounting for 29.50% of the total research sample) and 196 companies that fall into financial distress (accounting for 70.50% of the total research sample).

Table 3. Description statistics of the dependent variable

| Model 1 | | | Model 2 | | | Model 3 | | |
|----------|------|---------|----------|------|---------|----------|------|---------|
| Classify | Freq | Percent | Classify | Freq | Percent | Classify | Freq | Percent |
| 0 | 28 | 10.07% | 0 | 142 | 51.08% | 0 | 82 | 29.50% |
| 1 | 250 | 89.93% | 1 | 136 | 48.92% | 1 | 196 | 70.50% |
| Total | 278 | 100% | Total | 278 | 100% | Total | 278 | 100% |

Table 4 shows the descriptive statistics of the independent and control variables. As shown in table 4, this study uses the following independent and control variables: *Capex* (capital expenditure), *SGA* (Selling, general, and administrative expense), *FemaleBoC* (Female Board of Commissioner), *FemaleBoD* (Female Board of Director), *BoardMeeting* (Joint meeting of Board of Commissioner and Board of Director), *HighImpact* (High Impact Industry), *ROA* (Return on Assets), *DAR* (Debt to Asset), and *Age* (Age of firms after Initial Public Offering). Based on table 4, the average ratio of capital expenditure to assets is 4.4% which shows that the capex for companies in Indonesia is lower. The low level of capital investment shows that the company is more focused on maintaining the availability of cash flow. The average selling, general, and administrative expense is 794 billion rupiah. The high value of SGA expenses indicates a high level of innovation. The proportion of females on the board of commissioners and the board of directors is still low compared to the percentage of male. The average percentage of female BoC in the sample companies is 11.2%, while the percentage of female BoD is 12.4%. This shows that there are still opportunities to increase the number of women's involvement in the company's board structure. The average number of meetings involving the BoD and the BoC together is 5.4 times. Most of the sample companies are included in the high impact industry. This is indicated by the

average high impact percentage value of 96%. The other 4% are engaged in non-pharmacy and technology industries. The average level of profitability of non-financial companies in Indonesia is still low at 3.4%. The average company has a high level of leverage that is equal to 63.2%. This shows that the company's capital structure is mostly financed by debt. The sample companies on average have been around for a long time, which is about 14 years. This shows that the majority of companies are able to survive in the long term.

Table 4. Summary of statistics for independent and control variables.

| Descriptive Statistics | Mean | Standard Deviation | Min | Max | Obs |
|------------------------|----------|--------------------|-----------|----------|-----|
| <i>Capex</i> | 0.044 | 0.054 | 0.000 | 0.377 | 278 |
| <i>SGA</i> | 7.94e+11 | 1.67e+12 | -1.34e+11 | 1.17e+13 | 278 |
| <i>FemaleBoC</i> | 0.112 | 0.176 | 0.000 | 0.667 | 278 |
| <i>FemaleBoD</i> | 0.124 | 0.172 | 0.000 | 0.800 | 278 |
| <i>BoardMeeting</i> | 5.453 | 4.409 | 0.000 | 40.000 | 278 |
| <i>HighImpact</i> | 0.960 | 0.195 | 0.000 | 1.000 | 278 |
| <i>ROA</i> | 0.034 | 0.153 | -1.308 | 0.553 | 278 |
| <i>DAR</i> | 0.632 | 1.522 | 0.002 | 20.714 | 278 |
| <i>Age</i> | 14.668 | 10.185 | 0.025 | 40.392 | 278 |

To test the research hypothesis, this study uses logistic regression to test the financial distress determinants of Indonesian non-financial firms. Table 5 shows the results of the logistic regression for the research model. In model 1, we found five of nine variables to be significant at financial distress. Only *SGA* was significant at 1 %, meanwhile *Capex*, *FemaleBoC*, *BoardMeeting*, and *HighImpact* were significant at 5 %. *SGA* and *FemaleBoC* were negatively significant on distress probability, whereas *Capex*, *BoardMeeting*, and *HighImpact* industry have a positive significant effect on financial distress.

In order to check the empirical and theoretical robustness of the models and results, we used two other models to perform logistic regression with the same data. In model 2, we found four of nine variables to be significant at financial distress. There are three variables that are significant at 1 %: *Capex*, *ROA*, *DAR*. On the other hand, *FemaleBoC* was significant at 10%. *FemaleBoC* and *ROA* were negatively significant at distress probability, whereas *Capex* and *DAR* have a positive significant effect on financial distress.

Model 3 shows that six of nine variables to be significant at financial distress. Only *ROA* was significant at 1 %. *Capex*, *SGA*, *BoardMeeting* were significant at 5%. While *HighImpact* was significant at 10%. *SGA*, *FemaleBoD* and *ROA* were negatively significant at distress probability, whereas *Capex*, *BoardMeeting* and *HighImpact* have a positive significant effect on financial distress. The results are consistent for the three research models, using the Z-score, EMS model, and Springate as a measure of financial distress. This is indicated by the identical sign of the expected coefficient of all variables in all three models.

The results show that capital investment increases the probability of financial distress. This result is in line with the research (Kane & Richardson, 2002; Männasoo et al., 2017; Maripuu & Männasoo, 2014). Capital investment is known to have an effect on future cash flows and asset risk. It is possible for it to have a considerable influence on future returns. Higher capital investment tends to be associated with larger uncertainty in future earnings, cash flows and stock returns. This increased uncertainty makes it more difficult to estimate firm value. Therefore, large capital investment tends to be associated with less accurate estimation of firm value. Investment may not be successful due to several other factors (Echevarria, 1998). Unexpected market conditions such as the COVID-19 pandemic change consumer behaviour that may affect the demand conditions. These unexpected factors may contribute to the failure of investment projects. Tangible capital is highly sensitive to the business cycle. This study is in line with Spescha & Woerter (2021) which stated that fixed capital investment tends to decrease sharply during recessions.

This study finds that prospector strategy has a significant positive impact on financial distress. This shows that the more companies innovate, the probability of distress risk will decrease. The results of this study are in accordance with the findings of Bryan et al., (2013), and Dalwai & Salehi (2021) who stated that business strategy significantly mitigates the risk of bankruptcy. This study uses SGA as a proxy business strategy. The prospector strategy is characterized by a high SGA value. Companies with a prospector type, more focus on the marketing function. As for companies with the defender type, the focus on marketing is weak, while the emphasis is on production and financial functions. This study finds that a higher SGA leads to lower bankruptcy risks. This implies firms that use prospector strategies are more financially healthy than defender strategy. As a company that has a more stable corporate reputation, defender has the motivation to maintain its reputation. This pressure is not owned by prospectors who tend to seek new market opportunities by emphasizing innovation.

This research finds that the presence of female board reduces the likelihood of financial distress. These results support previous research by Adams & Ferreira (2009), García & Herrero (2021) and Mittal & Lavina (2018). It demonstrated that larger gender diversity improved the monitoring process while also lowering agency expenditures and enhancing financial and accounting data transparency. The increasing number of women in top management causes the point of views on a problem is more diverse so that the solutions provided will be more numerous and innovative.

The results of the study which show that the frequency of board meetings has a positive effect to the likelihood of bankruptcy on firm is in line with (Khurshid et al., 2019; Nasir & Ali, 2018). This could be because the board meeting held by the board was less effective and was only conducted as a formality (Erkens et al., 2012). The board of commissioners and the board of directors will hold more meetings when the company is in the poor performance. In line with Duchin et al., (2010), the large number of frequency of meetings contribute to the high costs associated with the processing and preparation of the data they require to be able to make decisions

that improve performance. This may be reflected in returns and performance due to the higher costs of holding such elaborate meetings.

Table 5. Prospector Strategy, Corporate Governance and Financial Distress

| | Variable | (1) | (2) | (3) |
|----------------------|---------------------|--------------|------------|-------------|
| Corporate Investment | <i>Capex</i> | 19.414** | 13.258*** | 6.560** |
| | <i>sig.</i> | 0.020 | 0.000 | 0.037 |
| Prospector Strategy | <i>SGA</i> | -3.46e-13*** | -1.41E-13 | -2.14e-13** |
| | <i>sig.</i> | 0.002 | 0.203 | 0.022 |
| Corporate Governance | <i>FemaleBoC</i> | -2.651** | -1.657* | 0.058 |
| | <i>sig.</i> | 0.014 | 0.069 | 0.944 |
| | <i>FemaleBoD</i> | -0.665 | -0.117 | -1.469* |
| | <i>sig.</i> | 0.609 | 0.904 | 0.082 |
| | <i>BoardMeeting</i> | 0.199** | 0.069 | 0.111** |
| | <i>sig.</i> | 0.036 | 0.141 | 0.023 |
| Industry | <i>HighImpact</i> | 2.188** | 0.856 | 1.340* |
| | <i>sig.</i> | 0.024 | 0.315 | 0.068 |
| Controls | <i>ROA</i> | -1.266 | -10.103*** | -4.808*** |
| | <i>sig.</i> | 0.540 | 0.000 | 0.001 |
| | <i>DAR</i> | -0.193 | 7.983*** | 0.824 |
| | <i>sig.</i> | 0.205 | 0.000 | 0.184 |
| | <i>Age</i> | 0.025 | -0.017 | -0.007 |
| | <i>sig.</i> | 0.267 | 0.343 | 0.625 |
| | <i>Obs</i> | 278 | 278 | 278 |
| | <i>Average VIF</i> | 2.320 | 2.320 | 2.320 |
| | <i>R-Sqr</i> | 0.176 | 0.383 | 0.119 |

Note(s): *p < 0.1, **p < 0.05, ***p < 0.01

Table 6 shows the odd ratio value from all variables in all three models. Odds ratio (OR) measures the relationship between independent variables on the likelihood of financial distress. In order to see how much independent variable effect has on financial distress, we can refer to the value of the odds ratio. The odd ratio of *SGA* in model 1 until model 3 is 1.000. It means if the value of *SGA* is increased by 1, and other variables are constant, then the probability of financial distress will increase by 1.000. The odds ratio values of *Capex*, *BoardMeeting*, *HighImpact*, and *DAR* are greater than 1, meaning that the higher the value of the variable, the likelihood of financial distress is more likely to occur. While *Female BoC* and *FemaleBoD* have an odds ratio value of less than 1, an increase in the number of women in the BoC and BoD will reduce the likelihood of bankruptcy firms. Meanwhile, *SGA* has an odds ratio equal to 1 so that changes in selling, general, and administrative expenses do not change the likelihood of financial distress.

Table 6. Odd ratio

| | Variable | (1) | (2) | (3) |
|----------------------|---------------------|----------|------------|---------|
| Corporate Investment | <i>Capex</i> | 2.70e+08 | 572457.900 | 706.418 |
| Prospector Strategy | <i>SGA</i> | 1.000 | 1.000 | 1.000 |
| Corporate Governance | <i>FemaleBoC</i> | 0.071 | 0.191 | 1.060 |
| | <i>FemaleBoD</i> | 0.515 | 0.889 | 0.230 |
| | <i>BoardMeeting</i> | 1.220 | 1.072 | 1.118 |
| Industry | <i>HighImpact</i> | 8.916 | 2.353 | 3.820 |
| Controls | <i>ROA</i> | 0.282 | 0.000 | 0.008 |
| | <i>DAR</i> | 1.824 | 2931.716 | 2.280 |
| | <i>Age</i> | 1.025 | 0.983 | 0.993 |

Table 7 provides the performance of three models used in this investigation. The three models have a value of $Prob > LR$ which is statistically significant at 5%, which is 0.000. This shows that the three models have a good goodness of fit. The next indicator used to test the good model fit is the *Hosmer and Lemeshow Test*. Hosmer's value for the three models is greater than 0.05. It means hypothesis 0 is accepted. These results indicate that the logistic regression model adequately explains the data and there is no difference between the model and the observed values. These three models are also valid to be used to explain the relationship between independent and dependent variables. Model 2 has the highest *McFadden's R2* value compared to the other two models, which is 38.3%. The findings indicate that the variability of the independent variable influences the probability of financial distress by 38.3%, while the remaining 61.7% percent is influenced by variables outside the scope of this study. The model 1 has a *McFadden's R2* value of 17.6% and model 3 has a *McFadden's R2* value of 11.9%.

Table 7. Summarizes the performance of the three models

| Measure | (1) | (2) | (3) |
|---------------------------------|-------|-------|-------|
| <i>Prob > LR</i> | 0.000 | 0.000 | 0.000 |
| <i>Hosmer and Lemeshow Test</i> | 0.452 | 0.865 | 0.429 |
| <i>McFadden's R2</i> | 0.176 | 0.383 | 0.119 |

CONCLUSIONS

This study aimed to examine determinant variables affect the likelihood of financial distress during COVID-19 pandemic. The sample comprises data of non-financial sector companies in Indonesia in 2020. There are several findings regarding this study. First, we found a positive association between corporate investment and financial distress. The higher the corporate investment before the COVID-19 pandemic, the higher the probability of the company experiencing financial distress during the pandemic. This is in line with the research (Kane & Richardson, 2002; Männasoo et al., 2017; Maripuu & Männasoo, 2014). Second, there is a negative and significant relationship between prospector strategy and financial distress probability.

Companies that implement prospector strategy will be more financially healthy than firms that do not. The results are in accordance with the findings of Bryan et al., (2013), and Dalwai & Salehi (2021). Third, female board has a significant negative relationship with financial difficulty. The presence of female boards tends to reduce the probability of financial distress and bankruptcy. These results support previous research by Adams & Ferreira (2009), García & Herrero (2021) and Mittal & Lavina (2018). Fourth, board meeting has a positive significant effect on financial distress. The higher the number of board meetings, the higher level of financial distress. Fifth, high impact industry also has a positive significant effect on financial distress. These results support (Bredart, 2014; Duchin et al., 2010; Erkens et al., 2012; Khurshid et al., 2019; Nasir & Ali, 2018). Companies from non-pharmacy and non-technology industries have a high risk of bankruptcy during the pandemic. Sixth, profitability is negatively related to financial distress. Companies that have high profitability tend to have low risk of financial distress. Seventh, leverage has a significant positive relationship with financial difficulty. Leverage of firms enhance the probability of financial distress. Thus, our results suggest that corporate investment, prospector strategy, female board, board meeting, high impact industry, profitability, and leverage is an economically important determinant of financial distress.

There are several implications given from the findings of this study. Predicting the occurrence of financial distress is a crucial issue for several parties, such as investors, managers, employees, the community, and shareholders. This study helps them to find out more deeply the variables that can reduce the probability of financial distress. The findings of this study can also provide an overview of variables that exacerbate financial distress conditions so that they can be an early warning for companies. This knowledge can help top managers in formulating policies to encourage company performance, especially during the COVID-19 period. Additionally, this study contributes to the growing body of knowledge regarding the impact of corporate investment, prospector strategy and corporate governance on financial distress during the COVID-19 pandemic.

This research has several limitations. The data used in conducting the research are limited. Researchers only use companies that are included in the non-financial sector. This shows that the composition of the data does not show all sectors listed on the Indonesian stock exchange. Further researchers can expand the scope of research by including the financial sector. Researchers can also conduct research outside Indonesia as an international comparison. This study also only uses 2020 as a representation of the COVID-19 pandemic and 2017 as the year for corporate investment, prospector strategy and corporate governance policies. Future research should cover longer periods consisting of pre COVID-19, during COVID-19 and post COVID-19 times that would minimize the time effect on results.

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