Role of Good Corporate Governance in Minimizing Bankruptcy by Moderating Pandemic Covid-19

Anita Juwita[1], Hugo Prasetyo[1] and Meiryani[2]
[1]*Accounting Department, Faculty of Economic and Communication, Bina Nusantara University, Jakarta, 11480, Indonesia*
[2]*Finance Department, Faculty of Economic and Communication, Bina Nusantara University, Jakarta, 11480, Indonesia*

Keywords: Independent Board Commissioner, Institutional Ownership, Board Directors Size, Financial Distress, Pandemic Covid-19.

Abstract: This research has main object to determine role Good Corporate Governance in minimizing potential of bankruptcy with pandemic covid 19 as moderating variables. This study uses causal method, which aims to explain the causal relationship between one variable that affects other variables. The sample using automotive companies listed on the Indonesia Stock Exchange during the period 2016-Q1 until 2020-Q3 and analysis data techniques using linear regression with panel data using E views program version 8.0. The type of data using secondary data as financial statement. This study uses independent board commissioner, institutional ownership and board size of director as the independent variable, financial distress as the dependent variable, the Covid-19 pandemic as moderating variable and applying panel data regression with random effect testing. Result of this research are Independent commissioners, institutional ownership and Covid 19 have impact on financial distress but board directors size doesn't impact on financial distress. Independent board commissioners which moderated by the Covid-19 has impact on financial distress but institutional ownership and size board of directors which are moderated by the Covid-19 don't impact on financial distress9.

1 INTRODUCTION

The Covid pandemic significantly impact on reducing Indonesia's economic growth. Stated by the Head of the Central Statistics Agency (BPS) Suharyanto, this pandemic reducing economic growth within second quarter of 2020 for 5.32%. It is also estimated that economic growth will remain minus in the third quarter of 2020. If this condition occurs, Indonesia entering the stage of an economic recession. The effects of an economic recession is the potential for the possibility of company bankruptcy, due to the company's inability to make sales, resulting in negative company profits and the cessation of company operations (Svobodová 2013; Achim et al. 2012; Smrcka et al. 2013).

This pandemic having an impact on Indonesia macro economy and directly affected the company's performance. Covid 19 has significantly impact on China's financial performance, studied by Shen et al (2020). The initial symptom of bankruptcy is financial distress and indicated with uncertainty of the company's profitability in the future. The company declared bankrupt while debt is greater than the assets and unable to covering its obligations to creditors at maturity (Hanafi, 2013). Financial distress is a stage of degenerating financial conditions prior to bankruptcy or liquidation Platt and Platt (2002). Companies need to anticipate financial distress condition that can affect to bankruptcy or delisting. Delisting is condition while issuer's securities no longer trading on stock exchange. One system that can minimize the risk of bankruptcy during the COVID-19 pandemic is implementation of Good Corporate Governance (GCG). GCG has important role in minimizing conflicts of interest between managers and shareholders Shahwan (2015). In Spain found that the implementation of GCG has an impact on financial distress research by Manzaneque et al. (2015). Miglani et al. (2014) in Australia and Manzaneque et al. (2016) in Spain studied institutional ownership significantly impact to financial distress. Manzaneque et al. (2016) analysed the influence institutional ownership for company's continuity, his research mentioned the effectiveness corporate governance in monitoring management long-term performance. Institutional ownership play significant role in controlling management.

Juwita, A., Prasetyo, H. and Meiryani, .
Role of Good Corporate Governance in Minimizing Bankruptcy by Moderating Pandemic Covid-19.
DOI: 10.5220/0011245700003376
In *Proceedings of the 2nd International Conference on Recent Innovations (ICRI 2021)*, pages 256-263
ISBN: 978-989-758-602-6

Therefore, the higher institutional ownership, the more company in financial distress condition. Shahwan (2015) in Egypt and Li et al (2008) in China didn't show a significant impact of managerial ownership on financial distress. Suntaruk's studied (2009) in Thailand showed GCG didn't impact to financial distress. Miglani et al. (2014) studied the independent director variable was negatively related to financial distress, while Manzaneque et al. (2016) showed a negative relationship between independent directors and financial distress.

The board of directors is the executor, decision maker and manager of a company. The bigger size of Board of Directors according to agency theory will bring superiority in decision making. Making the right decisions, the possibility of financial distress conditions can be avoided. Bigger size Board of Directors the possibility of financial distress will be smaller. Research by (Widyasaputri, 2012), founded a positive impact of size of the Board of Directors on the possibility of financial distress, means the greater the size of the Board of Directors, the greater the possibility of financial distress. The size of the Board of Directors has a negative effect on the possibility of financial distress (Hanifah and Purwanto, 2013). Research conducted by (Manzaneque et al., 2016) found that board size has a negative effect on the likelihood of financial distress

Based on the results of previous empirical studies, it is known that there are still inconsistent results regarding the relationship between GCG and financial difficulties. There are still very few studies that test the Covid Pandemic 19 factor as a moderating variable that affects the relationship between GCG and financial difficulties. The automotive industry chosen as the sample because the it's quite affected by the Covid-19 pandemic in Indonesia. This study purpose to analyze the effect of the implementation of Good Corporate Governance on financial difficulties, analyze the effect of the Covid 19 pandemic on financial difficulties, and analyze whether the Covid-19 pandemic moderates the effect of Good Corporate Governance on financial difficulties.

2 LITERATURE REVIEW

2.1 Bankruptcy Theory

Emerling (2015) stated bankruptcy as the last phase of a company's life due to insolvency. Ben et al., (2015) stated bankruptcy was the company's failure in generating profits. Bankruptcy is the situation while debtor unable in covering debts and inability to survive in market competition, asset's destruction and low productivity (Aleksanyan and Huiban 2016). The company is declared bankrupt if the company's debt is greater than the assets owned by the company, and the company is unable to fulfil its obligations to creditors at maturity (Hanafi, 2013).

2.2 Financial Distress

Platt and Platt (2002) stated Financial distress as decline condition in financial conditions that occurs before bankruptcy or liquidation occurs. Financial distress can be detected when a company is experiencing financial difficulties or has experienced a continuous decline in profit and is unable to meet its obligations when they fall due. Companies that are in a "decline" cycle must be able to make strategic choices whether to reduce dividends, reduce investment or change the capital structure to avoid financial distress (Koh, Durand, Dai, & Chang, 2015). Edi and May Tania (2018) stated that financial distress means a condition in which a company is categorized as facing a financial crisis that decreases in fulfilling its responsibilities to creditors.

2.3 Financial Distress Measurement

The measurement of financial difficulties in this study refers to Altman (1968), Altman (1968) developed a model for bankruptcy prediction as Altman Z score model and defined as Multiple Discriminant Analysis (MDA). The MDA technique has been applied in several financial distress and bankruptcy studies with satisfactory results (Aziz and Dar 2006; Bellovary, Giacomino and Akers 2007; Platt and Platt 2006; Zmijewski, 1984). The discriminant function estimated by Altman (1968) is $Z = 1{,}2X1 + 1{,}4X2 + 3{,}3X3 + 0{,}6X4 + 0{,}999X5$ Where X1 = Working Capital/Total Assets; X2 = Retained Earnings/ Total Assets; X3 = Earnings before Interest and Taxes/Total Assets; X4 = Market Value of Equity/Book Value of Total Liabilities; X5 = Sales/Total Assets; Z = Overall Index. On Altman's formula, the firms classified according to the company's sustainability. $Z < 1.80 \rightarrow$Distress Zone. $Z > 2.99 \rightarrow$Safe Zone. $1.8 < Z < 2.99 \rightarrow$Grey Zone.

2.4 Research Model

The research model in this study showed below:

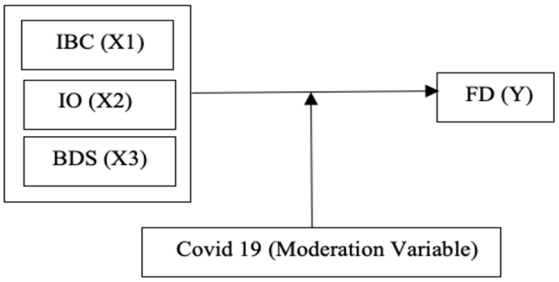

Figure 1: Research model.

IBC (X1) : Independent Board Commissioner
IO (X2) : Institutional Ownership
BDS (X3) : Board Directors Size
FD (Y) : Financial Distress
COVID (M) : The Covid-19 pandemic.

The following will explain the concept and operational definitions of each variable.

2.4.1 Independent Board of Commissioners

According to Marlinda et.al. (2020) the independent board of commissioners as a person who is not affiliated in all respects with the controlling shareholder has no affiliation with the board of directors or the board of commissioners and does not serve as a Director in a company related to the owner company

2.4.2 Institutional Ownership

Institutional ownership is ownership of company shares owned by institutions or institutions such as insurance companies, banks, investment companies, and other institutional property. (Arianandini and Ramantha, 2018).

2.4.3 Board Directors Size

The board of directors is the executor, decision maker and manager of a company. The size of the Board of Directors which is getting bigger according to agency theory will bring advantages in making decisions (Widyasaputri, 2012).

2.4.4 Financial Distress

Bankruptcy prediction in this study was carried out at listed manufacturing companies in Indonesia, where the measurement of bankruptcy prediction uses the Altman's Z-score model. This is supported by Sajjan's research (2016) that the measurement of z score suitable for manufacturing companies is to use the Original Altman's Z-score model (1968).

2.5 Hypothesis

H1: Independent board commissioners effect on financial distress.

H2: Institutional ownership has effect on financial distress.

H3: Size board of directors has effect on financial distress.

H4: The Covid-19 pandemic effect on financial distress.

H5: Independent board commissioners effect on financial distress which is moderating by the Covid 19 Pandemic.

H6: Institutional ownership effects financial distress which is moderating by the Covid-19 Pandemic.

H7: The size of the board of directors affect financial distress which is moderating by the Covid-19 Pandemic.

3 ANALYSIS METHOD

This research using quantitative approach and population in this study are automotive companies listed on the Indonesia Stock Exchange for the period 2016-Q1 to 2020-Q3. The sampling using non-probability sampling method with purposive sampling technique. The sample for automotive companies for the 2016-q1 - 2020-q3 period with the criteria: (1) IDX listed public company for the period 2016-2020; (2) Automotive companies that consistently publish financial reports for the period quarter (q) 1 of 2016 - quarter (q) 3 of 2020; (3) Automotive companies that have the data or variables needed in this study. The data analysis method is panel data regression model (combination of time series and cross section) using statistical application program Eviews 8.0.

This research using 12 Automotive companies with five years total research. The independent variable are Independent Board Commissioner (X1), Institutional Ownership (X2) and Board Directors Size (X3). The dependent variable is Financial Distress (Y) and Covid 19 as moderation variable.

Table 1: Variable Measurement.

Variabel	Indicator	Scale
Independent Board of Commissioners (X1)	Number of Independen Commisioner / Total Commisioner	Ratio
Institutional Ownership (X2)	Number of Institutional Shares's / Number of Outstanding Shares	Ratio
Directors Size (X3)	The number of directors in a company	Ratio
Covid 19 (D)	Dummy, 0 = before covid 19 1 = after covid 19	Nominal
Financial Distress (Y)	Z = 1,2X1 + 1,4X2 + 3,3X3 + 0,6X4 + 0,999X5 X1 = Working Capital/Total Assets; X2 = Retained Earnings/ Total Assets; X3 = Earnings before Interest and Taxes/Total Assets; X4 = Market Value of Equity/Book Value of Total Liabilities; X5 = Sales/Total Assets; Z = Overall Index (Source: Altman Z-Score, 1968)	Ratio

Source: Data processed, 2020

4 RESULT AND DISCUSSION

There are three model testing procedures used to select the best panel data regression: (1) Chow Test, it used to choose Common Effect Model (CEM) or Fixed Effect Model (FEM); (2) Lagrange Multiplier (LM), it used to choose CEM or Random Effect Model (REM); (3) Haussman test, it used to choose Fixed Effect Model (FEM) or REM (Gujarati, 2003).

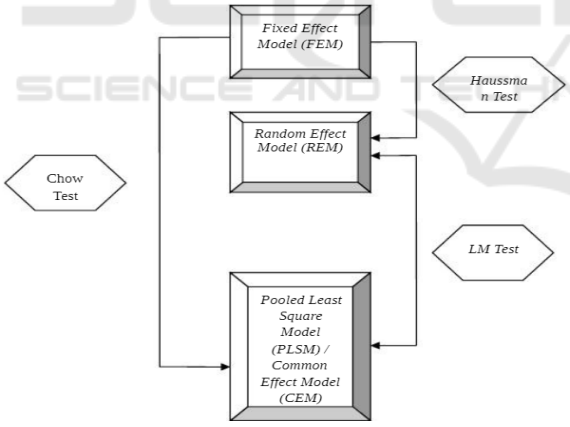

Figure 2: Suitability Model Testing.

4.1 Chow Test

This test is carried out by means chi-square statistical test with the following hypotheses: Ho: The model follows the Common Effect Model (CEM) H1: The model follows a Fixed Effect Model (FEM) Alpha: 5%. Condition: Reject Ho if the value of the F test or < alpha. The following are the results obtained from the chow-test using the EViews 8.0 software:

Table 2: Chow Test.

Effects Test	Statistic	d.f.	Prob.
Cross-section F	54.252059	(11,209)	0.0000
Cross-section Chi-square	307.678562	11	0.0000

Based on the results of the chow-test above, the F test and the chi-square test is 0.0000 < 0.05. Thus, Ho is rejected and H1 is accepted. The model estimation approach follows the fixed effect model.

4.2 Lagrange Multiplier Test

The hypothesis of the LM test is as follows:

Ho: Common Effect Model (CEM)

H1: Random Effect Model (REM)

Alpha: 5%.

Condition: Reject Ho if Probability Chi-Square < alpha 0.05. The following is the results obtained from the Langrage Multiplier test using the EViews 8.0 software:

Table 3: Lagrange Multiplier Test.

Breusch-Godfrey Serial Correlation LM Test:		
F-statistic	373.3532	Prob. F(2,218)
Obs*R-squared	176.4776	Prob. Chi-Square(2)

Based on the Lagrange Multiplier test, the Chi-Square of 0.0000 < alpha 0.05. Thus, Ho is rejected and H1 is accepted. Thus, the model estimation follow REM.

4.3 Hausman Test

The hypothesis in the Hausman test is as follows:

Ho: The model follows the Random Effect Model

H1: The model follows the Fixed Effect Model Alpha = 5% Condition: Reject Ho if the p-value < alpha. The following are the results obtained from the Hausman test which was carried out using the EViews 8.0 software:

Table 4: Hausman Test.

Correlated Random Effects - Hausman Test Equation: Untitled Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.000000	7	1.0000

Based on the results of the Hausman test, the probability value test is 1.0000, which means it has a significance greater than the 95% (α = 5%) level of confidence (significance level). So that the decisions taken in this Hausman test are Ho accepted and H1 rejected. The model follows the random effect model method.

4.4 Regression Result

Table 5: Regression Model Result.

Test Name	Information	Result
Chow test	CEM Vs FEM	*Fixed Effect Model*
Hausman Test	REM Vs FEM	*Random Effect Model*
Lagrange Multiplier test	PLS Vs REM	*Random Effect Model*

The results of selecting the panel data regression model in the table above show different results. The chow-test result showed the best model is the fixed effect model compared to the common effect model. Based on the Langrage multiplier test, it shows that the random effect model is better than the common effect model. The results of the Hausman Test showed that the best model is the random effect model better than the fixed effect model. Furthermore, result from the Hausman-test and Langrage multiplier testing, it can be decided that the test model for the regression equation is REM.

Table 6: Statistic Descriptive Result.

	N	Minimum	Maximum	Mean	Std. Deviation
Y	228	-,82	114,64	24,3303	28,02406
M	228	,00	1,00	,1579	,36544
X1	228	,20	,67	,3721	,07095
X2	228	,32	1,00	,6916	,17067
X3	228	2,00	12,00	5,6491	2,56195
M1	228	,00	,50	,0593	,14053
M2	228	,00	1,00	,1148	,27350
M3	228	,00	11,00	,8421	2,17142
Valid N (listwise)	228				

Financial Distress (Y) variable has a minimum value of -0.82, a maximum value of 114.64, and an average value of 24.3303. These results show that on average the automotive industry is in a safe zone. Furthermore, the Independent Commissioner variable (X1) obtained a minimum value of 0.2 with a maximum value of 0.67, and an average value of 0.3721. These results indicate that on average the percentage of independent commissioners in the automotive industry is still relatively low compared to the number of commissioners. The Institutional Ownership variable (X2) obtains a minimum value of 0.32 and a maximum value of 1, with the average value obtained 0.6916, these results explain that on average institutional ownership in the automotive industry is quite high. Finally, the size Board of Directors variable (X3) has a minimum value of 2 and a maximum value of 12, the average value obtained is 5.649, these results explain that on average board director size in the automotive industry is very high. The results of REM testing model can be seen in the following table:

Table 7: Panel Data Regression Test.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.443958	0.376692	6.487950	0.0000
IBC	0.455676	0.203827	2.235603	0.0264
IO	1.045734	0.182977	5.715112	0.0000
BDS	-0.284074	0.187915	-1.511715	0.1320
COVID	-0.793365	0.418848	-1.894159	0.0495
IBC*COVID	-0.981644	0.374627	-2.620322	0.0094
IO*COVID	-0.025522	0.342438	-0.074530	0.9407
BDS*COVID	-0.236129	0.163213	-1.446753	0.1494
Weighted Statistics				
R-squared	0.237515	Mean dependent var		0.127714
Adjusted R-squared	0.213254	S.D. dependent var		0.405682
S.E. of regression	0.359835	Sum squared resid		28.48584
F-statistic	9.790046	Durbin-Watson stat		0.624377
Prob(F-statistic)	0.000000			
Unweighted Statistics				
R-squared	-0.159328	Mean dependent var		1.077194
Sum squared resid	129.1722	Durbin-Watson stat		0.137691

The regression model used in the study based on the above tests is as follows: FD = 2.443958 + 0.455676 IBC + 1.045734 IO - 0.284074 BDS - 0.793365 COVID - 0.981644 IBC*COVID - 0.025522 IO*COVID - 0.236129 BDS*COVID.

From the equation model above, it can be explained that based on the results of the regression test using REM method, it shows the IBC and IO have a positive relationship with financial distress, while BDS has no effect on financial distress, and COVID-19 pandemic has been shown to moderate the effect of GCG on financial distress.

4.5 Hypothesis Result

Table 8: Partial Test (t-test).

Variable	Coefficient (β)	t-Statistic	Sig	Conclusion
C	2.443958	6.487950	0.0000	
IBC	0.455676	2.235603	0.0264	H1 Accepted
IO	1.045734	5.715112	0.0000	H2 Accepted
BDS	-0.284074	-1.511715	0.1320	H3 Denied
COVID	-0.793365	-1.894159	0.0495	H4 Accepted
IBC*COVID	-0.981644	-2.620322	0.0094	H5 Accepted
IO*COVID	-0.025522	-0.074530	0.9407	H6 Denied
BDS*COVID	-0.236129	-1.446753	0.1494	H7 Denied

4.5.1 The Test Results of the Independent Board of Commissioners on Financial Distress.

The independent board variable has value of β (beta) with a positive direction of 0.455676, a t-statistic value of 2.235603 and a significance value of 0.0264 < 0.05 (5% significance level). The conclusion is independent board commissioners has a positive and significant effect to financial distress. Interpretation Altman Z-score results if the value is greater > 0, then the company will be less likely to experience financial difficulties, so it concluded that if there is a positive coefficient relationship statistically, means there is a negative relationship between the board of commissioners and financial distress. Widhiadnyana and Ratnadi (2018) stated the proportion of independent commissioners has a positive effect on financial distress. Means greater percentage for independent commissioners will impact on decreasing financial distress.

4.5.2 The Test Results of Institutional Ownership on Financial Distress

The t test (partial) of institutional ownership variable has β (beta) value with a positive direction of 1.045734, t-statistic value of 5.715112 and a significance value of 0.0000 <0.05 (5% significance level). The conclusion is institutional ownership has positive and significant effect to financial distress. This result supported by Tri Wahyuning Tias and Muharam (2012); and Merkusiwati (2015) stated that institutional ownership has an effect on financial distress. This means the institutional ownership structure is one of the factors can affect the condition of the company in the future, whether the company run into financial distress or even goes bankrupt. The same results were also found by Helena and Saifi (2018) which showed that institutional ownership had a significant effect on financial distress. Means the companies that have greater institutional ownership, the less likely the company will experience financial distress.

4.5.3 The Test Results of Size of the Board of Directors on Financial Distress

The t test (partial) of variable size of the board of directors obtained a β (beta) value in a negative direction of -0.284074, a t-statistic value of -1.511715 and a significance value of 0.1320 > 0.05 (5% significance level). The conclusion is size of the board of directors a negative and insignificant effect on financial distress. The results of this study are in line with the research of Putri and Kristanti (2020) and Kristian (2017) which states that the board of directors has no effect on financial distress. This means that the board of directors cannot influence financial distress. Thus, directors have rights and powers, new decisions are made, the members of the board of directors unable affect the possibility of financial distress.

4.5.4 The Test Results of Covid-19 Pandemic on Financial Distress

The t test (partial) in the regression model, the Covid-19 pandemic variable obtained a β (beta) value in a negative direction of -0.793365, a t-statistic value of -1.894159 and a significance value of 0.0495 < 0.05 (5% significance level). The conclusion is Covid-19 pandemic has a negative and significant effect on financial distress. Economic recession potentially cause possibility of company bankruptcy, due to the company's inability to make sales, resulting in negative company profits and discontinuation of company operations (Svobodová 2013; Achim et al. 2012; Smrcka et al. 2013). Besides impact macro economy, Covid-19 pandemic also directly affected to declining the company's performance. Supported by Shen et al's (2020) founded that Covid 19 had a significantly impact on China's financial performance.

4.5.5 The Test Results Independent Board of Commissioners Moderated by the Covid-19 on Financial Distress

The results of the t test (partial) in the regression model, the variable of the independent board of commissioners moderated the Covid-19 pandemic obtained a β (beta) value in a negative direction of -0.981644, a t-statistic value of -2.620322 and a significance value of 0.0094 < 0.05 (significance level 5%). The conclusion is the independent board of commissioners has a negative and significant effect on financial distress which moderated by the Covid-19 pandemic.

4.5.6 The Test Results Institutional Ownership Moderated by the Covid-19 on Financial Distress

The t test (partial) in the regression model, institutional ownership variable with the Covid-19 pandemic moderated, the β (beta) value is obtained in a negative direction of -0.025522, the t-statistic value is -0.074530 and a significance value of 0.9407 > 0.05 (significance level of 5%). The conclusion is institutional ownership has a negative and insignificant effect on financial distress moderated by the Covid-19 pandemic.

4.5.7 The Test Results Board Directors Size Moderated by the Covid-19 on Financial Distress

The t test (partial) in the regression model, the variable size of the board of directors moderated by the Covid-19 pandemic obtained a β (beta) value in a negative direction of -0.236129, a t-statistic value of -1.446753 and a significance value of 0.1494> 0.05 (significance level 5%). The conclusion is size of the board of directors has a negative and insignificant effect on financial distress which is moderated by the Covid-19 pandemic. Supported by Ainun (2019); Cinantya and Merkusiwati (2015) showed size of the board of directors doesn't effect on financial distress. It indicated that managers are not motivated by individual goals, but managers are motivated to fully realize the goals of shareholders. Managers consider that the responsibility given as company management is a mandate that must be properly maintained, so that no matter the structure of the board in a company, managers will still try their best to improve company performance and avoid financial distress.

5 CONLUSIONS AND RECOMMENDATION

Based on testing, hypothesis analysis and discussion show that independent commissioners, institutional ownership and Covid 19 have impact on financial distress. Board directors size doesn't impact on financial distress. Independent board commissioners which moderated by the Covid-19 impact on financial distress but institutional ownership and size board of directors which are moderated by the Covid-19 don't impact on financial distress. Results for this study cannot generalized for all companies listed on Indonesia Stock Exchange. Recommendation for next research to use for another sectors. This research only using three types of corporate governance components, that are independent board commissioners, institutional ownership and size board directors because those variables are related to the problem of conflicts of interest that occur between shareholders and managers.

REFERENCES

Moore, R., Lopes, J. (1999). Paper templates. In *TEMPLATE'06, 1st International Conference on Template Production*. SCITEPRESS.

Smith, J. (1998). *The book*, The publishing company. London, 2nd edition.

Achim, V. M., and Borlea, N. S. (2012). Consideration on Business Risk of Bankruptcy. Faculty of Economics and Business Administration & Faculty of Science Economics.

Adnan Aziz, M. and Dar, H. A. (2006). Predicting corporate bankruptcy: Where We Stand?. Corporate Governance, Vol. 6 No. 1, pp. 18-33.

Ainun Jariyah, Anindhyta. (2019). Pengaruh Rasio Likuiditas, Profitabilitas, dan Aktivitas Terhadap Prediksi Financial Distress Perusahaan Tekstil dan Garmen. E-ISSN: 2461-0593. Jurnal Ilmu Riset Manajemen, Vol. 08, No 1.

Aleksanyan, L. and Huiban, J. Pierre. (2016). Economic and financial determinants of firm bankruptcy: evidence from the French food industry. Review of Agricultural, Food and Environmental Studies, Vol. 97, pp. 89–108.

Altman, Edward I. (1968): Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy. The Journal of Finance, 22(4), pp. 589-609

Arianandini P. Winning and Ramantha, I. Wayan. (2018). Pengaruh Profitabilitas, Leverage, dan Kepemilikan Institusional Pada Tax Avoidance. E-Jurnal Akuntansi, Vol. 22, No. 3, pp. 2088-2116.

Bellovary, Jodi L., Giacomino, Don and Akers, M. (2007). A Review of Bankruptcy Prediction Studies: 1930 to Present. Journal of Financial Education, Vol. 33.

Ben, D. A., AR, M. D., and Topowijono. (2015). Analisis Metode Springate (Score) Sebagai Alat Untuk Memprediksi Kebangkrutan Perusahaan (Studi Pada Perusahaan Property dan Real Estate Yang Listing di Bursa Efek Indonesia pada Tahun 2011-2013). Jurnal Administrasi Bisnis S1 Universitas Brawijaya, Vol. 21 (1).

Cinantya, I. G. A. Ayu Pritha and Merkusiwati, N. K. L. Aryani. (2015). Pengaruh Corporate Governance, Financial Indicators, dan Ukuran Perusahaan Pada Financial Distress. E-Jurnal Akuntansi, Vol. 10, No, 3, pp. 897-915.

Edi and May Tania. (2018). Ketepatan Model Altman, Springate, Smijewski dan Grover Dalam Memprediksi Financial Distress. Jurnal Review Akuntansi dan Keuangan, Vol. 8, No.1.

Gujarati, Damodar. (2003). Ekonometrika Dasar. Terjemahan: Sumarno Zain. Jakarta: Erlangga.

Hanafi, Mamduh. (2013). Analisis Laporan Keuangan. Yogyakarta: Penerbit UPP AMK.

Hanifah, and Purwanto, A. (2013). Pengaruh Struktur Corporate Governance Dan Financial Indicators Terhadap Kondisi Financial Distress. Diponegoro Journal of Accounting, Vol. 0, pp. 648-662.

Helena, S. and Saifi, M. (2018). Pengaruh Corporate Governance Terhadap Financial Distress (Studi Pada Perusahaan Transportasi Yang Terdaftar di Bursa Efek Indonesia Periode 2013-2016). Semantic Scholar.

Koemary, N. P. C. Oety., gama, A. S., and Astiti, N. P. Yeni. (2019). Pengaruh Struktur Corporate Governance Dan Financial Indicators Terhadap Kondisi Financial Distress (Studi Pada Sektor Industri Otomotif Dan Komponennya Yang Terdaftar Di Bursa Efek Indonesia Periode 2015 - 2017). Repository UNMAS Denpasar.

Koh, S., Durand, R. B., Dai, L. and Chang, M. (2015). Financial distress: Lifecycle and corporate restructuring. Journal of Corporate Finance, 33 19-33.

Kristian, M. (2017). Pengaruh Jumlah Dewan Direksi dan Shareholder Equity to Total Asset Ratio Terhadap Financial Distress (Studi Pada Perusahaan Manufaktur Yang Terdaftar Di BEI Tahun 2012-2015). Researchgate, Vol. 22, No. 3.

Li, H., Meng, L., Wang, Q. and Zhou, L.A. (2008). Political connections, financing and firm performance: evidence from Chinese private firms. Journal of Development Economics, Vol. 87, No. 2, pp. 283-299

Mackevicius, Jonas., Sneidere, Ruta., and Tamuleviciene, Daiva. (2019). The waves of enterprises bankruptcy and the factors that determine them: The case of Latvia and Lithuania. Researchgate, Vol. 6, No. 8, pp. 100-114.

Manzaneque, M., Cruz, Alba M. P., and Madrid, Elena M. (2015). Corporate governance effect on financial distress likelihood: Evidence from Spain. Researchgate, Vol. 23, No. 1.

Marlinda, D. Eva., Titisari, K. H., and Masitoh, E. (2020). Pengaruh GCG, Profitabilitas, Capital Intensity, dan Ukuran Perusahaan terhadap Tax Avoidance. Researchgate, Vol. 4, No. 1.

Miglani, Seema., Ahmed, Kamran., and Henry, D. (2014). Voluntary corporate governance structure and financial distress: Evidence from Australia. Researchgate, Vol. 11, No. 1.

Nicoleta Bărbuță-Mișu and Mara Madaleno. (2020). Assessment of Bankruptcy Risk of Large Companies: European Countries Evolution Analysis. Journal of Risk and Financial Management, MDPI, Open Access Journal, Vol. 13 (3), pp. 1-28.

Platt, H.D., and M.B. Platt. (2002). Predicting Corporate Financial Distress: Reflections on Choice-Based Sample Bias. Journal of Economics and finance, Vol. 26, No. 2. Pp. 60-72.

Platt, Harlan., and Platt, M. B. (2006). Understanding Differences Between Financial Distress and Bankruptcy. International Review of Applied Economics, Vol. 2, No. 2.

Prihatini, Ni Made Evi Dwi and Maria M. Ratna Sari. (2013). Analisis Prediksi Kebangkrutan dengan Model Grover, Altman Z-score, Springate dan Zmijewski pada perusahaan Food and Beverages di BEI. Jurnal Akuntansi, Universitas Udayana, Vol. 5, No. (3), 544-560.

Putri, A. K. and Kristanti, F. T. (2020). Faktor-Faktor Yang Mempengaruhi Financial Distress Menggunakan Survival Analysis. JIMFE (Jurnal Ilmiah Manajemen Fakultas Ekonomi), Vol. 6, No. 1, pp. 31-42.

Radifan, R., and Yuyetta, E. N. A. (2015). Analisis Pengaruh Mekanisme Good Corporate Governance Terhadap Kemungkinan Financial Distress. Diponegoro Journal of Accounting, Vol. 4, No. 3, pp. 453-463.

Sajjan, Rohini. (2016). Predicting Bankruptcy of Selected Firms by Applying Altman's Z-Score Model. International Journal of Research – Granthaalayah, Vol. 4 (4).

Schonfeld, J., Kudej, M. and Smrcka, L. (2013). Financial health of enterprises introducing safeguard procedure based on bankruptcy models. Journal of Business Economics and Management, Vol. 19 (5), pp. 692-705.

Shahwan, Tamer M. (2015). The effects of corporate governance on financial performance and financial distress: evidence from Egypt. Corporate Governance, Vol. 15 No. 5, pp. 641-662.

Shen, H., Fu, M., Pan, H., Yu, Z., and Chen, Y. (2020). The impact of the COVID-19 pandemic on firm performance. Emerging Markets Finance and Trade, Vol. 56 (10), 2213–2230.

Suntaruk, P. (2009). Predicting financial distress: Evidence from Thailand. Proc. Of The European Financial Management Association 2009 Annual Meeting, Milan, pp. 24-27.

Svobodová, Libuše. (2013). Trends in the number of bankruptcies in the Czech Republic. Paper presented at Hradecké ekonomické dny (Hradec Economic Days), Hradec Králové, 19–20; pp. 393–99.

Triwahyuningtias, M. and Muharam, H. (2012). Analisis Pengaruh Struktur Kepemilikan, Ukuran Dewan, Komisaris Independen, Likuiditas Dan Leverage Terhadap Terjadinya Kondisi Financial Distress (Studi Pada Perusahaan Manufaktur Yang Terdaftar di Bursa Efek Indonesia Periode Tahun 2008-2010). Eprints UNDIP.

Widhiadnyana, I. K. and Ratnadi, M. D. (2018). The impact of managerial ownership, institutional ownership, proportion of independent commissioner, intellectual capital on financial distress. Journal of Economics Business and Accountancy Ventura, Vol. 21 (3).

Widyasaputri, Erlinda. (2012). Analisis Mekanisme Corporate Governance pada Perusahaan yang Mengalami Kondisi Financial Distress. Accounting Analysis Journal.Vol. 1, No. 2, pp. 1–8.

Zmijewski, M. E. (1984). Methodological Issues Related to the Estimation of Financial Distress Prediction Models. Journal of Accounting Research, Vol. 22, pp. 59-82.