Almana : Jurnal Manajemen dan Bisnis
Volume 5, No. 2/ August 2021, p. 235-240
ISSN 2579-4892 print/ ISSN 2655-8327 online
DOI: 10.36555/almana.v5i2.1604

FINANCIAL RATIO ANALYSIS IN PREDICTING THE CONDITIONS OF FINANCIAL DISTRESS

Meilinda Dwi Astuti*[1], Sri Hermuningsih[2], Alfiatul Maulida[3]
Universitas Sarjanawiyata Tamansiswa, Indonesia*[123]
meilindadwiastutui12@gmail.com*[1], hermun_feust@yahoo.co.id[2]
Alfiatulmaulida@ustjogja.ac.id[3]

Abstract: Financial distress is a stage of decline in a company's financial condition that occurs before bankruptcy or liquidation. The Indicators of financial distress from results of the test scores using financial ratios, financial ratios are figures obtained from results comparisons between one financial statement item and another that have a relevant and significant relationship. The purpose of this study is to examine the effect of financial ratios to predict financial distress on manufacturing companies in Indonesia Stock Exchange. The research population was all manufacturing companies listed on the Indonesia stock exchange, period 2015-2019. The research sample used the purposive sampling technique. The data analysis method used logistic regression analysis. The results showed liquidity, leverage, and activity profitability, respectively simultaneously affect financial distress. Partially profitability has a positive effect on financial distress. Liquidity, leverage, and activity have negatively affected financial distress in manufacturing companies listed on IDX from 2015 to 2019.
Keywords: Activity; Financial Distress; Leverage; Liquidity; Profitability

INTRODUCTION

Financial distress has many meanings according to Foster (1986) in Luh et al. (2015) a company is categorized as experiencing financial distress if for two consecutive years experiencing negative net income, while Classens (1999) in (Dirman, 2020) a company experiencing financial distress if the interest coverage ratio (ICR) is less than one percent. There are also indicators of companies experiencing financial distress, namely: delays in paying debts, mass layoffs of workers, experiencing losses for more than one year until the company's activities are terminated. Platt and Platt (2002) in Carolina & Pratama, 2017) financial distress is a stage of decline in a company's financial condition that occurs before bankruptcy or liquidation.

Altman (1968) in Sean (2016) the indicators of companies experiencing financial distress, can be seen from the results of the test scores using financial ratios, in the findings of financial distress on manufacture companies using traditional financial ratio, Altman reveals that companies that are not included in the condition will be bankrupt or healthy if they have a score of less than 2,99 and a score less than 1,81 if they experience unhealthy or financial distress

One of the measuring tools that can predict the occurrence of financial distress is by measuring the financial performance contained in the financial statements that have been compiled accurately (Noviandri., 2014). Financial report information is needed by internal and external parties because this information provides an overview of the performance achievement of a company within a certain time so that this information can be used as a consideration in decision making (Restianti & Agustina, 2018).

Financial performance can be measured using financial ratios. Financial ratios are figures obtained from the results between one financial statement item and another that have a relevant and significant relationship. Financial ratios can be used to evaluate a company's financial condition and performance (Agung et al., 2017).

There is an inconsistency in the results of the study intending to re-test these variables. Some factors can affect financial distress, namely by using financial ratios.

Submitted: April 03, 2021; Revised: August 07, 2021; Accepted: August 08, 2021;
Published: August 16, 2021; Website: http://journalfeb.unla.ac.id/index.php/almana

Almana : Jurnal Manajemen dan Bisnis
Volume 5, No. 2/ August 2021, p. 235-240
ISSN 2579-4892 print/ ISSN 2655-8327 online
DOI: 10.36555/almana.v5i2.1604

There are several financial ratios, such as liquidity ratios, profitability, leverage, and activity.

The purpose of this study is to predict financial distress in manufacturing companies in Indonesia Stock Exchange during the 2015-2019 period. In predicting financial distress, ratios are used, namely liquidity, profitability, leverage, and activity.

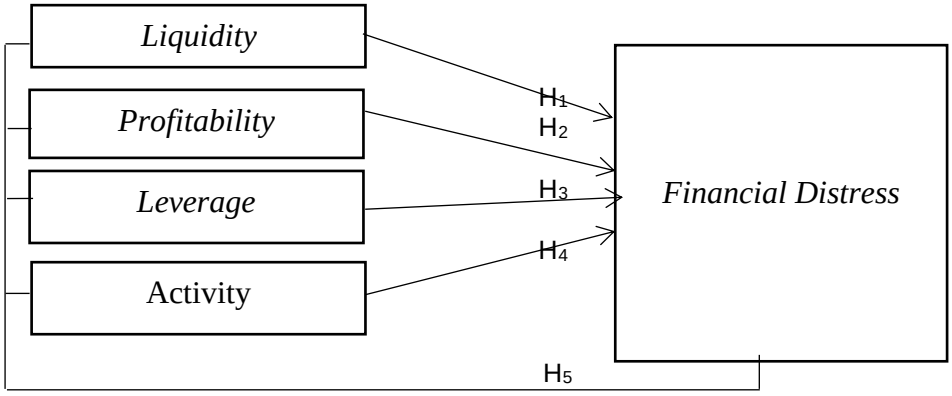

Figure 1. Framework
Sourch: (Syuhada & Muda, 2020) and (Fitri, 2020)

The hypothesis in the research is:
H_1: The liquidity, harms financial distress
H_2: Profitability ratio proxy by Return on Assets has a positive effect on financial distress
H_3: Leverage as a proxy by Debt to Equity harms financial distress
H_4: Activity Ratio as a proxy by Total Asset Turn Over hurts financial distress
H_5: Liquidity, profitability, leverage, and activity simultaneously have a positive effect on financial distress.

METHODS

This method used in this research is descriptive quantitative, namely research that describes and implements an object by existing facts. The description of the research object is carried out by using the numbers in the financial statements and implemented in financial ratios in predicting financial distress in 2015-2019 manufacturing companies on the Indonesia Stock Exchange (Rosanti, 2017).

This research uses secondary data financial statements of manufacturing companies, data is obtained from the www. IDX.co.id. The population in this study is manufacturing companies listed on the Indonesia Stock Exchange (BEI). The sample selection in this study was determined using the purposive sampling method, the technique of determining the sample with certain criteria to obtain a representative sample following predetermined criteria (Sulistyani & Ismanto, 2017).

Then the criteria used in sample selection in this study are: (1) A manufacturing company listed on the Indonesia Stock Exchange Manufacturing companies that are consecutively listed on the BEI during the study period, the data for the years 2015-2019 were completely reported; (2) Manufacturing companies that report financial statements using the rupiah currency; (3) Manufacturing companies that had negative net income for two consecutive years; (4) Manufacturing companies that have positive net income for two consecutive years, which have similar industry and similarity in asset size with companies that experience financial distress.

Submitted: April 03, 2021; Revised: August 07, 2021; Accepted: August 08, 2021;
Published: August 16, 2021; Website: http://journalfeb.unla.ac.id/index.php/almana

Almana : Jurnal Manajemen dan Bisnis
Volume 5, No. 2/ August 2021, p. 235-240
ISSN 2579-4892 print/ ISSN 2655-8327 online
DOI: 10.36555/almana.v5i2.1604

The method of analysis uses logit regression because the dependent variable is in the form of dummy variables (non-metric) or measured with a nominal scale (dichotomous), while the independent variables are measured by a ratio scale that does not require assuming data normality on the independent variables (Agung et al., 2017).

RESULTS AND DISCUSSION

Tabel 1. Hosmer and Lemeshow's Good of a Fit Test

Step	Chi-square	df	Sig.
1	15.094	8	0.057

Source: Data processed by the author (2020)

Based on the test results in the table shows the Chi-square value of 15.094 with a significance value of 0.057, that the significance value is greater than 0.05, this means that model can predict the value of the observations and can be used for further analysis.

Tabel 2. Log-Likelihood Value Test

Iteration		-2 Log likelihood	Coefficients Constant
Step0	1	291.122	0.000
Step 1	1	237,313	-1,119
	2	210,293	-1,099
	3	193,973	-0,898
	4	191.15	-0.838
	5	191,058	-0,836
	6	191.058	-0.836
	7	191.058	-0.836

Source: Data processed by the author (2020)

The results of the overall assessment of the regression model using the -2Log Likelihood value if there is a decrease in the second block compared to the first block, it can be concluded that the second regression model is getting better. As shown in the first block table (block number = 0) the -2Loglikelihood value is 291,122 and in the second block (block number = 1) the -2Log Likelihood value is 191.058. These results can conclude that the second regression model is better for predicting financial distress.

Table 3. Omnibus Test

		Chi-square	df	Sig.
Step 1	Step	98,067	4	0.000
	Block	98,067	4	0.000
	Model	98,067	4	0.000

Source: Data processed by the author (2020)

Submitted: April 03, 2021; Revised: August 07, 2021; Accepted: August 08, 2021;
Published: August 16, 2021; Website: http://journalfeb.unla.ac.id/index.php/almana

Almana : Jurnal Manajemen dan Bisnis
Volume 5, No. 2/ August 2021, p. 235-240
ISSN 2579-4892 print/ ISSN 2655-8327 online
DOI: 10.36555/almana.v5i2.1604

Table 3 shows that the significant number of 0.000. So it can be concluded that the significant number is 0.000 which is smaller than 0.05, which means that the variables of profitability, liquidity, leverage, and activity simultaneously affect financial distress.

The results of the research show that financial performance indicators use financial ratio analysis in the form of liquidity ratios, profitability, leverage, and activity influences the occurrence of financial distress so that if the company's financial statements provide benefits, the financial performance is good so that the possibility of financial distress is getting smaller, when the financial statements of a company experience a loss, then the possibility of financial distress will be even greater (Kholidah et al., 2016).

Table 4. The Classification Matrix

Observed	Non-FD	FD	Percentage
Nonfinancial distress	95	10	84.8
Financial distress	16	89	90.5
Overall Percentage			87.6

Source: Data processed by the author (2020)

Table 4 shows that of 210 samples, 105 samples were in a group of companies not experiencing financial distress while 105 samples were in a group of companies experiencing financial distress. In the group of companies not experiencing financial distress, the logistic regression model can predict as much as 84,8%, while in the group of companies experiencing financial distress, the logistic regression model can predict as much as 90, 5%. The overall result shows the prediction accuracy of 87.6% and it can be concluded

Table 5. Hypothesis

	B	Df	Sig.
Liquidity	0.052	1	0.300
Profitability	23,708	1	000
Leverage	-0.233	1	0.071
Activity	0.765	1	0.114

Source: Data processed by the author (2020)

The first hypothesis in this study states that the liquidity ratio, which is proxied by the current ratio, harms financial distress. The analysis results show that the regression coefficient has a positive direction of 0.052 and a significance value of 0.300 is greater than the implied significance level of 0.300> 0.05. That is because the company fulfills its short-term liabilities (debt) with current debt with well-owned assets so that financial distress does not occur (Toha, 2019).

The analysis results show that the profitability has a positive direction of significance value of 0.000 is smaller than the implied significance level of 0.000> 0.05. This shows that profitability, which is proxied by return on assets, has a significant effect on the occurrence of financial distress in manufacturing companies. So the second hypothesis which states that profitability has a positive effect on financial distress is proven. This is because a company that has a high ROA level indicates that the company can generate profits that can be used for various things, both to finance company

Submitted: April 03, 2021; Revised: August 07, 2021; Accepted: August 08, 2021;
Published: August 16, 2021; Website: http://journalfeb.unla.ac.id/index.php/almana

Almana : Jurnal Manajemen dan Bisnis
Volume 5, No. 2/ August 2021, p. 235-240
ISSN 2579-4892 print/ ISSN 2655-8327 online
DOI: 10.36555/almana.v5i2.1604

activities and to pay its obligations. Thus the company avoids financial distress. The effectiveness of assets to generate profits both from sales and investment makes the company resilient and avoids financial distress (Yudiawati & Indriani, 2016).

Based on the hypothesis test table above, it can be seen that the leverage variable has a significance level greater than 0.05, namely 0.071. This shows that leverage does not have a significant effect on the probability of financial distress. This shows that the leverage variable does not affect financial distress. Companies that have the risk of defaulting on debt or debt ratios are not necessarily protected from financial distress (Yudiawati & Indriani, 2016).

Based on the hypothesis test table above, it can be seen that the activity variable has a positive coefficient of 0.114 with a significance level greater than 0.05. This shows that TATO does not have a significant effect on the probability of financial distress. This shows that companies that have large or small activity values can experience financial distress. The higher the total asset turnover, the more effective the company's total assets are in generating sales, this means that the size of the total asset turnover does not affect the company's financial distress (Noviandri, 2014).

CONCLUSION

This study develops a prediction model of financial distress companies in the manufacturing sector in IDX using financial ratios such as liquidity, profitability, leverage, and activity. They were chosen on the basis that they were useful in at least five previous studies.

This study found that the most useful ratios for the Prediction of financial distress companies in the manufacturing sector in IDX were profitability. The values of the ratios must be carefully considered so that the company does not go into financial distress, This is because a company that has a high profitability level indicates that the company can generate profits that can be used for various things, both to finance the company activities and to pay its obligations. Thus the company avoids financial distress. The effectiveness of using assets to generate profits both from sales and investment makes the company resilient and avoid financial distress. The values of liquidity, leverage, and activity there is a possibility that the company will go into financial distress, The findings from the internal validation of this study showed that the prediction model provided a more than 50% chance that the model is accurate for five years before distress. Furthermore, the findings from the external validation of this study showed that the model might be able to be used outside the estimation period because the overall percentage accuracy.

REFERENCES

Agung, Y., Putra, P., Purnamawati, I. G. A., & Sujana, E. (2017). Analisis Rasio Keuangan Untuk Memprediksi Kondisi Financial Distress Perusahaan Manufaktur. *E-Journal Universitas Pendidikan Ganesha*, *1*.

Carolina, V., & Pratama, D. (2017). Analisis Rasio Keuangan untuk Memprediksi Kondisi Financial Distress (Studi Empiris pada Perusahaan Manufaktur yang Terdaftar di Bursa Efek Indonesia Periode 2014-2015). *Jurnal Akutansi Maranantha*, 137–145.

Dirman, A. (2020). *Financial distress: the impacts of profitability, liquidity, leverage, firm size, and free cash flow*. *22*(1), 17–25.

Fitri, S. (2020). *Pengaruh Likuiditas , Aktivitas , Profitabilitas dan Leverage Terhadap Financial Distress (Studi Kasus pada Perusahaan Manufaktur yang Terdaftar di Bursa Efek Indonesia Periode 2014-2018)*. *3*(1), 134–143.

Submitted: April 03, 2021; Revised: August 07, 2021; Accepted: August 08, 2021;
Published: August 16, 2021; Website: http://journalfeb.unla.ac.id/index.php/almana

Kholidah, A. N., Gumanti, T. A., & Mufidah, A. (2016). *Analisis Rasio Keuangan dalam Memprediksi Financial Distress pada Perusahaan Sektor Industri Dasar dan Kimia yang Terdafatar di BEI Tahun 2011-2015 and Chemical Companies Listed in IDX 2011-2015)*.

Luh, N., Ayu, M., Lely, N. K., & Merkusiwati, A. (2015). *Pengaruh Rasio Likuiditas , Leverage, Operating Capacity , dan Sales Growth Terhadap Financial Fakultas Ekonomi dan Bisnis Universitas Indonesia Udayana (Unud). E-Jurnal Akuntansi Universitas Udayana, 11*(2), 456–469.

Noviandri, T. I. O. (2014). Peranan Analisis Rasio Keuangan Dalam Memprediksi Kondisi Financial Distress Perusahaan Sektor Perdagangan. *Jurnal Ilmu Manajemen*, *2*, 1665.

Restianti, T., & Agustina, L. (2018). *The Effect of Financial Ratios on Financial Distress Conditions in Sub Industrial Sector Company*. *7*(1), 25–33. https://doi.org/10.15294/aaj.v5i3.18996

Rosanti, E. (2017). *Analisi Rasio Keuangan Untuk Memprediksi Kondisi Financial Distress pada Perusahaan Manufaktur yang Terdapat di Bursa Efek Indonesia Tahun 2013-2015*.

Sean, S. (2016). Sean dan Viriany: Pengaruh Rasio Keuangan Terhadap Financial Distress. *Jurnal Ekonomi, XXI*(01), 43–60.

Sulistyani, I. D., & Ismanto (2017). Analisis Rasio Keuangan Untuk Memprediksi Kondisi Financial Distress Perusahaan Manufaktur Yang Terdaftar di BEI. *Jurnal Fokus, Volume 7, Nomor 2 September 2017. 7(September), 156–167. 7*(September), 156–167.

Syuhada, P., & Muda, I. (2020). Pengaruh Kinerja Keuangan dan Ukuran Perusahaan Terhadap Financial Distress pada Perusahaan Property dan Real Estate di Bursa Efek Indonesia. *Jurnal Riset Akutansi Dan Keuangan*, *8*(2), 319–336.

Toha, A. (2019). The influence of Liquidity, Leverage, and Profitability Ratio on Financial Distress. *Riset & Jurnal Akutansi*, *3*, 103–115.

Yudiawati, R., & Indriani, A. (2016). Analisis Pengaruh Current Ratio, Debt to Total Asset Ratio, Total Asset Turnover, dan Sales Growth Ratio Terhadap Kondisi Financial Distress (Studi Kasus Pada Perusahaan Manufaktur yang Terdaftar di BEI Tahun 2012-2014). *Diponegoro Journal Of Management*, *5*, 1–13.

Submitted: April 03, 2021; Revised: August 07, 2021; Accepted: August 08, 2021;
Published: August 16, 2021; Website: http://journalfeb.unla.ac.id/index.php/almana