DETERMINANT OF FINANCIAL DISTRESS ON THE RETAIL PUBLIC COMPANIES: INDONESIA CASE

Audry Arsyila Utomo[1], Noer Azam Achsani, Aruddy

School of business, IPB University
Jl. Raya Padjadjaran, Bogor 16515, Indonesia

Article history:
Received
17 July 2024

Revised
2 September 2024

Accepted
18 September 2024

Available online
22 January 2025

Abstract:

Background: The retail sector plays a significant role in the Indonesian economy. According to data from Badan Pusat Statistik (BPS) in 2020, the retail sector contributed 12.93% to Indonesia's total Gross Domestic Product (GDP). However, results from the Retail Sales (SPE) survey by Bank Indonesia indicated a downward trend in the average annual growth of real sales for retail from 2015 to 2020. A decline in sales can lead to a decrease in income. The company's inability to balance income and costs raises the potential for financial distress.
Purpose: This research aims to study which financial factors may influence financial distress.
Design/Methodology/Approach: The observation period is from 2017 to 2021. This research uses the Debt Service Coverage Ratio (DSCR) as a proxy for financial distress. This research also employs a binary logistic model to identify which financial factors influence financial distress.
Findings/Result: Logistic regression analysis revealed that Return on Equity (ROE) has a negative and significant effect on the DSCR value with a coefficient of -15.066. Equity-to-Total Assets ratio (EQ/TA) also has a negative and significant effect on financial distress with a coefficient of -5.042.
Conclusion: The results emphasize the importance of consistent management of company performance, particularly by monitoring financial ratios that significantly affect the likelihood of financial distress.
Originality/value(State of the art): This research offers new insights into the impact of financial ratios on financial distress, specifically within the context of the retail sector experiencing economic uncertainty during the COVID-19 pandemic. It is focusing on a critical period and a specific sector, thereby providing valuable contributions to stakeholders such as investors, company management, and policy makers.

Keywords: DSCR, financial distress, financial ratios, logistic regression, company management

How to Cite:
Utomo A. A., Achsani N. A., & Aruddy. (2025). Determinant of Financial Distress on The Retail Public Companies: Indonesia Case. Jurnal Aplikasi Bisnis Dan Manajemen (JABM), 11(1), 35. https://doi.org/10.17358/jabm.11.1.35

[1] Corresponding author:
Email: audryau@gmail.com

INTRODUCTION

The retail sector plays a significant role in the Indonesian economy. According to 2020 data from Badan Pusat Statistik (BPS), the retail sector contributed 12.93% to Indonesia's total Gross Domestic Product (GDP). The 2021 Global Retail Development Index (GRDI) report, released by the global consulting company A.T. Kearney, ranked Indonesia 4th among developing countries. The GRDI research ranks the top 35 developing countries for retail investment each year. However, retail businesses have experienced a decline in average sales growth. The Retail Sales (SPE) survey by Bank Indonesia indicated a downward trend in the average annual growth of real sales for retail during the 2015–2020 period, as shown in the graph of average annual growth in retail sales from 2015 to 2020 (Figure 1).

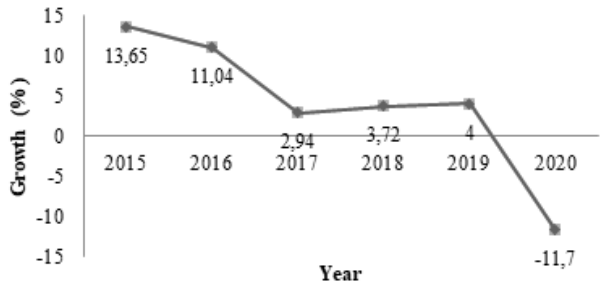

Figure 1. Average annual growth in real retail sales of 2015–2020

In 2020, the COVID-19 pandemic caused a significant decline in the average annual growth of real retail sector sales. High sales growth values indicate that a company is performing well, while negative sales growth signals a deterioration in the company's financial condition (Giarto and Fachrurrozie, 2020). A decline in sales can lead to reduced revenue. All costs incurred by the company must be covered by the revenue generated to ensure a net profit. The company's net profit is used for reinvestment, which will increase the company's net wealth. Sales growth that leads to increased profit will later reflect the company's financial health, preventing financial distress (Pane, 2023). The company's inability to balance revenue and costs will increase the potential for financial distress.

Financial distress is also indicated by a company's inability to fulfill its obligations to the bank, as measured by the Non-Performing Loan (NPL) ratio. The NPL ratio is the proportion of total non-performing loans to total loans (Tejo, 2020). Based on data from Indonesian Banking Statistics, the amount of credit and Non-Performing Loan (NPL) values in the retail sector for the period 2017–2021 have shown an increasing trend. The NPL ratio was 4.43% in 2020 and 4.42% in 2021, indicating an increase from the previous year. An increase in the NPL value suggests that the company's available cash flow is insufficient to meet its short-term debt obligations. This suggests that a significant number of companies in this sector are experiencing financial difficulties. A summary of credit and NPL can be seen in Table 1.

During the 2020–2021 period, the stock price index in the primary goods consumption sector experienced a decline and even had negative values throughout the year. Many companies in the retail sector also saw a downward trend in their Earnings Per Share (EPS) compared to previous periods, particularly in 2020 and 2021. Some companies reported negative EPS values (Table 2), indicating an inability to provide dividends to shareholders. Negative EPS reflects poor performance, as the company's income is lower than its costs or capital, resulting in losses and potential issues with business continuity.

In recent years, retail companies in Indonesia have experienced severe downturns, leading to a significant number of store closures. The closed stores are those considered less profitable. Between 2019 and March 2021, 25 Giant stores were closed. PT Matahari Department Store Tbk (LPPF), a retail issuer owned by Lippo Group, also decided to reduce 32 stores since 2019 because these stores could not contribute significantly to the company's finances. Between 2020 and 2021, a pandemic occurred that increased uncertainty for businesses, including the retail sector. According to the Indonesian Retailers Association (Aprindo), since the onset of the pandemic, more than 1,500 retail stores have closed their outlets.

Based on the above explanations, this study aims to determine which financial factors influence financial distress in the retail sub-sector. This research offers new insights into the impact of financial ratios on financial distress, specifically within the context of the retail sector experiencing economic uncertainty during the COVID-19 pandemic. It is focusing on a critical period and a specific sector, thereby providing valuable contributions to stakeholders such as investors, company management, and policy makers. This

research uses several financial ratios different from those in previous studies and employs a binary logistic model to identify which financial factors influence financial distress.

METHODS

This research was conducted on retail sub-sector companies listed on the Indonesia Stock Exchange (IDX) from 2017 to 2021. The study took place from January to April 2022 using a quantitative approach. The data used are secondary data, including company financial reports, Bank Indonesia publications, data from the Indonesian Stock Exchange, literature, and other supporting journals. The secondary data relevant to the analysis of financial ratios influencing financial distress include return on assets, current ratio, EBITDA/TA, equity/total assets, and total asset turnover, all obtained from the companies' financial reports. The sample size for this research consisted of 20 companies (Table 3).

The DSCR itself is an approach based on accounting ratios. The use of accounting ratios is chosen because company failures are generally not sudden events. Typically, a company's failure is the culmination of several years of poor performance. Therefore, much of the information will be captured by the company's financial statements. Additionally, debt agreements are generally based on accounting figures, and this information is more likely to be reflected in an accounting-based model (Agarwal, 2008).

There are various methods to measure financial distress, such as the Altman, Zmijewski, and others. The Altman method, in particular, has limitations as it is only applicable to manufacturing companies. Furthermore, both the Altman and Zmijewski methods were applied in developed countries, such as the United States. Over time, Altman further developed his model to be more applicable to developing countries with the modified Altman Z-score model. Previous research by Arlinda (2015) on financial distress in telecommunications companies explained that the DSCR model is better at predicting financial distress compared to the modified Altman Z-score model in that case. Another study by Baza (2011) also used the DSCR model to determine financial distress in Ethiopia. In Indonesia, a comprehensive approach has been evaluated using the debt service coverage proxy by Pranowo et al. (2010), Nurfajrina (2016) and Priadi (2019).

Table 1, Bank credit and NPL in wholesale and retail trade sector

Year	Credit (billion rupiah)	NPL (billion rupiah)	NPL Ratio (%)
2017	885,462	36,083	4.07
2018	975,995	35,285	3.61
2019	1,006,069	34,739	3.45
2020	942,188	41,784	4.43
2021	965,084	42,724	4.42

Table 2. Earnings per share of several companies in the retail sector

Emiten	2017	2018	2019	2020	2021
ACES	45.62	56.49	59.58	42.86	18.87
AMRT	7.23	15.66	26.79	25.56	26.66
CSAP	19	18	14	14	31
ECII	-8	17	26	-17	12
ERAA	117	274	92	192	45
HERO	-46	-299	17	-290	-179
LPPF	654	377	492	-332	168

Emiten	2017	2018	2019	2020	2021
MAPI	20	44	56	-33	-5
MKNT	4.94	-1.45	-15.5	-10.19	-2.58
MPMX	89	871	101	27	51
MPPA	-233	-143	-73	-54	-23
RALS	60.48	87.33	96.12	-20.6	15.62
TRIO	-18.57	-0.57	-3.98	-10.42	-1.01
TURI	85	100	104	8	66

Table 3. Sample data of retail companies

Name	Code
Matahari Department Store	LPPF
Ramayana Lestari Sentosa	RALS
Sona Topas Tourism Industry	SONA
Mitra Komunikasi Nusantara	MKNT
Mitra Pinasthika Mustika	MPMX
Tunas Ridea	TURI
Mitra Adiperkasa	MAPI
Wicaksana Overseas International	WICO
Duta Intidaya	DAYA
Enseval Putera Megatrading	EPMT
Millenium Pharmacon International	SDPC
Ace Hardware Indonesia	ACES
Catur Sentosa Adiprana	CSAP
Hero Supermarket	HERO
Erajaya Swasembada Tbk.	ERAA
Matahari Putra Prima	MPPA
Midi Utama Indonesia	MIDI
Sumber Alfaria Trijaya	AMRT
Supra Boga Lestari	RANC
Indomobil Sukses Internasional	IMAS

In this study, the researcher uses the DSCR as a proxy for financial distress. The DSCR is a ratio used to measure a company's ability to meet its fixed obligations (Akbar, 2019). According to Ruster in Pranowo (2010), if the DSCR value ≥ 1.2, the company is categorized as being in a safe condition. Conversely, if the DSCR value < 1.2, the company is categorized as being in financial distress. The calculation of DSCR is as follows:

DSCR = (EAT+(Depreciation+Amortization)+Interest and or Coupon)-Tax)/ (Principal+Interest and or Coupon)

Description: EAT (earning after tax); Depreciation (depreciation); Amortization (amortization); Interest (annual bank loan interest expenses); Tax (annual corporate tax); Coupon (annual corporate bond interest expenses); Principal (corporate bond repayment).

The independent variables used are selected financial ratios that are expected to have an impact on the DSCR. These financial ratios include: Current Ratio (CR), Equity/Total Assets (EQ/TA), Total Assets Turnover (TATO), Return on Equity (ROE), and Earnings Before Interest, Taxes, Depreciation, and Amortization to Total Assets (EBITDA/TA). Table 4, the details and operational definitions of the variables use.

In this study, binary logistic regression analysis will be used to address the research questions. The binary logistic model is employed because the independent variables in this study are categorized as 0 or 1. A value of 0 indicates that the company is not in distress, while a value of 1 indicates that the company is in distress. The binary logistic regression model will analyze the relationship between financial ratios and DSCR as a proxy for financial distress, as follows:

$$Y = \ln(\rho i/(1- \rho i)$$
$$= b_0+b_1CR+b_2ROE+b_3TATO+b_4EQ/TA+b_5EBITDA/TA+ \varepsilon$$

Description: Y (Debt Service Coverage Ratio (DSCR)); i (Observed company); ρí (Companies that are in the distress zone); 1-ρí (Companies that are in the safe zone); b_0 (constant); CR (current ratio); EQ/TA (equity per total assets); TATO (total assets turn over); ROE (return on equity); EBITDA/TA (earning before interest, tax, depreciation and amortization to total asset); ε (Error).

The average real sales condition for retail, based on the 2015–2020 Bank Indonesia Retail Sales Survey (SPE), shows a downward trend. Cumulative trading data published by the Indonesian Stock Exchange indicates a decline in market capitalization, volume, and share value from 2017 to 2020. Additionally, data from Indonesian Banking Statistics reveal that the Non-Performing Loan (NPL) ratio for banks in the retail subsector increased from 2017 to 2021. The negative earnings per share (EPS) values for several retail subsector companies further suggest financial distress among retail companies listed on the IDX.

The Debt Service Coverage Ratio (DSCR) is used as an indicator to assess a company's financial health and determine its financial position based on the overall financial distress process. Next, we will examine which financial ratio factors influence financial distress. The results of this analysis will serve as a reference and provide recommendations for investors and retail company management to consider in their decision-making processes. The conceptual framework can be seen in Figure 2.

Table 4. Operational definition of the independent variable: Determinant of financial ratios on financial distress

Variable	Definition	Formula	Unit
ROE	Ratio that indicates how much equity contributes to generating net profit	Earning after interest and tax/Equity	Ratio
CR	Ratio to measure a company's ability to meet short-term obligations with its current assets	Curent assets/Current lialibilities	Ratio
EBITDA/TA	Ratio to indicate the productivity of a company's assets in generating revenue	Earning before interest, tax, depreciation and amortization/Total assets	Ratio
EQ/TA	Ratio to show the proportion of equity relative to total assets	Equity/Total assets	Ratio
TATO	Ratio to measure the turnover of assets held by the company	Sales/Total assets	Ratio

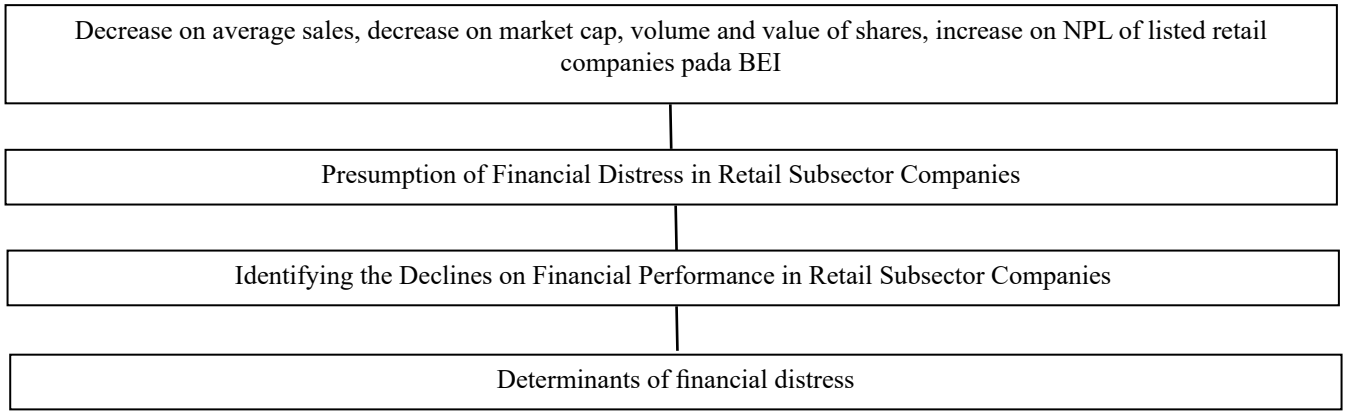

Figure 2. Framework of thought

Research on financial distress has been conducted by several researchers. Research by Charalambakis & Garrett (2019) and Yudawisastra (2019) shows that CR has a negative effect on financial distress. A small CR value indicates that the company is unable to pay short-term obligations with its short-term assets (Lumbantobing, 2022). In research by Jaafar et al. (2018) and Yudawisastra (2019) and Kholisoh (2020), was found that ROE has a negative influence on financial distress. Return on Equity (ROE) is the ratio of the net against equity to measure the return on investment of ordinary shareholders (Brigham and Houston, 2014). A company's weak ability to generate high profits will affect its financial condition, which can trigger financial distress. Based on research by Alifiah (2013), Gunawan & Putra (2020), and Bukhori (2022), it was found that TATO has a negative effect on financial distress. The more effective the company is in using its assets, the greater the level of sales (Bukhori, 2022). In addition, the high level of sales will increase the potential profit that will be obtained by the company, thereby reducing the possibility of financial distress. In Pranowo et al.'s (2010) research, there is a negative relationship between EQ/TA and financial distress. This ratio is an important ratio to describe the company's funding sources. The higher the equity, the greater the security of the company's financial condition due to payment failure. Research by Pranowo et al. (2010) and Lemmon et al. (2009) also found that there was a negative relationship between EBITDA/TA and financial distress. Low EBITDA/TA indicates that the company does not have the ability to pay overhead costs. Based on the description, the hypotheses proposed in this study are as follows:

H_1: CR has a negative effect on financial distress.
H_2: ROE has a negative effect on financial distress.
H_3: TATO has a negative effect on financial distress.
H_4: EQ/TA has a negative effect on financial distress.
H_5: EBITDA/TA negative effect on financial distress.

RESULTS

Descriptive Analysis

Descriptive analysis was performed by presenting quantitative data on both dependent and independent variables from 20 retail sub-sector companies. This

analysis includes the average value (mean), median, minimum value, maximum value, and standard deviation. Table 5 presents the descriptive statistics for the independent and dependent variables in the financial distress research sub-category, which consists of financial ratios.

On average, retail sub-sector companies have a DSCR value of 2.637, a CR of 1.995, a TATO of 2.027, an EQ/TA of 0.426, an ROE of -0.055, and an EBITDA/TA of 0.108. The average DSCR value is 2.637. As the dependent variable, DSCR has a maximum value of 77.093 from EPMT issuers. This high value indicates that the company generated substantial net profits but had no obligation to pay bank loan installments. The minimum value of -10.757 was recorded by HERO in 2018, when the company experienced a significant increase in net loss after tax by 553%.

The average CR value of 1.995 does not necessarily indicate that retail companies are in a safe position regarding their ability to pay short-term obligations. This is because not all current assets can be quickly converted into cash during the receivables payment period. The maximum CR value of 12.046 was held by SONA. In 2021, SONA experienced a significant reduction in short-term liabilities due to modifications to rental contracts, which led to a decrease in rental liabilities. The minimum CR value of 0.555 was recorded by MPPA, which in 2020 took out additional short-term bank loans, increasing by 47% compared to 2019.

The average TATO value of 2.072 indicates that every Rp. 1,000 of assets can generate Rp. 2,072 in sales. This suggests that the retail subsector is quite efficient in using its assets to generate revenue. The maximum TATO value of 6.894 was achieved by MKNT in 2020, reflecting high total sales with a lower total asset value compared to the previous year. The minimum TATO value of 0.091 was recorded by SONA, which in 2021 was unable to effectively optimize its assets, resulting in a significant 72% decrease in total sales from the previous year.

The average ROE value is -0.055, indicating that the average retail subsector company is unable to achieve a positive net profit. MPPA had a minimum value of -2.194 in 2020 due to negative operating profits resulting from a decline in sales during the pandemic. Conversely, the maximum ROE value of 0.411 was achieved by LPPF, which generated a positive net profit after tax in 2021.

The average EQ/TA value for retail sub-sector companies is 0.426. This ratio reflects the company's funding sources; a higher EQ/TA ratio indicates less reliance on external funding and a greater role of owner's equity in sustaining the business. Conversely, a lower EQ/TA ratio suggests that the owner would face less disadvantage if the company goes bankrupt. The maximum EQ/TA value of 0.875 was achieved by SONA, while the minimum EQ/TA of 0.040 was recorded by MPPA.

The average EBITDA/TA value for retail sub-sector companies is 0.108. The maximum EBITDA/TA value of 0.500 was achieved by LPPF, while the minimum EBITDA/TA value of -0.220 was recorded by MPPA, which experienced negative EBITDA due to negative profits after tax.

Financial Factors Determinant That Influence Financial Distress

The dependent variable has two values: if the DSCR is in the distress zone, the dependent variable value is 1 (Y=1); if the DSCR is in the safe zone, the dependent variable value is 0 (Y=0). The independent variables consist of financial ratios, including CR, ROE, TATO, EQ/TA, and EBITDA/TA. The relationship between the dependent variable and the independent variables is estimated using a logistic regression model. Estimating the logistic regression model can be done without requiring prior assumption testing (Ghozali, 2011).

Table 5. Descriptive Analysis

	DSCR	CR	TATO	ROE	EQ/TA	EBITDA/TA
Mean	2.637	1.995	2.027	-0.055	0.426	0.108
Median	0.522	1.316	1.878	0.082	0.375	0.114
Maximum	77.093	12.046	6.894	0.907	0.875	0.500
Minimum	-10.757	0.555	0.091	-2.194	0.040	-0.220
Std. Dev	8.769	1.899	1.238	0.490	0.224	0.118

The Likelihood Ratio (LR stat) test is used to determine whether the independent variables jointly affect the dependent variable in the study, which in this case is DSCR (Debt Service Coverage Ratio) as a proxy for financial distress. The probability (LR stat) is determined by examining the p-value of the LR test statistic.

Table 6 shows a probability value (LR stat) of 0.000000, which indicates that the LR probability is less than the alpha value of 0.05. Therefore, in this study, the regression model is considered feasible or good, and it indicates that the variables CR, ROE, EQ/TA, TATO, and EBITDA/TA together can influence DSCR as a proxy for financial distress. Based on the table, it can be seen that the McFadden R^2 value is 0.43994. This illustrates that 43.99% of the variability in the dependent variable can be explained by the variability in the independent variables, while the remaining variability is explained by other factors not included in the research model. The results from the logistic regression that has been conducted can be seen in Table 7.

Table 6. LR Statistic

McFadden R-squared	0.439944
LR statistic	54.47398
Prob(LR statistic)	0.000000
Obs with Dep=0	31
Obs with Dep=1	69
Total obs	100

There are two independent variables that significantly influence the dependent variable: ROE and EQ/TA. The coefficients for ROE and EQ/TA are negative, indicating that higher values of these ratios are associated with a lower likelihood of the company experiencing financial distress. A high ROE, which represents a high profitability ratio, means that the company is able to generate a good return on its assets. This implies that the company's profits are sufficient to cover its operations and return investments to shareholders, reflecting a strong financial condition and reduced risk of distress. As noted by Gunawan and Haq et al. (2013), an increase in ROE decreases the likelihood of financial distress.

Companies with a higher EQ/TA ratio are 0.006 times more likely to avoid financial distress. Equity represents a source of funds that does not incur interest. A low proportion of equity relative to total assets means that shareholders have less investment in the company, potentially leading to a higher proportion of debt and increased risk of payment failure. Higher equity provides a financial cushion, reducing the risk of distress, which is consistent with Pranowo et al. (2010). The p-value of the Current Ratio (CR) variable is 0.330, indicating that the coefficient of this variable is not significantly different from 0 when tested at a 0.05 significance level, or in other words, there is not enough evidence to reject the null hypothesis (Ho). Thus, it can be concluded that the CR variable does not have a significant effect on financial distress. The current ratio measures a company's ability to meet short-term obligations using its total current assets (Husna, 2019).

In other words, it shows how many liquid assets are available to cover short-term obligations. Therefore, a low CR usually indicates that a company may face liquidity problems when its short-term debts come due. However, a high CR does not necessarily mean the company is in good condition; a high CR might occur if the company cannot effectively utilize its liquid assets (funds are not circulating). According to Pranowo (2010), elements within the current ratio, such as cash and receivables, cannot all be considered sources of funds for meeting short-term payment obligations. For instance, receivables that are part of current assets may not all be converted into cash needed for short-term obligations, such as uncollectible receivables. These findings are consistent with research by Aslamiah (2023) and Sasongko (2021).

TATO does not have a significant effect on financial distress. Therefore, the null hypothesis (H0), which states that there is no effect of TATO on financial distress in the retail sector, cannot be rejected. A company seeking a high return on assets must have significant capital. To achieve this, companies sometimes rely on external capital or creditors. The capital used can act as a booster for generating high profits. However, high returns on assets do not necessarily mean that the company will avoid financial distress. This is consistent with research by Pranowo et al. (2010), Restianti (2018), and Santosa (2019).

Table 7. Financial factors that influence financial distress

Variable	Coefficient	Std. Error	Z-Statistic	P-Value
CR	-0.296	0.304	-0.972	0.330
ROE	-15. 006	7.132	-2.104	*0.035
TATO	0.383	0.400	0.956	0.338
EQ/TA	-5.042	2.220	-2.270	*0.023
EBITDA/TA	4.287	8.675	0.494	0.621
C	4.031	1.282	3.143	0.001

*Significant at 5% level of significance

The efficiency ratio represented by EBITDA/TA produces a probability value of 0.621, which shows that 0.621 > 0.05. Thus, it can be concluded that the null hypothesis (H0) is accepted, and the alternative hypothesis (H1) is rejected. Therefore, the efficiency ratio does not have a significant effect on financial distress. This condition might be due to the proportion of EBITDA not being sufficient to cover all the debts of the company in the retail sector. The EBITDA/TA ratio only shows how much profit can be generated from the company's assets in a year but does not account for debts or obligations that need to be paid. This is consistent with research by Santosa (2019).

Managerial Implications

Company management should consistently monitor performance, paying particular attention to financial ratios that significantly impact the likelihood of financial distress, such as return on equity and equity to total assets. Based on the DSCR value, retail company management should also be cautious with expansion plans, being selective about adding new outlets or possibly limiting additional outlets financed by loans.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Based on the research results, the results of the binary logistic regression analysis on the factors of financial ratios affecting financial distress show that financial ratios such as Return on Assets and Return on Equity have a negative and significant effect on financial distress. The higher the ROE and EQ/TA values of a company, the less likely the company is to experience financial distress. This can be further optimized by increasing revenue and sales to achieve substantial and positive net income. Innovation in customer financing can also be achieved by collaborating with third parties for financing solutions that allow customers to make payments on credit. This way, the third party can pay the company in cash, while the customer can pay the third party on credit. This approach will accelerate the company's cash flow and increase its returns.

Recommendations

Future research could compare various methods for evaluating financial distress, such as the Springate method or Zmijewski model. Additionally, exploring other variables that may impact financial distress, such as company size, other financial metrics, and corporate governance, could provide further insights. Using quarterly data in future studies may also enhance the understanding of financial distress.

FUNDING STATEMENT: This research did not receive any specific grant from public, commercial, or not-for-profit funding agencies.

CONFLICTS OF INTEREST: The author declares no conflict of interest.

REFERENCES

Akbar, B. M. B. (2019). Analisis financial distress dan pengaruhnya terhadap return saham pada sub sektor farmasi di Bursa Efek Indonesia [Tesis]. Bogor, Indonesia: Institut Pertanian Bogor.

Alifiah, M. N. (2014). Prediction of financial distress companies in the trading and services sector in Malaysia using macroeconomic variables. Procedia - Social and Behavioral Sciences, 129, 90-98.

Aslamiah, S. (2023). The influence of return on assets, current ratio and debt to asset ratio on financial distress in consumption goods industry

sector companies listed on the Indonesia Stock Exchange in 2017-2021. Journal Syntax Admiration, 4(4), 583-596.

Andrew Thomas Kearney. (2019). Global retail development index [Internet]. Diunduh pada 02 Juni 2021. Tersedia dari https://www.kearney.com/global-retail-development-index/2019.

Brigham, E. F., & Houston, J. F. (2014). Dasar-dasar manajemen keuangan (Edisi ke-11, Ali Akbar Yulianto, Penerjemah). Jakarta: Salemba Empat.

Bukhori, I., Kusumawati, R., & Meilani. (2022). Prediction of financial distress in manufacturing companies: Evidence from Indonesia. Journal of Accounting and Investment, 23(3), 589-605.

Bank Indonesia. (2021). Survei penjualan eceran [Internet]. Diunduh pada 02 Juni 2021. Tersedia dari http://www.bi.go.id/id/publikasi/survei/penjualan-eceran/Default.aspx

Badan Pusat Statistik. (2020). Distribusi PDB Triwulanan Seri 2010 atas dasar harga berlaku (Persen) 2018-2020 [Internet]. Diunduh pada 02 Juni 2021. Tersedia dari https://www.bps.go.id/site/resultTab

Charalambakis, E. C., & Garrett, I. (2018). On corporate financial distress prediction: What can we learn from private firms in a developing economy? Evidence from Greece. Review of Quantitative Finance and Accounting, 52(2), 467-491.

Ghozali, I. (2018). Aplikasi analisis multivariate SPSS 25. Semarang: Universitas Diponegoro.

Giarto, R., & Fachrurrozie. (2020). The effect of leverage, sales growth, cash flow on financial distress with corporate governance as a moderating variable. Accounting Analysis Journal, 9(1), 15-21.

Gunawan, B., & Putra, H. C. (2020). Determinant of financial distress (Empirical study of manufacturing companies listed on the Indonesia Stock Exchange and Malaysia Stock Exchange Period 2017-2018). Advances in Economics, Business and Management Research, 176, 113-120.

Gustmaniar, J., & Mariani. (2018). Analysis of the effect of current ratio, debt to equity, gross profit margin, return on investment, and earning per share on stock prices at LQ45 companies listed on the Indonesia Stock Exchange in the year of 2010-2016. BILANCIA, 2(4).

Husna, A., & Satria, I. (2019). Effects of return on asset, debt to asset ratio, current ratio, firm size, and dividend payout ratio on firm value. International Journal of Economics and Financial Issues, 9(5), 50-54.

Jaafar, M. N., Muhamat, A. A., Alwi, S. F., Karim, N. A., & Rahman, S. (2018). Determinants of financial distress among the companies practice note 17 listed in Bursa Malaysia. International Journal of Academic Research in Business and Social Sciences, 8(11), 798-809.

Jindal, D., Jain, S., & Vartika. (2017). Effect of receivables management on profitability: A study of commercial vehicle industry in India. International Journal of Applied Sciences and Management, 2(2), 246-255.

Kasmir. (2014). Analisis laporan keuangan. Jakarta: Rajawali Pers.

Keener, M. H. (2013). Predicting the financial failure of retail companies in the United States. Journal of Business & Economics Research, 11(8).

Kholisoh, S. N., & Dwiarti, R. (2020). The analysis of fundamental variables and macroeconomic variables in predicting financial distress. Management Analysis Journal, 9(1), 82-90.

Lemmon, M., Ma, Y. Y., & Tashjian, E. (2009). Survival of the fittest? Financial and economic distress and restructuring outcomes in Chapter 11. Third Singapore International Conference on Finance 2009.

Lumbantobing, R. (2022). The effect of financial ratios on the possibility of financial distress in selected manufacturing companies which listed in Indonesia Stock Exchange. Advances in Economics, Business and Management Research, 132, 60-63.

Mulyanti, S. Y. (2019). Financial distress dan faktor makroekonomi serta pengaruhnya terhadap harga saham pada perusahaan pertambangan subsektor batubara yang terdaftar di Bursa Efek Indonesia tahun 2013-2017. Bogor, Indonesia: IPB Press.

Munawir. (2012). Analisis laporan keuangan. Yogyakarta: Liberty.

Nurfajrina, A., Siregar, H., & Saptono, I. T. (2016). Analisis financial distress pada perusahaan agribisnis di Bursa Efek Indonesia. Jurnal Keuangan dan Perbankan, 20(3), 448-457.

Outecheva, N. (2007). Corporate financial distress: An empirical analysis of distress risk [Disertasi]. Swiss: University of St. Gallen Graduate School of Business Administration, Economics, Law and Social Sciences (HSG).

Ozdagli, K. (2013). Distressed, but not risky: Reconciling the empirical relationship between financial distress, market-based risk indicators, and stock returns (and more). Boston, US: Federal Reserve Bank of Boston.

Otoritas Jasa Keuangan. (2021). Statistik Perbankan Indonesia [Internet]. Diunduh pada 02 Juni 2021. Tersedia dari https://www.ojk.go.id/id/kanal/perbankan/data-dan-statistik/statistik-perbankan-indonesia/Pages/Statistik-Perbankan-Indonesia---Desember-2021.aspx

Pane, A. A., Dalimunthe, H., & Ananda, R. F. (2023). How sales growth and leverage affect financial distress. IJAFIBS, 11(1), 35-41.

Pranowo, K., Achsani, N. A., Manurung, A. H., & Nuryanto, N. (2010). Determinant of corporate financial distress in an emerging market economy: Empirical evidence from the Indonesian Stock Exchange 2004-2008. International Research Journal of Finance and Economics, 1(52), 81-90.

Prasetiyani, E., & Sofyan, M. (2020). Bankruptcy analysis using Altman Z-score model and Springate model in retail trading company listed in Indonesia Stock Exchange. IJTC Ilomata International Journal of Tax & Accounting, 1(3), 139-144.

Restianti, T., & Agustina, L. (2018). The effect of financial ratios on financial distress conditions in sub-industrial sector company. Accounting Analysis Journal, 7(1), 25-33.

Santosa, D., Anggraeni, L., & Pranowo, K. (2020). Determinan financial distress perusahaan subsektor ritel di Bursa Efek Indonesia. Jurnal Aplikasi Manajemen dan Bisnis, 6(1), 128-141.

Sasongko, H., & Ilmiyono, A. F. (2021). Financial ratios and financial distress in retail sector trade companies. Jurnal Ilmiah Akuntansi Fakultas Ekonomi, 7(1), 63-72.

Tejo, B. A., & Hanggraeni, D. (2020). The effects of credit risk and financial performance to financial distress prediction of listed banks in Indonesia. Advances in Economics, Business and Management Research, 160, 151-156.

Yudawisastra, H. G., & Febrian, E. (2019). Financial distress indications in mining sector companies in LQ45 in Indonesia. Global Business and Management Research, 11(1), 203-208.