ANALYSIS OF BANKRUPTCY POTENTIAL WITH ALTMAN Z-SCORE METHOD AT PT MATAHARI DEPARTMENT STORE TBK

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Abstract. This research was conducted because of the bankruptcy issue at PT Matahari Department Store Tbk. The purpose of this study is to analyze the potential for bankruptcy and its causes at PT Matahari Department Store Tbk for the 2018-2021 period. Analyzing the potential for bankruptcy will help the company to make decisions and policies to keep the company running.research is a qualitative research that uses financial ratio analysis. The data source used is secondary data, namely the financial information of PT Matahari Department Store Tbk for the 2018-2021 period which was obtained through the Indonesia Stock Exchange website. Data analysis used financial ratio analysis with Altman Z-Score Modification method which was carried out descriptively.The results of the analysis show that the condition of the company PT Matahari Department Store Tbk in 2018, 2019 and 2021 is in a healthy condition with a Z-Score value above the Z cut off point > 2.6, namely in 2018 a value of 6.3810 or 638% was obtained, in 2018. In 2019 a value of 6.7160 or 672% was obtained and in 2021 a value of 3.2971 or 330% was obtained. However, in 2020 the company's condition declined to a vulnerable condition with a Z-Score value of -0.1635 or -16% where the value was below the cut off point Z <1.1. The vulnerable condition in 2020 is due to a decrease in the four financial ratios and two negative financial ratios
Keywords: Financial Ratios, Analysis Ratio, Bankruptcy Potential, Altman Z-Score Method

Introduction

Retail business is one of the business fields that face rapid progress and intense competition. In Indonesia, the retail business has undergone a change from a conventional business sector to a modern business field. The retail business sector is part of the distribution channel that plays an important role in sales activities and acts as an intermediary between producers and consumers (Wulaningrum, 2014). However, the current growth in the retail business sector is quite worrying. This is due to the emergence of e-commerce which is starting to dominate the retail market. Emerging competition can result in the risk of company bankruptcy. Bankruptcy is a situation where the company faces failure in carrying out the company's operations so that the company's goals are not achieved, the financial difficulties faced by the company will cause the company to become smaller and even cause the company to be closed (Mustafa, 2017). Bankruptcy that occurs in a company can be caused by 2 things, namely economic failure and financial failure (Ria, 2018).

In analyzing the bankruptcy of a company, it can be seen from the financial statements available in the company. Financial statements are reports that describe the health condition of a company because the financial statements contain records of the company's activities (Hery, 2016). Financial statement analysis is useful for explaining accounts to be smaller to see their relationship with quantitative information and non-quantitative information (Harahap, 2013). Financial statements are also the final result in the recording process of transactions that occur within a period of one financial year (Lubis, 2017). Financial statement analysis also explains the relationship of tendencies/trends in financial positions, results of operations to see the development of the company (Munawir, 2016). In addition, the purpose of financial statements is to provide information about the assets owned by the company, share the amount of capital owned by the company and provide information on changes in the amount of assets and capital of the company (Kasmir, 2016). The types of financial statements that usually exist in companies consist of balance sheets, income statements, reports of changes in capital, cash flow statements and notes to financial statements. In measuring the company's financial capability can be done with various financial ratios. Each comparison has a specific purpose, benefit and purpose. The types of financial ratios include liquidity ratios, solvency ratios, activity ratios and profitability ratios (Jumingan, 2018).

Various analytical models have been developed to calculate company bankruptcy, one of which is the Altman Z-Score model. Altman Z-Score was researched in the United States in 1969 which has produced 3 Z-Score formulas consisting of Altman Z-Score I for manufacturing companies going public, Altman Z-Score Revised for manufacturing companies not going public and Altman Z-Score Modifi- This is for manufacturing companies going public or not going public and can be used by non-manufacturing companies. It is known that the accuracy rate of using this model reaches 95% (W., 2015).

PT Matahari Department Store Tbk is a leading retail company in Indonesia with the issuer code LPPF. In 2018 it has operated in 159 outlets spread across 74 cities in Indonesia. In 2019 PT Matahari Department Store added outlets to 169. However, in 2020 it is known that PT Matahari Department Store outlets have decreased to 153 outlets. PT Matahari Department Store has begun to close its outlets in several areas. One of the factors behind the closing of Matahari stores is the high number of COVID-19 in Indonesia. Several promotional strategies have been carried out by PT Matahari, such as developing digital services through the company's website or platform, the development of this service is expected to be able to provide an unlimited online and conventional shopping experience, but it seems that this has not been welcomed by the public. Furthermore, PT Matahari Department Store cooperates with Disney, Marvel and Nike companies in order to increase sales of goods. One of the causes of retail company bankruptcy is a decrease in sales levels, a decrease in sales and revenue can have an impact on a decrease in profit. The following is a table of sales of PT Matahari Department Store Tbk.

Table 1
Sales and net profit of PT Matahari Department
Store Tbk Year 2018-2021
(In rupiah)

Year	Sales (Rp)	Net Profit (Rp)
2018	10.245.173.000.000	1.097.332.000.000
2019	10.276.431.000.000	1.366.884.000.000
2020	4.839.058.000.000	- 873.181.000.000
2021	5.585.975.000.000	912.854.000.000

One of the causes for the bankruptcy of retail companies is the decline in sales levels, decreased sales and revenues can have an impact on declining profits. In chart 1, it can be seen that the sales trend of the PT Matahari company in 2020 decreased, accompanied by a significant decrease in net profit and even negative value in 2020.

Table 2
Net Working Capital of PT Matahari Department
Store Tbk Year 2018-2021
(In rupiah)

Year	Net Working Capital (Rp)
2018	274.597.000.000
2019	150.942.000.000
2020	-1.246.087.000.000
2021	-556.561.000.000

Table 2 shows the net working capital development of PT. Matahari Department Store Tbk. Net working capital is obtained by deducting current assets by current liabilities. The development of net working capital in 2018 and 2019 experienced unfavorable conditions due to a decline in 2019. Furthermore, in 2020 and 2021 net working capital experienced a negative value, which means that it is likely to face problems in meeting its short-term obligations.

Table 3
Total Assets, Liabilities and Equity of PT Matahari Department Store Tbk Year 2018-2021
(In rupiah)

Year	Assets (Rp)	Liabilities (Rp)	Equity (Rp)
2018	5.036.396.000.000	3.220.568.000.000	1.815.828.000.000
2019	4.832.910.000.000	3.086.283.000.000	1.746.627.000.000
2020	6.319.074.000.000	5.737.956.000.000	581.118.000.000
2021	5.851.229.000.000	4.845.257.000.000	1.005.972.000.000

In the company's financial information, it can be seen that all industrial assets have fluctuated over a period of four years, total assets in 2018-2019 decreased, then in 2020 there was an increase. The increase in overall assets illustrates the increase in the number of industrial assets used in operational activities such as increases in receivables, cash and inventories. Furthermore, industrial debt will increase in 2020, even the amount of debt exceeds the amount of equity. The increase that occurred for industrial debt showed unfavorable conditions, indicating that most of the operational activities were mostly paid for by industrial debt. Furthermore, for equity is smaller than the amount of debt, this illustrates the unfavorable conditions for the industry.

Method

The type of research used is a combination type, namely qualitative information and quantitative descriptive approach. The research was conducted at PT Matahari Department Store Tbk which is listed on the Indonesia Stock Exchange. The information used is industry financial information that has been displayed between 2018-2021. The type of information used in this research is sourced from secondary data. Secondary data is information obtained in a ready-to-use form that has been collected and processed by other parties. Information collection techniques and instruments used are documentation, namely the collection of information sourced from electronic media, company prospectuses to the internet. Qualitative research must reveal objective truth, because the validity of information in qualitative is so important. In this research, source triangulation technique is used to check the validity of the data by using various sources such as records, documents and archives. The data analysis technique used in this research is a quantitative and qualitative descriptive analysis technique.

Result and Discussion

- Financial Ratio Analysis with Altman Z-Score at PT Matahari Department Store Tbk

Table 4
Modified Altman Z-Score Model Equation
PT. Matahari Department Store Tbk
Year 2018-2021

Year	**6.56 (X_1)**	**3.26 (X_2)**	**6.72 (X_3)**	**1.05 (X_4)**	**Z-Score Value**	**% Z-Score**
2018	0.3575	3.3712	2.0604	0.5920	6.3810	638%
2019	0.2047	3.5449	2.3722	0.5942	6,7160	672%
2020	-1.2936	1.9302	-0.9065	0.1064	-0.1635	-16%
2021	-0.6245	2.4792	1.2244	0.2180	3.2971	330%

- Working Capital to Total Assets (X1)

  In 2018, the calculation of working capital for all assets was obtained at 0.3575 or 35.8% which is the result of the Z-Score formula of 6.56 times 0.0545. In 2019, the calculation of the ratio of working capital to overall assets is 0.2047 or 20.5% which is the result of the Z-Score formula of 6.56 times 0.0312. This year's calculation results decreased by 15.3% due to a decrease in current assets this year which resulted in a decrease in working capital. In 2020, the calculation of working capital to total assets is -1.2936 or -129.4% which is the result of the calculation of the Z-Score formula of 6.56 times -0.1972. The results of the calculation of this ratio experienced a significant decrease of 149.8% from the previous year. And in 2021, the calculation of the ratio of working capital to total assets is -0.6245 or -62.2% which is the result of 6.56 times -0.0952 calculation. This year's calculation results showed a decrease of -66.9% from the previous year.

- Retained Earnings to Total Assets (X2)

  In 2018, the calculation of the ratio of retained earnings to overall assets was 3.3712 or 227% which was the result of the calculation of the Z-Score method of 3.26 times 1.0341. In 2019, the calculation of the ratio of retained earnings to overall assets obtained results of 3.5449 or 354% which is the result of the Z-Score calculation of 3.26 times 1.0874. The results of the calculation of retained earnings to total assets this year increased 17.4% from the previous year. In 2020, the calculation of the ratio of retained earnings to overall assets is 1.9302 or 193% which is the result of the calculation of the Z-Score method of 3.26 with -0.5921. The results of the calculation of retained earnings on all assets this year decreased by 161.5% from the previous year. In 2021, the calculation of the ratio of retained earnings to overall assets is 2.4792 or 248% which is the result of the Z-Score method calculation of 3.26 with 0.7605. The results of the calculation of retained earnings for all assets this year increased 54.9% from the previous year.

- Profit before Interest and Tax on Total Assets (X3)

  In 2018, the calculation of profit before interest and tax on all assets was obtained at 2.0604 or 206% which is the result of the calculation of the Z-Score formula of 6.72 with 0.3066. In 2019, the calculation of the ratio of earnings before interest and taxes to all assets was obtained at 2.3772 or 237% which is the result of the calculation of the Z-Score method of 6.72 with 0.3530. The results of the calculation of the ratio of earnings before interest and taxes to all assets this year increased by 31.2% from the previous year. 2020, the calculation of the ratio of profit before interest and tax to all assets is -0.9065 or -91% which is the result of the calculation of the Z-Score method of 6.72 with -0.1349. The results of the calculation of the ratio of earnings before interest and taxes to overall assets this year decreased by 327.9% from the previous year. In 2021, the calculation of the ratio of profit before interest and tax to all assets is 1.2244 or 122.4% which is the result of the calculation of the Z-Score method of 6.72 with 0.1822. The calculation result of the ratio of profit before interest and tax to overall assets this year increased by 213.1% from the previous year.

- Book Value of Equity against Book Value of Debt (X4)

  In 2018, the calculation of the ratio of the book value of equity to the book value of debt was obtained at 0.5920 or 59.2% which is the result of the calculation of the Z-Score method of 1.05 with 0.5638. In 2019, the calculation of the ratio of the book value of equity to the book value of debt was obtained at 0.5942 or 59.4% which is the result of the calculation of the Z-Score method of 1.05 with 0.5942. The calculation result of the ratio of book value of equity to book value of debt this year increased by 0.2% from the previous year. In 2020, the calculation of the book value ratio of equity to debt value is 0.1064 or 10.6% which is the result of the calculation of the Z-Score method of 1.05 to 0.1013. The calculation result of the ratio of book value of equity to book value of debt this year decreased by 48.8% from the previous year. In 2021 the calculation of the book value ratio of equity to book value of debt is obtained at 0.2180 or 21.8% which is the result of the calculation of the Z-Score method of 1.05 with 0.2076. The calculation result of the ratio of book value of equity to value of debt this year increased by 11.2% from the previous year.

- **Analysis Using Altman Z-Score Modified Method**

  - PT Matahari Department Store Tbk in 2018 produced a Z-Score of 6.3810 or 638%, meaning that the company is included in the healthy category because the result of Z> 2.6. This is supported by the four financial ratios which have been multiplied by the Z-Score equation of each ratio. These results can be seen in the ratio (X1) of working capital to overall assets consisting of working capital of Rp. 274,597 million and total assets of Rp. 5,036,396,000,000, resulting in X1 of 0.0545. The amount of this ratio for the company's liquidity conditions are getting better. Furthermore, in the ratio (X2) of retained earnings to total assets, retained earnings of Rp. 5,208.079,000,000 and total assets of Rp. 5,036,396,000,000 so that the result of X2 is 1.0341. The results of a positive ratio must be maintained and increased by the company, the higher the ratio of retained earnings to total assets will increase the company's ability to develop its business. In the variable (X3) which consists of profit before interest and taxes on total assets, the EBIT result is Rp. 1,544,139,000,000 and the total assets are Rp. 5,036,396,000,000 so that X3 is 0.3066. This ratio shows the ability to generate operating profit from the assets used and the variable (X4) which consists of the equity value with the book value of debt getting an equity value of Rp. 5638. This ratio is used to assess the strength of the industry in providing guarantees for each of its debts through its own capital. From the calculation of the four ratios, it can be seen that the financial condition of the industry is in good condition.

- PT Matahari Department Store Tbk in 2019 produced a Z-Score of 6.7160 or 672% and increased from 2018 which was 6.3810 or an increase of 33%, meaning that the company is in good health because Z results > 2.6. This is supported by the calculation of four ratios with each weighted Z-Score equation. These results can be seen in the ratio (X1) of working capital to total assets consisting of working capital of Rp. 150,942,000,000 and total assets of Rp. 4,832,910,000,000, resulting in X1 of 0.0312. The ratio of working capital to overall assets in 2019 decreased from last year, this was due to a decrease in working capital and overall assets owned by the company. Furthermore, the ratio (X2) of Retained Earnings to total assets consisting of Retained Earnings of Rp. 5,255,184,000,000 and total assets of Rp. 4,832,910,000,000, resulting in X2 of 1.0874. The ratio of retained earnings to total assets this year has increased which can indicate the company's ability to generate retained earnings is getting better. In the ratio (X3) of profit before interest and taxes to total assets which consists of Rp. 1,706,051,000,000 with Rp. 4,832,910,000,000, resulting in X3 of 0.3530. The EBIT ratio in 2019 increased from before. And in comparison (X4) the book value of equity to the book value of debt which consists of Rp. 1,746,627,000 with Rp. 3,086,283,000,000 so as to produce X4 of 0.5659. The value ratio has increased from the previous year. From the calculation of the four ratios, it can be seen that the company's condition is in good condition. Although there is a decrease in the ratio of working capital to total assets, there is an increase in other ratios so that the calculation results show the company is in a healthy classification. Even though the industry is in good health, the industry must remain vigilant and strive to increase the company's working capital.

- PT Matahari Department Store Tbk in 2020 produced a Z-Score of -0.1635 or -16%, a decrease from the previous two years, namely in 2019 of 6.7160 and 2018 of 6.3810 or a drastic decrease of 688%. The results of the Z-Score indicate that the company is included in the danger zone and is predicted to experience financial problems because the results of the classification of the Z value < 1.1. The results can be seen in the calculations that have been carried out, the ratio (X1) of Working Capital to Total Assets consists of Rp.-1,246,087,000.00 with Rp. 6,319,074,000,000 so that the X1 value is -1972. The yield ratio decreased from the previous year and was negative. Net working capital should not be negative because it can make it difficult for the company to meet or pay its debts. Furthermore, from the calculation of the ratio (X2) Retained earnings to total assets in 2020 consisting of Rp. 3,741,255,000,000 with Rp. 6,319,074,000,000 so that X2 results of 0.5921 reflect the company's ability to accumulate retained earnings. very low which can cause the industry to be unable to cover its operational costs or expenses. This is also seen in the calculation of (X3) Earnings before interest and taxes on total assets. The company earned a negative profit before interest and tax of Rp852,695,000,000 and total assets of Rp6,319,074,000,000, so the value of X3 is -0.1349. The negative result of this ratio shows that the industry has operating costs that are greater than its gross profit. And from the calculation (X4), the book value of equity to the book value of debt gets the lowest ratio value in 2020, which is Rp.581.118 million. This is because industrial debt has increased in 2020, which is Rp. 5,737,956,000,000 so that it gets a result of X4 0.1013. Related to this, as reported by cnnindonesia.com, the Finance Director of Matahari revealed that PT Matahari Department Store Tbk recorded a decline in performance until it ended with a loss in 2020. PT Matahari Department Store Tbk suffered a loss of Rp. 873.18 billion throughout 2020, inversely proportional to the profit of Rp1.36 trillion in 2019. This condition requires the company's management to overcome the problems that cause the company to be in a dangerous zone. Each component must really be considered because it has a significant impact on the company's internal and can even affect the decision-making process by investors.

- PT Matahari Department Store Tbk in 2021 produced a Z-Score of 3.2971 or 330%, a significant increase from 2019 which was -0.1635 or an increase of 346%. This shows the company is in good health because it has a Z value > 2.6. This is supported by the calculation of four ratios with each weighted Z-Score equation. This can be seen in the ratio (X1) of working capital to total assets consisting of working capital of Rp. 556,820 million and total assets of IDR 5,851,229,000,000, resulting in X1 of -0.0952. The ratio of working capital to total assets this year decreased from last year due to the decline in working capital and total assets of the company. Furthermore, in the ratio (X2) Retained Earnings to Total Assets consisting of Retained Earnings of Rp.4,449,943,000,000 and Total Assets of Rp.5,851,229,000,000, resulting in X2 of 0.7605. The ratio of retained earnings to total assets this year has increased from 2020 which was previously 0.5921. In the ratio (X3) of EBIT to total assets consisting of EBIT of Rp. 1,066,186,000,000 and total assets of Rp. 5,851,229,000,000, resulting in an X4 value of 0.1822. The value of the ratio of EBIT to total assets this year has increased from the previous year which was negative -0.1349. Then in the ratio (X4) the book value of equity to the book value of debt which consists of the book value of equity of Rp. 1,005,972,000,000 and the book value of debt is Rp. 4,845,257,000,000 so that the X4 value of 0.2067 has increased from the previous year. From the calculation of the four ratios, it can be seen that the financial condition of the industry is in good condition. Although there is a decrease in the ratio of working capital to overall assets in 2021, this is supported by an increase in other ratios so that the calculation results show the company is in a healthy condition.

Conclusion

In 2018, the results of the analysis showed that the company was in a healthy condition, the Z-Score was 6.3810 or 638% where the figure was at the cut off point Z > 2.6 which means the industry is in a safe condition and does not face financial problems. In 2019, the results of the analysis show that the company is at a Z-Score of 6.7160 or 672% where the figure is at the cut off point Z > 2.6 which means the industry is in a healthy condition. This year there was a decline in working capital for all assets, but analysis shows the industry is in safe condition. This is because it is offset by an increase in the value of other ratios so that the company does not have the potential to go bankrupt. In 2020, the results of the analysis show that the company is in the danger zone or prone to bankruptcy. This can be seen from the results of the Z-Score value obtained by -0.1635 or -16% where the value is below the minimum zone Z cut off point <1.1. Obtaining a Z-Score in 2020 is the lowest Z-Score value in four years. Seen in the results of the calculation of the four financial ratios that have decreased and are negative. In addition, it can be seen that the level of sales in 2020 also decreased, a decrease in sales and income resulted in a decrease in profit which could cause the company to suffer losses. In 2021 the results of the analysis show that the company is in the safe zone, it is known that the Z-Score is 3.2971 or 330% where the value is at the Z cut off > 2.6, meaning the company is in good health. This year there was a decrease in the ratio of working capital to overall assets, but the results of the analysis show the company is in a healthy condition, this is because it is offset by an increase in the value of other ratios so that the company does not have the potential to go bankrupt.

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