

Analysis of Factors Causing Bankruptcy Using the Altman Z-Score Model (Case Study of PT Sepatu Bata Tbk 2019-2023)

^{1*}Naura Salsabilla, ²Wastam Wahyu Hidayat, ³Supardi Supardi

^{1*,2,3}Fakultas Ekonomi dan Bisnis, Universitas Bhayangkara Jakarta Raya, Indonesia

ARTICLE INFO

Keywords:

Bankruptcy, Altman Z-Score, Analysis

E-mail:

salsabillan91@gmail.com

ABSTRACT

This research aims to analyze the factors causing the bankruptcy of PT Sepatu Bata Tbk during the 2019-2023 period using the Altman Z-Score model. A quantitative descriptive approach with secondary data from the company's annual financial reports and supporting information from the company's official website was used in this study. The Altman Z-Score analysis results for PT Sepatu Bata Tbk show a significant decline in financial health from 2019 to 2023, shifting from a safe zone to a distress zone, indicating a high risk of bankruptcy. The main causes are internal factors such as poor working capital management (X1), continuous operating losses (X3), and an imbalanced capital structure (X4), exacerbated by a decrease in retained earnings (X2) and asset efficiency (X5). This potential bankruptcy has a broad impact on all stakeholders, including employees, suppliers, consumers, investors, creditors, as well as management and owners, thus strategic and rapid restructuring is highly necessary.

Copyright © 2023

Jurnal Restorasi : Hukum dan Politik

All Right reserved id Licensed under a [Creative Commons Attribution-NonCommercial 4.0 International License \(CC BY-NC 4.0\)](https://creativecommons.org/licenses/by-nc/4.0/)

INTRODUCTION

Bankruptcy is a situation in which a company is unable to provide sufficient funds to run its business and is then declared bankrupt. Bankruptcy can occur for a variety of reasons, including a company not having enough liquid assets, declining sales, or debt exceeding assets. According to the Bankruptcy Law Number 4 of 1998, if a company has two or more creditors and is unable to pay at least one debt, then the company can be declared bankrupt based on a decision or application from the competent court. Every company uses all means to avoid bankruptcy. One way to avoid this is to analyze financial statements using various bankruptcy prediction models.

Conducting a bankruptcy analysis is essential for companies that go public for a variety of reasons. Because, if a company goes bankrupt, many parties involved can be harmed. Parties to the contract who may suffer losses include creditors who may suffer losses due to non-payment of fees, and bond and stock investors.

Financial difficulties begin when a company is unable to meet a predetermined payment schedule, or when projected cash flows indicate that the company will soon have difficulty meeting its obligations. Therefore, every company needs to be aware of the

Analysis of Factors Causing Bankruptcy Using the Altman Z-Score Model (Case Study of PT Sepatu Bata Tbk 2019-2023) - Naura Salsabilla, et al

potential for bankruptcy. It is important for companies to conduct an analysis related to bankruptcy risks as early as possible. The benefits of conducting a bankruptcy analysis for the Company aim to be able to anticipate and avoid or reduce the risk of bankruptcy.

Various analysis methods have been developed to predict the likelihood of a company's bankruptcy. One of the effective mathematical formulas in predicting bankruptcy is able to provide a high level of certainty, achieving an accuracy of up to 95%. This method is also among the most popular studies because it is often used by many researchers in their studies. A similar study aimed at predicting corporate bankruptcy was developed by Professor Edward I. Altman of New York University, USA, in 1968.

Altman attempted to combine multiple financial ratios into a predictive model using a statistical technique known as discriminative analysis. This method is designed to predict the likelihood of a company's bankruptcy. In his research, Altman selected five relevant financial ratios for companies listed on the stock exchange, namely: Working Capital to Total Assets, Retained Earnings to Total Assets, EBIT to Total Assets, Market Value of Equity to Total Debt, and Sales to Total Assets. From the results of the calculation using these ratios, a Z value (Z-Score) will be obtained which provides an overview of the company's financial condition, whether it is in a healthy state, at risk, or even threatened with bankruptcy.

The company's annual financial statements reflect the company's performance. If profits continue to return, we do not rule out that the company could go bankrupt. Bankruptcy reflects the inability to achieve incomplete fund gains in managing business activities. The loss of PT This very important brick shoes is necessary for the analysis of the company's bankruptcy procedures. Bankruptcy results in the benefit of an imperfect instrument in managing activities (Korry & Dewi, 2019).

One approach to evaluating the financial health of a company is through financial ratio analysis. Various studies have been conducted to assess the effectiveness of financial ratios in analyzing the financial state of a company. The results of the study show that financial ratios are very useful not only in assessing the health condition of a company, but also in predicting the likelihood of bankruptcy that may occur.

It is important for investors and creditors to know the results of the bankruptcy analysis because it is useful as a reference for hedging investments in the company (Lisdayanti, 2013). Bankruptcy analysis is beneficial for companies because it can be used as an early warning system in decision-making, especially in anticipating, avoiding or reducing the risk of bankruptcy (Mastuti et al., 2012). The Altman Z-Score method is used in this study as a method of predicting company bankruptcy. The measurement indicator in the company's bankruptcy analysis is the financial statements of PT. SepatuBata Tbk for the period of 2019 to 2024.

With consideration of the background of the phenomenon that occurred in Indonesia and at PT Sepatu Bata Tbk (BATA), the author will conduct a research entitled "Analysis of Factors Causing Bankruptcy Using the Altman Z-Score Model (case study: PT. Brick Shoes Tbk Year 2019-2023)".

Analysis of Factors Causing Bankruptcy Using the Altman Z-Score Model (Case Study of PT Sepatu Bata Tbk 2019-2023) - Naura Salsabilla, et al

METHOD

Literature Review

Kebangkrutan

Bankruptcy studies can be used as a reference to consider which prediction model is the most accurate to predict bankruptcy in public companies. According to Hariyanto (2021), bankruptcy refers to liquidity difficulties that are severe enough that a company cannot operate properly. Pihadi (2011) also emphasizes that bankruptcy is a situation in which a company is unable to fulfill its obligations. Although this condition usually does not only appear in companies, the early signs of the company can usually be detected faster if financial statements are analyzed more carefully in certain ways. Financial indicators can be indicators of a company's bankruptcy.

Bankruptcy is the pinnacle of failure in business management. This failure can be in the form of a company's inability to manage its working capital or compete in increasingly uncertain competition. Gapenski (2008) explained that bankruptcy can be interpreted differently depending on the problems faced by the company.

Altman Z-Score

Z-Score is a concept developed in 1968 by Edward I. Altman, a professor and financial economist at New York University's Stern School of Business. In the short term, Altman's model is known to be 95% accurate in predicting which companies will go bankrupt in 2010. Further research found that when this model was applied to a wider sample of companies and broader economic conditions, the accuracy rate was around 82% to 85%. Z-Score uses five financial indicators from accounting statements and stock values to provide an objective picture of a company's financial health. The Altman Z-Score approach has several advantages over other bankruptcy prediction methods. First, the model integrates various key indicators to assess a company's liquidity, profitability, solvency, and activities. Second, the metrics used in the Z-Score include internal and external assessments of the company, such as comparing market value to total debt, which is part of the Altman Z-Score methodology (Melia & Deswita, 2020).

The bankruptcy prediction model was developed using multiple discriminator analysis (MDA) techniques using five types of financial ratios: 4,444 working capital to total assets, internal to total assets; Market value of equity to total assets, Book value of total debt and Sales of total assets. Based on these financial indicators, the Altman Z-Score model is effective in classifying companies into categories of high probability of bankruptcy or low risk of bankruptcy. The Altman Z-Score model allows you to predict bankruptcy up to two years before it happens (E. I. Altman, 1968).

This model, known as Z-Score, aims to assess the financial health of a company by determining its Z-Score. This score reflects the company's financial health and provides an overview of its performance and future prospects. This study shows that several

financial ratios can be strong predictors of bankruptcy. Indicators that measure profitability, liquidity, and solvency are generally considered the most meaningful indicators for predicting the likelihood of a company going bankrupt. Z-Score is a value obtained from a combination of standard financial ratios intended to indicate the level of risk of bankruptcy of a company (Susilawati, 2018).

Conceptual Framework

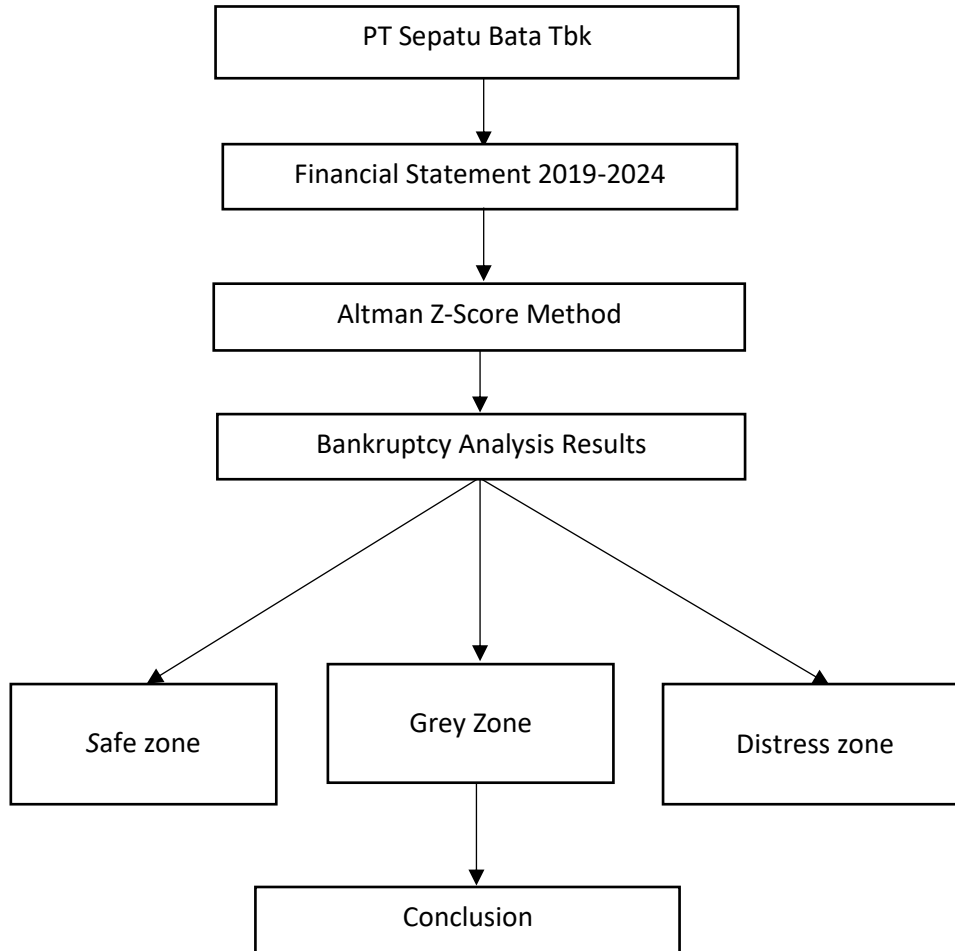


Figure 1. Conceptual Framework

Research Methods

This study uses a quantitative descriptive approach by utilizing secondary data. Data was obtained from the annual financial statements of PT Sepatu Bata Tbk listed on the Indonesia Stock Exchange (IDX), as well as supporting information from the company's official website (www.bata.co.id). The data collection and analysis period

Analysis of Factors Causing Bankruptcy Using the Altman Z-Score Model (Case Study of PT Sepatu Bata Tbk 2019-2023) - Naura Salsabilla, et al

covers 2019 to 2024. The population of this study is all financial statements of PT Sepatu Bata Tbk from 2019 to 2023. To analyze the potential for corporate bankruptcy, this study applied the revised Altman Z-Score model. This analysis method allows a comprehensive evaluation of financial statements to understand and predict the possibility of bankruptcy in companies listed on the IDX. All financial statement data collected are then analyzed in depth to answer research questions.

RESULTS AND DISCUSSION

Results and Discussion

Analysis of the Potential Bankruptcy Level of PT. Brick Shoes Tbk Using Altman Z-Score Model

Based on the partial research results, the influence of liquidity on tax aggressiveness was found. The t-statistic for the liquidity variable was 4.521811, with a positive coefficient of 0.019780. The probability value for liquidity was 0.0000, which is less than 0.05, indicating that liquidity has a positive and significant effect on tax aggressiveness. Thus, the hypothesis in this study—that liquidity has a positive effect on tax aggressiveness—is accepted.

The results of the Altman Z-Score analysis of the revision of PT Sepatu Bata Tbk's financial performance during the 2019–2023 period show a consistent and significant downward trend in the company's financial health. This decline reflects various external and internal challenges that affect the stability and sustainability of the company's business.

In 2019, the company was in a healthy financial condition (Z-Score 3.48) and entered the safe zone. This reflects a strong capital structure, high efficiency in the use of assets to generate sales, as well as adequate liquidity and profitability. However, this condition did not last long.

The impact of the COVID-19 pandemic which began to be felt in 2020 dealt a heavy blow to the company's operations. The Z-Score dropped drastically to 1.02 and put the company in a distress zone. Significant declines in EBIT (X3), working capital (X1), and sales efficiency (X5) reflect a decline in people's purchasing power, restrictions on economic activities, and the potential for store closures or production declines.

Although 2021 showed a slight improvement to the gray zone (Z-Score 1.82), this condition has not been enough to restore the company's financial stability. Improvements in liquidity and capital structure were not enough to offset the ongoing operating losses. This shows that restructuring and efficiency efforts have not been optimal.

In 2022, despite the increase in sales efficiency (X5), the Z-Score decreased again to 1.30. This indicates that the sales recovery has not been strong enough to offset the weakening of capital and liquidity structures. The company also still recorded negative EBIT, showing that its operating activities have not yet delivered a profit.

The year 2023 marked the worst of conditions with the Z-Score falling to 0.49, returning to the distress zone. The decline in the value of X1 and X4 to very low levels

Analysis of Factors Causing Bankruptcy Using the Altman Z-Score Model (Case Study of PT Sepatu Bata Tbk 2019-2023) - Naura Salsabilla, et al

indicates a liquidity crisis and the dominance of liabilities over equities. Although sales began to increase, this was not accompanied by adequate profitability, as the company continued to suffer large operating losses (negative X3). With the Z-Score well below the safe threshold, PT Sepatu Bata Tbk faces a high risk of bankruptcy if strategic steps and a thorough restructuring are not taken immediately.

Analysis of Internal Factors Causing Bankruptcy

Internal factors are the causes of bankruptcy that originate within the company itself, including mismanagement, weaknesses in financial structures, and decreased operational performance. Based on the results of the analysis using the Altman Z-Score method and financial ratios at PT Sepatu Bata Tbk in 2019–2023, several internal factors that contribute to the potential for bankruptcy can be identified as follows:

1. Decreased Liquidity (X1 Ratio - Working Capital to Total Assets). The X1 ratio shows a significant downward trend from 0.44 (2019) to -0.07 (2023). Negative working capital in the last year indicates the company's inability to meet short-term obligations. This shows a lack of effective cash management, as well as a dependence on short-term debt.
2. Retained Earnings Decline (X2 Ratio - Retained Earnings to Total Assets). The X2 ratio decreased from 0.73 (2019) to 0.18 (2023), reflecting a decline in the company's ability to maintain profits. The accumulation of losses lowers the profit balance, which should be internal capital to support operational activities.
3. Recurring Operating Loss (X3 Ratio - EBIT to Total Assets). The X3 ratio recorded negative values for four consecutive years since 2020. Negative EBIT indicates that the company's core operations (sales of footwear and footwear products) are not able to generate profits, even before interest and tax costs are taken into account. This is a key indicator of a decline in operational efficiency.
4. Unbalanced Capital Structure (X4 Ratio - Equity to Liabilities). The X4 ratio experienced a sharp decline from 3.11 (2019) to 0.28 (2023), indicating that debt is starting to dominate the company's funding structure. This imbalance suggests that companies may be overly reliant on external financing, which increases the risk of bankruptcy especially amid economic uncertainty.
5. Decreased Sales Efficiency (X5 Ratio - Sales to Total Assets). Although the value of X5 had improved, its instability and limited sales volume growth relative to total assets showed a lack of efficiency in utilizing assets. This is of particular concern, given the high cost pressures and declining consumer purchasing power post-pandemic.

Based on the five financial ratios, internal factors such as cash management, production inefficiency, and capital structure imbalances have had a significant impact on the decline in PT Sepatu Bata Tbk's financial condition, thereby contributing to the risk of bankruptcy based on the z-score results.

The Impact of Potential Bankruptcy on Stakeholders

Analysis of Factors Causing Bankruptcy Using the Altman Z-Score Model (Case Study of PT Sepatu Bata Tbk 2019-2023) - Naura Salsabilla, et al

The potential bankruptcy faced by PT Sepatu Bata Tbk not only has an impact on the company's internal condition, but also has serious consequences for stakeholders. Based on the analysis of the company's financial condition that tends to deteriorate, here are the impacts that can occur:

1. The impact on employees is one of the most immediate felt. In unstable financial conditions, companies will usually commit cost efficiencies that can lead to large-scale layoffs or reduced working hours. Additionally, employees face uncertainty in terms of job sustainability, delayed payroll payments, and potential benefits cuts. This situation has the potential to lower morale and productivity of the workforce, as well as increase employee turnover, which ultimately negatively impacts the company's overall operational performance.
2. The company's suppliers are also under pressure due to the potential for bankruptcy. In this situation, the risk of late payment or even default by the company to the suppliers increases significantly. This can damage the long-term business relationship between the company and the supplier partner, as well as trigger distrust. In addition, suppliers may stop shipping goods or services, which can ultimately disrupt the supply chain and smooth production in the company.
3. Consumers as end users of the company's products are also not spared from its impact. When a company faces financial pressure, the efficiency steps taken can be in the form of reducing production costs that have an impact on declining product quality. In addition, after-sales service, which was originally one of the advantages, may be overlooked. This can lower the level of consumer satisfaction and loyalty. If left unchecked, consumers will move to competitors who are able to provide better quality and service.
4. Investors and creditors are also in a vulnerable position. Investors face the risk of declining stock prices as a result of declining company performance and declining market confidence. Meanwhile, creditors face the possibility of default or adverse debt restructuring. In the long run, this condition can lead to a loss of investor and financial institution confidence in the company, making it difficult for the company to obtain new funding in the future.
5. Management and business owners also face significant impacts from potential bankruptcy. In deteriorating financial conditions, the company's management is faced with great pressure to immediately devise and execute an effective recovery strategy. They must be able to conduct a thorough evaluation of the cost structure, operational efficiency, and develop financial policies that can improve the company's liquidity and solvency. If the recovery strategy is not carried out immediately or proves to be ineffective, the management position will be in the spotlight, both internally and externally, including from shareholders, the board of commissioners, and regulators.

From the side of business owners, the decline in the value of shares and the company's reputation has the potential to significantly erode the value of their wealth. In addition to financial losses, the owner can also lose control of the company if there is an acquisition or takeover by an outside party due to the company's inability to fulfill its

obligations. A bad business reputation due to a financial crisis will also have an impact on future business relationships, including access to establish or develop other ventures. Therefore, management and owners have a great responsibility to take swift, strategic, and measurable actions to prevent the total collapse of the company and restore the trust of all stakeholders.

CONCLUSION

Based on the analysis and discussion outlined in the previous chapter, the following conclusions can be drawn:

1. PT Sepatu Bata Tbk showed a significant downward trend in financial health based on the Altman Z-Score analysis for the 2019–2023 period, from the safe zone (Z-Score 3.48) to the distress zone (Z-Score 0.49). This indicates that the company is at high risk of bankruptcy, especially due to declining profitability, liquidity crisis, and the dominance of funding structures by liabilities.
2. The main internal factors that cause potential bankruptcy are poor working capital management (X1), ongoing operational losses (X3), and capital structure imbalances (X4). The decline in retained earnings (X2) and asset efficiency (X5) also worsened the situation, indicating that the problems stemmed from within the company's operations and financial policies, not solely from external pressures.
3. Potential bankruptcy has a systemic impact on all stakeholders, including employees (layoffs and deterioration of welfare), suppliers (risk of default), consumers (deterioration in quality and service), investors and creditors (loss of trust and financial losses), and management and owners (threat of loss of control and business reputation). Therefore, strategic and rapid restructuring measures are needed to save the company's sustainability.

REFERENCES

- Altman, E. I. (1968). Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy. *The Journal of Finance*, 23(4), 589–609.
- Gapenski, B. (2008). *Financial Management Theory and Practic*. The Dryden Press.
- Hariyanto. (2021, July 16). *Imbas Pandemi, Saham SSTM Masih Redup di Tahun 2021*. Ajaib.Co.Id. <https://ajaib.co.id/imbas-pandemi-saham-sstm-masih-redup-di-tahun-2021/>
- Korry, S. T. I., & Dewi, P. M. (2019). Analysis Method of Altman Z Score Modifications to Predict Financial Distress on the Company Go Public Sub Sector of The Automotive and Components. *Buletin Studi Ekonomi*, 24(2), 191–200.
- Lisdayanti, A. (2013). Analisis Potensi Kebangkrutan Bank yang Terdaftar di BEI Tahun 2012 dengan Menggunakan Model Altman Z-Score. *Proceeding PESAT (Psikologi, Ekonomi, Sastra, Arsitektur & Teknik Sipil)*, 414–420.

- Mastuti, F., Saifi, M., & Azizah, D. F. (2012). Altman Z-Score Sebagai Salah Satu Metode Dalam Menganalisis Estimasi Kebangkrutan Perusahaan. *Jurnal Administrasi Bisnis (JAB)*, 6(1), 1–10.
- Melia, Y., & Deswita, R. (2020). Analisis Predeksi Kebangkrutan dengan Menggunakan Metode Altman Z-Score. *Jurnal Akuntansi Keuangan Dan Bisnis*, 13(1), 71–80.
- Pihadi, T. (2011). *Analisis Laporan Keuangan Lanjutan Proyek dan Valuasi*. PPM.
- Susilawati, E. (2018). Analisis Prediksi Kebangkrutan Dengan Model Altman Z-Score pada Perusahaan Semen yang Terdaftar di Bursa Efek Indonesia Periode 2012- 2018. *Jurnal Akuntansi Dan Keuangan*, 2(1), 1–12.
<https://doi.org/10.36448/jak.v9i1.999>