

SPRINGATE S-SCORE MODEL TO PREDICT FINANCIAL DISTRESS, THE LAST STAGE TO CORPORATE BANKRUPTCY: A CASE STUDY OF PT. SEPATU BATA TBK.

Syukron Sazly¹, Harun Al Rasyid², Agus Tri Indah K³

^{1,2,3,4)} Universitas Bina Sarana Informatika

Email: syukron.szy@bsi.ac.id

ABSTRAK

Financial distress adalah kondisi yang ingin dihindari oleh semua pimpinan maupun pemilik perusahaan, karena kondisi tersebut merupakan langkah menuju kebangkrutan. Dalam penelitian ini, peneliti menggunakan data rasio keuangan dan nilai S-Score untuk memeriksa kondisi keuangan PT Sepatu Bata Tbk dari tahun 2018 hingga 2023. Hasilnya menunjukkan bahwa kinerja perusahaan menurun secara signifikan selama periode tersebut, dengan masalah keuangan mulai tahun 2019 dan terus memburuk hingga tahun 2023. Meningkatnya risiko kebangkrutan dikaitkan dengan penurunan nilai rasio keuangan seperti efisiensi, leverage, likuiditas, dan profitabilitas, serta S-Score yang semakin rendah. Rekomendasi termasuk mengevaluasi ulang pendekatan keuangan, menggunakan manajemen utang yang lebih baik, mengembangkan rencana pemulihan keuangan, bekerja sama dengan ahli keuangan, dan meningkatkan pengawasan dan pengawasan kinerja keuangan. Dengan menerapkan rekomendasi ini, perusahaan diharapkan dapat memperbaiki keuangan mereka dan mengurangi risiko kebangkrutan di masa depan.

ABSTRACT

Financial distress is a condition that all company leaders and owners want to avoid, because this condition is a step towards bankruptcy. In this study, researchers used financial ratio data and S-Score values to examine the financial condition of PT Sepatu Bata Tbk from 2018 to 2023. The results show that the company's performance decreased significantly during that period, with financial problems starting in 2019 and continuing to worsen until in 2023. The increasing risk of bankruptcy is associated with a decrease in the value of financial ratios such as efficiency, leverage, liquidity and profitability, as well as a lower S-Score. Recommendations include reevaluating the financial approach, using better debt management, developing a financial recovery plan, working with financial experts, and improving financial performance oversight and oversight. By implementing these recommendations, companies are expected to improve their finances and reduce the risk of bankruptcy in the future.

DOI: 10.31000/combis.v6i2.11400

Article History:

Received: 16/05/2024

Reviewed: 21/05/2024

Revised: 23/05/2024

Accepted: 31/05/2024

Keywords: *Financial Distress, Springate S-Score, Bankruptcy*



INTRODUCTION

A phenomena that rocked Indonesia's industrial sector early in 2024 was the announcement of multiple plants closing across a range of industries. President Joko Widodo acknowledged the reality of the issue and said that swings in the commercial sector are common. Jokowi acknowledged that PT. Sepatu Bata Management's painful choice to liquidate the Purwakarta plant was one of the many reasons these factories may close, along with operational effectiveness and competition from new goods. Since 1931, Bata has established itself in Indonesia by working with NV, Nederlandsch-Indisch, as a Tanjung Priok shoe importer. In Kalibata, South Jakarta, Tomas Bata established a shoe factory in 1937. Production started there in 1940. 1982 saw the listing of PT.Sepatu Bata, TBK on the Jakarta Stock Exchange, with the Purwakarta factory's construction having been finished in 1994. As of the now, Bata Indonesia It is housed in a six-story structure in South Jakarta's Cilandak neighborhood. One of the biggest producers, Bata focuses on producing footwear for both domestic and foreign consumers. The Bata brand has expanded from selling only school shoes under the slogan "Back to School" to become a multi-market brand that caters to Marie Claire, Comfit, Power, and other market sectors. With 435 retail locations around Indonesia, Bata provides a large range of goods, including collections for adults and infants. With over 125 years of expertise, Bata is still at the forefront of shoe technology, producing stylish and cozy footwear for people of all social classes.

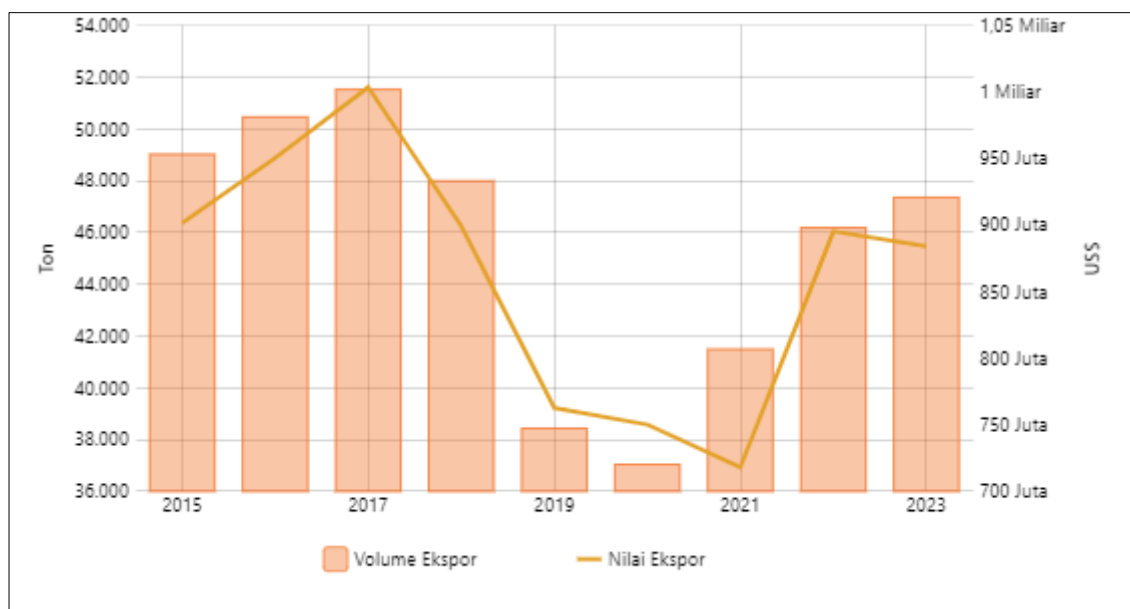
However, in the midst of its glory days, Bata faced serious challenges. The decline in customer demand for the types of products made in factories, along with ever-increasing financial losses, is a burden that cannot be ignored. In recent years, the company has experienced a significant decline in production, from printing 3.5 million pairs of footwear in 2018 to only 1.15 million pairs in the last year. As a result, PT Shoes Bata Tbk. recorded a large net loss, reaching IDR 190.28 billion in 2023. This figure increased by almost 80% compared to the same period in the previous year. With increasingly deteriorating financial conditions and increasingly severe industrial challenges, Bata management decided on a drastic step: to close factory in Purwakarta, West Java, on April 30, 2024. This marks the end of an era for a brand that was once an icon in the childhoods of many Indonesians.

Business analysts claim that it is impossible to isolate the age of a brand from the drop in Bata shoe sales. In actuality, this aging process has been ongoing since the 1990s.

Although Bata's heyday was in the 1970s and 1980s, that period has gone, and the company has struggled to keep up with trends and adjust to shifting market conditions. The elderly population, including Gen X and Boomers, whose spending power inevitably declines as they approach retirement, is presently Bata's primary market segment. Because of this, Bata finds it challenging to hold onto its market share. It is believed that Bata has not been successful in drawing in younger customers or revitalizing existing ones. Sales have decreased as a result of this. The external factor expected impact the decreasing its' financial performace such as export performance.

Figure 1.

Export Performance of Indonesian Footwear Products 2018-2023



Source : Katadata.com

Indonesia's export performance of footwear for daily needs is likely to decline in 2023, and will still be weaker than the pre-Covid-19 pandemic period. The Central Statistics Agency (BPS) reports that Indonesia exported 47.36 thousand tons of daily-use footwear in 2023, up 2.54% year over year (yoy) from 2022. The export value actually decreased 1.26% (yoy) to US\$884.08 million, despite the volume increasing, suggesting a drop in commodity prices. Longer term analysis reveals that, as the graph above illustrates, daily footwear export performance in 2023 will likewise be lower than period of 2015-2018.(Katadata.com).

Finally , this research aims to find out and describe the results of the Springate S-Score Model calculation in predicting the financial distress of PT.Sepatu Bata, Tbk which resulted in the management decision to close the factory in the first quarter of 2024.

THEORITICAL REVIEW

Financial Distress

Financial distress is a condition where a company experiences a significant decline in their financial condition, which can cause difficulty in meeting their financial obligations, especially those of a short-term nature such as accounts payable or interest expenses. Defined to that financial distress as a stage of decline in financial conditions that occurs before bankruptcy or liquidation occurs. This situation begins when the company's operational cash flow is insufficient to pay off current liabilities, and the company is forced to take corrective action.(Sari & Diana, 2020)

There are several factors that can cause a company to experience financial distress from a financial perspective, such as the factor of capital inadequacy or lack of funds, which occurs when the flow of cash receipts from sales or collection of receivables is not balanced with the expenditure of money for the company's operational costs, giving rise to a problem of lack of funds. If the company is unable to attract additional funds to overcome this shortfall, it may experience financial distress. In identifying financial distress conditions, financial ratio analysis is often used. Financial ratios provide an overview of the financial health of a company and can be used to predict the possibility of bankruptcy. (Sari & Diana, 2020). Being in financial trouble starts with not being able to pay its debts, particularly short-term obligations such as liquidity obligations and solvency obligations, financial distress is characterized by an organization's incapacity to fulfill its debts; it arises when the firm lacks the necessary finances to sustain its operations.(Hidayat et al., 2021)

Brigham & Houston in (Dharma Swara, 2021) state that disorder or inconsistency in the company's financial management is the first sign of financial hardship. This started because of ever more intense liquidity constraints, and it persisted as a result of declining asset prices that made it harder for the business to pay its debts. According (Silanno, Glousa Lera & Loupatty, 2021) , it is a company's failure to meet its financial commitments is a defining feature of a trend of liquidity challenges, which makes symptoms of financial

distress evident. Three perspectives are available to view the financial distress process: the time frame, the financial hardship, and the stages of the process. Financial distress is classified into four (four) categories. The first category is financial hardship category A, which is very severe or extremely dangerous. Second, financial difficulty is regarded as hazardous and falls into category B or high. Third, a financial crisis is classified as moderate (class C). Fourth, there is low, or category D, financial difficulty. (Rivandi & Ariska, 2019)

Springate Model

One of the models in the Multiple Discriminant Analysis (MDA) ratio that is used to determine a company's risk of bankruptcy is the Springate model. The Springate Model uses many financial ratios to offer a more thorough examination of the company's financial status than models like Z-Score, which only employ one. Gordon L.V. Springate created this model back in 1978. This model was developed by study on twenty manufacturing businesses in Canada. (Gunawan & Debbianita, 2022). Springate may distinguish between organizations that are doing well and those that are not by using step-wise multiple discriminate analysis to determine which of the 19 commonly used financial ratios are the most significant. Following the same procedure as Altman (1968), Springate selected four ratios that were thought to be able to distinguish between businesses that were suffering distress and those that weren't. (Suwandani & Nuzula, 2017). Although several bankruptcy analysis methods have been developed, the analysis of Grover and Springate models is the most used bankruptcy analysis tool. The second reason is that a decent degree of accuracy may be achieved in predicting a company's impending bankruptcy by using analytical methods that are often utilized for the examination of both devices. (Gracia et al., 2018). The model that Springate produces is as following:

$$S = 1.03 A + 3.07 B + 0.66 C + 0.4 D$$

where:

A = working capital/total assets

B = earnings before interest and taxes (EBIT)/total assets

C = Income before Tax (EBT)/Total current liabilities

D = Sales/total assets

S = Overall index

The ratio A, or working capital to total assets, gauges the liquidity of the business. The bigger the working capital gained by the firm in relation to its entire assets, the higher the working capital value of its total assets. Net working capital, which is determined by deducting current obligations from current assets, is the working capital that is utilized. Ratio B Ratio (EBIT to Total Assets): This ratio compares EBIT to total assets on the company's balance sheet at the end of the accounting period to determine the rate of return on assets, or profitability. (Suwandani & Nuzula, 2017)

EBT to Total Current Liabilities, or the C Ratio, gauges how well a corporation can pay down its short-term debt. EBT to total current liabilities is the ratio that is used to compute it. This ratio is helpful to the management of the firm in determining how much income, after interest is subtracted, may be used to pay down current short-term debt. An activity ratio that contrasts net sales with total assets is called ratio D (sales to total assets) or total asset turnover. This ratio assesses how well the company's total assets have been used to generate revenue as well as how well they have been used to generate sales. (Suwandani & Nuzula, 2017)

The cutoff point for the Springate S-score for this model is 0.862; that is, a S-Score of less than 0.862 indicates that financial distress is anticipated for the company, and a S-Score greater than 0.862 indicates that financial distress is actually being experienced by the company. The Springate S-Score Model has a 92.5% accuracy rate in forecasting financial hardship. The findings of other studies stated that high degree of accuracy, as they found that the Springate S-Score Model had a 90% accuracy rate in forecasting financial hardship. (Tahu, 2019) . According to (Azwar, 2022), the Altman, Springate, Zmijewski, and Grover models can be used to forecast financial hardship. In comparison to the other models, the Springate model has the greatest accuracy level based on coefficient determination tests, making it the best appropriate prediction model for financial hardship.

RESEARCH METHODS

A case study of the firm PT. Sepatu Bata , Tbk is the sort of research that was conducted. Because the study data is in the form of numbers, the type of research is quantitative research using a descriptive technique. Then, descriptive research collects data, analyzes, interprets, and draws conclusions based on the analysis that has been conducted in order to present facts, situations, variables, and phenomena that are occurring currently and present them as they are, without taking action or controlling the research object. (Gunawan

Springate S-Score Model To Predict Financial Distress, The Last Stage To Corporate Bankruptcy: A Case Study Of Pt. Sepatu Bata Tbk. By Syukron Sazly¹, Harun Al Rasyid², Agus Tri Indah K³

& Debbianita, 2022)

RESULTS AND DISCUSSION

Financial Performance of PT. Sepatu Bata ,Tbk

In order to assess the company's financial performance and develop business goals for the future, PT Sepatu Bata has released its financial reports for the last six years. But, in this report, researcher show the contrast situation at year 2018 and 2023. Financial reports give managers important information about the state of a company's finances as well as trends that might affect strategic choices

Figure 2.
PT Sepatu Bata Financial Report Year 2018

PT SEPATU BATA Tbk. LAPORAN POSISI KEUANGAN Tanggal 31 Desember 2018 (Disajikan dalam Ribuan Rupiah, Kecuali Dinyatakan Lain)	31 Desember 2018/ December 31, 2018	31 Desember 2018/ December 31, 2018	PT SEPATU BATA Tbk. LAPORAN LABA RUGI DAN PENGHASILAN KOMPREHENSIF LAIN Untuk Tahun yang Berakhir pada Tanggal 31 Desember 2018 (Disajikan dalam Ribuan Rupiah, Kecuali Dinyatakan Lain)
ASET		LIABILITAS DAN EKUITAS	
Aset lancar		LIABILITAS	2018
Kas dan setara kas	4.688.596	Liabilitas jangka pendek	
Piutang usaha		Pinjaman jangka pendek	992.696.071
Pihak ketiga - neto	29.834.451	Utang usaha	(516.928.103)
Pihak-pihak berelasi	2.864.543	Pihak ketiga	
Piutang pegawai	877.431	Pihak-pihak berelasi	475.767.968
Piutang lain-lain	2.095.172	Utang pajak	(270.485.988)
Persediaan - neto	377.713.945	Beban akrual	(115.826.057)
Pajak pertambahan nilai dibayar		Liabilitas imbalan kerja	
di muka	68.448.560	jangka pendek	
Biaya dibayar di muka	68.495.249	Uang jaminan dari penyalur	50.202.829
Pajak penghasilan badan dibayar		Total liabilitas jangka pendek	194.538.478
di muka	7.409.571	Liabilitas jangka panjang	
Aset lancar lainnya	7.118.033	Liabilitas imbalan kerja jangka	
Total aset lancar	569.545.551	panjang	24.728.438
Aset tidak lancar		Liabilitas pajak tangguhan - neto	20.781.950
Aset tetap - neto	240.000.026	Total liabilitas jangka panjang	45.510.388
Aset lain-lain		TOTAL LIABILITAS	240.048.866
Biaya dibayar di muka	39.265.362	EKUITAS	
Uang jaminan sewa	21.889.371	Modal saham - modal dasar	
Pajak dibayar di muka - tidak lancar	6.155.915	2.000.000.000 saham dengan	
Total aset tidak lancar	307.310.674	nilai nominal Rp10 (Rupiah penuh)	
TOTAL ASET	876.856.225	per saham; ditempatkan dan disetor	
		penuh 1.300.000.000 saham	13.000.000
		Saldo laba	
		Telah ditentukan penggunaannya	176.000
		belum ditentukan penggunaannya	624.227.946
		Penghasilan komprehensif lain	
		Kerugian aktual atas	
		imbalan pasca kerja	(596.587)
		TOTAL EKUITAS	636.807.359
		TOTAL LIABILITAS DAN EKUITAS	876.856.225
			Penjualan neto
			Beban pokok penjualan
			Laba bruto
			Penjualan dan pemasaran
			Umum dan administrasi
			Keuntungan pelepasan
			aset tetap - neto
			Pendapatan/(beban) usaha lainnya -
			neto
			Laba usaha
			Pendapatan bunga
			Beban keuangan
			Laba sebelum beban pajak
			penghasilan badan
			Beban pajak penghasilan badan
			Laba tahun berjalan
			Penghasilan komprehensif lain
			Tidak akan direklasifikasi ke
			laba rugi
			Pengukuran kembali atas program
			imbalan pasti
			Pajak penghasilan terkait
			Total penghasilan komprehensif
			lain tahun berjalan
			Laba per saham dasar
			(Rupiah penuh)

Source : PT.Sepatu Bata,Tbk

Figure 3.
PT Sepatu Bata Financial Report Year 2023

strategy to avoid similar risks in the future.

Financial Distress Analysis of PT. Sepatu Bata ,Tbk

In order to evaluate PT.Sepatu Bata Tbk's financial performance using the Springate S-Score Model, a formula with many dimensions must be used. By taking into account many financial parameters, the Springate S-Score Model is a financial research technique that may be used to predict a company's insolvency. The Springate S-Score Model states that the likelihood of bankruptcy decreases with increasing S-Score value.

Figure 4.
Springate S-Score PT Sepatu Bata Year 2018

	2018		
Dimension		Weight	S-Score
A	0,4276722	1,03	0,4405024
B	0,1089602	3,07	0,3345078
C	0,4774279	0,66	0,3151024
D	1,1321081	0,4	0,4528433
			1,5429559

Source : Empirical Research

Given the Springate S-Score of 1,5429559 in this instance, it can be said that there was little chance of bankruptcy for PT.Sepatu Bata Tbk in 2018. It's crucial to keep in mind that this research only looks at one year, and that the company's financial situation might alter in the future. As a result, ongoing observation and analysis are required to comprehend the financial status of the organization.

Figure 5
Springate S-Score PT Sepatu Bata Year 2019

	2019		
Dimension		Weight	S-Score
A	0,122603571	1,03	0,126281678
B	0,049149922	3,07	0,15089026
C	0,144168294	0,66	0,095151074
D	1,201136958	0,4	0,480454783
			0,852777795

Source : Empirical Research

When compared to year 2018, the Springate S-Score (0,852777795) is in the lower range. This suggests that there may be a higher chance of financial difficulties. Although the danger of financial difficulty may not be extremely significant, it is still important to monitor it, as shown by the fact that the Springate S-Score is still positive. The Springate S-Score,

Springate S-Score Model To Predict Financial Distress, The Last Stage To Corporate Bankruptcy: A Case Study Of Pt. Sepatu Bata Tbk. By Syukron Sazly¹, Harun Al Rasyid², Agus Tri Indah K³

which represents variations in a company's financial situation over time, is similarly impacted by changes in the A, B, C, and D grades from year to year.

Figure 6
Springate S-Score PT Sepatu Bata Year 2020

	2020		
Dimension		Weight	S-Score
A	0,122603571	1,03	0,12628168
B	-0,273682425	3,07	-0,840205
C	-0,904792805	0,66	-0,5971633
D	0,592763271	0,4	0,23710531
			-1,0739813

Source : Empirical Research

At Figure 6 The A, B, C, and D values in this instance, along with the overall S-Score, have all changed significantly. In particular, the company's financial situation fundamentally changes when the B, C, and S Score turn negative. A substantial danger of financial trouble is indicated by a negative Springate S-Score. A declining financial situation is indicated by a decline in the A, B, and C values as well as a negative total S score. There are several possible reasons for the decline in these figures, such as a decline in sales, a rise in manufacturing costs, or an increase in debt. To prevent future bankruptcy risk, this matter needs to be addressed right once and corrective action needs to be taken.

Figure 7
Springate S-Score PT Sepatu Bata Year 2021

	2021		
Dimension		Weight	S-Score
A	0,153972382	1,03	0,158591554
B	-0,089179389	3,07	-0,273780726
C	-0,324700186	0,66	-0,214302123
D	0,671758235	0,4	0,268703294
			-0,060788

Source : Empirical Research

The value of the Springate S-Score (-0,060788) is less than it was previously. The Springate S-Score score has decreased, indicating a higher likelihood of financial trouble, even though it hasn't reached the previously significant negative value of -5.679496589. A Springate S-Score number that is still negative, however, denotes a precarious financial situation and calls for managerial intervention.

Figure 8
Springate S-Score PT Sepatu Bata Year 2022

	2022		
Dimension		Weight	S-Score
A	0,015218671	1,03	0,015675231
B	-0,083746811	3,07	-0,25710271
C	-0,189902584	0,66	-0,125335706
D	0,888658082	0,4	0,355463233
			-0,011299952

Source : Empirical Research

At figure 8 , The values of A, B, C, and D between the most recent data and the earlier data have changed significantly. The most recent data's Springate S-Score (-0,011299952) is greater than the prior one (--0,060788). The S-Score decreased from to -0.011299952, indicating that the company's financial situation has improved. The danger of financial hardship may have decreased, even though financial ratio values are still fluctuating. This is shown by an increase in the Springate S-Score.

Figure 9
Springate S-Score PT Sepatu Bata Year 2023

	2023		
Dimension		Weight	S-Score
A	-0,0125	1,03	-0,01288
B	-0,03504	3,07	-0,10756
C	-0,06452	0,66	-0,04258
D	0,17242	0,4	0,068968
			-0,09405

Source : Empirical Research

At figure 9, the values of A, B, C, and D between the most recent data and the earlier data have changed significantly. The most recent data's Springate S-Score (-0,09405) is less than the prior one's -0,011299952). A drop in the Z Value from the previous value (-0.011299952) to -0.09405 suggests that there may be a greater chance of financial difficulty. Significant financial instability is indicated by negative A, B, and C scores. A negative Springate S-Score number suggests a greater chance of bankruptcy in the future. This

Springate S-Score Model To Predict Financial Distress, The Last Stage To Corporate Bankruptcy: A Case Study Of Pt. Sepatu Bata Tbk. By Syukron Szaly¹, Harun Al Rasyid², Agus Tri Indah K³

research shows that, in comparison to Figure 8, the company's financial condition has substantially worsened in Figure 9. To address the underlying issue and guarantee the

	A	B	C	D	(Z)	Financial Condition
2018	0,4277	0,1090	0,4774	1,1321	1,5430	Safe
2019	0,1226	0,0491	0,1442	1,2011	0,8528	Financial Distress
2020	0,1226	-0,2737	-0,9048	0,5928	-1,0740	Financial Distress
2021	0,1540	-0,0892	-0,3247	0,6718	-0,0608	Financial Distress
2022	0,0152	-0,0837	-0,1899	0,8887	-0,0113	Financial Distress
2023	-0,0125	-0,0350	-0,0645	0,1724	-0,0941	Financial Distress

company's long-term financial health, management has to act quickly.

Figure 10

Springate S-Score PT Sepatu Bata Year 2018- 2023

Source : Empirical Research

Figure 10 shows that In 2018, the company's financial condition was indicated to be safe, with a positive S-Score, (1.5430). However, financial conditions began to deteriorate in 2019, with the company experiencing financial distress (Financial Distress) that worsened until 2023. The decline in A, B, C, and D values from year to year, along with increasingly negative S-Score, indicates there is a decline in financial performance and the potential risk of bankruptcy increases from year to year. From this data, it can be seen that the company has experienced a decline in its financial condition from year to year, which indicates that there are problems that need to be addressed immediately to avoid a greater risk of bankruptcy in the future.

CONCLUSION AND RECOMMENDATIONS

It can be seen that the company's financial condition consistently declines from 2018 to 2023, marked by a decrease in the value of financial ratios (A, B, C, D) and an increasingly negative S-Score value. The company began experiencing financial distress in 2019, and its condition will continue to worsen until 2023. This is indicated by a negative S-Score, which indicates an increased potential risk of bankruptcy. A decrease in the value of financial ratios from year to year, such as leverage (A), liquidity (B), profitability (C), and efficiency (D), indicates a decline in general financial performance. The company needs to reevaluate its financial strategy to reduce debt levels (A), increase liquidity (B), increase profitability (C), and increase operational efficiency (D). This may involve financial restructuring, cost reduction, and increased productivity. Management must pay attention to debt management so as not to be too burdened with high financial obligations. More effective

debt management can help reduce the risk of bankruptcy.

Companies need to develop a comprehensive financial recovery plan to overcome existing financial problems. This plan should include specific steps to improve financial conditions and reduce the risk of future bankruptcy. Management may consider consulting financial matters with financial experts or independent consultants to obtain objective views and suggestions. By implementing these recommendations, it is hoped that companies can improve their financial condition and reduce the risk of bankruptcy in the future.

REFERENCE

- Azwar, K. (2022). *Implementation of Springate , Altman , Grover and Zmijewski Models in Measuring Financial Distress*. 3(1), 1–8.
- Dharma Swara, R. A. (2021). Pengaruh Rasio Keuangan Terhadap Financial Distress pada Perusahaan Sub Sektor Bangunan Konstruksi yang Terdaftar di Bursa Efek Indonesia Tahun 2017 – 2019. *Jurnal Syntax Admiration*, 2(10), 1960–1068. <https://doi.org/10.46799/jsa.v2i10.328>
- Gracia, A., Hungan, D., & Sawitri, N. N. (2018). *Analysis of Financial Distress with Springate and Method of Grover in Coal In BEI 2012 - 2016*. 2(2), 52–60.
- Gunawan, E., & Debbianita, D. (2022). Analisis Financial Distress pada Perusahaan Sub Industri Penerbangan dan Kereta Api yang Terdaftar di Bursa Efek Indonesia Sebelum dan Sesudah Pandemi Covid-19. *Jurnal Akuntansi*, 14(1), 112–126. <https://doi.org/10.28932/jam.v14i1.4426>
- Hidayat, T., Permatasari, M., & Suhamdeni, T. (2021). Analisis Pengaruh Rasio Keuangan Terhadap Kondisi Financial Distress Perusahaan Manufaktur Yang Terdaftar Di Bursa Efek Indonesia. *Jurnal Akuntansi Bisnis Pelita Bangsa*, 5(02), 93–108. <https://doi.org/10.37366/akubis.v5i02.156>
- Rivandi, M., & Ariska, S. (2019). Pengaruh Intensitas Modal, Dividend Payout Ratio Dan Financial Distress Terhadap Konservatisme Akuntansi. *Jurnal Benefita*, 1(1), 104. <https://doi.org/10.22216/jbe.v1i1.3850>
- Sari, M., & Diana, H. (2020). Analisis Rasio Keuangan Untuk Memprediksi Kondisi Financial Distress Perusahaan Pulp Dan Kertas Yang Terdaftar Di Bursa Efek Indonesia Tahun 2012-2017 Dengan Model Altman Z-Score. *Research in Accounting Journal (RAJ)*, 1(1), 32–48. <https://doi.org/10.37385/raj.v1i1.32>
- Silanno, Glousa Lera & Loupatty, L. G. (2021). Pengaruh Current Ratio, Debt To Equity Ratio dan Return On Asset terhadap Financial Distress Pada Perusahaan-Perusahaan Di Sektor Industri Barang Konsumsi. *Jurnal Ekonomi, Sosial & Humaniora*, 2(07), 85–109. <https://www.jurnalintelektiva.com/index.php/jurnal/article/view/482>
- Suwandani, V., & Nuzula, N. (2017). SPRINGATE S-SCORE MODEL UNTUK MEMPREDIKSI FINANCIAL DISTRESS PERUSAHAAN (Studi pada Perusahaan Tekstil dan Garmen yang Terdaftar di Bursa Efek Indonesia Periode 2006-2015). *Jurnal Administrasi Bisnis SI Universitas Brawijaya*, 47(1), 140–146.
- Tahu, G. P. (2019). *PREDICTING FINANCIAL DISTRESS OF CONSTRUCTION COMPANIES IN INDONESIA : A COMPARISON OF ALTMAN Z-SCORE AND SPRINGATE METHODS Author*. 2(2), 7–12.