# Bankruptcy Prediction Analysis Of Retail Companies Affected by Israeli Boycott Using Altman's Z-Score and Springate

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## Abstract

*This study aims to analyze the potential bankruptcy of retail sub-sector companies affected by the Israeli boycott listed on the Indonesia Stock Exchange (IDX) for the period 2022–2024 using the Altman Z-Score and Springate models. By applying both prediction models and computing financial ratios from the companies' financial statements, this study employs a qualitative approach to evaluate the likelihood of bankruptcy. According to the findings, the Springate model has an accuracy rate of 50% with a 50% mistake rate, whereas the Altman Z-Score model has a higher accuracy rate of 75% with a 25% error rate. The quantity and kind of financial ratios employed, as well as the threshold values that each model applies, affect the variations in prediction outcomes. According to the results, the Altman Z-Score model is better suited to forecast bankruptcy in retail businesses impacted by the boycott. Businesses can use this analysis's insightful findings to identify financial issues early and take proactive steps to preserve their viability. This research contributes by providing useful insights for investors, companies, and policymakers to anticipate financial distress and make better strategic decisions in the retail sector.*

## INTRODUCTION

In general, a business is an organization that deliberately arranges people and resources to produce goods or services in order to achieve specific purposes, primarily to earn profit (Robbins & Coulter, 2021). Profititability itself is the consequence of the sale of goods or services and the costs incurred to acquire those inputs. In addition, there are other important goals, such as surviving business competition, growing, and fulfilling other social functions in society. Retail companies play a vital role in a country's economy, including Indonesia, by providing various consumer goods and contributing significantly to employment and national economic growth. However, some retail companies face significant challenges due to changes in consumer behavior influenced by global social and political issues. One prominent issue is the boycott movement against companies affiliated with Israel, which has gained attention due to the ongoing conflict between Israel and Palestine.

Regarding the law on aiding the Palestinian cause, the Fatwa Commission of the Indonesian Ulema Council (MUI) released its most recent fatwa, No. 83 of 2023, on November 8, 2023. It confirms that it is haram (forbidden) to support Israeli aggression against Palestine. The MUI also exhorts Muslims to refrain from doing business with or using goods associated with Israel, as well as those that promote colonialism and Zionism. Globally, this boycott is known as the Boycott, Divestment, and Sanctions (BDS) movement, which not only involves the Muslim community but also non-Muslims who support it on humanitarian grounds (Hasna Nur Azizah, 2023). The boycott carried out by consumers, whether on a small or large scale, has a significant impact on companies, especially large companies that rely on sales volume and customer loyalty. One of the most significant impacts of such conditions is the increased risk of bankruptcy, where companies

that cannot quickly adapt to market and financial changes often fall into deep financial difficulties. The bankruptcy that occurs in a company is caused by the deterioration of its financial condition and the company's inability to meet its obligations (Kou dkk., 2021).

According to Mulawarman Hanase, An Instructor in Terrorism Studies at the University of Indonesia's School of Strategic and Global Studies (SSGS), the renewed conflict between Palestine and Israel should be anticipated because the pros and cons between Palestine and Israel do not create urgency as acts of revenge between the border areas around the Gaza Strip. According to this academic who has conducted research in Gaza, Israel has launched ground attacks in retaliation against attacks carried out by Hamas. Many Israeli military assets have entered the border areas around the Gaza Strip (very, 2023). The current conflict is actually the result of a series of previous events that have triggered anger from both sides (Mubarok, 2023). The boycott experienced by several major retail companies in Indonesia in recent years includes, among others, PT Unilever Tbk (UNVR), PT Mitra Adiperkasa Tbk (MAPI), PT MAP Boga Adiperkasa Tbk (MAPB), and PT Fast Food Indonesia Tbk (FAST). These companies not only face challenges from external factors but also have to deal with a significant decline in demand due to consumer boycotts.
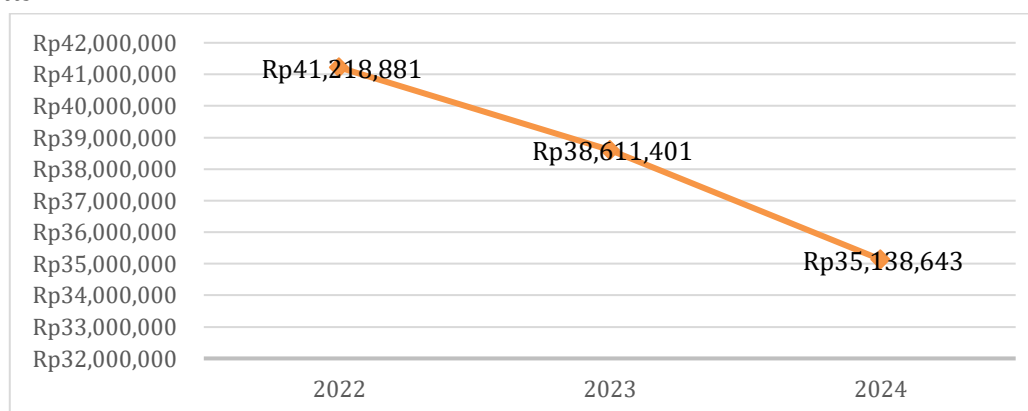


**Figure 1. UNVR Sales Graph**

In 2022, Unilever Indonesia faced a declining economic condition due to rising inflation in the second semester. However, Unilever Indonesia was still able to increase its market share, both in value and volume, on a rolling three-month basis (the last three months compared to the previous three months). Net sales increased by 4.2% to IDR 41.2 trillion in 2022, while net profit decreased by 6.8% to IDR 5.4 trillion. In terms of volume share, Unilever Indonesia made significant progress, closing 2022 with an outbound volume share of 32.3%. In the third quarter of 2023, Unilever Indonesia grew positively domestic sales increased 3.3%, driven by 4.3% underlying volume growth.

Although this positive momentum persisted until October 2023, a shift in sentiment due to geopolitical situations had an impact in November and December, resulting in domestic sales growth for fiscal year 2023 of negative 5.2%. Overall, the company recorded net sales of Rp38.6 trillion and net profit of Rp4.8 trillion in 2023. Unilever Indonesia recorded net sales of Rp35.1 trillion in 2024, a 9.0% decrease compared to the previous year. Fluctuations in customer inventory levels and price volatility also weighed on revenue. Net profit was recorded at Rp3.4 trillion, a 29.8% decrease compared to the previous year.

During the 2023–2024 period, Unilever products most affected by the pro-Palestine boycott in Indonesia were household care categories such as Rinso, Sunlight, Molto, and Wipol, which recorded an annual sales volume decline of up to 11% in the third quarter of 2024. This category

likewise suffered a downturn in national market share from 38.5% to 34.9%. Followed by food and beverage products such as Blue Band, Royco, Bango, SariWangi, and Lipton, which experienced a sales decline of around 7%, primarily because consumers are switching to local products that are considered safer and more halal. Meanwhile, the beauty and personal care category such as Lifebuoy, Dove, Pepsodent, and Vaseline remained relatively stable, with a volume decline of around 3–5%, due to the more essential nature of the products and strong brand loyalty among consumers (Richa & Stefanno, 2025). Unilever acknowledged that the boycott impacted sales, although it did not provide specific details. In October, PT Unilever Indonesia Tbk reported an 18.2% decrease in quarterly core revenue to 8.4 trillion rupiah (US$533 million). With the majority of Indonesian population (87%) being Muslim, various applications and pro-Palestinian groups are encouraging a boycott of brands like Ben & Jerry's, while recommending local products like Indomie (Laoli, 2025).
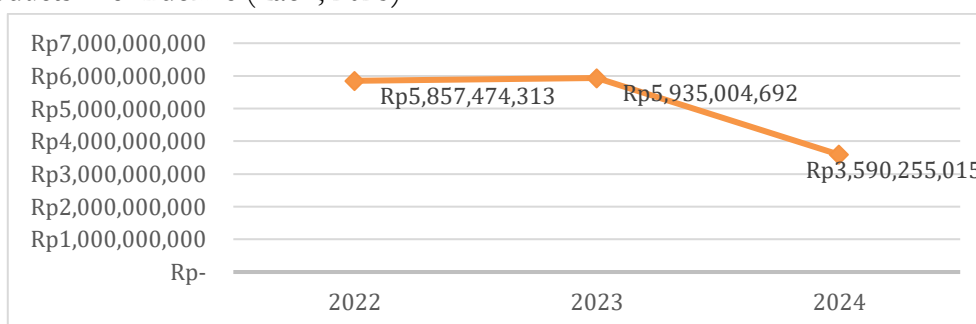


**Figure 2. FAST Sales Graph**

PT Fast Food Indonesia recorded a revenue growth of 21.01% from Rp4.84 trillion in 2021 to Rp5.86 trillion in 2022. This revenue increase was primarily driven by a 20.87% rise in food and beverage sales, reaching Rp5.82 trillion in 2022, up from Rp4.81 trillion the previous year. In 2023, the company's revenue was recorded at Rp5.93 trillion, an increase of 1.32% compared to Rp5.86 trillion in 2022. The cost of goods sold rose by 3.51% from Rp2.19 trillion in 2022 to Rp2.27 trillion. Operational expenses, which consists of sales and distribution expenses, general and administrative expenses, and other operating expenses also increased, resulting in an operational loss of Rp301.93 billion in 2023. The decrease in the number of operating stores and calls for boycotts have affected the company's financial performance. Revenue was recorded at Rp4.87 trillion in 2024, down 17.85% from Rp5.93 trillion in 2023, or 26% below the target of Rp6.59 trillion.

PT Fast Food Indonesia Tbk is the KFC franchise holder on IDX in Indonesia, has experienced significant impacts due to consumer boycotts since late 2023, related to the global geopolitical conflict. In addition to domestic factors, the development of the QSR business, especially for non-local American brands like KFC, will also depend on dynamics in the Middle East. Individual combo meals, seasonal menus such as desserts and special drinks, as well as Bucket Meals (family packs) are the most affected products because this segment heavily relies on bulk and impulsive purchases, which are now hindered by the boycott. Since the end of 2023, a series of boycotts against American brands in Indonesia have put significant pressure on KFC, managed by FAST—with a YoY revenue decline of 22.3% in Q3 2024 to Rp3.59 trillion and losses soaring to Rp557; this impact triggered the closure of 47 outlets, the dismissal of 2,274 employees, and several mitigation measures by management, who acknowledged the boycott as one of the main triggers besides macroeconomic (Burhan, 2024).
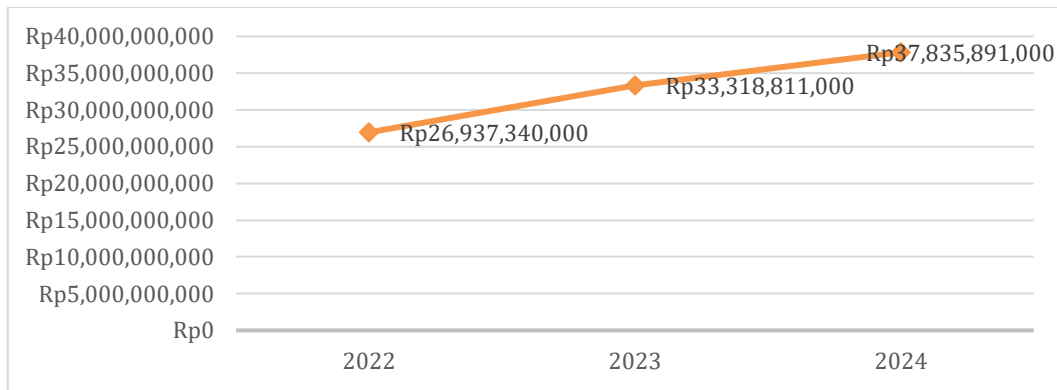
**Figure 3. MAPI Sales Graph**

In 2022, PT Mitra Adiperkasa recorded a net revenue of Rp26.9 trillion, an achievement supported by sales from the retail, department store, and food & beverage segments. Net sales this year increased by 46.2%, with all segments contributing positively to the sales. The company recorded a net revenue of Rp33.3 trillion, an achievement supported by sales from the retail, department store, and food & beverage segments. Net sales this year increased by 23.7%, with all segments contributing positively to the sales. PT Mitra Adiperkasa recorded a net revenue of Rp37.8 trillion in 2024, an achievement supported by sales from the retail, department store, and food & beverage segments. Net sales this year increased by 13.6%, with all segments contributing to the sales.

During the period 2022–2024, Zara faced significant pressure due to pro-Palestinian boycott calls that impacted its image and sales performance. The controversy began in 2022 when one of Zara's head designers made anti-Palestinian comments, triggering a wave of boycotts in various Muslim-majority countries. The pressure intensified at the end of 2023 after the "Atelier Collection" ad campaign featured models wearing jackets amidst ruins and statues wrapped in white plastic, visuals that were perceived as resembling the bodies of Gaza victims and shrouds in Islamic culture, sparking widespread condemnation and the hashtag #BoycottZara. Although Zara retracted the advertising materials and stated that the campaign was created before the conflict and was not intended to be political, the damage to its image had already occurred. As a result, in the first quarter of 2024 (Feb–Apr), sales growth for Inditex, Zara's parent company, slowed to 7%, down from 13% in the same period the previous year. In fact, sales growth in early May 2024 was recorded at only 6%, sharply down from 12% in early May 2023. In Indonesia, shares of PT Mitra Adiperkasa Tbk (MAPI), the official distributor of Zara, have fallen by about 8% in the past 3 months, reflecting market concerns over the reputational impact and weakening consumer demand due to the ongoing boycott.
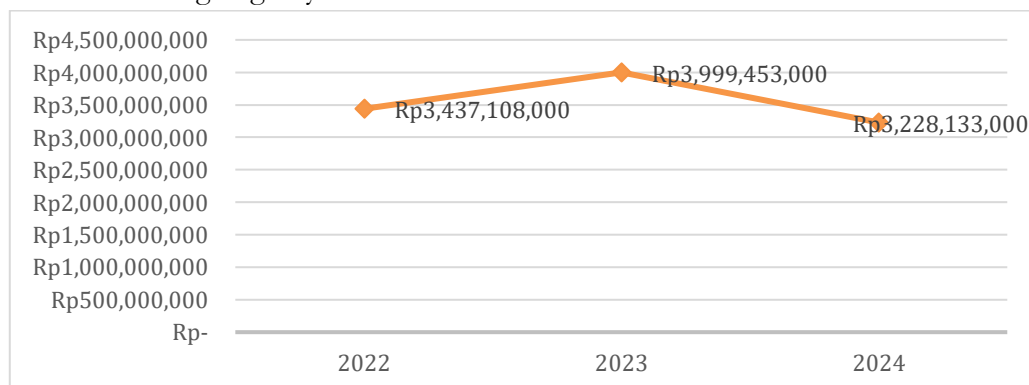


**Fig. 4. MAPB Sales Graph**

In 2022, PT MAP Boga Adiperkasa successfully recorded a net revenue of Rp3.4 trillion. This year's net revenue experienced a significant increase of 41.4%, with sales growth occurring in all segments. Some-store sales growth also increased by 18.8% in 2022. This year, The company continues to expand aggressively by adding new stores and expanding its area. The company recorded positive performance throughout 2023 after the end of the COVID-19 pandemic. Net income increased by 16.4% from the previous year, but the company still recorded a 19% decline in net sales compared to the previous year, amounting to Rp3.2 trillion. The company still recorded a 19% decline in net sales compared to the previous year, amounting to Rp3.2 trillion. Until the reporting period's end, the Company successfully recorded a net revenue of Rp3,228.1 billion. This amount experienced a decrease of 19.3% compared to 2023, which was Rp3,999.5 billion.

This decline occurred due to the impact of the boycott. During the past 8 months following the escalation of the Israel-Gaza conflict, Starbucks Indonesia has been the main contributor to the decline in MAPB's performance, with net revenue in Q1 2024 dropping 17.7% YoY to Rp 788 billion from Rp 957 billion in the same period the previous year, resulting in MAPB recording a loss of Rp 22.23 billion, whereas it previously recorded a profit of Rp 13.65 billion (Kurnia, 2024). The decline in the beverage segment, dominated by Starbucks, reached 23.2% YoY to Rp 438.5 billion. Cumulatively, MAPB recorded a net loss of Rp 50.1 billion in the first half of 2024, along with a 24.7% YoY decline in beverage sales (Puspadini, 2024). Management cited the boycott—encompassing vandalism, social protests, and public pressure—as the main factor, in addition to macroeconomic pressures, which led to the closure of several outlets and the postponement of expansion (Muslimawati, 2024).

Based on the explanation above, this indicates that boycotts and sharp declines in demand can cause companies to struggle to maintain their financial performance. According to (Izzati Nisa dkk., 2024), if there is a sustained decline in revenue, this can cause the company to experience financial difficulties, which can ultimately lead to bankruptcy, meaning the company fails to operate its business. To prevent financial difficulties, every company must monitor its financial performance based on specific guidelines as an indicator or type of early warning system for potential financial difficulties using specific methods.

In this context, the emergence of various bankruptcy predictions becomes very important, and as analysts and investors, one must be able to identify early warning signs that may indicate a company's potential bankruptcy. For companies that are currently operating, bankruptcy is a fatal matter (Dou dkk., 2018). Some key indicators used to predict bankruptcy include liquidity ratios, solvency ratios, profitability ratios, and operating cash flow. Additionally, external factors such as consumer boycotts and market changes caused by certain issues should also be a primary consideration in this analysis. Predicting corporate bankruptcy by involving in-depth analysis of financial data and external factors becomes a very useful tool for taking preventive measures before conditions worsen.

This study uses the Altman Z-Score and Springate models to examine the possible bankruptcy of sub-retail businesses impacted by the Israeli boycott. Additionally, this research evaluates the extent to which the boycott affects the financial condition of the companies and compares the results of both models in predicting bankruptcy. If bankruptcy can be predicted earlier, then mitigation measures can be taken, such as debt restructuring, changes in business strategy, or even improving the reputation of the affected company. Considering the aforementioned issues, the researcher is interested in conducting a study titled "Bankruptcy

Prediction Analysis Of Retail Companies Affected by Israeli Boycott Using Altman's Z-Score and Springate".

**METHODS**

This type of study is qualitative. Qualitative research is used to study social or business phenomena. In qualitative research, it is more commonly used to examine the scientific conditions of objects (Kasmir, 2022). The subjects of this study were companies operating in the retail sub-sector listed on the Indonesia Stock Exchange (IDX) that were suspected of being affected by the boycott of products linked to Israel. The companies chosen as subjects for this research are PT Unilever Indonesia Tbk (UNVR), PT Mitra Adiperkasa Tbk (MAPI), PT MAP Boga Adiperkasa Tbk (MAPB), and PT Fast Food Indonesia Tbk (FAST). The object of this research is the financial condition of these companies.

This study used quantitative, secondary data as its data type. Annual financial reports of companies in the retail sub-sector for the period 2022–2024. The data collection method was documentation-based, with secondary data gathered from the annual financial statements of retail sub-sector companies listed on the Indonesia Stock Exchange for the period 2022-2024 on the website www.idx.co.id and the respective companies' official websites. This study used quantitative data analysis to forecast impending bankruptcy in retail sub-sector enterprises. Data processing using Microsoft Excel to predict firm insolvency through calculations using the Altman Z-Score and Springate models, as follows:

The financial condition of the company and the possibility of the company's bankruptcy can be predicted using the Altman Z-Score 1983 model were obtained from the financial statements of retail companies listed on the Indonesia Stock Exchange (IDX). Using the first version of the Altman formula, which includes five ratios, among others:

$$Z = 1{,}2X1 + 1{,}4X2 + 3{,}3X3 + 0{,}6X4 + 1{,}0X5$$

**Working Capital to Total Assets Ratio (X1)**
This ratio measures the company's liquidity and ability to meet short-term obligations using total assets. Higher values indicate stronger liquidity and financial stability.

**Retained Earnings to Total Assets Ratio (X2)**
This ratio represents the extent to which the company has financed its assets from retained earnings rather than debt, indicating long-term sustainability.

**EBIT to Total Assets Ratio (X3)**
This ratio shows how efficiently a company generates operating profits from its assets, reflecting its operational performance.

**Market Value of Equity to Total Liabilities Ratio (X4)**
It compares the market value of a company's equity to its liabilities, representing how well the company's market capitalization can cover its debts.

**Sales to Total Assets Ratio (X5)**
This ratio measures the company's efficiency in using its assets to generate sales or revenue.

A company falls into the healthy category if the Z-score is > 2.99, Meanwhile, a company is categorized as being in the gray area if its Z-score is between 1.81-2.99, and a company is considered to have the potential for bankruptcy if its Z-score is <1.81.

The Springate model is a technique for estimating a company's financial health and likelihood of financial difficulty that uses four ratios. The authors of this study employed the Altman formula in its initial iteration, which includes four ratios, among others:

$$S = 1{,}03\ X1 + 3{,}07\ X2 + 0{,}66\ X3 + 0{,}4\ X4$$

**Working Capital to Total Assets Ratio (X1)**
This ratio measures the company's ability to meet its short-term obligations using total assets. A higher value indicates greater liquidity and stronger short-term financial health.

**EBIT to Total Assets Ratio (X2)**
This ratio evaluates the company's efficiency in generating operating profits from its total assets. A higher ratio shows better profitability and operational performance.

**EBIT to Current Liabilities Ratio (X3)**
This ratio measures the company's ability to cover its current liabilities using profits generated before tax. A higher value reflects better short-term solvency and stronger financial stability.

**Sales to Total Assets Ratio (X4)**
This ratio assesses the company's effectiveness in utilizing its total assets to generate sales. A higher ratio indicates more efficient asset use and stronger operational performance.

When analyzing a company's potential for bankruptcy using the Springate method, a company is considered healthy if its S value is > 0.862, while a company is considered to have the potential for bankruptcy if its S value is < 0.862.

## RESULTS AND DISCUSSION
### Financial Statement Analysis Using the Altman's Z-Score Bankruptcy Prediction Method
Altman Z-Score is a commonly used tool in financial analysis to assess a company's financial condition by relying on several financial ratios that can indicate potential bankruptcy risk.

**Table 1. Altman Z-Score Model Bankruptcy Prediction Results**

| Company Code | Year | X1 | X2 | X3 | X4 | X5 | Total | Predictions |
|---|---|---|---|---|---|---|---|---|
| UNVR | 2022 | -0,319 | 0,291 | 1,273 | 0,008 | 2,250 | 3,503 | Healthy |
| | 2023 | -0,362 | 0,268 | 1,243 | 0,006 | 2,317 | 3,472 | Healthy |
| | 2024 | -0,490 | 0,171 | 0,908 | 0,003 | 2,190 | 2,782 | Grey Area |
| FAST | 2022 | -0,105 | 0,311 | -0,025 | 0,845 | 1,532 | 2,558 | Grey Area |
| | 2023 | -0,314 | 0,179 | -0,255 | 0,556 | 1,518 | 1,684 | Bankrupt |
| | 2024 | -0,387 | -0,011 | -0,102 | 0,298 | 0,938 | 0,736 | Bankrupt |
| MAPI | 2022 | 0,181 | 0,362 | 0,517 | 1,279 | 1,282 | 3,621 | Healthy |
| | 2023 | 0,172 | 0,368 | 0,420 | 1,180 | 1,211 | 3,351 | Healthy |
| | 2024 | 0,198 | 0,420 | 0,378 | 0,928 | 1,316 | 3,240 | Healthy |
| MAPB | 2022 | -0,236 | 0,193 | 0,283 | 1,760 | 1,333 | 3,333 | Healthy |
| | 2023 | -0,119 | 0,197 | 0,180 | 1,784 | 1,233 | 3,275 | Healthy |
| | 2024 | -0,132 | 0,146 | -0,106 | 1,213 | 1,067 | 2,188 | Healthy |

*Source: Research Data (2025)*

Each research sample is classified based on predetermined bankruptcy criteria. According to Altman Z score, If the value of Z is less than 1.8, it is a Bankruptcy company or in a financial distress, If the value of Z is between 1.81 and 2.99, it is included in grey area (in a crisis). If the

value of Z is greater than 2.99, then the company is said to be a healthy company (Teja, 2025). Based on a bankruptcy ratio analysis conducted using the Altman Z-Score method, the results show that retail companies listed on the Indonesia Stock Exchange (IDX) for the 2022-2024 period are generally considered healthy, with an average value of 3.145 exceeding 2.99. The explanation for each retail company's analysis is as follows:

PT. Unilever Tbk, in 2022 and 2023, is in the healthy category because its Z-Score is more than 2.99, and despite a slight decline in 2023, the company remains in the healthy category, with scores of 3.503 and 3.472 respectively. However, The working capital to total assets ratio (X1) is negative, which causes the company to be in crisis in meeting its short-term obligations, thus affecting the company's operations. The negative value of X1 is caused by its working capital being negative, which is due to current liabilities being greater than current assets.

According to the Pecking Order Theory, profitable companies generally use little external funding to finance their operational activities (Syarifuddin dkk., 2022). In the X2 ratio, a good score indicates that the company is effective in using its total assets to generate retained earnings. The X3 ratio also tends to be good, This signifies that the corporation is effective in generating earnings before interest and taxes from its entire assets. The X4 value has significantly decreased, which means this has caused the company difficulties in meeting its long-term obligations, This affects the value of the company's assets. In 2024, PT. Unilever Tbk entered the gray area category because its Z-Score did not reach 2.99, which was 2.782. In 2024, the company showed further decline, caused by a negative X1 value of -0.490. Meanwhile, the ratios X2, X3, X4, and X5 are quite good compared to the ratio X1.

PT. Fast Food Tbk, in 2022, fell into the gray area category with a Z-Score of 2.558. However, in the following years, 2023 and 2024, the company fell into the bankruptcy category. According to an analysis of the circumstances, the company has the same issues each year, which puts it at risk of going bankrupt, where the values of X1 and X3 have been negative, and in 2024, the value of X2 is also negative. This is caused by the company's inefficiency in using its overall assets to generate profits, resulting in losses due to increased operational costs not offset by increased sales. Additionally, the amount of current liabilities has continued to increase each year, resulting in negative working capital and negative X1 values throughout 2022-2024, which also affects its Z-Score.

PT Mitra Adiperkasa Tbk, for the past three years from 2022 to 2024, The company is categorized as healthy based on the Altman Z-Score method, as evidenced by Z-Score values exceeding 2.99, namely 3.621, 3.351, and 3.240 respectively. This is because each ratio, namely X1, X2, X3, X4, and X5, is positive and tends to be high, which means the company has good performance in managing working capital and current liabilities, is effective in generating profits both retained earnings and earnings before interest and taxes, and is productive in generating sales. This is evidenced by the increase in sales in 2023 and a slight decline in 2024.

PT MAP Boga Adiperkasa, in 2022 and 2023, falls into the category of healthy companies, as its Z-Score values were above 2.99, namely 3.333 and 3.275, respectively. Although the X1 value is negative each year, it is supported by the values of the X2, X3, X4, and X5 ratios. However, in 2024, the company fell into the gray area category due to the negative X1 and X3 values. The negative X1 value is caused by negative working capital, which is due to current liabilities being greater than current assets.

**Analysis of Financial Statements Based on The Springate Model Bankruptcy Prediction Method**

Altman Z-Score is a commonly used tool in financial analysis to assess a company's financial condition by relying on several financial ratios that can indicate potential bankruptcy risk.

**Table 2. Bankruptcy Prediction Results using the Springate Model**

| Company Code | Year | X1 | X2 | X3 | X4 | Total | Prediction |
|---|---|---|---|---|---|---|---|
| UNVR | 2022 | -0,274 | 0,638 | 0,371 | 0,900 | 1,635 | Healthy |
| | 2023 | -0,311 | 0,588 | 0,365 | 0,927 | 1,569 | Healthy |
| | 2024 | -0,420 | 0,375 | 0,243 | 0,876 | 1,074 | Healthy |
| FAST | 2022 | -0,090 | 0,681 | -0,038 | 0,613 | 1,166 | Healthy |
| | 2023 | -0,270 | 0,391 | -0,124 | 0,607 | 0,604 | Bankrupt |
| | 2024 | -0,332 | -0,024 | -0,209 | 0,375 | -0,190 | Bankrupt |
| MAPI | 2022 | 0,156 | 0,794 | 0,277 | 0,513 | 1,740 | Healthy |
| | 2023 | 0,148 | 0,807 | 0,191 | 0,484 | 1,630 | Healthy |
| | 2024 | 0,170 | 0,921 | 0,170 | 0,513 | 1,774 | Healthy |
| MAPB | 2022 | -0,202 | 0,422 | 0,114 | 0,537 | 0,871 | Healthy |
| | 2023 | -0,102 | 0,431 | 0,082 | 0,493 | 0,904 | Healthy |
| | 2024 | -0,113 | 0,319 | -0,117 | 0,436 | 0,525 | Bankrupt |

*Source: Research Data ( 2025)*

Each sample is classified according to the Springate model criteria. According to Springate S score, If the value of S is less than 0.862, the company is said to be in finan cial distress or categorized as Bankruptcy, whereas the value of S is greater than 0.862 then it is said to be a healthy company or the company is not categorized as bankruptcy (Teja, 2025). According to a bankruptcy analysis conducted utilizing the Springate model, the results show that retail companies listed on the Indonesia Stock Exchange (IDX) for the period 2022-2024 are generally in the healthy category, as their average score is more than 0.862, specifically 1.1085. The explanation for each retail company analysis is as follows:

PT Unilever Tbk during the previous three years, namely 2022-2024, falls into the healthy category according to the Springate model, as evidenced by its S-Score values exceeding 0.862, which are 1.635, 1.569, and 1.074 respectively. Although the X1 ratio value is negative, it can be balanced by the positive values of the X2, X3, and X4 ratios, which means the company has fairly good performance in managing working capital and current liabilities and is already effective in generating profits, both earnings before interest and taxes and earnings before taxes.

PT Fast Food Indonesia Tbk, for the years 2022 and 2024, falls into the healthy category with S-Scores of 1.166 and 1.684 respectively. However, in the following year, 2024, the company falls into the bankrupt category. Analyzing the situation, the company experiences the same issue where the X1 value is negative each year, and in 2024, the X3 value is also negative. This is caused by the company's ineffectiveness in using its total assets to generate profit, even leading to losses due to increased operating expenses not accompanied by increased sales. Peak occurred in 2024 when the company's current liabilities exceeded its current assets, making it difficult to meet them, resulting in a negative X1 value and affecting its S-Score.

PT Mitra Adiperkasa Tbk in the years 2022-2024 falls into the category of healthy companies, as evidenced by an S-Score value of more than 0.862 and even relatively high rational values of 1.740, 1.630, and 1.177 respectively. The ratio values are the highest among all the values of the

retail companies being analyzed. However, if we look at the X1 ratio value for Mitra Adiperkasa, all its values are low, even almost negative, indicating that the company has difficulty with working capital. This is supported by a high X2 value, meaning the company have good performance in earning profit before interest and tax from its total assets. The X3 value, although small, is not negative, and the X4 value is also high, which is due to its very high sales value.

PT MAP Boga Adiperkasa Tbk in 2022 and 2023 falls into the category of healthy companies because its S-Score values are more than 0.862, specifically 0.871 and 0.904 respectively. But in 2024, the company fell into the bankrupt category with an S-Score of 0.525. This is due to the negative X3 value, meaning The company's pre-tax profits are insufficient to meet its current liabilities. Even throughout the 3 consecutive years from 2022 to 2024, the value of X1 was negative, causing the company to struggle in meeting its short-term obligations, which in turn affected the company's operations.

**Discussion**

The potential bankruptcy results utilizing the Altman Z-Score and Springate models on retail sub-sector companies affected by the Israeli boycott listed on the Indonesia Stock Exchange (IDX) for the period 2022-2024 were then given scores of 1 and 2 according to the separation thresholds of each analysis model, and the average value of the entire sample was calculated. A score of 1 is given to companies that indicate they are in the bankruptcy zone, and a score of 2 indicates that the company is in the gray or safe zone.

**Table 3. Summary of Bankruptcy Prediction Results Utilizing the Altman Z-Score and Springate Models**

| Prediction | Altman's Z-Score | Springate |
|---|---|---|
| Bankrupt | 1 | 2 |
| Not Bankrupt | 3 | 2 |
| Number | 3 | 2 |
| % Accuracy | 75% | 50% |
| Type of Error | 25% | 50% |

*Source: Research Data (2025)*

From the 4 company samples used, according to the Altman Z-score model 1 company will go bankrupt and 3 companies are predicted not to go bankrupt. In reality, none of the companies actually went bankrupt. Overall, it can be concluded that the Altman Z-score model is inaccurate in predicting corporate bankruptcy. Thus, this model only has an accuracy rate of 75% with an error rate of 25%. Meanwhile, the Springate prediction model predicts that there are 2 companies that will go bankrupt and 2 companies that are predicted not to go bankrupt. If compared to reality, the Springate model has a bankruptcy prediction error rate because, in reality, there were no companies in the sample that went bankrupt. As a result, the Springate model has a 50% accuracy and 50% error rate.

Based on the two models of corporate bankruptcy calculations conducted, compared to the Springate model, the Altman Z-Score model exhibits a higher degree of accuracy, specifically 75%. Meanwhile, the accuracy rate of the Springate model is 50%. Additionally, looking at the ratios used, Altman Z-Score and Springate models differ because the Altman Z-Score model uses five financial ratios, which include working capital, retained earnings, market value of equity, EBIT, and total assets, while the Springate model uses four financial ratios. From the calculations above,

there is a difference in the prediction results between the two models. This is due to differences in accuracy levels, different threshold values, and the ratios used in each method. Therefore, it can be concluded that the Altman Z-Score model is a more accurate prediction model for forecasting bankruptcy in retail companies affected by the Israeli boycott listed on the Indonesia Stock Exchange (IDX).

This study is consistent with the studies carried out by (Dewi Harahap dkk., 2025), which states that the highest accuracy level is the Altman Z-Score model has an accuracy rate of 72.72%, Type 1 Error Rate (False Positive): 18.18%, and Type 2 Error Rate (False Negative): 9.09%; the accuracy rate of the Springate S-Score model is 63.63%. Type 1 Error Rate (False Positive): 0%, and Type 2 Error Rate (False Negative): 36.36%. This study denies the findings of the one conducted by (Oliviana, 2023), which states that in terms of accuracy calculation, The Springate model has the highest accuracy of any model in predicting financial issues in the food and beverage subsector listed on the Indonesia Stock Exchange, at 50%. Meanwhile, the Altman Z-Score model has a 30% accuracy rate.

### Mitigation Efforts And Corporate Social Responsibility (CSR)

In addition to the financial effects due to the pro-Palestine boycott, several companies that were the subject of the research made mitigation efforts through corporate social responsibility (CSR) programs to improve their image and quell negative consumer sentiment. PT Unilever Indonesia Tbk (UNVR) openly condemned the genocide against the Palestinian people and provided humanitarian aid amounting to more than Rp. 4.65 billion through official institutions BAZNAS, Lazismu, and LAZISNU, including Rp. 198 million sourced from employee donations (BAZNAS, 2023). Fast Food Indonesia Tbk (FAST), the company that owns the KFC franchise, donated Rp 1.5 billion through the Indonesian Red Cross to help conflict victims in Gaza in November 2023 (Burhan, 2024). Meanwhile, PT MAP Boga Adiperkasa Tbk (MAPB) and Mitra Adiperkasa Tbk (MAPI) have not been found to have any public records regarding specific CSR programs related to Palestine, although both companies are experiencing pressure due to boycott issues that have impacted sales and brand image. These efforts demonstrate that CSR can be one of the strategies to mitigate reputational risks and rebuild consumer trust, although its effectiveness in recovering financial performance still requires further study.

### Bankruptcy in the Perspective Of Islam

Etymologically (*lughawy*), maqashid al-syari'ah consists of two words, namely *maqashid* and *syari'ah*. *Maqashid* is a plural noun derived from the word *maqsid*, which comes from the root word *qasada yaqsudu qasdan* meaning intention or purpose. According to linguistic theory, the term "*syari'ah*" can refer to a variety of things, such as the straight way and the route to a water source. Meanwhile, according to the term, sharia is everything that Allah has prescribed for His servants, both related to faith, worship, morals and muamalat and all systems that regulate human life for the benefit and happiness of humans in this world and the hereafter (Abdurrahman, 2020).

The aim of legal enactment is *maqashid al-syar'iyah*, and its content is human benefit. This view is based on the idea that every law has a purpose behind an obligation (*taklif*) which is made to realize human benefit. Thus, if there is a law that has no purpose, it is the same as imposing obligations (*taklif*) that cannot be implemented, and that is something that is impossible for the Wise Lawmaker (Tahir & Hamid, 2024). It is clear that the laws that have been given to humans were made for the benefit of humans, not for the law itself. Maqashid al-Syariah aims to achieve

prosperity and prevent harm in economic activities. Maqashid alsharia Islam is a universal teaching that regulates humanity (Isnaini & Sugara, 2024).

This concept has been developed by classical scholars such as Imam al-Syatibi, a person who defined Sharia's purposes as the safeguarding of five major aspects: religion (hifz al-din), life (hifz al-nafs), reason (hifz al-'aql), lineage (hifz al-nasl), and property (hifz al-mal). All legal decisions and policies, including those in business and economics, are based on these five interconnected factors. According to scholars, the goal of Islamic law is to assist humanity in both the afterlife and the present. Public welfare is at the heart of maqasid al-syariah, as was previously explained. This benefit, according to al-Syathibi, can be viewed from two perspectives: qashdu al-Syari' (the purpose of God) and qashd al-mukallaf (the purpose of humans). According to al-Syathibi, Allah revealed the Sharia (legal rules) to His servants solely to achieve benefits while avoiding harm (jalb al-mashalih wa dar'u al-mafasid) (Baharuddin dkk., 2025).

Imam al-Syatibi divides the benefits to be realized into three levels, namely the needs of *dharuriyat, hajiyat,* and *tahsiniyat.* The first level, *dharuriyat* needs, is the level of essential demands, also known as primary needs. If this level of need is not met, humanity's safety will be jeopardized both now and in the afterlife. Al-Syatibi categorizes five things as falling into this category, namely *hifzh al-din* (preserving religion), *hifzh al-nafs* (preserving life), *hifzh al-'aql* (preserving intellect), *hifzh al-nasl* (preserving lineage), and *hifzh almal* (preserving wealth). To preserve these five essentials, Islamic Sharia was revealed. The second level, *hajiyat* needs are secondary needs, where if they are not fulfilled, they do not threaten safety, but will cause difficulties. Islamic law eliminates all those difficulties. The third level, *tahsiniyat* needs, refers to the level of needs thatIf it is not met, it does not jeopardize the existence of any of the five points listed above and does not generate problems (Abdurrahman, 2020).

In the context of bankruptcy, the application of *Maqashid Syariah* is very relevant, because bankruptcy not only affects the loss of wealth (hifz al-mal). As mentioned in the Qur'an Surah Al-Baqarah verse 188:

$$وَلَا تَأْكُلُوٓا۟ أَمْوَٰلَكُم بَيْنَكُم بِٱلْبَٰطِلِ وَتُدْلُوا۟ بِهَآ إِلَى ٱلْحُكَّامِ لِتَأْكُلُوا۟ فَرِيقًا مِّنْ أَمْوَٰلِ ٱلنَّاسِ بِٱلْإِثْمِ وَأَنتُمْ تَعْلَمُونَ$$

Meaning: "*Do not consume one another's wealth unjustly or send it [in bribery] to the rulers in order that [they might aid] you [to] consume a portion of the wealth of the people in sin, while you know [it is unlawful]*"
(QS. Al-Baqarah: 188)

In Islam, predicting and preventing bankruptcy is part of the effort to maintain welfare. This is consistent with the *maqashid sharia's maslahah daruriyyah* (primary) principle, which is to ensure that basic human needs are met. When a company is unable to manage risks and ultimately goes bankrupt, it will have a domino effect on employees, shareholders, and even the wider community. Therefore, Islam encourages business practitioners to always apply the principle of caution (*ihtiyath*) and justice in every business decision. In line with bankruptcy predictions, to minimize and prevent bankruptcy for both internal and external parties, a bankruptcy analysis is needed to predict the continuity of the company's life (Komang Try Satriawan Korry dkk., 2019).

Thus, *maqashid syariah* does not only view bankruptcy as a financial failure but also as a threat to social and spiritual welfare. Therefore, every effort to predict and prevent bankruptcy must align with the objectives of Sharia, which are to achieve welfare and reject harm for all of humanity. Applying the maqashid sharia principles, the Islamic economic system implementation can establish a just business environment, stable, and sustainable business order. In line with that,

minimizing the risk of bankruptcy can be realized by predicting the bankruptcy itself through company bankruptcy analysis using methods, namely the Altman's Z-Score and Springate models.

## CONCLUSION

The purpose of this study is to analyze the potential bankruptcy of companies affiliated with the boycott due to the Israel-Palestine conflict during the period 2022-2024 using the Altman's Z-Score and Springate models. Based on calculations using the Altman's Z-Score and Springate models on the potential bankruptcy of retail sub-sector companies affected by the Israeli boycott stated on the IDX from 2022 to 2024, The Altman' Z-Score method has a greater accuracy rate of 75% with a 25% mistake rate, whereas the Springate method has an accuracy rate of 50% with a 50% error rate. This difference in accuracy is caused by the different financial ratios and threshold values used in each model. Thus, the Altman's Z-Score model is more suitable for prediction the potential bankruptcy of retail sub-sector companies in this study.

Based on the research results, it is recommended that retail sub-sector companies routinely evaluate their financial conditions using predictive models for bankruptcy, such the Altman's Z-Score to detect potential bankruptcy risks earlier and take appropriate preventive measures. Additionally, companies also need to maximize their financial performance by paying attention to financial ratios that affect the health of the company. For upcoming scholars, It is recommended that use a larger sample and consider external factors so that the prediction results can be more accurate and comprehensive.

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