Digibrand Business Journal

Digibrand Business Journal 2026, Volume 01, Issue 01

Article

BANKRUPTCY RISK ANALYSIS USING THE MODIFIED ALTMAN Z-SCORE MODEL IN RURAL BANKS (BPR) AND ISLAMIC RURAL BANKS (BPRS) IN WEST SUMATRA

Siti Gadijah[1], Sulastri[2], Mexano Hans Gery[3]

[1]Department of Accounting Faculty of Economics and Business, University Sumatera barat, Padang Indonesia
[2] Department of Accounting Faculty of Economics and Business, University Sumatera barat,Padang Indonesia
[3] Department of Accounting Faculty of Economics and Business, University Sumatera barat,Padang Indonesia

***Corresponding Author: Sulastri**
Email: sulastrisyam79@yahoo.com

Article Info

Article History:
Received Jun 12th, 2026
Revised Aug 31th, 2026
Accepted Sep 07th, 2026

Keywords:
Working Capital to Total Assets, Retained Earnings to Total Assets, Earning Before Interest and Taxes to Total Assets, Book Value of Equity to Total Liabilities and modified Altman Z-Score Model.

Abstract

The aim of this research is to analyze the bankruptcy level of Bank Perkreditan Rakyat (BPR) dan Bank Pembiayaan Rakyat Syariah (BPRS) which are measured based on the financial ratios Working Capital to Total Assets, Retained Earnings to Total Assets, Earning Before Interest and Taxes to Total Assets, Book Value of Equity to Total Liabilities using modified Altman Z-Score. In this research, the bankruptcy level of BPR and BPRS will be calculated. This research was conducted on BPR and BPRS in West Sumatra which are registered with Bank Indonesia and the Financial Services Authority as well as the websites of each banking company for the period 2021 – 2023. The results of this research are that in the group classified as "Bankrupt" in 2021 there are 11 BPR, in 2022 there are 9 BPR and in 2023 there are 10 BPR and 1 BPRS. In the group classified as "Grey Area" in 2021 there are 16 BPR and 2 BPRS, in 2022 there are 16 BPR and 3 BPRS and in 2023 there are 13 BPR and 2 BPRS. The group classified as "HEALTHY" 2021 includes 4 BPR and 1 BPRS, In 2022 there will be 6 BPR and in 2023 there will be 8 BPR. For folk credit banks and Islamic community financing banks from bankruptcy, it is expected to improve and financial performance. Breaking up sufficient capital will help maintain the stability of financial performance by doing the current assets and maintaining the composition of the current debt.

INTRODUCTION

Small businesses play a significant role in the development of the national economy. This sector absorbs a substantial amount of labor and contributes to increasing people's income. However, the existence of small businesses cannot be separated from various challenges. The main problems faced by small businesses are limited capital and difficulties in accessing financing sources from formal financial institutions, particularly banks. Capital constraints have become a major obstacle to the development of small businesses. Bank loans can help overcome entrepreneurs' capital limitations, enabling them to expand and improve their business operations.

In response to the difficulties faced by small businesses, the government has also made efforts to provide solutions by regulating the banking system and directing credit policies appropriately. One form of this policy was the establishment of Rural Banks (Bank Perkreditan Rakyat/BPR). Rural Banks (BPR) are specialized banking institutions established to serve lower-income communities and small-scale businesses. BPRs provide banking services to meet the financial needs of the community, one of which is credit facilities with more flexible requirements, simpler procedures, and less complicated application processes.

The Financial Services Authority (Otoritas Jasa Keuangan/OJK) reported that, by the end of 2023, the number of Rural Bank (BPR) offices had decreased to 1,402, compared with 1,545 offices in 2019 (Financial Services Authority, 2023). In contrast, Islamic Rural Banks (Bank Pembiayaan Rakyat Syariah/BPRS) experienced an increase, reaching 173 offices at the end of 2023, up from 164 offices in 2021 (Financial Services Authority, 2023). The following figure presents the number of BPRs and BPRSs in Indonesia from 2019 to 2023.

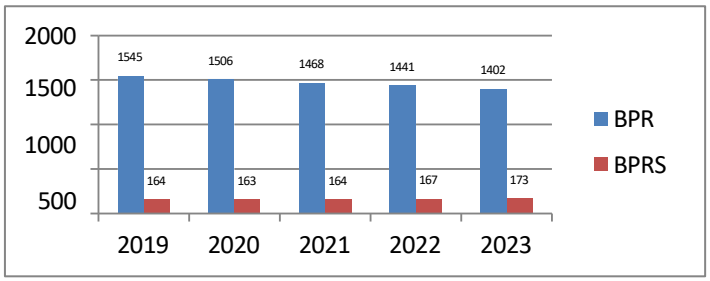


Figure 1. Number of Rural Banks (BPR) and Islamic Rural Banks (BPRS) in Indonesia

Number of Rural Banks (BPR) and Islamic Rural Banks (BPRS) in Indonesia

Based on the figure above, the number of BPRs in Indonesia experienced a consistent annual decline. In 2019, there were 1,545 BPR units, which decreased to 1,506 units in 2020, followed by a further decline to 1,468 units in 2021. Subsequently, the number decreased to 1,441 units in 2022 and declined again to 1,402 units in 2023. In contrast, the number of BPRSs in Indonesia generally showed an upward trend over the same period. In 2019, there were 164 BPRS units, which decreased slightly to 163 units in 2020 before increasing to 164 units in 2021. The number continued to rise to 167 units in 2022 and reached 173 units in 2023.

Thus, the annual decline in the number of BPRs indicates a contraction in the sector, potentially reflecting bank closures, mergers, or the revocation of operating licenses. According to the Indonesia Deposit Insurance Corporation (Lembaga Penjamin Simpanan/LPS), from 2006 to 2024, the institution disbursed approximately IDR 1.5 trillion to liquidate 128 BPRs and 9 BPRSs (Indonesia Deposit Insurance Corporation, 2024). Six regions recorded the highest proportions of bank liquidations: West Java accounted for 27%, West Sumatra for 16%, East Java for 13%, the Greater Jakarta area for 9%, Central Java for 8%, and Bali for 7%. Based on these data, West Sumatra ranked second among the regions with the highest proportion of bank liquidations, accounting for 16% (Indonesia Deposit Insurance Corporation, 2024). These figures are illustrated in the following graph.

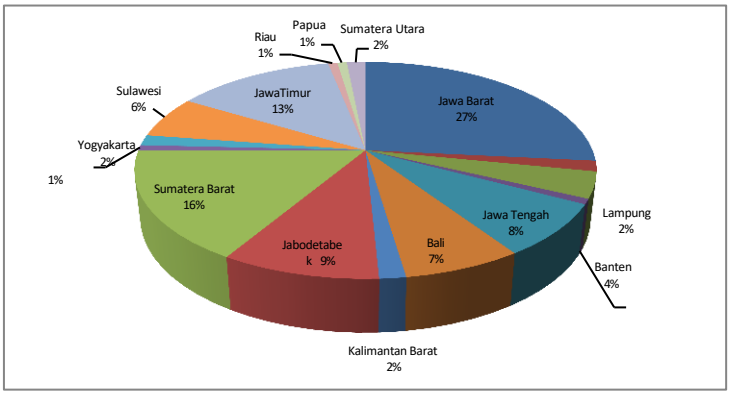


Figure 2. Data on Liquidated Banks

Data on Liquidated Banks

To maintain financial stability and support broader economic growth, BPRs need to strengthen their capital adequacy ratios, improve equity governance, enhance organizational ethics and culture,

and implement regulations that ensure adequate bank liquidity. These objectives can be achieved through more intensive dialogue between regulators and banks, extending beyond conventional supervision of regulatory compliance. Such measures need to be continuously maintained to improve the effectiveness of corporate governance and prudential regulation (Thakor, 2020). Poor governance practices within BPRs create opportunities for ethical violations and are considered one of the primary causes of financial and operational problems in these institutions.

Various analytical methods have been developed to provide early warnings of potential bank bankruptcy. One widely used approach is Altman's discriminant analysis, which evaluates a company's financial ratios through a mathematical equation known as the Z-Score model. These ratios represent relationships between specific financial figures and provide analysts with insights into a company's financial position. The Z-Score analysis is also widely recognized as a bankruptcy prediction model because the resulting score indicates whether a company is financially healthy, exhibits early signs of financial distress, or is in a critical condition that may lead to bankruptcy. Altman's prediction model can be simplified to enable the identification and assessment of financial indicators associated with bankruptcy more easily (Elly Noer Safitri, 2020).

LITERATURE REVIEW

Signaling Theory

Signaling theory indicates the existence of information asymmetry between company management and other parties with an interest in specific information. This theory explains why companies have the initiative and motivation to provide information to external parties. Signaling theory also explains the reasons why companies disclose information to the public (Wolk et al., 2001:308).

Financial Analysis

Financial statement analysis is a process of evaluating and assessing a company's current and past financial position and operating results, with the aim of determining the most probable estimates and predictions regarding the company's future financial condition and performance.

The Modified Altman Z-Score model consists of four variables that can be used to measure a company's financial performance. These variables include *Working Capital to Total Assets, Retained Earnings to Total Assets, Earnings Before Interest and Taxes to Total Assets,* and *Book Value of Equity to Total Liabilities.*

1. **Working Capital to Total Assets (WCTA)**
   Altman (1968) stated that the *Working Capital to Total Assets* (WCTA) ratio is frequently found in studies examining corporate financial distress. The WCTA ratio indicates a company's ability to generate net working capital from its total assets.
2. **Retained Earnings to Total Assets (RETA)**
   Altman (1968) stated that *Retained Earnings to Total Assets* (RETA) is a measure of cumulative profitability over time. The RETA ratio indicates a company's ability to generate retained earnings from its total assets.
3. **Earnings Before Interest and Taxes to Total Assets (EBITTA)**
   Altman (1968) stated that this ratio measures the productivity of a company's assets before the deduction of interest and tax expenses. It reflects the company's ability to generate operating earnings from its total assets.
4. **Book Value of Equity to Total Liabilities (BVETL)**
   This ratio serves as an indicator for measuring a company's leverage level. It reflects the company's ability to cover all its liabilities, both short-term and long-term, through the book value of its equity.

Bankruptcy

Bankruptcy is a condition in which a company is unable to meet its financial obligations, whether short-term or long-term. Bankruptcy generally does not occur suddenly; rather, it is usually preceded by early indicators or warning signs of potential financial failure.

Altman Z-Score Model

Edward I. Altman was a researcher who conducted studies on corporate bankruptcy cases and phenomena. One of the models developed by Altman to predict bankruptcy is the Z-Score model. The Modified Altman Z-Score equation is formulated as follows:

$$Z = 6{,}56X1 + 3{,}26X2 + 6{,}72X3 + 1{,}05X4$$

a) Nilai Z > 2.6 dikategorikan perusahaan sehat
b) Nilai 1.1 < Z < 2.6 dikategorikan perusahaan pada *grey area*
c) Nilai Z < 1.1 dikategorikan tidak sehat (Altman, 2006)

Rural Banks (BPR) and Islamic Rural Banks (BPRS)

According to the Financial Services Authority (Otoritas Jasa Keuangan/OJK), a Rural Bank (*Bank Perkreditan Rakyat/BPR*) is a banking institution that conducts conventional banking activities but does not provide services related to payment transactions. Meanwhile, an Islamic Rural Bank (*Bank Pembiayaan Rakyat Syariah/BPRS*) operates under similar limitations regarding payment transaction services; however, its business activities are conducted in accordance with Islamic Sharia principles.

METHODOLOGY

Research Type

This study employs a comparative research approach, which aims to compare data from several samples. In this study, bankruptcy risk levels are calculated and compared between Rural Banks (BPR) and Islamic Rural Banks (BPRS).

Research Location

This study was conducted on Rural Banks (BPR) and Islamic Rural Banks (BPRS) operating in West Sumatra and registered with Bank Indonesia and the Financial Services Authority (Otoritas Jasa Keuangan/OJK). The research data were obtained from the respective banks' websites and official websites of the relevant regulatory institutions, covering the period from 2021 to 2023.

Population and Sample

The population of this study comprises all Rural Banks (BPR) and Islamic Rural Banks (BPRS) operating in West Sumatra. The sampling technique employed in this study is *purposive sampling*. According to Sugiyono (2018:138), purposive sampling is a sampling technique in which samples are selected based on specific considerations and predetermined criteria relevant to the research objectives. The BPRs and BPRSs selected as research samples are presented in the following table.

Tabel 1 Daftar Sampel BPR

No	Nama BPR
1.	PT. BPR Baringin Padang Panjang Sakato
2.	PT. BPR Lumbung Pitih Nagari Panampung
3.	PT. BPR Lumbung Pitih Nagari Talawi Sakato
4.	PT. BPR LPN Sungai Rumbai
5.	PT. BPR Batang Palangki
6.	PT. BPR Durian Mandiri
7.	PT. BPR Majo Lelo Sati Tambun Ijuk
8.	PT. BPR Mitra Usaha Muaro Paiti
9.	PT. BPR Raga Dana Sejahtera
10.	PT. BPR Tjahaja Baru
11.	PT. BPR VII Koto
12.	PT. BPR Andalas Baruh Bukit
13.	PT. BPR Batang Kapas
14.	PT. BPR Bukit Cati Pematang Panjang
15.	PT. BPR Cincin Permata Andalas

16.	PT. BPR Gebu Harapan
17.	PT. BPR Gema Ampekkoto Sejahtera
18.	PT. BPR Gema Pesisir
19.	PT. BPR Harau
20.	PT. BPR Khatulistiwa Bonjol
21.	PT. BPR Lengayang
22.	PT. BPR Muaro Bodi
23	PT. BPR Mutiara Pesisir
24.	PT. BPR Pagaruyung
25.	PT. BPR Pembangunan Kab. Padang Pariaman
26.	PT. BPR Sago Luhak Limapuluh
27.	PT. BPR Samudera
28.	PT. BPR Sipora
29.	PT. BPR Solok Sakato
30.	PT. BPR Tilatang Kamang
31.	PT. BPR X Koto Singkarak

Source: Indonesia Deposit Insurance Corporation (LPS), 2024.

Tabel 2 Daftar Sampel BPRS

No	BPRS
1.	PT. BPRS Ampek Angkek Candung
2.	PT. BPRS Jam Gadang Perseroda
3.	PT. BPRS Haji Miskin

Source: Indonesia Deposit Insurance Corporation (LPS), 2024.

Tabel 3
Definisi Operasional Variabel

No	Variabel	Pengukuran
1.	X1	$\text{WCTA} = \frac{Asset\ \ Lancar - Kewajiban\ \ Lancar}{Total\ Aktiva}$
2.	X2	$\text{RETA} = \frac{Laba\ Ditahan}{Total\ Aktiva}$
3.	X3	$\text{EBITTA} = \frac{Laba\ \ Sebelum\ \ Bunga\ \ dan\ \ Pajak}{Total\ Aktiva}$
4.	X4	$\text{BVETL} = \frac{Book\ Value\ of\ Equity}{Total\ Liabilities}$
5.	Z-score Modifikasi	Z = 6,56X1 + 3,26X2 + 6,72X3 + 1,05X4

Source: Data processed by the author (2024).

Data Analysis Techniques

The data analysis techniques employed in this study involve the following steps:

a) Rasio Modal Kerja / Total Aktiva (X_1)
b) Rasio Laba Ditahan / Total Aktiva (X_2)
c) Rasio EBIT / Total Aktiva (X_3)

d) Rasio Nilai Buku Ekuitas / Nilai Hutang (X_4)

Calculating the Modified Altman Z-Score

The bankruptcy risk analysis is conducted using the Modified Altman Z-Score model, with the following formula:

$$\textbf{Z''-}\textit{\textbf{Score}} = 6{,}56\ X_1 + 3{,}26\ X_2 + 6{,}72\ X_3 + 1{,}05\ X_4$$

Interpreting the Results and Classifying Financial Conditions

The results of the calculations are interpreted and classified based on the predetermined cut-off points. Based on the resulting Z"-Score values, the financial conditions of the banks are classified into the following categories:

1. A Z-Score value greater than 2.6 indicates that the bank is financially healthy.
2. A Z-Score value between 1.1 and 2.6 indicates that the bank is in the *grey area*.
3. A Z-Score value below 1.1 indicates that the bank is in an unhealthy financial condition (Altman, 2006).

RESULTS

BPR and BPRS Identified as Financially Distressed in 2021.

Table 4. Results of the Modified Altman Z"-Score Model for Rural Banks (BPR) and Islamic Rural Banks (BPRS) in West Sumatra Identified as Financially Distressed in 2021

No	Nama BPR dan BPRS	Z''-*score*	Klasifikasi
1	PT. BPR LPN Sungai Rumbai	0.69	Bangkrut
2	PT. BPR Majo Lelo Sati Tambun Ijuk	0.90	Bangkrut
3	PT. BPR Andalas Baruh Bukit	0.92	Bangkrut
4	PT. BPR Cincin Permata Andalas	0.50	Bangkrut
5	PT. BPR Gema Pesisir	0.58	Bangkrut
6	PT. BPR Harau	0.79	Bangkrut
7	PT. BPR Khatulistiwa Bonjol	0.50	Bangkrut
8	PT. BPR Lengayang	0.77	Bangkrut
9	PT. BPR Mutiara Pesisir	0.84	Bangkrut
10	PT. BPR Pagaruyung	0.56	Bangkrut
11	PT. BPR Sago Luhak Limapuluh	0.75	Bangkrut

Source: Indonesia Deposit Insurance Corporation (LPS), 2024.

Based on the data presented above, out of the 31 BPRs and 3 BPRSs selected as research samples, 11 BPRs were predicted to face bankruptcy in 2021, while none of the BPRSs were predicted to experience bankruptcy during the same year. The low Z"-Score values obtained by PT. BPR LPN Sungai Rumbai, PT. BPR Majo Lelo Sati Tambun Ijuk, PT. BPR Andalas Baruh Bukit, PT. BPR Cincin Permata Andalas, PT. BPR Gema Pesisir, PT. BPR Harau, PT. BPR Khatulistiwa Bonjol, PT. BPR Lengayang, PT. BPR Mutiara Pesisir, PT. BPR Pagaruyung, and PT. BPR Sago Luhak Limapuluh were primarily attributable to the results of the X2 ratio, namely *Retained Earnings to Total Assets*, and the X3 ratio, namely *Earnings Before Interest and Taxes to Total Assets*. The *Retained Earnings to Total Assets* ratio is calculated by comparing the nominal balance of retained earnings with the company's total assets.

In 2021, most of the 11 BPRs predicted to face bankruptcy did not report any retained earnings balance in their financial statements. Therefore, the researchers treated the retained earnings balance of each BPR as zero or nil, resulting in a *Retained Earnings to Total Assets* ratio of zero percent (0.00%).

Consequently, the low value of this ratio negatively affected the resulting Z"-Score. Furthermore, the *Earnings Before Interest and Taxes to Total Assets* ratio recorded by these 11 BPRs was also relatively low, similar to the X2 ratio. The low value of this ratio indicates that the assets owned by BPRs and BPRSs do not necessarily guarantee higher earnings before interest and taxes. This is evidenced by their financial statements, which show that the annual earnings before interest and taxes of these 11 BPRs generally amounted to only approximately IDR 200 million. Therefore, the very low Z"-Score values, which did not even reach the grey area cut-off point of 1.1, were primarily attributable to these two ratios.

Rural Banks (BPR) and Islamic Rural Banks (BPRS) Identified as Financially Distressed in 2022

Table 5. Results of the Modified Altman Z"-Score Model for Rural Banks (BPR) and Islamic Rural Banks (BPRS) in West Sumatra Identified as Financially Distressed in 2022

No	Nama BPR dan BPRS	Z"-*score*	Klasifikasi
1.	PT. BPR LPN Sungai Rumbai	0.71	Bangkrut
2.	PT. BPR Andalas Baruh Bukit	0.96	Bangkrut
3.	PT. BPR Cincin Permata Andalas	0.52	Bangkrut
4.	PT. BPR Gema Pesisir	0.57	Bangkrut
5.	PT. BPR Harau	0.65	Bangkrut
6.	PT. BPR Khatulistiwa Bonjol	0.59	Bangkrut
7.	PT. BPR Lengayang	0.76	Bangkrut
8.	PT. BPR Pagaruyung	0.42	Bangkrut
9.	PT. BPR Sago Luhak Limapuluh	0.69	Bangkrut

Source: Indonesia Deposit Insurance Corporation (LPS), 2024

Based on the data presented in the table above, out of the 31 BPRs and 3 BPRSs selected as research samples, 9 BPRs were predicted to face bankruptcy in 2022, while none of the BPRSs were predicted to experience bankruptcy during the same year. The low Z"-Score values obtained by PT. BPR LPN Sungai Rumbai, PT. BPR Andalas Baruh Bukit, PT. BPR Cincin Permata Andalas, PT. BPR Gema Pesisir, PT. BPR Harau, PT. BPR Khatulistiwa Bonjol, PT. BPR Lengayang, PT. BPR Pagaruyung, and PT. BPR Sago Luhak Limapuluh were primarily attributable to the X2 ratio, namely *Retained Earnings to Total Assets*, and the X3 ratio, namely *Earnings Before Interest and Taxes to Total Assets*. The *Retained Earnings to Total Assets* ratio is calculated by comparing the nominal balance of retained earnings with the company's total assets.

For example, in 2021, PT. BPR Majo Lelo Sati Tambun Ijuk and PT. BPR Mutiara Pesisir were classified as being in a financially distressed condition. However, their classifications changed in 2022, when both banks were no longer included in the bankruptcy category. This change was attributable to the low X2 and X3 ratios recorded in 2021. In that year, the X2 and X3 ratios of PT. BPR Majo Lelo Sati Tambun Ijuk and PT. BPR Mutiara Pesisir were relatively low because the retained earnings balances and earnings before taxes reported in their financial statements were relatively small compared with their respective total assets. However, an improvement occurred in 2022, when both banks recorded substantial increases in retained earnings and earnings before taxes. These increases were more proportionate to the total assets owned by the banks, resulting in higher X2 and X3 ratios. Consequently, PT. BPR Majo Lelo Sati Tambun Ijuk and PT. BPR Mutiara Pesisir were no longer classified as financially distressed in 2022.

In 2022, most of the nine BPRs predicted to face bankruptcy did not report any retained earnings balance in their financial statements. Therefore, the researchers treated the retained earnings balance of each BPR as zero or nil, resulting in a *Retained Earnings to Total Assets* ratio of zero percent (0.00%). Consequently, the low value of this ratio negatively affected the resulting Z"-Score. In addition, the *Earnings Before Interest and Taxes to Total Assets* ratio recorded by these nine BPRs was also relatively low, similar to the X2 ratio. The low value of this ratio indicates that the assets owned by BPRs and

BPRSs do not necessarily guarantee higher earnings before interest and taxes. This is supported by the financial statements, which show that the annual earnings before interest and taxes of these nine BPRs generally amounted to only approximately IDR 200 million. Therefore, the very low Z"-Score values, which did not even reach the grey area cut-off point of 1.1, were primarily attributable to these two ratios.

Rural Banks (BPR) and Islamic Rural Banks (BPRS) Identified as Financially Distressed in 2023

Table 6. Results of the Modified Altman Z"-Score Model for Rural Banks (BPR) and Islamic Rural Banks (BPRS) in West Sumatra Identified as Financially Distressed in 2023

No	Nama BPR dan BPRS	Z"-*score*	Klasifikasi
1	PT. BPR LPN Sungai Rumbai	0.80	Bangkrut
2	PT. BPR Andalas Baruh Bukit	0.99	Bangkrut
3	PT. BPR Batang Kapas	0.76	Bangkrut
4	PT. BPR Cincin Permata Andalas	0.44	Bangkrut
5	PT. BPR Harau	0.41	Bangkrut
6	PT. BPR Khatulistiwa Bonjol	0.62	Bangkrut
7	PT. BPR Lengayang	0.64	Bangkrut
8	PT. BPR Mutiara Pesisir	0.99	Bangkrut
9	PT. BPR Pagaruyung	0.49	Bangkrut
10	PT. BPR Sago Luhak Limapuluh	0.59	Bangkrut
11	PT. BPRS Jam Gadang Perseroda	0.96	Bangkrut

Source: Indonesia Deposit Insurance Corporation (LPS), 2024.

Based on the data presented in the table above, out of the 31 BPRs and 3 BPRSs selected as research samples, 10 BPRs and 1 BPRS were identified as being at risk of bankruptcy. This condition can be observed in their financial statements, particularly in the calculation of the X2 ratio, namely *Retained Earnings to Total Assets*. This ratio aims to measure a company's ability to generate retained earnings from its total assets during a specific period. However, the findings indicate that these 10 BPRs and 1 BPRS have relatively large amounts of assets but are unable to generate sufficient retained earnings from those assets, resulting in very low *Retained Earnings to Total Assets* ratios. This is evidenced by the financial statements of the respective BPRs and BPRS, which report zero or nil retained earnings balances.

Another factor contributing to the bankruptcy risk predictions for these BPRs and BPRS is the X3 ratio, namely *Earnings Before Interest and Taxes to Total Assets*. This ratio indicates the ability of a company's assets to generate operating income or earnings before interest and taxes. Based on the data presented in Table 4.35, the *Earnings Before Interest and Taxes to Total Assets* ratios recorded by the respective BPRs and BPRS were relatively low. This indicates that the assets owned by BPRs and BPRSs do not necessarily guarantee higher earnings before interest and taxes. This is supported by their financial statements, which show that the annual earnings before interest and taxes of these 10 BPRs and 1 BPRS generally amounted to only approximately IDR 200 million.

For example, in 2022, PT. BPR Mutiara Pesisir was no longer classified as financially distressed. However, its classification changed in 2023, when it returned to the financially distressed category. This change was attributable to a decline in the nominal retained earnings balance and earnings before taxes generated by PT. BPR Mutiara Pesisir. These amounts were insufficient relative to the bank's total assets, resulting in lower X2 and X3 ratios. Consequently, PT. BPR Mutiara Pesisir was classified as financially distressed in 2023.

Therefore, the very low Z"-Score values, which did not even reach the grey area cut-off point of 1.1, were primarily attributable to these two ratios. Accordingly, the 10 BPRs and 1 BPRS identified as being at risk of bankruptcy need to improve their financial performance and strengthen their financial

management systems to achieve healthier financial conditions and reduce the risk of future bankruptcy. This is particularly important given that the Financial Services Authority (OJK) regularly announces the liquidation of BPRs and BPRSs in West Sumatra.

The primary focus of improvement for these 10 BPRs and 1 BPRS should be on enhancing the performance of the X2 and X3 ratios, while maintaining and further improving the X1 ratio, *Working Capital to Total Assets*, and the X4 ratio, *Book Value of Equity to Total Liabilities*. These improvements are expected to enhance their financial condition and potentially move them out of the financially distressed category into the *grey area*, or ideally into the financially healthy category, with a Z"-Score exceeding 2.60.

CONCLUSION

Based on the research findings and discussion presented in the preceding sections, the following conclusions can be drawn:

Bankruptcy Risk Based on the Working Capital to Total Assets (WCTA) Ratio

The level of bankruptcy risk measured using the *Working Capital to Total Assets* ratio indicates that current assets and current liabilities should remain in a balanced position. An imbalance between these two components may indicate that a company is in a financially vulnerable condition and faces a higher risk of bankruptcy due to its inability to meet its financial obligations.

Bankruptcy Risk Based on the Retained Earnings to Total Assets (RETA) Ratio

The level of bankruptcy risk measured using the *Retained Earnings to Total Assets* ratio indicates that companies with low retained earnings may experience a weakening of their internal financing capacity. This condition may signal financial vulnerability and an increased risk of bankruptcy.

Bankruptcy Risk Based on the Earnings Before Interest and Taxes to Total Assets (EBITTA) Ratio

The level of bankruptcy risk measured using the *Earnings Before Interest and Taxes to Total Assets* ratio indicates that an increase in a company's earnings reflects improvements in its financial management and operating performance. This may indicate a healthier financial condition. Conversely, a low ratio may indicate financial distress and an increased risk of bankruptcy.

Bankruptcy Risk Based on the Book Value of Equity to Total Liabilities (BVETL) Ratio

The level of bankruptcy risk measured using the *Book Value of Equity to Total Liabilities* ratio indicates the extent to which a company's asset value can decline before its total liabilities exceed the value of its assets, potentially resulting in insolvency.

Bankruptcy Risk Based on the Modified Altman Z-Score Model

The bankruptcy risk classification based on the Modified Altman Z-Score model produces the following results:

Financially Distressed Category: In 2021, 11 BPRs were classified as financially distressed. In 2022, the number decreased to 9 BPRs, while in 2023, there were 10 BPRs and 1 BPRS classified in this category.

REFERENCES

Altman, E. I. (2006). *Corporate Financial Distress*. New York: John Wiley & Sons.

Altman, E. I. (2007). *Financial Ratios, Discriminant Analysis And The Prediction Of Corporate Bankruptcy*. *Journal Of Finance*, *23*(4), 589–609.

Anshory, M. Z. (2016). Pengaruh Rasio Utang , *Return On Equity* Dan Laba DitahanTerhadap *Earning Per Share* Pada Perusahaan Makanan Dan Minuman YangTerdaftar Di Bursa Efek Indonesia Pada Tahun 2010 – 2012. *Jurnal Profita*, 1–16

Antonio, M. S. (2001). *Bank Syariah Dari Teori Ke Praktik*. Jakarta: Gema Insani.

Ashari, H., & Nugrahanti, T. P. (2020). Apakah Pelanggaran Etika Menjadi Penyebab Terjadinya Fraud dan Kegagalan Bank Perkreditan Rakyat (BPR)? Neraca Keuangan Jurna Ilmiah Akuntansi Dan Keuangan, 15(2). https://doi.org/10.32832/neraca.v15i2.3497.

Elly, N.S. (2020). Analisis Komparatif Kinerja Keuangan dan Tingkat Kebangkrutan dengan Metode Altman Z-Score Modifikasi (Studi Antara Bank Perkreditan Rakyat (BPR) dan Bank Pembiayaan Rakyat Syariah (BPRS) di Sumatera Barat periode 2014- 2018). Skripsi. UIN Maulana Malik Ibrahim. Malang.

Fahmi, Irham. 2020. Analisis Kinerja Keuangan. Bandung: Alfabeta.

Hamidi, M. (2017). Studi Komparasi Kinerja Bank Perkreditan Rakyat (Bpr) Syariah Dan Konvensional Di Sumatera Barat. *Jurnal Iqtishoduna*, *10*, 45–70.

Hanafi, M., & Halim, A. (2009). *Analisis Laporan Keuangan* (Edisi Keem). Yogyakarta: Upp Stim Ykpn.

Kholifah, U., Alfie, A. A., & Ayuningtyas, R. D.(2019). *Analysis Of Bankruptcy Prediction With Altman Z-Score Method In Shariah Rural Bank In Central Java Period 2011-2016*. *Conference on Islamic Management, Accounting, and Economics (CIMAE) Proceding,* 56–65.

Melissa, Puput dan Haposan Banjarnahor. "Analisis Prediksi Kebangkrutan Menggunakan Model Altman Z-Score, Springate Dan Zmijewski Yang Terdaftar Di Bursa Efek Indonesia". Jurnal EMBA,8 no.1 (2020).

Putri, W. M. S., (2019). Analisis Komparatif Tingkat Risiko Kebangkrutan Perbankan di Indonesia dengan Menggunakan Metode Altman Z-Score Modifikasi (Studi Antara Bank Umum Syariah dan Bank Umum Konvensional Periode 2013-2017). Skripsi. UIN Maulana Malik Ibrahim. Malang.

Sugiyono, 2020. Metode Penelitian Kualitatif. Bandung: Alfabeta.

Sugiyono. 2018. Metode Penelitian Kuantitatif, Kualitatig, dan R&D, penerbit Alfabeta,Bandung.