

## FINANCIAL DISTRESS PREDICTION IN BANK MUAMALAT INDONESIA: BEFORE AND AFTER ANALYSIS OF THE CONTROLLING SHAREHOLDER (PSP) CHANGE

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### *Abstract*

*A study aims to analyze and compare financial distress conditions, namely a decline in financial performance before bankruptcy, at Bank Muamalat Indonesia before and after the change of Controlling Shareholder (PSP) by BPKH. The analysis was conducted using the Zmijewski and Grover methods to identify differences in financial distress indicators between periods and compare the sensitivity of the two methods. This study uses a quantitative approach, drawing on secondary data from Bank Muamalat Indonesia's quarterly financial reports covering the period from the first quarter of 2018 to the second quarter of 2025. A normality test was conducted to select the testing method, and the Wilcoxon Signed Rank Test was used to assess the significance of differences between conditions before and after the change in PSP. The results show that, based on the Zmijewski method, indications of financial distress in the period after the PSP change were lower than in the previous period. Meanwhile, the Grover method consistently classified Bank Muamalat Indonesia as non-distressed both before and after the PSP change. These findings indicate differences in financial condition dynamics in the periods before and after the PSP.*

**Keywords:** *Financial Distress, Bank Muamalat Indonesia, Zmijewski Method, Grover Method*

### **Abstrak**

Studi ini bertujuan untuk menganalisis dan membandingkan kondisi *financial distress*, yaitu penurunan kinerja keuangan sebelum terjadinya kebangkrutan, pada Bank Muamalat Indonesia periode sebelum dan sesudah perubahan Pemegang Saham Pengendali (PSP) oleh BPKH. Analisis dilakukan menggunakan metode Zmijewski dan metode Grover untuk mengidentifikasi perbedaan indikasi *financial distress* antarperiode serta membandingkan sensitivitas kedua metode. Penelitian ini menggunakan pendekatan kuantitatif dengan data sekunder yang bersumber dari laporan keuangan triwulan Bank Muamalat Indonesia yang mencakup periode Triwulan I 2018 hingga Triwulan II 2025. Uji normalitas dilakukan sebagai dasar pemilihan metode pengujian, dan Uji Wilcoxon Signed Rank Test digunakan untuk mengetahui signifikansi perbedaan kondisi sebelum dan sesudah perubahan PSP. Hasil penelitian menunjukkan bahwa berdasarkan metode Zmijewski, indikasi *financial distress* pada periode sesudah perubahan PSP relatif berkurang dibandingkan periode sebelumnya. Sementara itu, metode Grover secara konsisten mengkategorikan Bank Muamalat Indonesia dalam kondisi *non-distress* baik sebelum atau sesudah perubahan PSP. Temuan ini mengindikasikan adanya perbedaan dinamika kondisi keuangan pada periode sebelum dan sesudah PSP.

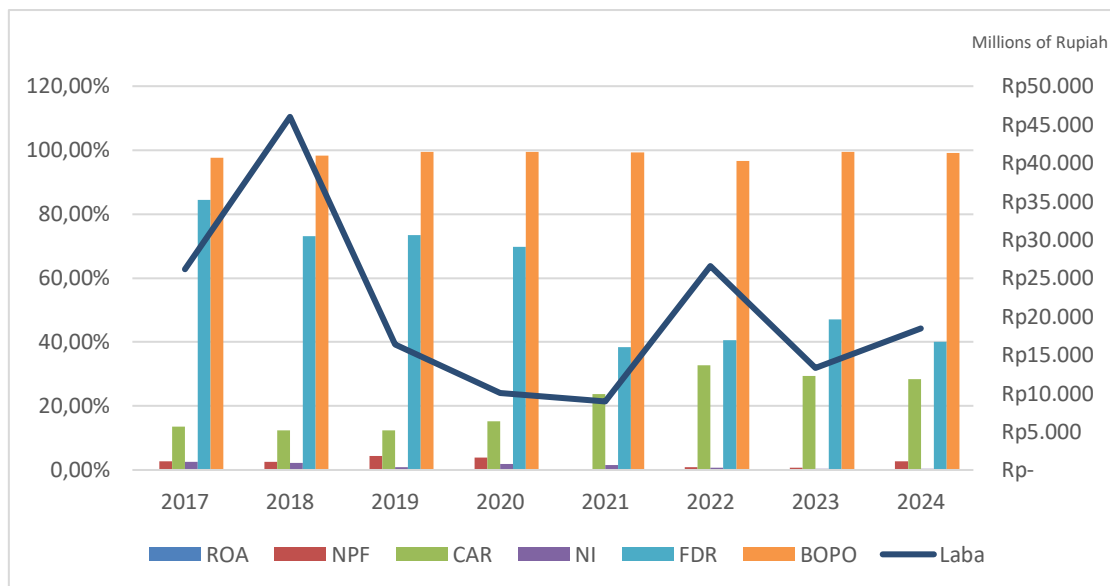
**Kata Kunci:** *Financial Distress, Bank Muamalat Indonesia, Metode Zmijewski, Metode Grover*

**INTRODUCTION**

The banking sector holds an important role in the country’s economic growth. One important indicator in the banking sector is financial stability, which enables banks to operate sustainably and maintain public trust (Faizulayev, 2025). In the context of sharia banking, this stability is even more important, as financial intermediation is based on the principles of justice and benefit (Afiq & Yudha, 2023). Financial stability can be evaluated through financial distress indicators, which reflect a decline in financial performance and serve as early warning signs before bankruptcy or liquidation (Hutauruk et al., 2021).

Bank Muamalat Indonesia, as the oldest sharia bank in Indonesia, has faced various challenges over the past three decades. One of the challenges faced is capital constraints amid the high Non-Performing Financing (NPF) ratios. In 2015, Bank Muamalat’s NPF rate increased significantly to 7.11%, exceeding OJK’s 5% limit (BMI, 2015). The high NPF continued until 2017-2019. The Covid-19 pandemic also suppressed people’s purchasing power, affecting Bank Muamalat’s performance during 2019-2021 (Balqis & Muharrami, 2025). This condition is reflected in the following graph.

Graph 1. Trends in the Financial Performance of Bank Muamalat Indonesia 2017-2024



Source: Annual Report

In November 2021, the Hajj Financial Management Agency (BPKH) was officially declared to have met the requirements set as the Controlling Shareholder (PSP) of Bank

Muamalat Indonesia. This decision was made after BPKH received a grant of shares from the Islamic Development Bank (IDB), resulting in a final share ownership of 82.7% (BPKH, 2022). This change in ownership structure is an important factor in evaluating the dynamics of the bank's financial condition, particularly by comparing the periods before and after the change in PSP. Graph 1 shows that the change in Controlling Shareholders (PSP) was followed by an increase in performance as reflected in profit and financial ratios. This is in line with the findings of Sobriah et al. (2025), who stated that changes in PSP are associated with capital strengthening and a decrease in non-performing financing, although inconsistencies remain.

However, Bank Muamalat Indonesia's financial condition still faces various challenges, as reflected in its restructuring efforts that have not been fully successful (Liviawati et al., 2021). Over the past two years, Bank Muamalat Indonesia has also undergone several changes in its board of directors and commissioners, reflecting managerial adjustments amid dynamic financial conditions (Bisnis.com, 2024). In addition, there is information about BPKH's plans to divest its Bank Muamalat Indonesia shares, as the largest shareholder (Kompas.com, 2025). These conditions indicate that Bank Muamalat Indonesia's financial stability still needs to be further evaluated using financial distress indicators. The change in Controlling Shareholder (PSP) was also an important moment to evaluate the dynamics of Bank Muamalat Indonesia's financial condition, particularly by comparing the periods before and after the PSP change.

Previous studies have analyzed Bank Muamalat's financial distress predictions using various methods. The study by Weo et al. (2022) concluded that, based on the Altman method, Bank Muamalat was in a non-distressed condition in 2014 and 2017. Meanwhile, in 2015, 2016, and 2018, it was in a questionable financial condition or grey zone. However, in the study by Afiq & Yudha (2023) using the Zmijewski method, Bank Muamalat was found to have experienced non-distress from 2017 to 2020. Similarly, Bakri's (2019) study, which used the Altman and Grover methods, produced contradictory findings: the Altman method indicated financial distress for the 2015-2018 period. Meanwhile, the Grover method categorized it as non-financial distress. These differing results show that differences in sensitivity to financial distress prediction methods affect

the interpretation of a bank's financial condition. In addition, previous studies have not specifically examined the period before and after the PSP change.

Based on this research gap, this study aims to analyze and compare the financial distress conditions of Bank Muamalat Indonesia before and after the change in Controlling Shareholder (PSP) by BPKH using the Grover and Zmijewski methods. The use of these two methods is based on the highest level of accuracy, as evidenced by the studies of Mufidah & Handayani (2024) and Kimin & Nasution (2022). Therefore, these two methods are expected to provide a more comprehensive picture by comparing the prediction results before and after the change in Controlling Shareholder. Through this research, management can evaluate the impact of changes in ownership structure on Bank Muamalat's financial condition. In addition, it can serve as an early warning signal to identify potential financial risks from the outset and to take appropriate corrective measures.

## **LITERATURE REVIEW**

### **Signalling Theory**

Signalling theory was proposed by Michael Spence (1973), who argued that by sending, the sender (information owner) attempts to provide relevant information that the receiver can use. This information functions as a signal that can influence decision-making (Ria & Hestria, 2024). In this context, the information provided takes the form of positive or negative signals. Positive signals can include improved performance as indicated by profit growth, sound financial conditions, and dividend distributions. Negative signals, on the other hand, can include declines in performance, as indicated by capital difficulties, the absence of dividend distributions, and high debt levels that increase the risk of bankruptcy (Dirman, 2020). Signalling theory emphasizes the actions companies take to signal management's assessment of the company's prospects. With these signals, external parties can distinguish between the conditions and performance of one company and another (Firdiyanti et al., 2021)

## Financial Report

A financial report is a source of information that reflects a company's financial activities to assess its condition and performance over a specific period. More than just an evaluation tool, financial reports are an important reference for company stakeholders in assessing the financial position to support decision-making. They also serve as accountability reports from company managers regarding the resources and funds entrusted to them (Siregar et al., 2025). Financial reports aim to provide information on a company's cash flow, performance, and financial position. This info serves as an indicator of past, present, and future performance (Astuti et al., 2021). So, financial reports help users make informed, efficient financial decisions.

## Financial Distress

According to Platt & Platt (2000), as cited in Natalia & Rudiawarni (2022), "financial distress is a stage of decline in a company's financial condition before bankruptcy or liquidation". This condition can generally occur across various companies and is a sign of an impending bankruptcy (Mauludi & Mardani, 2022). Several causes of financial distress in a company include cash flow problems, inability to pay current liabilities, and consecutive operational losses (Dahruji & Muslich, 2022). In addition, the capital crisis, declining public confidence, and mergers and acquisitions by companies are evident (Fakhar et al., 2023). Investors need bankruptcy predictions to reduce concerns about losing shares and to serve as guidelines for owners in assessing companies' future sustainability (Simbolon, 2023). Financial distress is the initial stage before bankruptcy, characterized by a decline in a company's financial performance that limits its ability to operate optimally.

## Zmijewski Method

The Zmijewski method is a probit method for predicting financial distress developed by Mark E. Zmijewski in 1984. This method uses financial ratio analysis to measure performance, liquidity, and leverage (Pratikto & Afiq, 2021). The assessment criteria for the Zmijewski method are that if the X-Score value is  $< 0$ , then the company is predicted not to experience financial distress. Conversely, if the X-Score value is  $> 0$ ,

then the company is predicted to experience financial distress. The formula for the Zmijewski method is as follows: “X-Score:  $-4.3 - 4.5 X_1 + 5.7 X_2 + 0.004 X_3$ ”.

Description:

$X_1$  = Net Income/Total Assets

$X_2$  = Total Debt/Total Assets

$X_3$  = Current Assets/Current Liabilities

### **Grover Method**

The Grover method is a financial distress prediction method that redesigns and reevaluates the Altman method. Jeffrey S. Grover applied the Altman method to the sample, using 13 financial ratios (Kimin & Nasution, 2022). The Grover method assessment criteria state that if the G-Score value is  $< -0.02$ , the company is predicted to experience financial distress. Meanwhile, if the G-Score value is  $> 0.01$ , the company is non-distressed. The Grover method formula is as follows: “G-Score:  $1.650 X_1 + 3.404 X_2 + 0.016 X_3 + 0.057$ ”.

Description:

$X_1$  = Working Capital/Total Assets

$X_2$  = Earnings Before Interest and Taxes/Total Assets

$X_3$  = Return on Asset (ROA)

## **RESEARCH METHODS**

This study uses a quantitative approach with a comparative research design (Rahmah & Novianty, 2021). The comparative approach is used to compare the financial distress conditions of Bank Muamalat Indonesia before and after the change in Controlling Shareholder (PSP) without assuming a causal relationship. The data used are Bank Muamalat Indonesia's quarterly financial reports, obtained from the OJK (Financial Services Authority) and Bank Muamalat Indonesia websites. The research period is divided into two periods, namely the period before the CSP (Quarter I 2018-Quarter III 2021) and the period after the PSP (Quarter IV 2021-Quarter II 2025), with Quarter IV 2021 as the dividing point of analysis based on the official appointment of BPKH as the PSP in November 2021. Financial distress analysis was conducted using the Zmijewski

and Grover methods. These two methods differ in their predictive characteristics, with the Zmijewski method measuring performance, leverage, and liquidity, while the Grover method emphasizes profitability and asset efficiency (Widyawati & Masdiantini, 2024).

The X-Score and G-Score values were calculated in Microsoft Excel and verified through recalculation and formula consistency checks to ensure the results were reliable and consistent. In the Zmijewski method, companies are categorized as financially distressed if the X-Score is  $> 0$  and as non-financially distressed if the X-Score is  $< 0$ . Meanwhile, in the Grover method, companies are categorized as being in a state of non-financial distress if the G-Score value is  $> 0.01$ , while a G-Score value of  $< 0.01$  indicates a state of financial distress. Then, the X-Score and G-Score values were analyzed using descriptive statistics and difference tests. A normality test was conducted to determine the appropriate difference test: the Paired Sample T-Test if the data were normally distributed, and the Wilcoxon Signed Rank Test if they were not. A descriptive comparison of the results of the Zmijewski and Grover methods was conducted to understand the differences in sensitivity and predictive characteristics between the two methods.

## RESULT AND DISCUSSION

### 1. Financial Distress in Bank Muamalat Indonesia Before of the Controlling Shareholder (PSP) Change

**Table 1. Financial Distress Calculation Results Before the Change of PSP**

Method	Year	X1	X2	X3	Result	Category
Zmijewski	2018 Q I	0.00029	0.930	3.963	1.0055	Financial Distress
	2018 Q II	0.00188	0.930	3.655	0.9966	Non Distress
	2018 Q III	0.00204	0.927	4.008	0.9941	Non Distress
	2018 Q IV	0.00080	0.931	3.853	1.0211	Financial Distress
	2019 Q I	0.00004	0.930	4.270	1.0094	Financial Distress
	2019 Q II	0.00009	0.927	4.303	1.0046	Financial Distress
	2019 Q III	0.00014	0.926	4.140	0.9956	Non Distress

	2019 Q IV	0.00032	0.922	3.400	0.9682	Non Distress
	2020 Q I	0.00005	0.920	3.477	0.9581	Non Distress
	2020 Q II	0.00010	0.918	3.329	0.9496	Non Distress
	2020 Q III	0.00015	0.918	3.350	0.9503	Non Distress
	2020 Q IV	0.00020	0.922	3.427	0.9715	Non Distress
	2021 Q I	0.00005	0.923	3.400	0.9769	Non Distress
	2021 Q II	0.00009	0.922	3.683	0.9749	Non Distress
	2021 Q III	0.00014	0.923	3.599	0.9777	Non Distress
Grover	2018 Q I	0.6688	0.0003	0.15	1.1643	Non Distress
	2018 Q II	0.6723	0.0025	0.49	1.1828	Non Distress
	2018 Q III	0.6876	0.0027	0.35	1.2063	Non Distress
	2018 Q IV	0.6832	0.0008	0.08	1.1882	Non Distress
	2019 Q I	0.7011	5.8185	0.02	1.2143	Non Distress
	2019 Q II	0.6975	0.0001	0.02	1.2087	Non Distress
	2019 Q III	0.6886	0.0001	0.02	1.1941	Non Distress
	2019 Q IV	0.6297	0.0005	0.05	1.0987	Non Distress
	2020 Q I	0.6309	6.7896	0.03	1.0987	Non Distress
	2020 Q II	0.6164	0.0001	0.03	1.0751	Non Distress
	2020 Q III	0.6185	0.0002	0.03	1.0787	Non Distress
	2020 Q IV	0.6258	0.0002	0.03	1.0911	Non Distress
	2021 Q I	0.6242	6.1168	0.02	1.0874	Non Distress
2021 Q II	0.6431	0.0001	0.02	1.1189	Non Distress	
2021 Q III	0.6362	0.0001	0.02	1.1076	Non Distress	

Source: Data processed in Excel, 2026

Before the change in Controlling Shareholder (PSP) by BPKH, the Zmijewski method predicted that Bank Muamalat Indonesia would experience financial distress in several quarters, namely Quarter I and Quarter IV 2018, and Quarter I and Quarter II

2019. Meanwhile, the Grover method categorized Bank Muamalat Indonesia as being in a healthy condition. Before the change in PSP, Bank Muamalat Indonesia's financial performance was generally suboptimal, constrained by financial constraints. In terms of capital, the capital adequacy ratio (CAR) was relatively low at 12.34% in 2018 and 12.42% in 2019. In addition, the quality of Bank Muamalat Indonesia's assets also faced pressure, as indicated by the high non-performing financing (NPF) ratio of 2.58% in 2018, which increased further to 4.30% in 2019. Similarly, the low profitability is reflected in the Return on Assets (ROA) of 0.08% in 2018, which declined further to 0.03% in 2019. This indicates that the utilization of Bank Muamalat Indonesia's total assets to generate profits remains suboptimal. The low profitability and high non-performing financing during this period reinforce the indication that Bank Muamalat Indonesia's financial performance before the BPKH became the Controlling Shareholder (PSP) was in an unhealthy condition.

## 2. Financial Distress of Bank Muamalat Indonesia After of the Controlling Shareholder (PSP) Change

**Table 2. Financial Distress Calculation Results After the Change of PSP**

Method	Year	X1	X2	X3	Result	Category
Zmijewski	2021 Q IV	0.00015	0.932	2.977	1.0254	Financial Distress
	2022 Q I	0.00020	0.913	2.922	0.9171	Non Distress
	2022 Q II	0.00035	0.913	2.948	0.9146	Non Distress
	2022 Q III	0.00053	0.912	2.909	0.9119	Non Distress
	2022 Q IV	0.00043	0.915	2.870	0.9263	Non Distress
	2023 Q I	0.00017	0.915	2.817	0.9280	Non Distress
	2023 Q II	0.00042	0.918	2.828	0.9428	Non Distress
	2023 Q III	0.00079	0.920	2.630	0.9547	Non Distress
	2023 Q IV	0.00020	0.922	2.394	0.9645	Non Distress
	2024 Q I	0.00004	0.919	2.353	0.9510	Non Distress

	2024 Q II	0.00007	0.916	2.389	0.9328	Non Distress
	2024 Q III	0.00014	0.912	2.445	0.9116	Non Distress
	2024 Q IV	0.00031	0.913	2.200	0.9118	Non Distress
	2025 Q I	0.00003	0.914	2.109	0.9190	Non Distress
	2025 Q II	0.00011	0.913	2.220	0.9167	Non Distress
Grover	2021 Q IV	0.5948	0.0002	0.02	1.0395	Non Distress
	2022 Q I	0.5891	0.0002	0.10	1.0316	Non Distress
	2022 Q II	0.5901	0.0004	0.09	1.0337	Non Distress
	2022 Q III	0.5849	0.0006	0.09	1.0259	Non Distress
	2022 Q IV	0.5868	0.0008	0.09	1.0295	Non Distress
	2023 Q I	0.5805	0.0002	0.11	1.0175	Non Distress
	2023 Q II	0.5807	0.0006	0.13	1.0194	Non Distress
	2023 Q III	0.5521	0.0011	0.16	0.9746	Non Distress
	2023 Q IV	0.5248	0.0002	0.02	0.9240	Non Distress
	2024 Q I	0.5191	7.7222	0.03	0.9143	Non Distress
	2024 Q II	0.5222	0.0001	0.03	0.9197	Non Distress
	2024 Q III	0.5220	0.0002	0.03	0.9196	Non Distress
	2024 Q IV	0.4758	0.0003	0.03	0.8437	Non Distress
	2025 Q I	0.4584	4.9600	0.02	0.8139	Non Distress
2025 Q II	0.4790	0.0001	0.04	0.8486	Non Distress	

Source: Data processed in Excel, 2026

After the change in Controlling Shareholder (PSP) by BPKH, Bank Muamalat Indonesia's financial performance showed an upward trend, so that the prediction of financial distress using the Zmijewski method was only in Quarter IV 2021. This period reflects the initial phase of recovery and adjustment of financial conditions after restructuring. In the following period, there is no longer a prediction of financial distress, followed by an improvement in financial performance. In line with this, Grover's method

consistently classifies Bank Muamalat Indonesia as non-distressed. A strengthening capital structure and improved asset quality support Bank Muamalat Indonesia's financial condition. The capital adequacy ratio (CAR) rose from 23.76% in 2021 to 32.70% in 2022. BPKH's strengthening of the capital structure provides room to support Bank Muamalat Indonesia's sustainability. In addition, the quality of assets has improved significantly, as reflected in the decline in the non-performing financing (NPF) ratio to 0.08% in 2021. Therefore, the change in Controlling Shareholder (PSP) from BPKH to Bank Muamalat Indonesia plays an important role in encouraging a gradual improvement process, thereby enabling Bank Muamalat Indonesia's financial performance to improve in the next period.

### 3. Comparative Financial Distress Before and After of the Controlling Shareholder (PSP) Change

The prediction of Bank Muamalat Indonesia's financial distress served as the basis for a comparative analysis of conditions before and after the change in Controlling Shareholder (PSP) by BPKH.

Table 3. Descriptive Statistics Results

<b>Descriptive Statistics</b>					
	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
X-Score Before PSP	15	.95	1.02	.9837	.02216
X-Score After PSP	15	.91	1.03	.9353	.03027
G-Score Before PSP	15	1.08	1.21	1.1410	.05368
G-Score After PSP	15	.81	1.04	.9571	.07878
Valid N (listwise)	15				

Source: Data processed in SPSS 25, 2026

Based on descriptive statistics, the mean decreased following the change in Controlling Shareholder (PSP), suggesting a reduced risk of financial distress. Meanwhile, the increase in standard deviation indicates that the prediction of financial distress after the change in Controlling Shareholder (PSP) remains volatile and not yet fully stable.

Table 4. Normality Test Results

	Shapiro-Wilk		
	Statistic	df	Sig.
X-Score Before PSP	.955	15	.604
X-Score After PSP	.762	15	.001
G-Score Before PSP	.855	15	.020
G-Score After PSP	.861	15	.025

Source: Data processed in SPSS 25, 2026

As shown in Table 4, the X-Score values before the PSP change were normally distributed. Meanwhile, the X-Score values after the PSP change and the G-Score values before and after the PSP change showed non-normal distributions. Thus, to test the differences in financial distress conditions before and after the PSP change, the Wilcoxon Signed-Rank Test was used.

Table 5. Wilcoxon Signed Rank Test Results

Test Statistics <sup>a</sup>		
	X-Score After PSP – X-Score Before PSP	X-Score After PSP – X-Score Before PSP
N	-2.953 <sup>b</sup>	-3.408 <sup>b</sup>
Asymp. Sig. (2-tailed)	.003	.001

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks

Source: Data processed in SPSS 25, 2026

Referring to the table above, the significance value of Asymp.Sig (2-tailed) X-Score and G-Score, which are less than 0.05, indicate a difference in financial distress conditions before and after BPKH became the Controlling Shareholder (PSP).

Table 6. Output Ranks

Ranks				
		N	Mean Rank	Sum of Ranks
X-Score After PSP – X-Score Before PSP	Negative Ranks	12 <sup>a</sup>	9.33	112.00
	Positive Ranks	3 <sup>b</sup>	2.67	8.00
	Ties	0 <sup>c</sup>		
	Total	15		
G-Score After PSP – G-Score Before PSP	Negative Ranks	15 <sup>d</sup>	8.00	120.00
	Positive Ranks	0 <sup>e</sup>	.00	.00
	Ties	0 <sup>f</sup>		
	Total	15		

a. X-Score After PSP < X-Score Before PSP

- 
- b. X-Score After PSP > X-Score Before PSP
  - c. X-Score After PSP = X-Score Before PSP
  - d. G-Score After PSP < G-Score Before PSP
  - e. G-Score After PSP > G-Score Before PSP
  - f. G-Score After PSP = G-Score Before PSP
- Source: Data processed in SPSS 25, 2026

The difference in financial distress conditions before and after BPKH became the Controlling Shareholder (PSP) is evident in the Output Ranks table, where both the X-Score and G-Score show more negative ranks than positive ranks and ties. This means that the dominance of negative ranks indicates that financial distress in the period after the PSP change was lower than in the period before.

#### **4. Comparison of Results from the Zmijewski and Grover Methods**

The differences in financial distress analysis results between the Zmijewski and Grover methods reflect each method's sensitivity in predicting financial conditions. In this study, the Zmijewski method identified financial distress predictions in several periods before and after the change in Controlling Shareholder (PSP). Meanwhile, the Grover method consistently indicates that Bank Muamalat Indonesia is in non-financial distress before and after the change in Controlling Shareholder (PSP). This pattern shows that the Zmijewski method is more responsive to changes in the bank's financial structure and risk levels. Conversely, the Grover method, which emphasizes profitability and asset efficiency, tends to reflect operational performance stability and is less sensitive to short-term financial pressures.

These findings are consistent with those of Bakri (2019), Utari (2021), Mulya et al. (2024), and Mufidah & Handayani (2024), who state that, using the Grover method, a company tends to produce non-financial distress results. However, using the Zmijewski method, a company is predicted to be in financial distress at various points in time, as shown in the studies by Listyarini (2020), Utari (2021), and Kimin & Nasution (2022). In the context of PSP changes, these findings indicate that the dynamics of Bank Muamalat Indonesia's financial condition are better captured by methods sensitive to financial risk, such as Zmijewski's. In contrast, the Grover method captures the bank's relatively stable operational conditions. Therefore, the simultaneous use of both methods provides a

complementary understanding of financial distress conditions before and after PSP changes, without relying on a single prediction method.

## CONCLUSION

Based on the study's results, Bank Muamalat Indonesia's financial condition in the period after the change in Controlling Shareholder (PSP) showed improvement compared to the period before the PSP change, as indicated by reduced financial distress indicators. However, these findings are comparative between periods and cannot be interpreted as a direct causal relationship between the PSP change and the reduction in financial pressure. The results of the Zmijewski analysis show a decrease in the frequency of financial distress predictions following the change in the PSP. In contrast, the Grover method consistently classifies Bank Muamalat Indonesia as non-distressed both before and after the change in the PSP. The difference is that each method has distinct characteristics and sensitivities, so the interpretation of financial conditions cannot depend on a single method.

Therefore, the results of this study can be used to evaluate for Bank Muamalat Indonesia's financial condition after the PSP change, particularly as an early warning signal of potential financial pressure. This study has limitations, as it focuses solely on the analysis of financial distress in Sharia banking. Therefore, further research is recommended to expand the scope of analysis by examining various variables and financial ratios that affect financial distress, and by comparing them with those of other Islamic banks to obtain a more comprehensive picture.

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