PERFORMANCE ANALYSIS OF PUBLIC COMPANIES IN THE SHARIA CATEGORY DURING THE COVID-19 PANDEMIC USING THE ALTMAN Z-SCORE METHOD

by Didi Asmadi

Submission date: 29-Aug-2022 04:43PM (UTC+0700)
Submission ID: 1888726889
File name: Didi_Asmadi_dkk_edit.docx (105.8K)
Word count: 4730
Character count: 26780

Received: 00 Month 20xx; Revised: 00 Month 20xx; Accepted: 00 Month 20xx

PERFORMANCE ANALYSIS OF PUBLIC COMPANIES IN THE SHARIA CATEGORY DURING THE COVID-19 PANDEMIC USING THE ALTMAN Z-SCORE METHOD

Didi Asmadi[1,4*]
Sri Rahmawati[2,4]
Muhammad Ihsan[3]
[1,2,3]Industrial Engineering Department, Engineering Faculty, Universitas Syiah Kuala, Banda Aceh, Indonesia
[4]System Design and Industrial Management Laboratory, Industrial Engineering Department, Engineering Faculty, Universitas Syiah Kuala, Banda Aceh, Indonesia
[*1]Email: didi.asmadi@usk.ac.id, [2]Email: srirahmawati@usk.ac.id,
[3]Email: mhdihsan1998@gmail.com

ABSTRACT - This study aims to find out and analyze the performance of public companies in the sharia category during the Covid-19 pandemic. This study used the Altman Z-Score method with four parameters and secondary data, namely the company's annual financial statements for the 2020 period, with a research sample of 30 public companies in the Sharia category. The study results showed 3 companies with the potential to go bankrupt because the Z-Score value was less than 1.1 and 3 companies potentially prone to bankruptcy because the Z-Score value was between 1.1 and 2.6. There were 24 companies in the healthy category since the Z-Score was more than 2.6. To anticipate the potential for bankruptcy, management is expected to be able to implement management and debt restructuring strategies and see the good practices of companies that can survive during the pandemic. This research also shows that the Altman Z-Score method can evaluate performance, detect financial problems, predict bankruptcy, and measure a company's financial health level.

Keywords: Performance Management, Financial Performance, Altman Z-Score Method, COVID-19 Pandemic

ABSTRAK – Analisis Kinerja Perusahaan Publik Kategori Syariah pada Masa Pandemi Covid-19 menggunakan Metode Altman Z-Score. *Penelitian in bertujuan untuk mengetahui dan menganalisis kinerja perusahaan terbuka kategori syariah pada masa pandemi Covid-19. Penelitian ini menggunakan metode Altman Z-Score dengan empat parameter dan data sekunder yaitu laporan keuangan tahunan perusahaan periode 2020, dengan sampel penelitian berjumlah 30 perusahaan terbuka kategori syariah. Hasil penelitian menunjukkan 3 perusahaan berpotensi bangkrut karena nilai Z-Score kurang dari 1,1, dan 3 perusahaan berpotensi rawan bangkrut karena nilai Z-Score antara 1,1 dan 2,6, serta ada 24 perusahaan dalam kategori sehat karena Z-Score lebih dari 2,6. Untuk mengantisipasi potensi kebangkrutan, manajemen diharapkan dapat menerapkan strategi rekstrukturisasi manajemen dan utang serta melihat praktik baik perusahaan yang mampu bertahan dimasa pandemi. Penelitian ini juga menunjukkan bahwa metode Altman Z-Score mampu mengevaluasi kinerja, mendeteksi masalah keuangan, memprediksi kebangkrutan, dan dapat mengukur tingkat kesehatan keuangan perusahaan.*

Kata Kunci: *Manajemen Kinerja, Kinerja Keuangan, Metode Altman Z-Score, Pandemi COVID-19*

INTRODUCTION

The Covid-19 pandemic that occurred at the beginning of 2020 in Indonesia has resulted in a decline in the country's economy, one of which is the productive sector, namely the manufacturing and service industries Decreased productivity. Based on the results of a survey by the Central Statistics Agency, the impact of the Covid-19 pandemic was that there were problems with the operational activities of companies that were able to operate normally by 58.95%, and 82.45% of companies experienced a decrease in income/profits resulting in losses, termination of employment, price increases (inflation). So that production costs increase, and export-import activities decrease (Kurniawan et al., 2021; Yamali & Putri, 2020).

Every company hopes to maintain performance for the continuity of its business. However, it cannot be avoided from risks leading to potential bankruptcy, such as too much debt from assets (Hilman & Laturette, 2021). During the Covid-19 pandemic, companies that before Covid-19 had a low debt ratio and more excellent asset value will be able to anticipate the impact of the pandemic. On the other hand, if the company had high debt from assets in the previous year, it is likely to be affected by Covid-19 (Kurniawan et al., 2021).

Indonesia is a developing country that still needs capital to increase its economic growth. The efforts can be made by growing the investment sector (Nurafiati, 2019). Investments made in public companies can benefit companies and investors based on the procedures established by the capital market law (Djohan & Loh, 2021). Establishing a sharia stock index is a fascinating aspect of the Indonesian capital market system. As is generally known, Indonesia has the world's largest Muslim population, and sharia investment continues to rise yearly. As a result, the Indonesian Islamic capital market has a bright future (Puspitasari et al., 2020).

The achievement of company goals can be seen from the performance achieved by all stakeholders involved. Performance is obtained from operational capabilities, which can also use a company's financial performance to increase investor confidence. One of the investment strategies for investors is the ability to analyze the company's financial statements (Asmadi et al., 2021). In performance management, the measurement of company performance can be through financial performance recorded in financial ratios. The financial ratios used to assess company performance are profitability, liquidity, solvency, and activity (Barus et al., 2017). Financial statement analysis is essential information for companies to determine strategy. Companies can also analyze these ratios to determine the company's strengths and weaknesses and predict business continuity in healthy and unhealthy conditions (Anriani, 2019).

One method that can use in evaluating the company's financial performance is the Altman Z-Score method. The method was developed by Edward I Altman in 1968, which established a formula for predicting company bankruptcy from financial ratio analysis. Altman Z-Score is a score value determined from standard calculations multiplied by financial ratios that result in the potential for bankruptcy. So, the Altman Z-Score method can be a measuring tool to assess and predict company performance (Altman et al., 2019; Gilrita, 2015; Indriyati, 2010; Sudiyatno & Puspitasari, 2010). The Altman Z-Score approach as a method of measuring financial performance continues to develop from time to time. Previously this method had three calculation models and was limited to assessing certain types of companies. So, currently, a modified Altman Z-Score is found that can determine the financial performance of all kinds of companies (Herlin et al., 2021; Primadani & Ariasih, 2021).

Based on the explanation above, the researchers are interested in conducting research on the analysis of the performance of public companies in the sharia category during the Covid-19 pandemic using the Altman Z-Score method. With the hope, this research will obtain the results of the analysis of the performance of public companies in the sharia category that can provide information for management to take corrective actions and information for investors in taking steps to minimize investment risk.

LITERATURE REVIEW

According to Fahmi (2014), financial performance is an analysis to see if a company has used financial rules properly and correctly. Meanwhile, according to Esomar dan Chritianty (2021), financial performance is a description of the company's financial condition, which is analyzed using financial analysis tools so that the strengths and weaknesses of the company are known in a certain period.

Generally, for companies that can manage business activities effectively and efficiently, the company's performance will be better, so the profit achieved will be higher. That is also related to investment activities by investors, where investors can assess the company's financial performance in the decision-making process to invest in the company (Efriyanti et al., 2012). The objectives of measuring financial performance are to know a company's liquidity or ability to satisfy financial obligations, know the company's solvency level, know the level of profitability, and understand the level of stability (Asmadi & Rahmawati, 2021).

One of the activities in evaluating the company's performance can be done by using financial statements, which are reports on the financial information of an

organization within a particular time in the form of balance sheets, profit and loss calculations, changes in equity, and cash flow statements. Financial statement information is also the result of the accounting process as a communication tool between companies and stakeholders that is useful in making economic decisions(Anriani, 2019; Azlina, 2020). Financial statement analysis is needed to study financial data to determine the company's financial position, weaknesses, and strengths (Herlin et al., 2021).

One method of analyzing the company's financial performance is the Altman Z-Score method. According to Sudiyatno & Puspitasari (2010), Z-score is a form of analysis of company performance using financial ratio numbers and then made in the form of a mathematical equation. The Z-score method was first proposed by Edward I Altman in 1968. This method is one of the analytical methods that can be used to measure the financial health of a company and can predict the possibility of a company's bankruptcy. The Altman Z-Score method uses 5 (five) ratios, namely liquidity, profitability, leverage, market test ratio, and activity. The primary purpose of these ratios is to look at areas that require more investigation than others (Gilrita, 2015).

Currently, the Altman Z-Score method has three calculation models. The first is the Altman Z-Score Original model where this model is intended for manufacturing companies that go public. Second, the Altman Z-Score model has been revised again so that it can be used by private sector companies that do not go public. This second Altman model became known as the Revised Altman Z-Score Model. The third model developed is the Altman Z-Score Modified model. This third model exists because not all companies have the same ratio as manufacturing companies. This modified model was deliberately developed so that it can be used by all companies, both manufacturing and non-manufacturing, publicly-listed and non-public companies. This Modified Model is different from the two previous models, which lie in the number of ratios used. The previous two models used 5 (five) ratios, while the last model only used 4 (four) types of ratios. Altman excludes the X_5 variable (sales to total assets) since this ratio varies greatly across businesses with varying asset quantities (Altman et al., 2019; Herlin et al., 2021; Primadani & Ariasih, 2021).

According to Indriyati (2010), the Z-Score model is a very effective method for predicting bankruptcy 2 years before the actual bankruptcy. In some cases, other models can predict bankruptcy 4 or 5 years in advance. In addition, the Z-Score can also be used to re-examine prospective companies to be acquired to detect financial problems that arise and measure the level of a company's financial health.

Several previous studies used the Altman Z Score method in evaluating the company's financial performance, including Setyaningrum et al. (2020), obtained research results that PT Astra International, PT Sri Rejeki Isman, and

PT Gudang Garam were in a position prone to bankruptcy. Furthermore, research by Azlina (2020), resulted in PT Panorama Sentrawisata Tbk in a potential bankruptcy condition because, in 2017, it obtained a Z-Score value of 2.1, in 2018 a Z-Score value of 1.2, and in 2019 a value of 1.6. Meanwhile, the lower limit for healthy companies is 2.9. So, these results indicate that the company's performance is not good. Then, Korry et al. (2019) show that all state-owned banks are in a grey area condition for the 2014-2017 period because the Altman Z-Score value obtained is between 1.1 and 2.6. Meanwhile, research that shows the relationship between company performance and the Covid-19 pandemic has also been carried out by Hilman & Laturette (2021), found that differences in company performance before and during the Covid-19 pandemic caused the liquidity ratio and profitability ratio to decrease. As a result, the phrasing of the problem in this study is how the results of evaluating the performance of public companies in the sharia category during the Covid-19 pandemic using the Altman Z-Score method.

METHODOLOGY

This study uses secondary data, namely the annual financial statements (LKT) for the 2020 period from public companies in the sharia category published by the Jakarta Islamic Index (JII) based on No: Peng 00229/BEI.POP/07-2020 (IDX, 2020). The number of registered companies is 30, so this study's population and sample determination use the saturated sample technique, where all populations are used as research samples (Sugiyono, 2011). The analysis used is the modified Altman Z-Score method using the following equation (Altman et al., 2019):

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

The ratios in the above equation are used to analyze and calculate the annual financial statements and are then used to predict the occurrence of potential bankruptcy. These ratios can be categorized into three groups, namely (Barus et al., 2017; Esomar & Christianty, 2021; Gilrita, 2015; Indriyati, 2010; Kasmir, 2014; Setyaningrum et al., 2020):

1. Liquidity ratio; **(X_1)** working capital to total assets aims to measure liquidity by comparing net working capital with total assets.
2. Profitability ratio consisting of; **(X_2)** retained earnings to total assets, which aims to show the ratio of retained earnings to total assets and **(X_3)** The ratio of earnings before interest and taxes to total assets is intended to demonstrate the company's ability to make profits before taxes.

3. Activity ratio; **(X_4)** market value equity to book value total debt ratio, aims to measure how much the company's assets can decrease in value before total liabilities are more significant than assets.

Table 1. Value "*cut off*" Z-*Score*

No	Value "*cut off*" Z-Score	Description
1	Less than 1,1 (<1,1)	Bankrupt
2	Between 1.1 to 2.6 (1,1 < Z < 2,6)	Prone to Bankruptcy
3	Greater than 2.6 (>2,6)	Healthy

Source: Altman et al. (2019)

Based on table 1, The bankruptcy statement shows that the company is facing a serious bankruptcy danger, which the company's management must address. Information indicating a prone to bankruptcy indicates that the company is vulnerable. In this situation, management must use caution when handling corporate assets. Meanwhile, the healthy category indicates that the company's performance is in good shape and that there are no issues with financial performance (Altman et al., 2019; Herlin et al., 2021; Primadani & Ariasih, 2021).

RESULT AND DISCUSSION

Calculation of Altman Z-Score Parameter Value

In measuring company performance using the Altman Z-Score method, four parameters. These calculations use annual financial report (LKT) data for 2020. The following is a recapitulation of the Altman Z-Score parameter value calculation in table 2.

Table 2. Recapitulation of Altman Z-Score Parameter Value

No.	Code	Company Name	X_1	X_2	X_3	X_4
1	ACES	Ace Hardware Indonesia Tbk.	0,578	0,572	0,127	2,579
2	ADRO	Adaro Energy Tbk.	0,092	0,368	0,045	1,626
3	AKRA	AKR Corporindo Tbk.	0,157	0,371	0,067	1,299
4	ANTM	Aneka Tambang Tbk.	0,05	0,262	0,064	1,500
5	ASII	Astra International Tbk.	0,138	0,440	0,064	1,369
6	BRPT	Barito Pacific Tbk.	0,125	0,028	0,032	0,624
7	BTPS	Bank BTPN Syariah Tbk.	0,769	0,254	0,068	2,233
8	CPIN	Charoen Pokphand Indonesia Tbk.	0,262	0,743	0,153	2,990
9	CTRA	Ciputra Development Tbk.	0,230	0,182	0,036	0,801
10	ERAA	Erajaya Swasembada Tbk.	0,180	0,286	0,082	1,106
11	EXCL	XL Axiata Tbk.	-0,167	0,002	0,002	0,394
12	ICBP	Indofood CBP Sukses Makmur Tbk.	0,111	0,217	0,096	0,945
13	INCO	Vale Indonesia Tbk.	0,231	0,682	0,045	6,866

No.	Code	Company Name	X_1	X_2	X_3	X_4
14	INDF	Indofood Sukses Makmur Tbk.	0,064	0,190	0,076	0,942
15	INTP	Indocement Tunggal Prakarsa Tbk.	0,296	0,630	0,079	4,291
16	JPFA	Japfa Comfeed Indonesia Tbk.	0,221	0,287	0,065	0,785
17	JSMR	Jasa Marga (Persero) Tbk.	-0,041	0,030	0,007	0,312
18	KLBF	Kalbe Farma Tbk.	0,439	0,737	0,161	4,262
19	MDKA	Merdeka Copper Gold Tbk.	0,008	0,201	0,060	1,540
20	MNCN	Media Nusantara Citra Tbk.	0,325	0,657	0,124	3,242
21	PGAS	Perusahaan Gas Negara Tbk.	0,109	0,353	0,023	0,645
22	PTBA	Bukit Asam Tbk.	0,187	0,571	0,134	2,380
23	PWON	Pakuwon Jati Tbk.	0,161	0,493	0,043	1,986
24	SCMA	Surya Citra Media Tbk.	0,305	0,729	0,220	1,358
25	SMGR	Semen Indonesia (Persero) Tbk.	0,052	0,407	0,045	0,879
26	TLKM	Telekomunikasi Indonesia (Persero) Tbk.	-0,091	0,321	0,157	0,959
27	TPIA	Chandra Asri Petrochemical Tbk.	0,178	0,263	0,008	1,016
28	UNTR	United Tractors Tbk.	0,233	0,494	0,070	1,723
29	UNVR	Unilever Indonesia Tbk.	-0,221	0,231	0,448	0,317
30	WIKA	Wijaya Karya (Persero) Tbk.	0,056	0,059	0,005	0,324

Based on table 2, the calculation results obtained for each parameter value in the Altman Z-Score method show that for the X_1, companies with negative values are EXCL, JSMR, TLKM, and UNVR. The negative net working capital was caused by higher short-term debt than current assets. That is not appropriate considering that if short-term debt matures and current assets are insufficient to finance it, the company does not have collateral because fixed assets have very low liquidity.

For X_2 calculation results, the company with the highest retained earnings value is CPIN, and the lowest is EXCL. This ratio is used to measure cumulative profitability, which measures the overall profit for the company running. The company's age affects this ratio because the longer the company is running, it can facilitate the accumulation of retained earnings. However, negative retained earnings indicate the company's failure to achieve profits and contribute negatively to the company due to accumulated losses.

While the result of X_3, the highest parameter value is UNVR and the lowest is EXCL. This ratio measures the actual productivity of the company's assets. This ratio has a large constant in the modified Altman Z-Score model, so it can produce a negative value indicating that the use of company assets cannot accumulate profits, even reducing the company's equity due to accumulated losses.

Finally, the results of the X_4, where this ratio is used to measure how much the company's assets can decrease in value before the total liabilities are greater than assets and the company becomes bankrupt. Several companies have a value of <1, including BRPT, CTRA, EXCL, ICBP, INDF, JPFA, JSMR,

PGAS, SMRG, TLKM, UNVR, and WIKA. The ratio value <1 reflects that the total liability is greater than the book value of equity. So that the equity owned by the company cannot fully guarantee its debt, the company also uses other debt as a source of funding to pay off debts that are due. This shows that the company pays off its debt by incurring new debt. Suppose the accumulated losses experienced by the company continue to increase while the amount of debt also increases. It is feared that one day the debt will exceed assets, and equity will have a negative value. Then this can indicate that the company will experience the potential for bankruptcy.

Calculation of Altman Z-Score Value

Based on the calculated data from the four parameters above, the next step is to enter the results into the modified Altman Z-Score equation above. Then the results will be converted based on the Z-Score "cut-off" value in table 1. The following are the results of the Altman Z-Score value Score for each company in table 3.

Table 3. Altman Z-Score Value in The Sharia Category Public Company

No.	Code	*Z-Score*	Description
1	ACES	9,222	Healthy
2	ADRO	3,810	Healthy
3	AKRA	4,057	Healthy
4	ANTM	3,189	Healthy
5	ASII	4,206	Healthy
6	**BRPT**	**1,777**	**Prone to Bankruptcy**
7	BTPS	8,677	Healthy
8	CPIN	8,312	Healthy
9	CTRA	3,188	Healthy
10	ERAA	3,826	Healthy
11	**EXCL**	**-0.378**	**Bankrupt**
12	ICBP	3,078	Healthy
13	INCO	11,254	Healthy
14	**INDF**	**2,560**	**Prone to Bankruptcy**
15	INTP	9,027	Healthy
16	JPFA	3,646	Healthy
17	**JSMR**	**0,204**	**Bankrupt**
18	KLBF	10,835	Healthy
19	MDKA	2,730	Healthy
20	MNCN	8,511	Healthy
21	PGAS	2,702	Healthy
22	PTBA	6,487	Healthy
23	PWON	5,039	Healthy
24	SCMA	7,283	Healthy
25	SMGR	2,893	Healthy
26	**TLKM**	**2,507**	**Prone to Bankruptcy**
27	TPIA	3,145	Healthy
28	UNTR	5,420	Healthy
29	UNVR	2,653	Healthy

No.	Code	Z-*Score*	Description
30	WIKA	0,738	Bankrupt

Based on table 4, it is found that there are three companies based on the Altman Z-Score method that are classified as unsafe in 2020. This means that the prediction model signals that the three companies included in the category of potential bankruptcy are EXCL, JSMR, and WIKA.

Several things cause the potential for bankruptcy of the above companies. For example, EXCL, in the company's 2020 annual financial statements, has problems with short-term liabilities that cannot be covered by current assets, thus making the company have to use long-term liabilities to cover short-term liabilities. The increasing public need for internet access during the Covid-19 pandemic has made this company's experience an advantage. However, because the liquidity and activity ratios also affect the company's financial performance, this also puts the company in a potential bankrupt position.

Meanwhile, JSMR has a negative liquidity ratio, so the company cannot pay its short-term liabilities with its current assets. This company's profitability and activity ratios are not too high, so it is categorized as having the potential to experience bankruptcy. This condition occurred due to the impact of the Covid-19 pandemic. In the summary of the financial statements, it was explained that the implementation of PSBB in various regions drastically decreased the mobility of the community. Likewise, the flow of trade in goods and services experienced a slowdown. This causes a decrease in the volume of vehicles crossing the toll road, resulting in a decrease in revenue. This also happened to WIKA, which is projected by this method to have the potential to fail due to the impact of the Covid-19 pandemic, which has hampered the planning, implementation of land acquisition, and construction project work. Thus, affecting the operational and financial performance of the company.

Furthermore, based on the Altman Z-Score method, there are three companies classified as prone to bankruptcy in 2020: BRPT, INDF, and TLKM. This condition requires quick and measurable corrective action so the company can return to a stable condition. Several things cause prone to bankruptcy companies above, including BRPT has a low liquidity ratio, so the company has not been able to pay its short-term liabilities with current assets. The book value of equity is lower than total liabilities, so the equity owned by the company cannot fully guarantee its debt. Meanwhile, INDF experienced an increase in profits from the previous year. However, the liquidity and equity of this company are not good enough, so the Z-Score value is potentially prone to bankruptcy. Finally, TLKM In the company's 2020 financial statements, this company experienced a problem where short-term liabilities could not be covered by current assets, thus making the company have to use long-term liabilities to cover short-term liabilities.

Company management can follow several strategies to minimize the risk of poor performance during the Covid-19 pandemic. The strategy is to restructure management and debt, aiming to improve the company's performance condition. Management restructuring is a change in the management structure with more competent people to optimize business processes. Meanwhile, debt or financial restructuring is an effort to ensure a low capital cost so the company can survive in the long term (Altman et al., 2019; Pustylnick, 2012).

Other strategies can also be obtained from good practices carried out by several healthy category companies based on the Altman Z-Score method, one of which is ADRO which implements the Crisis Management Plan (CMP) for Contagious Disease Outbreak before Covid-19 spreads in Indonesia and BTPS, which has an anticipatory strategy for market dynamics and changes, in which BTPS develops crisis scenarios and simulates potential impacts on business processes, credit risk, and liquidity risk.

The results of this study also show that the Altman Z-Score method can evaluate the company's performance and predict the potential for bankruptcy. Of course, this method is an early warning system for management to immediately take corrective action and prepare a survival strategy during a crisis, especially during the Covid-19 pandemic. That is also in line with the statement of Indriyati (2010) that the Altman Z-Score method is an effective method for predicting bankruptcy 4 or 5 years prior to bankruptcy and can be used to detect financial and performance problems that will affect business processes and can measure the level of financial company health.

CONCLUSIONS

Based on the results of the study, it can be concluded that the performance of public companies in the sharia category during the Covid-19 pandemic using the Altman Z-score method obtained that there were 3 companies predicted to have the potential to go bankrupt, namely EXCL, JSMR, and WIKA. Furthermore, 3 companies are predicted to be prone to bankruptcy, namely BRPT, INDF, and TLKM. Meanwhile, 24 companies are in the healthy category, most of which have total assets that are relatively large compared to total debt so that they can survive during the Covid-19 pandemic.

Strategies that can be followed up by management to minimize the risk of poor performance during the Covid-19 pandemic are management restructuring and debt or financial restructuring to improve the company's performance conditions.

The results of this study also show that the Altman Z-Score method can evaluate performance, detect financial problems, predict bankruptcy, and measure the level of company financial health. This method is an early warning system for management to immediately take corrective action so that the company's performance can survive during a crisis.

REFERENCES

Altman, E. I., Hotchkiss, E., & Wang, W. (2019). Corporate Financial Distress, Restructuring, and Bankruptcy: Analyze Leveraged Finance, Distressed Debt, and Bankruptcy. In *John Wiley & Sons*.

Anriani, Y. (2019). *Analisis Laporan Keuangan Untuk Menilai Kinerja Keuangan Perusahaan Pada PT. Makassar Inti Motor (Dealer Resmi Honda) Jl A.P Pettarani Kota Makassar*. Universitas Muhammadiyah Makassar.

Asmadi, D., Izzaty, N., & Erwan, F. (2021). Performance Analysis of Sharia Share Companies Using the Piotroski F-Score Method. *Amwaluna: Jurnal Ekonomi Dan Keuangan Syariah*, *5*(1), 67–75. https://doi.org/10.29313/amwaluna.v5i1.5926

Asmadi, D., & Rahmawati, S. (2021). *Analisis dan Estimasi Biaya* (N. Eltivia (ed.); 1st ed.). Syiah Kuala University Press.

Azlina, Y. (2020). Analisis Kinerja Keuangan Dengan Metode Altman Z-Score Pada PT Panorama Sentrawisata Tbk. *Jurnal AKRAB JUARA*, *5*(4), 191–201.

Barus, M., Sudjana, N., & Sulasmiyati, S. (2017). Penggunaan Rasio Keuangan Untuk Mengukur Kinerja Keuangan Perusahaan (Studi pada PT. Astra Otoparts, Tbk dan PT. Goodyer Indonesia, Tbk yang Go Public di Bursa Efek Indonesia). *Jurnal Administrasi Bisnis S1 Universitas Brawijaya*, *44*(1), 154–163.

Djohan, D., & Loh, R. (2021). Analisis Kinerja keuangan Perusahaan Sebelum dan Sesudah Go public yang terdaftar dibursa efek indonesia. *Jurnal BIKOM*, 1–10.

Efriyanti, F., Anggraini, R., & Fiscal, Y. (2012). Analisis Kinerja Keuangan Sebagai Dasar Investor Dalam Menanamkan Modal Pada PT. Bukit Asam,TBK (Study Kasus pada PT. Bukit Asam,TBK). *Jurnal Akuntansi Dan Keuangan*, *3*(2), 299–316. https://doi.org/10.36448/jak.v3i2.236

Esomar, M. J. F., & Christianty, R. (2021). Dampak Pandemi Covid-19 terhadap Kinerja Keuangan Perusahaan Sektor Jasa di BEI. *JKBM (Jurnal Konsep Bisnis Dan Manajemen)*, *7*(2), 227–233. https://doi.org/10.31289/jkbm.v7i2.5266

Gilrita, G. (2015). Analisis Altman (Z-Score) Sebagai Salah Satu Cara Untuk

Mengukur Potensi Kebangkrutan Perusahaan (Studi Pada Perusahaan Manufaktur yang Listing di BEI dan Perusahaan Manufaktur yang Delisting dari BEI Periode 2012-2014). *Jurnal Administrasi Bisnis S1 Universitas Brawijaya*, *25*(2), 86216.

Hanafi, M. M., & Abdul, H. (2014). *Analisis Laporan Keuangan*. Alfabeta.

Herlin, Efdendi, Y., & Ayu, E. T. (2021). Analisis Financial Distress Bank Umum Milik Negara (BUMN) Masa Pandemi Covid 19. *Jurnal Bisnisman : Riset Bisnis Dan Manajemen*, *3*(1), 19–29. https://doi.org/10.52005/bisnisman.v3i1.52

Hilman, C., & Laturette, K. (2021). Analisis Perbedaan Kinerja Perusahaan Sebelum Dan Saat Pandemi Covid-19. *BALANCE: Jurnal Akuntansi, Auditing Dan Keuangan*, *18*(1), 91–109. https://doi.org/10.25170/balance.v18i1.2659

IDX. (2020). Evaluasi Berkala Jakarta Islamic Index (JII) No. Peng-00355/BEI.POP/11-2020. In *Indonesia Stock Exchange* (Vol. 70). https://www.idx.co.id/data-pasar/data-saham/indeks-saham/

Indriyati, I. T. (2010). *Analisis Laporan Keuangan dan Penggunaan Z-Score Altman Untuk Perusahaan Properti Yang Terdaftar Di Bursa Efek Indonesia Periode 2006-2008*. Universitas Sebelas Maret.

Kasmir. (2014). *Analisis Laporan Keuangan, cetakan ke-7. Jakarta*. PT Rajagrafindo Persada.

Korry, I. K. T. S., Dewi, M. P., & Ningsih, N. L. A. P. (2019). Analisis Prediksi Kebangkrutan Berdasarkan Metode Altman Z-Score (Studi Kasus Pada Bank Bumn Yang Terdaftar Di Bei). *Buletin Studi Ekonomi*, *24*(2), 191. https://doi.org/10.24843/bse.2019.v24.i02.p03

Kurniawan, M. A., Hariadi, K. E., Sulistyaningrum, W. O., & Kristanto, A. B. (2021). Pandemi COVID-19 dan Prediksi Kebangkrutan: Apakah Kondisi Keuangan Sebelum 2020 Berperan? *Jurnal Akuntansi*, *13*, 12–22. https://doi.org/10.28932/jam.v13i1.3193

Nurafiati, N. (2019). Perkembangan Pasar Modal Syariah dan Kontribusinya Terhadap Pertumbuhan Ekonomi di Indonesia. *INKLUSIF (Jurnal Pengkajian Penelitian Ekonomi Dan Hukum Islam)*, *4*(1), 65. https://doi.org/10.24235/inklusif.v4i1.4167

Primadani, N. M. L., & Ariasih, N. K. (2021). Rancang Bangun Sistem Prediksi Financial Distress Menggunakan Metode Altman Z-Score Modifikasi Pada Koperasi XYZ. *INFORMAL: Informatics Journal*, *6*(2), 72. https://doi.org/10.19184/isj.v6i2.23710

Puspitasari, S., Mahri, A. J. W., & Utami, S. A. (2020). Indeks Inklusi Keuangan Syariah di Indonesia. *Amwaluna: Jurnal Ekonomi Dan Keuangan Syariah*, *4*(1), 15–31. https://doi.org/10.29313/amwaluna.v4i1.5094

Pustylnick, I. (2012). Restructuring the financial characteristics of projects in financial distress. *Global Journal of Business Research*, *6*(2), 125–134.

Setyaningrum, K. D., Atahau, A. D. R., & Sakti, I. M. (2020). Analisis Z-Score Dalam Mengukur Kinerja Keuangan Untuk Memprediksi Kebangkrutan Perusahaan Manufaktur Pada Masa Pandemi Covid-19. *Jurnal Riset Akuntansi Politala*, *3*(2), 74–87. https://doi.org/10.34128/jra.v3i2.62

Sudiyatno, B., & Puspitasari, E. (2010). Tobin's Q dan Altman Z-Score Sebagai Indikator Pengukuran Kinerja Perusahaan (Tobin'sQ and Altman Z-Score as Indicators of Performance Measurement Company). *Kajian Akuntansi*, *2*(1), 9–21.

Sugiyono. (2011). *Metode Penelitian Kuantitatif, kualitatif dan R&D*. Alfabeta.

Yamali, F. R., & Putri, R. N. (2020). Dampak Covid-19 Terhadap Ekonomi Indonesia. *Ekonomis: Journal of Economics and Business*, *4*(2), 384. https://doi.org/10.33087/ekonomis.v4i2.179

PERFORMANCE ANALYSIS OF PUBLIC COMPANIES IN THE SHARIA CATEGORY DURING THE COVID-19 PANDEMIC USING THE ALTMAN Z-SCORE METHOD

ORIGINALITY REPORT

17%	15%	12%	7%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to UIN Ar-Raniry Student Paper	3%
2	Muhammad Irfan Ibrahim, Jullia Titaley, Tohap Manurung. "Analisis Keakuratan Capital Asset Pricing Model (CAPM) dan Arbitrage Pricing Theory (APT) dalam Memprediksi Expected Saham pada LQ45", d'CARTESIAN, 2017 Publication	2%
3	etd.unsyiah.ac.id Internet Source	2%
4	www.bircu-journal.com Internet Source	1%
5	Anny Widiasmara, Putri Widyasari. "PENGGUNAAN MODEL INDEKS TUNGGAL DALAM MENILAI RESIKO DAN RETURN SAHAM UNTUK PILIHAN BERINVESTASI", INVENTORY: JURNAL AKUNTANSI, 2018 Publication	1%

6	ejurnal.umri.ac.id Internet Source	1 %
7	ejournal.unisba.ac.id Internet Source	1 %
8	Agus Irawan, Adi Prasetyo, Dwi Irawan. "ANALYSIS OF FINANCIAL DISTRESS IN TRANSPORTATION COMPANIES WITH THE ALTMAN Z-SCORE APPROACH", Review of Applied Accounting Research (RAAR), 2021 Publication	1 %
9	jkmk.ppj.unp.ac.id Internet Source	1 %
10	journal.uii.ac.id Internet Source	1 %
11	Fika Andriani, Pardomuan Sihombing. "Comparative Analysis of Bankruption Prediction Models in Property and Real Estate Sector Companies Listed on the IDX 2017-2019", European Journal of Business and Management Research, 2021 Publication	1 %
12	Submitted to Forum Perpustakaan Perguruan Tinggi Indonesia Jawa Timur Student Paper	1 %
13	Submitted to Swiss Management Center Student Paper	1 %

14	www.researchgate.net Internet Source	1 %
15	María Cantero-Saiz, Begoña Torre-Olmo, Sergio Sanfilippo-Azofra. "Creditor rights, monetary policy, financial crisis, and trade credit", BRQ Business Research Quarterly, 2021 Publication	1 %
16	ojs.unud.ac.id Internet Source	1 %

Exclude quotes	On	Exclude matches	< 1%
Exclude bibliography	On		