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Forecasting Analysis of Potential Financial Distress PT Bank Aladin Syariah Tbk Using Arima Box Jenkins Method

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Abstract

Introduction: *PT Bank Aladin Syariah earned negative profits in and from 2019 to 2022 did not distribute dividends. Both of these conditions are signs that the company is experiencing financial distress. The purpose of this study is to analyze the potential for financial distress and predict it using the ARIMA Box Jenkins method.* **Research Methods:** *This study uses a quantitative method with the ARIMA Box Jenkins data processing technique. The sample used is time series data of z-score values from 2019 to April 2024. The hypothesis in this study is that the ARIMA method has been proven accurate in predicting the potential for financial distress of PT Bank Aladin Syariah Tbk from May 2024 to December 2024.* **Results:** *The results showed that PT Bank Aladin Syariah Tbk in the next eight months are in financial distress.* **Conclusion:** *These results indicate that Aladin Syariah Bank must pay close attention to its financial condition so that it does not actually experience financial distress. Investors also need to further consider the decision to invest in Bank Aladin Syariah given its poor financial distress predictions.*

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INTRODUCTION

As a company that runs a business, the results of banking business operations are also closely related to profitability. Profitability or better known as the profitability ratio is a ratio used as a measuring tool for a company's ability to make a profit from every rupiah of sales generated.(Widarjo W & D, 2009) Profitability is an important thing to consider, where in the sustainability of the banking business, the Bank must be in a profitable state (Priatna, 2016). Without profit, it will be difficult for the company to attract capital from outside (Rahayu & Sari, 2018).

In contrast to expectations related to profitability, which is expected that the company's business will always be profitable, PT. Bank Aladin Syariah Tbk is the opposite. Reported by CNBC Indonesia (Aprilia, 2023) PT. Bank Aladin Syariah TBk still posted a current year loss in the first quarter of 2023 of IDR 46.17 billion. This amount increased 4.98% from the same period the previous year of IDR 43.98 billion. Likewise, as reported in Infobanknews.com (Irawati, 2023), it was reported that until the first six months of 2023, Bank Aladin had recorded a net loss of IDR96.25 billion, which is a figure that has increased by 19.16% yoy from IDR80.77 billion in 2022.

In reviewing its financial statements, PT Bank Aladin syariah has suffered losses for more than two consecutive periods. The financial data is presented in the following table:

Table 1. Quarterly Net Profit Data of PT Bank Aladin Syariah Tbk

NO	Time	Net Profit (in IDR)
1	Quarterly I - 2021	1.417
2	Quarterly II - 2021	-3.134
3	Quarterly III - 2021	-60.725
4	Quarterly IV - 2021	-131.219
5	Quarterly I - 2022	-43.981
6	Quarterly II - 2022	-80.776
7	Quarterly III - 2022	-146.418
8	Quarterly IV - 2022	-264.913
9	Quarterly I - 2023	-46.174
10	Quarterly II - 2023	-96.254
11	Quarterly III - 2023	-145.736
12	Quarterly IV - 2023	-226.738
13	Quarterly I - 2024	-44.196

Source: Financial Statements of PT Bank Aladin Syariah Tbk

The condition of PT Bank Aladin Syariah Tbk which continues to lose money in the last period is very dangerous for the condition of the company. According to Jantadej (Jantadej, 2006), companies that have reported losses for three consecutive periods can potentially

experience financial distress. Financial distress is a condition where the company shows a stage of decline in financial condition that occurs before bankruptcy or liquidation (Dwijayanti, 2010).

In addition to experiencing losses for three consecutive periods, according to Jantadej (Jantadej, 2006), the suspension of dividends is also a sign of financial distress. This condition was also experienced by PT Bank Aladin Syariah, based on its financial statements, Bank Aladin did not pay dividends from 2019 to 2023. This can be interpreted that financial distress can be a signal of bankruptcy that may be experienced by the company or if seen further, it can be said that the loss conditions experienced by PT Bank Aladin Syariah Tbk can threaten the company and cause bankruptcy.

Cintya Meiske Idi and Johanis Darwin Borolla have researched similar themes to this research. The study aims to determine the potential financial distress of PT Golden Plantation using the Altman Z-score method. This research was conducted based on the problems found in PT Golden Plantation, where this company in the last five years has experienced a decrease in profit/loss, and even experienced a loss of up to 44% of the profit earned in the previous year. This study uses the Altman Z-score method with the variables used include current ration, retained earnings ratio and leverage ratio, and solvency ratio. The results showed that since 2014 the company has begun to indicate financial distress, based on the Altman Z-score value in 2015 to 2018, the company is in a bankrupt condition (Idi & Borolla, 2021).

Basically, the research conducted by Cintya Meiske Idi, et al. and the research that will be conducted have similarities which lie in the things studied, namely seeing the potential financial distress of a company which stems from the problem of profit / loss which has continued to decline in the last few periods. However, these two studies also have some differences. First, what is clearly visible is the object of research, the object of research in the previous study was PT Golden Plantation, while the object of research in this study is PT Bank Aladin Syariah Tbk. Second, previous research looked at the potential for financial distress using the Altman Z-score method, while this study used the Z-score method developed by JH Boyd. Third, this study also forecasts the Z-score value using the ARIMA Box-Jenkins forecasting method, while previous studies did not. So this research has an important element of novelty to be researched.

The ARIMA method has very good accuracy for short-term forecasting, but for long-term forecasting the forecasting accuracy is not good, because the results will tend to be flat or constant (Sitepu & Sinaga, 2018). Short-term forecasting is forecasting for which the period of forecasting results is one year or less (Ginting, 2007). In addition, the ARIMA method is also said to be a method that can solve various problems in forecasting time series data (Soraya et al., 2021). This method is reliable and efficient in predicting financial time series data. Able to deal with seasonal data fluctuations and analyse random, trend, and seasonal situations. It can predict large-scale data and can predict values that are difficult to explain by economic theory (Wibawa et al., 2018).

Based on the novelty and problems above, it is necessary to conduct further research related to this issue. This is important because the prediction of financial distress is expected to be an evaluation material for the company and as a starting point for planning on what needs to be done in the future. In addition, seeing from the series of losses experienced by PT Bank Aladin Syariah Tbk, it is important to immediately take effective strategic actions to avoid the company entering into bankruptcy.

Through this research, it will be investigated how to predict the potential financial distress of PT Bank Aladin Syariah Tbk using the Z-score analysis method popularised by JH Boyd and how to forecast the Z-score value from May 2024 to December 2024. The analytical tool used to perform forecasting is EViews 9 with the Box-Jenkins Autoregressive Integrated Moving Average (ARIMA) method forecasting technique.

METHOD

This research is quantitative research, quantitative research focuses more on testing theories by measuring research variables through numbers and analysing data through statistical procedures (Paramita et al., 2021). The variable used is the z-score value. Z-score is a proxy for the probability of bank failure or bankruptcy (Safitri, 2018). The greater the z-score value, the better and the smaller the z-score value, the more likely the financial condition is to experience financial distress. The z-score calculation formulation uses the formula from JH Boyd et al (De Nicoló et al., 2006):

$$Z - Score = \frac{ROA + EA}{SD_{ROA}}$$

Z = Z-score Value
ROA = Return on Asset
EA = Ratio of Equity to Assets
SD_{ROA} = Standard Deviation of ROA

The research sample taken is the z-score value of PT Bank Aladin Syariah, Tbk for the period January 2019-April 2024. The data used is secondary data obtained from the monthly financial statements of PT Bank Aladin Syariah Tbk. The report comes from the official website of PT Bank Aladin Syariah, Tbk, namely https://aladinbank.id/ and the official OJK website, namely https://www.ojk.go.id/. Furthermore, financial reports from these two sources will be combined. Reports from the official website of PT Bank Aladin Syariah Tbk as the main data source and financial reports from the official OJK website as a data source that complements the main data if in a certain month Bank Aladin Syariah does not publish financial reports on its official website. Data processing is adjusted to the stages of the ARIMA Box Jenkins method (Juanda & Junaidi, 2012) using EViews software starting from the model identification stage which consists of the stationarity test stage and identification of ACF and PACF patterns. Then, proceed with the model estimation stage. This stage compares the coefficient of determination (R-squared), Akaike

Indormaiton Criteria (AIC) and Schwarts Criterion (SC) of each alleged best model to find the best model in this study. Furthermore, the model evaluation stage consists of normality test and white noise test. The normality test in this study uses the Monte Carlo method. and the forecasting stage. Data processing is also carried out on SPSS software, namely at the normality test stage in the model evaluation to see the normality of residuals using the Monte Carlo method. This method is a method of testing data normality using systematic development that utilises random numbers, so it is commonly used when the data distribution is random or considered too extreme (Kinanti & Rosdiana, 2022). The last stage is the forecasting stage, in which prediction or forecasting is carried out based on the best model that has been selected.

RESULT AND DISCUSSION

Table 2. Descriptive Statistics Test

	Z-score
Mean	14.64411
Median	16.01063
Maximum	19.01577
Minimum	7.488328
Std. Dev.	3.686842

Source: Secondary Data Processed 2024

Based on table 2, it is known that the z-score value has a mean value of 14.644 with a median of 16.0106. In this data, the maximum value is 19.01577 and the minimum value is 7.4883.

Figure 1. Z-score Plot

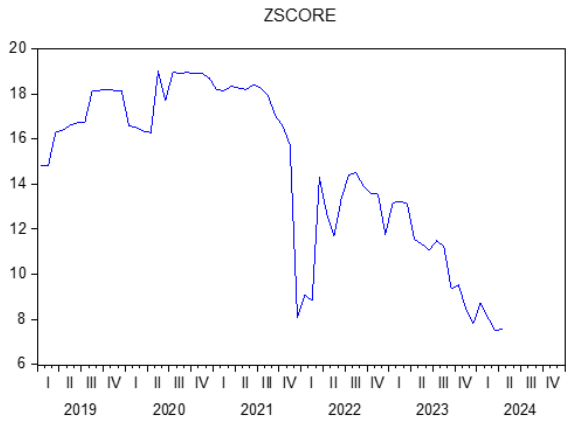


Figure 1 shows the Z-score plot from 2019 to April 2024. From the figure, it can be seen that the Z-score data tends to be unstable and has a downward trend, with the lowest number

seen in the first quarter of 2024. The maximum value of the data is 19.01577 and the minimum value is 7.4883. This means that the highest and lowest z-score values in this five-year period have a difference of more than 10.

Based on JH Boyd, et al (De Nicoló et al., 2006), the higher the z-score value, the better and the lower the z-score value, the more likely the potential for financial distress. In this regard, the z-score graph of PT Bank Aladin Syariah actually shows a significant decrease and is interpreted as closer to the potential for financial distress.

Based on this plot, there are two periods when the z-score value has decreased very drastically. This means that PT Bank Aladin Syariah had experienced potential financial distress twice, namely at the end of 2021 and the end to early 2024. This condition was triggered by the Covid-19 pandemic which triggered problems with the company's financial performance.

In the case of Bank Aladin Syariah, the bank's ROA, which is one of the profitability ratios for measuring financial performance as well as a component calculated in the z-score model, whose data has been attached in the appendix, continues to be in a loss condition even though it fluctuates. This situation in the financial performance of PT Bank Aladin Syariah Tbk is in accordance with Ambas Hamida and Kulkarni's research where the ROA value in 2021 does not meet the criteria set by Bank Indonesia (Hamida & Kulkarni, 2020). This situation is also in accordance with the research of Nidya Oktavia Kurniawati and Wimber Jerry Panjaitan (Kurniawati & Panjaitan, 2023) who found that natural disasters and epidemics have an impact on the financial stability of the financial industry.

Next is to forecast the z-score value using the ARIMA method which is processed with the Eviews 9 application. ARIMA method testing includes identification of model, model parameter estimation, model verification, and *forecasting*.

Identification of Model

Identification of model stage includes stationarity test and identification of ACF and PACF patterns.

Tabel 3. Stasionary Test at level

Null Hypothesis: ZSCORE has a unit root Exogenous: Constant Lag Length: 0 (Automatic - based on SIC, maxlag=10)			
		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-0.972949	0.7578
Test critical values:	1% level	-3.538362	
	5% level	-2.908420	
	10% level	-2.591799	
*MacKinnon (1996) one-sided p-values.			

Source: Secondary Data Processed 2024

Based on Tabel 3. the results of stationary testing at level. From the table, it is known that the probability value in the stationarity test at the level level is 0.7578. In this study using $\alpha = 5\%$

or 0.05. For this reason, the probability value = 0.7578 <0.05, conclude that the z-score data is not yet stationary at the level level. Since the data is not yet stationary at the level, it is necessary to perform the first differencing process.

Tabel 4. Stasionary Test at First Difference

Null Hypothesis: D(ZSCORE) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=10)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-8.780648	0.0000
Test critical values:	1% level	-3.540198	
	5% level	-2.909206	
	10% level	-2.592215	

*MacKinnon (1996) one-sided p-values.

Source: Secondary Data Processed 2024

Table 4 shows that the stationary test results at the first difference level have a prob value of = 0.000 <0.05. It can be concluded that the Z-score data is stationary at the first difference level. After the data is stationary, data processing can proceed to the ACF and PACF testing stages.

Tabel 5. First Difference Z-score Correlogram Results

Sample: 2019M01 2024M04
Included observations: 63

Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob
		1	-0.12...	-0.12...	1.0279	0.311
		2	0.038	0.023	1.1241	0.570
		3	-0.22...	-0.22...	4.5905	0.204
		4	0.069	0.016	4.9173	0.296
		5	0.100	0.125	5.6271	0.344
		6	-0.15...	-0.19...	7.3931	0.286
		7	-0.04...	-0.07...	7.5448	0.374
		8	-0.03...	0.019	7.6189	0.472
		9	-0.04...	-0.15...	7.7909	0.555
		1...	0.014	-0.03...	7.8054	0.648
		1...	0.056	0.118	8.0523	0.709
		1...	0.180	0.144	10.657	0.558
		1...	-0.14...	-0.16...	12.442	0.492
		1...	-0.02...	-0.01...	12.492	0.567
		1...	-0.04...	0.008	12.690	0.626
		1...	0.103	-0.03...	13.609	0.628
		1...	-0.07...	-0.09...	14.133	0.658
		1...	0.009	0.107	14.140	0.720
		1...	-0.15...	-0.17...	16.249	0.641
		2...	0.034	-0.07...	16.357	0.694
		2...	0.004	0.084	16.359	0.749
		2...	0.172	0.139	19.321	0.625
		2...	0.118	0.079	20.737	0.597
		2...	-0.01...	0.058	20.758	0.653
		2...	-0.03...	0.062	20.879	0.699
		2...	-0.03...	-0.06...	20.985	0.743
		2...	0.050	-0.00...	21.265	0.774
		2...	-0.09...	-0.07...	22.312	0.767

Source: Secondary Data Processed 2024

Table 5 which is the result of the correlogram of z-score data shows that there are no ACF and PACF values that cut off. However, there are ACF and PACF values that are almost out, namely at 3rd and 6th order respectively. For this reason, the next step is to find the best model

using 3rd order ACF/PACF and 6th order ACF/PACF. So that the ARIMA (p,d,q) value obtained the initial temporary conjecture model formed as follows:

Table 6. Estimated Provisional ARIMA Model

d = 1	0	AR(3)	AR(6)
0		ARIMA (3, 1, 0)	ARIMA (6, 1, 0)
MA(3)	ARIMA (0, 1, 3)	ARIMA (3, 1, 3)	ARIMA (6, 1, 3)
MA(6)	ARIMA (0, 1, 6)	ARIMA (3, 1, 6)	ARIMA (6, 1, 6)

Source: Secondary Data Processed 2024

Model Parameter Estimation

Table 7. Parameter Estimation Results of Temporary ARIMA Model

Model	Parameter	P. Value	Hasil Uji Signifikansi
ARIMA ([3], 1, 0)	AR(3)	0,0005	Signifikan
ARIMA ([6], 1, 0)	AR(6)	0,5781	Tidak Signifikan
ARIMA (0, 1, [3])	MA(3)	0,0001	Signifikan
ARIMA([3], 1, [3])	AR(3) MA(3)	0,4105 0,0556	Tidak Signifikan
ARIMA ([6], 1, [3])	AR(6) MA(3)	0,2309 0,0003	Tidak Signifikan
ARIMA(0, 1, [6])	MA(6)	0,6391	Tidak Signifikan
ARIMA([3], 1 [6])	AR(3) MA(6)	0,0002 0,1002	Tidak Signifikan
ARIMA ([6], 1, [6])	AR(6) MA(6)	0,5620 0,7080	Tidak Signifikan

Source: Secondary Data Processed 2024

Parameter significance is measured by looking at the probability value. A model that passes the significance test is a model whose model parameter probability <0.05. Based on the table of estimation results and parameter significance tests above, it is known that the models that pass the significance test are the ARIMA ([3], 1, 0) model and the ARIMA (0, 1, [3]) model which has a prob value <0.0005. The ARIMA ([3], 1, 0) model has a prob value of 0.0005 <0.05, so it is declared significant. Similarly, ARIMA (0, 1, [3]) has a prob value of=0.0001<0.05, so this model is also declared significant. Meanwhile, other models are seen to have prob values > 0.05, so they do not pass the significance test and are not included in the best possible model.

Models that pass the significance test will then be included in the best possible model and seen the value of R-Square, AIC (Akaike Information Criteria) and SC (Schwartz Creterion) (Juanda & Junaidi, 2012). A comparison of the R-Squared, AIC, and SC values of the ARIMA (0, 1, [3]) model and the ARIMA ([3], 1, 0) model will be presented in the following table:

Tabel 8. Best ARIMA Model Criteria

MODEL	R-SQUARED	AIC	SC
ARIMA ([3], 1, 0)	0,051928	3,615113	3,717167
ARIMA (0, 1, [3])	0,088995	3,579607	3,681661

Source: Secondary Data Processed 2024

The best model is chosen based on the largest R-Squared value, or the smallest AIC and SC values. Based on table 8, the ARIMA ([3], 1, 0) model has an R-Squared value of 0.051928, an AIC value of 3.615113, and an SC value of 3.717167. While the ARIMA (0, 1, [3]) model has an R-Squared value of 0.088995, an AIC value of 3.579607, and an SC value of 3.681661. For this reason, it can be obtained from the comparison of each criterion that has the largest R-Squared value, the smallest AIC, and the smallest SC is the ARIMA (0, 1, [3]) model.

Model Verification

At this stage, model verification is carried out by testing normality and white noise on the selected ARIMA model, namely ARIMA (0,1,3).

Table 9. Result of Normality Test

One-Sample Kolmogorov-Smirnov Test

			RESID_ZSCORE
N			63
Normal Parameters[a,b]	Mean		.02
	Std. Deviation		1.388
Most Extreme Differences	Absolute		.140
	Positive		.140
	Negative		-.136
Test Statistic			.140
Asymp. Sig. (2-tailed)			.004[c]
Monte Carlo Sig. (2-tailed)	Sig.		.151[d]
	99% Confidence Interval	Lower Bound	.142
		Upper Bound	.160

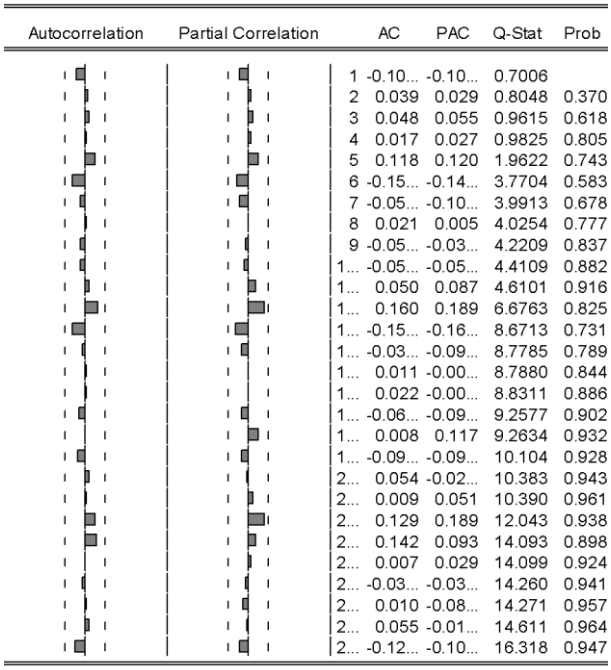
Source: Secondary Data Processed 2024

This normality test uses the Monte Carlo method. This method is a method of testing data normality using systematic development that utilises random numbers. The Monte carlo method is used when the data distribution is random or considered too extreme (Kinanti & Rosdiana,

2022). From table 9, it can be seen that the significance value with the Monte Carlo Sig (2-tailed) method is 0.151> 0.05 so that it is stated that the residuals in this case are normally distributed.

Table 10 . Result of White noise

Sample: 2019M01 2024M04
Included observations: 63
Q-statistic probabilities adjusted for 1 ARMA term



Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob
		1	-0.10...	-0.10...	0.7006	
		2	0.039	0.029	0.8048	0.370
		3	0.048	0.055	0.9615	0.618
		4	0.017	0.027	0.9825	0.805
		5	0.118	0.120	1.9622	0.743
		6	-0.15...	-0.14...	3.7704	0.583
		7	-0.05...	-0.10...	3.9913	0.678
		8	0.021	0.005	4.0254	0.777
		9	-0.05...	-0.03...	4.2209	0.837
		1...	-0.05...	-0.05...	4.4109	0.882
		1...	0.050	0.087	4.6101	0.916
		1...	0.160	0.189	6.6763	0.825
		1...	-0.15...	-0.16...	8.6713	0.731
		1...	-0.03...	-0.09...	8.7785	0.789
		1...	0.011	-0.00...	8.7880	0.844
		1...	0.022	-0.00...	8.8311	0.886
		1...	-0.06...	-0.09...	9.2577	0.902
		1...	0.008	0.117	9.2634	0.932
		1...	-0.09...	-0.09...	10.104	0.928
		2...	0.054	-0.02...	10.383	0.943
		2...	0.009	0.051	10.390	0.961
		2...	0.129	0.189	12.043	0.938
		2...	0.142	0.093	14.093	0.898
		2...	0.007	0.029	14.099	0.924
		2...	-0.03...	-0.03...	14.260	0.941
		2...	0.010	-0.08...	14.271	0.957
		2...	0.055	-0.01...	14.611	0.964
		2...	-0.12...	-0.10...	16.318	0.947

Source: Secondary Data Processed 2024

Based on table 10, it is obtained that the ACF and PACF data plots do not cross the boundaries, and the probability> 0.05 so that the white noise assumption is fulfilled.

Forecasting

To see the accuracy of the ARIMA model that has been selected, this study uses MAPE (Mean Absolute Percentage Error). Mean Absolute Percent Error (MAPE), used to calculate the average absolute percentage error (Sukerti, 2015). MAPE gives an indication of how much the forecasting error is compared to the true value of the series (Barus, 2013). The percentage results of the MAPE value have benchmarks that illustrate whether the model is suitable for forecasting the z-score value of PT Bank Aladin Syariah Tbk. The benchmark is like the following table (Hutasuhut et al., 2014):

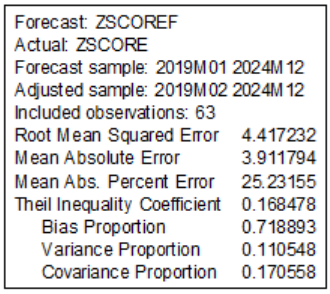
Table 11. MAPE Criterion

MAPE Range	Criterion
<10%	The forecasting model is excellent
10-20%	The forecasting model is good
20-50%	The forecasting model is worth
>50%	The forecasting model is bad

Source: Past Research

The table shows the percentage error value in MAPE. The forecast can still be used if the MAPE value does not exceed 50%, if the MAPE value is greater than 50% then the forecasting model cannot be used (Hasanah, 2022). The MAPE value can be seen from the output of ARIMA data processing using Eviews, as in the following tabel:

Tabel 12. MAPE Output



Forecast: ZSCOREF	
Actual: ZSCORE	
Forecast sample: 2019M01 2024M12	
Adjusted sample: 2019M02 2024M12	
Included observations: 63	
Root Mean Squared Error	4.417232
Mean Absolute Error	3.911794
Mean Abs. Percent Error	25.23155
Theil Inequality Coefficient	0.168478
Bias Proportion	0.718893
Variance Proportion	0.110548
Covariance Proportion	0.170558

Source: Secondary Data Processed 2024

It is known from table 12, the MAPE (Mean Absolute Percentage Error) value is 25.231%. This means that the MAPE results are in the 20-50% category so that the forecasting model is worth. Next, the forecasting results will be presented with the ARIMA (0,1,3) model in the form of z-score forecasting values.

Table 13. Z-score Data Forecasting Results for the Period May 2024 to December 2024

Year	FORECASTING *Z-SCORE*
2024M05	6.993016133744643
2024M06	6.871036280678153
2024M07	6.749056427611663
2024M08	6.627076574545173
2024M09	6.505096721478683
2024M10	6.383116868412193
2024M11	6.261137015345703
2024M12	6.139157162279213

Source: Secondary Data Processed 2024

Based on the results of forecasting the z-score value of PT Bank Aladin Syariah presented in table 13, it is known that the z-score value in each month continues to consistently decrease, although the value is not significant. Forecasting the z-score value in December 2024 dropped z-score in May 2024. The results of this z-score forecasting have decreased by an average of 0.12 per month. This condition means that in the following months during 2024, Bank Aladin Syariah will experience financial distress.

Referring to the reference above, namely from research by Ignacio Moreno, et al (Moreno et al., 2022), if the z-score value decreases, it means that it illustrates a decrease in profitabilits and capitalisation of Islamic banks, in accordance with the calculation components contained in this z-score model. This means that the profitability of PT Bank Aladin Syariah in the next 8 months will decrease again.

Profitability or also called profitability is the ratio of the company's ability to generate profits (Prasetiyo, 2012). If the profitability ratio is low, even negative, which means that the company's profit is negative, it can be interpreted that PT Bank Aladin Syariah Tbk is difficult or less able to generate profits. Since covid-19, the financial performance and z-score of PT Bank Aladin Syariah, which is still in poor condition, means that until the past 8 months the financial performance of PT Bank Aladin Syariah is still unstable. Calculated from the first period of losses, it is stated that PT Bank Aladin Syariah is very likely to experience financial distress, as stated by Lisa R Gilbert, et al in Jantadej (Jantadej, 2006) where if the bank continues to print negative profits in 3 consecutive periods then the bank is experiencing financial distress.

Based on signal theory, the company will provide positive or negative signals, where positive signals are characterised by an increase in profits and negative signals are characterised by a decrease in company profits. Judging from its financial statements, investors receive negative signal information from PT Bank Aladin Syariah Tbk. The company, which has the stock name "BANK", has actually experienced a continuous decline in profits, indicating that the performance of PT Bank Aladin Syariah is not good. This is also supported by the results of this study which state that this company is in financial distress, even according to predictions based on the ARIMA (0,1,3) model in the next 8 months the z-score value has not increased and the numbers continue to decline, which indicates the company's condition is increasingly experiencing financial distress. This information creates a negative signal for investors who will invest in this bank.

CONCLUSION

Based on the research results that have been stated in the previous chapters, it can be concluded that PT Bank Aladin Syariah has the potential for financial distress at the end of 2023 to early 2024. Based on the results of the ARIMA test, the best forecasting model is ARIMA (0,1,3) which has an R-square value of 0.088995, an AIC value of 3.579607, and an SC of 3.681661. The model has a MAPE value of 25.231%. The forecasting results show a decreasing value from May 2024 to

December 2024 with an average decrease of 0.12 per month. This means that the condition of PT Bank Aladin Syariah Tbk is experiencing financial distress because the smaller the z-score value, the more potential the company is experiencing financial distress. In terms of company profits, PT Bank Aladin Syariah has experienced losses in 3 consecutive periods, so this bank is experiencing financial distress.

REFERENCES

Book

Ginting, R. (2007). *Sistem Produksi*. Graha Ilmu.

Juanda, B., & Junaidi. (2012). *Ekonometrika Deret Waktu: Teori dan Aplikasi* (L. Utari & P. Komalasari (eds.)). PT Penerbit IPB Press.

Paramita, R. W. D., Rizal, N., & Sulistyan, R. B. (2021). *Metode Penelitian Kuantitatif* (Ketiga). Widya Gama Press. www.rosda.co.id

Sitepu, R. K.-K., & Sinaga, B. M. (2018). *Aplikasi Model Ekonometrika: Estimasi, Simulasi, dan Peramalan Menggunakan Program SAS@ 9.2* (Cetakan 1). PT Penerbit IPB Press.

Journal

Barus, J. H. (2013). Analisis Peramalan Ekspor Indonesia Pasca Krisis Keuangan Eropa Dan Global Tahun 2008 Dengan Metode Dekomposisi. *Jurnal Ekonomi Dan Keuangan*, *1*(3), 117–133.

De Nicoló, G., Jalal, A. M., & Boyd, J. H. (2006). Bank Risk-Taking and Competition Revisited: New Theory and New Evidence. *IMF Working Papers*, *06*(297), 1. https://doi.org/10.5089/9781451865578.001

Dwijayanti, S. P. F. (2010). Penyebab, Dampak, Dan Pbediksi Dari Financial Distress Serta Solusi Untuk Mengatasi Financial Distress. *Jurnal Akuntansi Kontemporer*, *2*(2). http://www.bi.go.id.

Hamida, A., & Kulkarni. (2020). Analisis Kinerja Keuangan Bank Syariah. *Al-Khanaj: Journal of Islamic Economic and Business*, *3*(2), 104. https://doi.org/10.59261/inkubis.v2i2.6

Hutasuhut, A. H., Anggraeni, W., & Tyasnurita, R. (2014). Pembuatan Aplikasi Pendukung Keputusan Untuk Peramalan Persediaan Bahan Baku Produksi Plastik Blowing dan Inject Menggunakan Metode ARIMA (Autoregressive Integrated Moving Average) Di CV. Asia. *Jurnal Teknik POMITS*, *3*(2), 169–174. https://media.neliti.com/media/publications/169644-ID-peramalan-deret-waktu-menggunakan-s-curv.pdf

Idi, C. M., & Borolla, J. D. (2021). Analisis Financial Distress Menggunakan Metode Altman Z–Score pada PT. Golden Plantation Tbk. Periode 2014-2018. *PUBLIC POLICY (Jurnal Aplikasi Kebijakan Publik & Bisnis)*, *2*(1), 102–121. https://doi.org/10.51135/publicpolicy.v2.i1.p102-121

Kinanti, P. F., & Rosdiana, Y. (2022). Accountancy Pengaruh Operating Leverage terhadap Kinerja Keuangan pada Perusahaan Makanan dan Minuman yang Terdaftar pada Bursa Efek

Indonesia Periode Tahun 2016-2020. *Bandung Conference Series: Accountancy*, *2*(1), 245–252. https://doi.org/10.29313/bcsa.v2i1.1354

Kurniawati, N. O., & Panjaitan, W. J. (2023). *Dampak Covid-19 Terhadap Stabilitas Industri Keuangan Sekolah Tinggi Ilmu Ekonomi Studi Ekonomi Modern*. *1*(3).

Moreno, I., Parrado-Martínez, P., & Trujillo-Ponce, A. (2022). Using the Z-score to analyze the financial soundness of insurance firms. *European Journal of Management and Business Economics*, *31*(1), 22–39. https://doi.org/10.1108/EJMBE-09-2020-0261

Prasetiyo, L. (2012). Analisis Rentabilitas Bank umum Syariah di Indonesia. *Kodifikasia*, *6*(1).

Priatna, H. (2016). Pengukuran Kinerja Perusahaan Dengan Rasio Profitabilitas. *Jurnal Ilmiah Akuntansi*, *7*(2), 44–53. http://ejournal.unibba.ac.id/index.php/AKURAT

Rahayu, M., & Sari, B. (2018). Faktor-Faktor Yang Mempengaruhi Nilai Perusahaan. *Ikraith Humaniora*, *2*(2), 69–76. https://doi.org/10.52859/jba.v8i2.148

Safitri, T. R. (2018). Analisis Pengaruh Fakor Makroekonomi dan Faktor Fundamental Terhadap Stabilitas Perbankan Konvensional di Indonesia Tahun 2008-2017. *Jurnal Ilmiah Mahasiswa FEB Universitas Brawijaya*, *6*(2), 3–4.

Soraya, S., Nurhidayati, M., Herawati, B. C., Anggrawan, A., Putra, L. G. R., & D, D. (2021). Forecasting Foreign Tourist Visits to West Nusa Tenggara Using ARIMA Method. *Jurnal Varian*, *5*(1), 89–96. https://doi.org/10.30812/varian.v5i1.1441

Sukerti, N. K. (2015). Peramalan Deret Waktu Menggunakan S-Curve dan Quadratic Trend Model. *Konferensi Nasional Sistem & Informatika*, 592–597. https://media.neliti.com/media/publications/169644-ID-peramalan-deret-waktu-menggunakan-s-curv.pdf

Wibawa, A. P., Qonita, A., Dwiyanto, F. A., & Haviluddin. (2018). Perbandingan Metode Prediksi pada Bidang Bisnis dan Keuangan. *Prosiding Seminar Ilmu Komputer Dan Teknologi Informasi*, *3*(1), 129–133.

Widarjo W, & D, S. (2009). Pengaruh Rasio Keuangan Terhadap Kondisi Financial Distress Perusahaan Otomotif. *Jurnal Bisnis Dan Akuntansi*, *11*(2), 107–119.

Thesis

Hasanah, U. (2022). *Analisis Model Autoregressive Integrated Moving Average (Arima) Box-Jenkins Pada Penderita Diabetes*. http://etheses.uin-malang.ac.id/42079/%0Ahttp://etheses.uin-malang.ac.id/42079/2/17610001.pdf

Jantadej, P. (2006). Using The Combinations of Cash Flow Components to Predict Financial Distress. *University of Nebraska*, *August*, 32 p.

Website

Aprilia, Z. (2023). *Pendapatan Terbang, Kok Rugi Bank Aladin Makin Membengkak?* https://www.cnbcindonesia.com/market/20230502155737-17-433783/pendapatan-

terbang-kok-rugi-bank-aladin-makin-membengkak/

Irawati. (2023). *Beban Melonjak, Bank Aladin Catat Rugi Bersih Rp96,25 Miliar Di Semester I-2023*. Berita. https://infobanknews.com/beban-melonjak-bank-aladin-catat-rugi-bersih-rp9625-miliar-di-semester-i-2023/