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Article

Comparisonal Analysis Of Financial Distress On Sharia Bank And Conventional Bank Based On The Altman Z-Score Method

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Abstract:

The role of banking in advancing the economy of a country is very large. The current economy cannot be separated from the banking world. In condition that , banking sued for capable facing and overcoming financial distress. This study aim for compare the level of financial distress of Islamic banks and conventional banks with Altman Z-Score method for the period 2015-2019. This research is a quantitative study. As for the variables compared _ are net working capital to total assets (X1), retained earnings to total assets (X2), earnings before interest and taxes to total assets (X3), book value of equity to total (X4), and Z-Score. Sample chosen use method purposive sampling . As for the sample consist from Islamic banks (Bank Muamalat Indonesia, Bank BNI Syariah, and Bank Mega Syariah) and conventional banks (Bank Mandiri , Bank BRI, and Bank BTN) for the 2015-2019 period. Hypothesis testing method use Mann Whitney U Test.

Test results show comparison level performance Islamic bank finance and conventional bank based on net working capital to total assets (X1) shows value 0.000 <0.05 means H0 is rejected, retained earnings to total assets (X2) shows value 0.000 <0.05 means H0 is rejected, earning before interest and taxes to total assets (X3) shows a value of 0.003 <0.05 means that H0 is rejected and the book value of equity to total liabilities (X4) shows that value 0.000 <0.05 means H0 is rejected so that there is difference significant . Whereas results comparison the level of financial distress based on the Z-Score shows value 0.178> 0.05 so that H0 is accepted . This means that no there is significant difference Among Islamic banks and conventional banks .

Keywords: Financial Distress, Islamic Bank, Conventional Bank , Altman Z-Score

1. Introduction

The role of banking in advancing the economy of a country is very large. The economy today and in the future will not be separated from the world of banking, if you want to carry out financial activities, both individuals and institutions, social or government. In simple terms, a bank is defined as a financial institution whose business activity is to collect funds from the public and redistribute public funds and provide other banking services. Then according to Law Number 10 of 1998, what is meant by a bank is a business entity that collects funds from the public in the form of savings and distributes them to the public in the form of credit and/or other forms in order to improve the standard of living of the people at large.[1]

The strategic role of banking in the economy is due to the function of banking as a financial intermediary, namely as an institution that has a role to bring together the owners of funds and users of funds, so bank activities must run efficiently on a macro and micro scale. So that if the banking sector faces difficulties in carrying out its functions, it will have an impact on the economy of a country. Indonesia in its policy regarding banking adheres to a dual banking system. Dual banking system means the implementation of two banking systems (conventional and sharia) whose implementation is regulated in various applicable regulations and has different perceptions [2]. Conventional banks carry out business activities based on conventional principles, where the main profit is obtained from the difference between deposit interest given to depositors and interest on loans or loans. Meanwhile, Islamic banks carry out business activities based on sharia principles in their activities of providing payment traffic services.

The banking industry in Indonesia, both conventional and sharia, in 2015 entered a period of decline from the previous year, this happened with an increase in bad loans or Non Performing Loans (NPL). If things continue to happen continuously, it can lead to potential financial difficulties and even bankruptcy. According to the Commercial Bank Soundness Rating System, the higher the NPL above 5%, the bank is categorized as unhealthy. A high NPL causes a decrease in profits to be received by the bank. The decrease in profit will result in a decrease in dividends distributed so that the growth of the bank's return rate will also decrease. According to the Financial Services Authority (OJK), the development of Islamic banking business in 2015 was considered to be entering a bleak period. Asset growth which had reached 49% in 2013, could not be repeated in 2015 and had to be satisfied with growth of 7.98%. The decline in the growth of Islamic banking did not only occur on the asset side, but also on financing and third party funds (DPK). In fact, this growth is also far below conventional banking. The position in July 2015 financing only grew by 5.55%, much lower than conventional banking which grew 8%. This slowing growth was reinforced by the increase in the ratio of non-performing financing (NPF). The position in July 2015, the NPF of Islamic banking was at 4.89%. 4 Although it is still below the maximum set, the percentage is quite high and indicates problematic financing. In the increasingly competitive world of banking and quality, it must be balanced with good management as well.

Financial distress is the process of a company experiencing financial difficulties, so that the company cannot fulfill its obligations. Financial distress analysis is used as an early warning or early warning to find out the condition that is being experienced by a bank from the financial side. The method that can be used to measure financial distress is the Altman Z-Score method. Altman Z-Score is the best model in predicting financial distress or bankruptcy and can be applied to all companies, both manufacturing and non-manufacturing companies. Based on the description above, researchers are interested in conducting research using the Altman Z-Score model to determine the potential for financial distress in Islamic banks and banks based on the ratio of the Altman Z-Score method. In addition, researchers also want to compare between Islamic banks and conventional banks that have the potential for financial distress based on the Z-Score value.

2. Methodology

The research method is a procedure and work steps used in research activities ranging from planning, data collection, data processing, to the decision-making stage. The type of research used by the researcher is quantitative. Quantitative is one type of research activity whose specifications are systematic, well-planned, and clearly structured from the beginning to the making of research designs, both regarding research objectives, research subjects, research objects, data samples, data sources, and methodologies . [3]The quantitative data is from the financial statements published by the bank's official. This study uses a descriptive approach, namely by analyzing financial statement data which is then tabulated to determine the category of banking companies that can be said to be healthy, bankrupt, or vulnerable. Descriptives are also used to describe the results of the

[1] Kasmir , Banking Fundamentals , (Jakarta: Rajawali Pers, 2014), p. 3

[2]Abdul Ghofar Anshori , Islamic Banking in Indonesia, (Yogyakarta: Gadjah Mada University Press, 2018), p. 33

[3] strong Suharso , Method Study Quantitative For Business , Approach Philosophy and Practice , (Jakarta:PT Index , 2009), p. 3

study by being presented in the form of descriptions to show differences in the level of financial distress between Islamic banks and conventional banks based on ratios or Z-score *values* . of the prospective bride and groom, data regarding divorce rates must be available. The data were obtained at the Makassar religious court in 2020. The data obtained were then classified based on the causal factors.

3. Results

A. Description of Research Results

This study analyzes the comparison of financial distress in Islamic banks and conventional banks using the Altman Z-Score method during the 2015-2019 period. This study uses secondary data from the Indonesia Stock Exchange website. The data used are the annual financial statements of each bank, namely current assets, current liabilities, total assets, retained earnings, earnings before tax, equity, and total debt which are then calculated using the Altman Z-Score method and then processed with SPSS 16. Determination of the sample based on purposive sampling technique obtained 3 conventional banks and 3 Islamic banks that meet the sample criteria.

Bank Sharia	Conventional Bank
1. Bank Muamalat Indonesia	1. Bank Independent
2. BNI Bank Sharia	2. BRI Bank
3. Mega Bank Sharia	3. Bank BTN

Data Source: Processed by Researchers 2021

1. Calculation of Financial Ratios Between Islamic Banks and Conventional Banks Measured based on the Ratio of Net Working Capital To Total Assets (X1), Retained Earnings To Total Assets (X2), Earning Before Interest And Taxes To Total Assets (X3), And Book Value Of Equity To Total Liabilities (X4) .

Net Working Capital/Total Assets ratio as a ratio that shows the company's ability to generate net working capital from the total assets it owns. Net working capital that has a positive value will have no difficulty in paying off its obligations, while if it is negative it will face difficulties in dealing with its short-term obligations.

Table 4.2. Calculation Results of Net Working Capital To Total Assets (X1) of Islamic Banks

No	Bank name	Tah u n				
		2015	2016	2017	2018	2019
1	Bank Muamalat Indonesia	0.314	0.347	0.520	0.602	0.394
2	Bank BNI Sharia	0.680	0.653	0.633	0.542	0.495
3	Bank Mega Syariah	0.757	0.827	0.751	0.812	0.820

Data Source: Processed by Researchers 2021

Based on the table above shows that the net working capital to total assets (X1) of Islamic banks from the years 2015 to 2019 showed a fluctuating value this was due to differences in working capital and total assets owned and led to a positive direction so that it could be categorized as not experiencing difficulties in terms of liquidity ratios.

Table 4.3. Calculation Results of Net Working Capital To Total Assets (X1) Conventional

No	Banks Nama Bank	Tahun				
		2015	2016	2017	2018	2019
1	Bank Mandiri	0,536	0,543	0,892	0,854	0,876
2	Bank BRI	0,737	0,732	0,757	0,578	0,828
3	Bank BTN	0,779	0,826	0,807	0,772	0,789

Data Source: Processed by Researchers 2021

Based on table 4.3 shows the net working capital to total assets (X1) of conventional banks shows a fluctuating value with the lowest and highest values at Bank Mandiri, namely the lowest in 2015 and the highest in 2017. This is due to changes in the amount of net working capital and total assets. owned in 2015 and 2017.

Table 4.4. Calculation Results of Retained Earnings to Total Assets (X2) Islamic Banks

No	Name Bank	Year				
		2015	2016	2017	2018	2019
1	Bank Muamalat Indonesia	0.019	0.019	0.020	0.020	0.020
2	Bank BNI Sharia	0.065	0.025	0.043	0.036	0.050
3	Bank Mega Syariah	0.157	0.138	0.120	0.115	0.105

Data Source: Processed by Researchers 2021

Based on table 4.4 retained earnings to total assets (X2) of Islamic banks to measure cumulative profitability. This ratio shows that Bank Muamalat Indonesia has the lowest score of 0.019 and the highest score of Bank Mega Syariah is 0.157. The difference in value between Islamic banks is due to the different amount of assets each year. This means that Islamic banks can generate retained earnings from total assets.

Table 4.5. Calculation Results of Retained Earnings to Total Assets (X2) Conventional Banks

No	Nama Bank	Tahun				
		2015	2016	2017	2018	2019
1	Bank Mandiri	0,012	0,011	0,013	0,009	0,008
2	Bank BRI	0,014	0,018	0,005	0,004	0,004
3	Bank BTN	0,030	0,024	0,020	0,017	0,016

Data Source: Processed by Researchers 2021

Based on table 4.5 shows retained earnings to total assets (X2) conventional banks show the ratio value at Bank BRI of 0.004 is the lowest value in this calculation and Bank BTN shows the highest value of 0.030. This happens because of differences in the total assets owned by the bank and can still obtain cumulative profitability.

Table 4.6. Calculation Results of Earning Before Interest And Taxes to Total Assets (X3) Islamic Banks

No	Nama Bank	Tahun				
		2015	2016	2017	2018	2019
1	Bank Muamalat Indonesia	0,001	0,002	0,009	0,008	0,005
2	Bank BNI Syariah	0,013	0,015	0,011	0,013	0,016
3	Bank Mega Syariah	0,003	0,024	0,013	0,008	0,008

Data Source: Processed by Researchers 2021

Based on table 4.6 earning before interest and taxes to total assets (X3) Islamic banks show the value to generate profits from the assets used. The smaller the level of profitability means the more inefficient and ineffective the company uses all assets to generate profits.

Table 4.7. Results of Earning Before Interest And Taxes to Total Assets (X3) Conventional

Banks No	Nama Bank	Tahun				
		2015	2016	2017	2018	2019
1	Bank Mandiri	0,028	0,017	0,024	0,028	0,027
2	Bank BRI	0,006	0,008	0,032	0,031	0,030
3	Bank BTN	0,014	0,015	0,014	0,011	0,013

Data Source: Processed by Researchers 2021

Based on table 4.7 earning before interest and taxes to total assets (X3) of conventional banks, the lowest ratio was 0.006 in 2015 and the largest in 2017 was BRI Bank. This shows an increase in managing assets to earn a profit.

Table 4.8. Result of Book Value Of Equity to Total Liabilities (X4) Calculation of Islamic Banks

No	Nama Bank	Tahun				
		2015	2016	2017	2018	2019
1	Bank Muamalat Indonesia	0,393	0,381	0,555	0,414	0,409
2	Bank BNI Syariah	0,669	0,670	0,575	0,433	0,362
3	Bank Mega Syariah	0,935	1,62	0,924	1,28	0,128

Data Source: Processed by Researchers 2021

Based on table 4.8 *book value of equity to total liabilities* (X_4) bank sharia This shows the extent to which the company's assets are financed by debt. In Thing this ratio this measure ability company for pay whole obligations, both short term and long term.

Table 4.9. Calculation Results Book Value Of Equity to Total Liabilities (X 4) Bank Conventional

No	Nama Bank	Tahun				
		2015	2016	2017	2018	2019
1	Bank Mandiri	0,162	0,326	0,342	0,196	0,273
2	Bank BRI	0,308	0,233	0,175	0,166	0,176
3	Bank BTN	0,087	0,104	0,096	0,090	0,903

Data Source: Processed by Researchers 2021

Based on table 4.9, the book value of equity to total liabilities (X4) of conventional banks shows the extent to which the company's assets are financed by debt. In this case, this ratio measures the company's ability to pay all its obligations, both short-term and long-term.

2. Calculation of Z-Score Value Between Islamic Banks and Conventional Banks in Predicting Financial Distress

Table 4.10. Altman Calculation Results Z- *Score* Bank Sharia

Code	Year	6.56(X_1)	3.26(X_2)	6.72(X_3)	1.05(X_4)	Z- *Score*	Note:
BMI	2015	2.059	0.061	0.006	0.412	2.53	*Grey*
	2016	2,276	0.061	0.013	0.400	2.75	*Safe*
	2017	3,411	0.065	0.060	0.582	4.11	*Safe*
	2018	3,949	0.065	0.053	0.434	4.51	*Safe*
	2019	2,584	0.065	0.033	0.429	4.90	*Safe*
BNIS	2015	4,460	0.211	0.087	0.702	5.46	*Safe*
	2016	4.283	0.081	0.100	0.703	5.16	*Safe*
	2017	4,152	0.140	0.073	0.603	4.96	*Safe*
	2018	3,555	0.117	0.087	0.454	4.21	*Safe*
	2019	3,247	0.163	0.107	0.380	3.89	*Safe*
BMS	2015	4,965	0.511	0.020	0.981	6.47	*Safe*
	2016	5,425	0.499	0.161	1,701	7.78	*Safe*
	2017	4,926	0.391	0.087	0.970	6.37	*Safe*
	2018	5,326	0.374	0.053	1.344	7.09	*Safe*
	2019	5,379	0.342	0.053	0.134	5.90	*Safe*

Data Source: Processed by Researchers 2021

After knowing the discriminant score of each bank, the next step is to compare it with the applicable provisions according to the Altman Z-Score formula. The stipulation is that if the Z-Score > 2.6 then the company is classified as safe. If the value 1.1 < Z < 2.6 then it is classified in the gray area. If the Z-Score is >1.1 then it is classified as distress. Based on the table above, from the 15 data generated, 1 data is in the gray area category, namely Bank Muamalat in 2015. This is due to low financial ratios based on the ratio of net working to total assets.

B. Analysis Statistics Descriptive

Descriptive statistics as an activity to collect data, process data and present data in the form of tables, diagrams, measures and figures showing frequency, measures of central tendency and dispersion (range, variance, and standard deviation). The data of Islamic banks and conventional banks are 15 data each consisting of 3 Islamic banks and 3 conventional banks that meet the sample criteria with annual reports. The following is

a description of each variable in the 2015-2019 period.

Table 4.12. Descriptive Variables of Islamic Banks

Descriptive Statistics

	N	Minimum	Maximum	mean	Std. Deviation
X 1 (NWCTA)	15	.314	.827	.60980	.171175
X 2 (RETA)	15	.019	.157	.06347	.049526
X 3 (EBITTA)	15	.001	.024	.00993	.006076
X 4 (BVTL)	15	.128	1,620	.64987	.0393175
Z- *Score*	15	2.53	7.78	5.0727	1.49202
Valid N Listwise	15				

Source Data : Processed Researcher 2021

Based on table 4.13 of conventional banks, it is stated that the X1 variable has a minimum value of 0.536, a maximum value of 0.892, a mean (average) of 0.75373 and a standard deviation of 0.114447 indicating that the assets used as net working capital for banking are stable, thus indicating the level of liquidity. good. The positive average value indicates that conventional banks have good liquidity of 75.373%.

Based on the X2 variable, conventional banks have a minimum value of 0.004, the maximum value of 0.030, the mean (average) of 0.01367 and the standard deviation of 0.07442. This shows that conventional banks are able to generate retained earnings quite well from total banking assets. Z-Score in conventional banks show average value 5,6307 p this show good value _ so that could avoid from difficulty finance . This thing show that conventional bank financial distress level low because conventional bank Z-Score value by whole big . The more small the resulting Z-Score so the level of financial distress is getting vulnerable or bad based on Altman Z-Score analysis for predict level financial distress risk . Then the more tall resulting Z-Score value so level financial distress is getting good based on Altman Z-Score analysis for predict level financial distress risk On average, the ratio of retained earnings to total assets and earnings before interest and taxes total assets has a positive average ratio . This thing means in Thing produce income or profit have good performance. However if observed retained earnings to total assets of Islamic banks more tall compared to with conventional banks . This thing means profitability the cumulative sharia bank is sufficient good compared to conventional banks . Whereas for earnings before interest and taxes total assets of conventional banks have ratio more tall compared to Islamic banks. This thing because conventional banks profit generated _ more big from activity banking . On average, the ratio of book value of equity to total assets of Islamic banks and conventional banks have positive ratio . _ This thing means in Thing the solvency of the bank have good performance . _ However if observed that Islamic banks have ratio more tall compared to conventional banks . This means that Islamic banks in Thing pay his obligations more good compared to conventional banks .

4. Discussion

1. Measured financial condition between Islamic banks and conventional banks based on ratio of net working capital to total assets, retained earnings to total assets, earnings before interest and taxes to total assets, and book value of equity to total liabilities

Net working capital or net working capital shows the company's ability to generate net working capital from the total assets owned. The magnitude of this variable is an illustration of the magnitude of the liquidity

condition of a company compared to its total assets, as well as how the position of the working capital is. This amount is largely determined by each company's business. Based on table 4.12 shows that in Islamic banks, the X1 variable has a minimum value of 0.314, a maximum value of 0.827, a mean (average) of 0.60980 and a standard deviation of 0.171175. This means that the company's assets used as banking net capital tend to be stable, indicating that the liquidity level of Islamic banks is good because they have a high average level of ratio during the period of observation, namely 2015-2019. Meanwhile, from table 4.13 conventional banks it is stated that the X1 variable has a minimum value of 0.536, a maximum value of 0.892, a mean (average) of 0.75373 and a standard deviation of 0.114447 indicating that the assets used as net working capital for banking are stable, thus indicating the level of good liquidity because it has a higher average ratio value compared to Islamic banks. Because the higher the NWCTA ratio, the more financial difficulties will be avoided.

Based on the data, in terms of total assets, Islamic banking is still less competitive than conventional banking. However, in recent years, the growth of Islamic banking assets has become stronger and has developed. So that when there is an economic crisis, Islamic banking is able to survive the crisis. According to Mamduh M Hanafi, this ratio shows the company's ability to generate net working capital from the total assets owned . [4]If the value of this liquidity ratio is high, it will have an impact on the company's operational capabilities. So operations will be smooth. The value of net working capital to total assets indicates that the condition of banking liquidity is getting better. Good conditions such as the amount of cash adequacy, the total credit extended to customers is large. Meanwhile, the small value of net working capital to total assets indicates the existence of a small company liquidity condition. These conditions illustrate high current liabilities, swelling fixed assets, small credit distribution, decreased cash available at banks or funds at Bank Indonesia and other banks, high allowance for losses on receivables and others. Then if the company's operations are smooth, then It is expected that the company's income will increase and if the income increases, the company's profit will increase. This is in line with Putri Wahidiyah Majid's research that the ratio of net working capital to total assets has a positive influence on profit changes.[5]

2. Comparison of Financial Distress Levels for Islamic Banks and Conventional Banks Based on the Altman Z-Score Method

The Altman Z-Score method is used to analyze the potential for financial distress between Islamic banks and conventional banks and then the results of these predictions are compared to find out whether there are differences in financial distress between Islamic banks and conventional banks. Based on the results of the Z-Score as a whole in table 4.12 and in table 4.13 it shows that the average Z-Score of conventional banks is greater than that of Islamic banks with a mean (average) Z-Score of Islamic banks of 5.0727 while the mean (average) average) conventional banks of 5.6307. This shows that the level of financial distress of conventional banks is lower than that of Islamic banks because the Z-Score value of conventional banks as a whole is greater than that of Islamic banks. The smaller the resulting Z-Score, the higher the level of financial distress based on the Altman Z-Score analysis to predict the level of financial distress risk.

Based on the data in table 4.14 on the results of the Mann-Whitney test, the comparison of the level of financial distress of Islamic banks and conventional banks shows 0.178> 0.05. This means that there is no significant difference between Islamic banks and conventional banks based on the Z-Score value. This is indicated by the existence of a rank on the results of the Mann-Whitney test between Islamic banks and conventional banks which have values that are not much different. Then the variable description shows a value of 5.07 for Islamic banks and 5.63 for conventional banks, meaning that the value shows not much different. So it can be concluded that in this study H0 is accepted, which means there is no difference in financial distress as measured by the Z-Score value between Islamic banks and conventional banks. This shows that Islamic

[4] Mamduh M Hanafi, Management Finance Edition Second , h. 656

[5]Wahidiyah 's daughter Majid Sofi, Analysis Comparative Risk Level Bankruptcy Banking in Indonesia with Use Modified Altman Z-Score Method , p.75

banking in Indonesia is not under financial pressure. There is no difference in the health condition of Islamic banking with conventional banking in Indonesia. Both types of banking are in a healthy condition for five consecutive years. The results showed that both banks were in a stable condition.

Regarding the prediction of financial distress, it is the same as uncertainty about what will happen. For example, in making a living, a Muslim is faced with conditions of uncertainty about what is happening. Planning can be done in business activities such as investments, but we cannot ensure that what we will get from these investments will experience profits or losses .[6] The concept of uncertainty in Islam is one of the important pillars in financial management. That in any business activity, no one wants their business to experience financial distress or even bankruptcy. However, this cannot be avoided, because risk will always coexist with the decisions taken. Every business that is undertaken will have two consequences in the future, namely profit or loss. These two things cannot be separated from business activities. No one guarantees a business will experience a profit or loss in the future. Therefore, the risk itself is a constant nature attached to life human . So that in Islam no know transaction business that doesn't know risk . Many factors can _ cause financial distress or bankruptcy of the company more banking good that internal factors or external company . So that if is known there is signs that lead to company financial distress so party management company could take steps to get manage and minimize the risk that will happen . With thereby with existence financial distress prediction recommends our for To do activity with very careful calculation in face future endeavors . _

2. Conclusion

Comparison of the level of financial performance of Islamic banks and conventional banks based on the ratio of net working capital to total assets (X1), the ratio of retained earnings to total assets (X2), the ratio of earnings before interest and taxes to total assets (X3) and the ratio of book value of equity to total liabilities (X4) shows that there is a significant difference. In the Mann-Whitney test results, the significance value of the ratio of net working capital to total assets shows a value of 0.000 <0.05. This means that there are significant differences between Islamic banks and conventional banks. With the decision H0 is rejected. In the results of the Mann-Whitney test the ratio of retained earnings to total assets, the significance value of the ratio shows a value of 0.000 <0.05. This means that there are differences in financial performance between Islamic banks and conventional banks. Comparison of financial performance based on the ratio of earnings before interest and taxes to total assets (X3) the results of the Mann-Whitney test, the significance value of the ratio shows a value of 0.003 <0.05 between Islamic banks and conventional banks showing a significant difference. The results of the Mann-Whitney test show that there is a significant difference in financial performance based on the ratio of book value equity to total liabilities (X4) of Islamic banks and conventional banks. The resulting significance value is 0.000 <0.05. This means that there is a significant difference.

Comparison of the level of financial distress of Islamic banks and conventional banks based on the Altman Z-Score method, it shows 0.178> 0.05 so that H0 is accepted . This thing means that no there is significant difference _ between Islamic banks and conventional banks based on Z-Score value . This thing showed with there is a rank on the results of the Mann-Whitney test between Islamic banks and conventional banks have value that is not far different . Then in description variable show value of 5.07 for Islamic banks and 5.63 for conventional banks means score the show no far different and deep healthy state . _

[6]Ibid h. 83

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