Research.

BANKRUPTCY PREDICTION OF THE COMPANY USING ALTMAN Z–SCORE METHOD FOR THE CONVENTIONAL BANKS REGISTERED IN THE INDONESIA STOCKS EXCHANGE (BEI)

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Abstract. This study was conducted to prove the accuracy of bankruptcy prediction of Altman Z-Score model on conventional banks listed on the Indonesia Stock Exchange. The data used in this study is secondary data obtained from the annual financial statements of conventional banks during the period of 2013-2016 mentioned on the official website of the Indonesia Stock Exchange. The data analysis technique used is bankruptcy prediction of Altman Z-Score–model, using five variables representing liquidity ratios X_1, profitability ratios X_2 and X_3, and activity ratios X_4 and X_5. The formula Z-score = $1.2X_1 + 1.4X_2 + 3.3X_3 + 0.6X_4 + X_5$. When Z-Score criteria is Z > 2.90 it is categorized as a healthy company. Z-Score between 1.23 to 2.90 is categorized as a company in area. While Z-Score Z < 1.23 is categorized as a potential bankrupt company. Based on the results of the research, Z-Score analysis that has been done in the period of 2013-2016 indicating that most conventional banks are predicted bankrupt. The lowest score of the Z-Score is 1.23. Only one Bank Jtrust Indonesia Tbk (BCIC bank code) is in a healthy category. Bank Mandiri (Persero) Tbk with BMRI bank code, has been increasing from the prediction of bankruptcy category to the prediction of gray area category.

Keywords: Altman Z-Score, Conventional Banks Listed on BEI 2013-2016, Prediction of Bankruptcy.

INTRODUCTION

Banking industries especially in Indonesia is susceptible to political, economic and social issues. Eq, when a case happened on the entity of the industries, refers to a bank issue, it would affect people trust on the banking industries.

Finance Authority (OJK) has indicated four crucial factors influencing the future of banking industry development. Referring to the formal announcement on the banking booklet 2014 distributed by OJK on 27/32013., Muliaman Hadad, Chief of Board of Commissioners of OJK, describing the strategy and business model of banking industry that would be influenced by four factors.

First, in line with the increasing productive people at mid class, bank consumers have requested rapid and flexible varied products. Credit instrument has connected with stock exchange and stock market instruments , hence, OJK has identified the possibility to integrate banking products with stock exchange and stock market instruments.

Second, banking will improve credit investment distribution especially in the manufacturing industry, energy and infrastructure sectors, in order to renew and revitalize the industrial capacity producing more valuable products. OJK will evaluate more carefully the process of credit distribution.

Third, banking industrial changes have required more comprehensive information covering the structure of capitalization, liquidity, governance and security to reduce the possibility of institution failure. In connection with a limited domestic capital and the limitation of foreign capital involvement, improving bank investment is not very easy.

Fourth, though the integration of banking sectors in MEA (Asean Economics Society) will be established in 2020, but the integration of stock market in 2015 had provided bank financing since bank customers had had more alternative to invest their money. Moreover, domestic business in Indonesia has been easier to enter international stock exchange which is reducing domestic credit facility. (http://keuangan.kontan.co.id/news/inilah-4-faktor-yang-akan-mempengaruhi-bisnis-bank, 2014).

Competitive company is depending on its performance. One of the most important aspect of the company's performance is financial aspect. Bad financial performance will jeopardize the company to improve the production. If it had not been solved as quickly as possible, it would make the company bankrupt. A bankruptcy of a company can be identified and measured by analyzing the financial statement of the company. Analyzing financial statement is to identify the financial condition of the company using various instruments and techniques. The most popular one is the financial ratio analysis.

For the company that is eager to develop its business, the best management has been required to be able to recognize the existing opportunities so that it can get rid of the bankruptcy condition. By having used the financial report to analyze the company's financial condition, it can be an information media for some investors to invest their money.

According to Edward I. Altman's research, he has selected 22 financial ratios, and determined only five financial ratios can be used to detect the possibility of company's bankruptcy. The five ratios are as follows; capital assets, retained profit upon the assets, profit before bank interest and tax, share's value upon the credit book value, and the assets selling. The aforementioned analysis is recognized as Z-score analysis that can predict accurately the company's performance, and the future financial condition of the company whether it is bankrupt or is going to be bankrupt or in a good condition. It is helpful for the investors to invest their money whether selling or buying or retention the investment at the related company. The leaders of the companies are responsible to prepare, consider and make the right decision for their stakeholders of investors.

Based on the aforementioned background, this research aims to recognize any potential bankruptcy at the conventional banks registered in BEI based on Z-score analysis method.

LITERATURE REVIEW

Bankruptcy

The company has not always been running as planned. On a certain situation, the company could probably encounter a slightly financial problem such as liquidity problem (cannot pay the salary, bank interest). If it had not been solved properly, it would make the company bankrupt though it was just small problem.

According to Hanafi (2008) bankruptcy can be identified by a flow and stock approach. Using stock approach, a company is declared bankrupt when its total debts / liabilities are bigger than the total assets. Using flow approach, a company is going to be bankrupt when it is unable to obtain the sufficient cash flow. However, refers to stock approach, a company is declared bankrupt even though it is still able to obtain a sufficient cash flow, or is still having a good prospect in the future.

Bankruptcy problems

Hanafi and Halim (2005) identified that some problems can cause the bankruptcy due to a short term financial problems which is insoluble problem. Insoluble problem has happened since the company cannot afford its debts payment due to the limited assets. However, insoluble problem has happened when the company has been liquidated or reorganized. Liquidation would be taken if the total of the liquidation assets had been bigger than the value of the company. Reorganization would be taken if the company had been still indicating good prospect and the value of the company had been bigger than liquidated company value.

Four variables indicating the differences between a bankrupt company and not bankrupt one:

1. Rate of return. A bankrupt company has had a lower rate of return.
2. Liabilities utilization. A bankrupt company has used a bigger debt.
3. Fixed payment coverage security. A bankrupt company has had a security upon less fixed payment coverage.
4. Fluctuation of share return. A bankrupt company has had lower share return on average and bigger fluctuation of share return.

Referring to Foster (1986) some indicators or information regarding the possibility of financial problems are as follows;

1. Analysis of Cash flow at the current period and the future one.
2. Analysis of the company's strategy has been considering the potential competitors, relative cost structure, industrial expansion planning, capability of the company to continue cost increasing, quality of the management, etc.
3. Analysis of Financial statement of the company and comparison with other company. This analysis has focused to a single financial variable or a combination of financial variables.
4. External information, refers to shares return and bonds evaluation.

Some factors causing a bankruptcy

Some factors that have been causing the company bankruptcy, according to Jauch and Glueck (in Adnan, 2000: 139) are as follows;

1. General factors:
   a. Economics sector

      The Factors causing the bankruptcy at the economics sector is related to an inflation symptom and deflation of the price of goods and service, financial policy, bank interest and currency devaluation or revaluation relating to foreign currency and balance payment, surplus or deficit related to the international trading.

   b. Social sector

      Social factor has been the big impact of the company bankruptcy since people life-style changing has affected the demands of products and services or how the company is getting along with the employees. Other social factor is the riot or chaos happened in a society.

   c. Technology

      Using an information technology has been causing a huge cost for the company especially for the maintenance and implementation of such information technology in the company. A huge cost increasing will happen when using informational technology is not well prepared which is the system is not integrated well and the managers are not professionally using it.

   d. State /government sectors

      The effect of governmental sector which is the government policies refers to the industry or company subsidy cancellation , exportation and importation tariffs changes, new regulations and policies for banking or employees, etc.

2. External factors of the company
   a. Customer's factor

      The company should have been able to identify customers' characteristics to avoid any losses of the customer and to create some opportunities to catch new customers so that the decreasing of sales income and customers losses can be avoided.
   b. Creditor factor

      The strength of the company is depending on the credit given and credit long-term payment which is relying on the creditor trustworthy upon the company's liquidity.
   c. Competitor's factor

      This factor should have to be managed carefully as it is related to the service provided to the customer. The company should not have ignored the competitors since if the competitor's products were accepted by the people, the company would absolutely lose the customers and reduce the revenue.

3. Internal factor of the company

   Some internal factors causing the bankruptcy according to Harnanto (in Adnan, 2000:140) are as follows;
   a. Too much credit given to the customers has been producing the credit problem refers to the customers payment problems which is they cannot settle down their payment.
   b. Inefficient management has happened due to lack of competency, experience, skills, initiative of the management.
   c. Authority displacement and fraud which have been done by the employees, even by the CEO reflecting to the financial losses of the company.

Alternative Corrective Action upon the Financial problem

Some alternatives correction action to solve the financial problem based on the size of financial problems being encountered by the company (Hanafi and Halim, 2005:274):

1. Informal Problem Solving

   This problem solving can only be done when the problem has not been worse yet and when the company problem has been in a temporary situation but still in a good prospect. How to solve such the problems are as follows;
   a. Extension: To extend the validity time of the credits.
   b. Composition: To reduce the amount of the credit payment.
   c. Liquidity: can be done when the liquidated amount is bigger than the value of going concern.

2. Formal Problem Solving

   This kind of problem solving can be done when the problem has been worse, so that the creditor or investor will have a security guarantee and justice. Formal problem solving has involved the third party which is the court. They are as follows;
   a. If the value of the company which were continued > value of the company liquidated, the company had obliged to execute a reorganization which is capital restructuring to be a proper capital structure. The changes can be done by extension, composition changing or both.
   b. If the value of the company which were continued < value of the company liquidated, the company had obliged to pick a liquidation step which is selling the company's assets, then distributing it to the investor but under the supervision of the third party.

Z-Score Analysis

Z-Score analysis is a tool/method using to predict the company's condition whether it is good or bad and to indicate the performance of the company reflecting to the prospect of the company in the future. Altman has applied 5 financial ratios to predict the company's bankruptcy. This method has been formulated as follows;

$$Z_i = 1,2X_1 + 1,4X_2 + 3,3X_3 + 0,6X_4 + X_5$$

refers to :
X_1 = (current assets – current liability) / total assets
X_2 = (retained earnings / total assets)
X_3 = (Earnings before interest and tax/total assets)
X_4 = Market value of equity / book value of liability
X_5 = Sales income/total assets

Z-Score Ratios

The ratios of Z-Score have described a specific description about the company, which is:

Working Capital upon Total Assets.

The first ratio that has been applied as the tool to predict a bankruptcy is the ratio of working capital upon the total assets. This kind of ratio is to measure the liquidity. Nett liquid assets or net working capital is the difference between total net current assets and total liability. Actually when the company has encountered financial problems, then the working capital will decrease more rapid than the total assets reflecting on the decreasing of this ratio. Negative net working capital will be encountering the problem of short term liability payment since there has not had any sufficient current assets to cover it. On the other hand, the company having positive working capital has seldom encountered the problem of liability payment. Working capital ratio has indicated the total amount of working capital of the company which is each Rp 1.00 of the company's assets.

Retained Earnings upon Total Assets

Retained Earnings / Total Assets (X_2) is the probability ratio evaluating the company capability to earn the profit during the operational of the company. The age of the company has been influencing the related ratio since the longer time of the company has been operating, it will speed up the accumulation of retained earnings. That is why new company has indicated low ratio, unless it has gained a big profit since the beginning of the company established. The more of the ratio, the bigger retained earnings has been building up the company's finance. The smaller of the ratio, the more weakness of the company financial has been indicated. Ratio of retained earnings upon the total assets has indicated that each Rp 1.00 of the company assets has been guaranteed by the balance of retained earnings.

Earnings Before Interest (EBIT) and Taxes upon the Total Assets

This kind of ratio has measured the profit achievement which is returnable assets that have been calculated by dividing yearly earnings before interest and tax (EBIT) from the total assets at year-end of balance statement. This ratio can be used to measure the productivity of the loan given. EBIT ratio upon the total assets has indicated net earnings before interest and tax obtained from each Rp 1.00 of the company assets.

Market Value of Equity upon Book Value of Liabilities.

This ratio has indicated the company's capability to pay the long-terms liabilities using the ordinary shares or its own capital. Market value of the equity has been obtained by multiplying the total of the shares in the market with the market price per share. Book value of liabilities has been obtained by counting-up current liabilities with long-terms liabilities. The smaller ratio has indicated the unhealthy condition of company financial. The ratio of market value of equity upon book value of liabilities has indicated that each Rp 1.00 of total liabilities consumed has been financing the company shares.

Sales Ratio upon Total Assets

This kind of ratio is an activity ratio applied to measure the capability of the company to increase the volume of the sales. This ratio has been identifying an efficient management utilizing all the company's assets to achieve the sales target and to get the profit. A smaller ratio has identified a small company's revenue indicating unhealthy financial of the company. The ratio of sales upon the total assets has indicated an effective utilization of all company's assets obtaining net sales income. It explains that each Rp 1.00 has been invested into the assets of the company.

Criteria of Altman Z-Score

The criteria to predict the company's bankruptcy refers to the company having Z-score > 2.90 is classified as a healthy company, but a company having Z-score < 1.20 is classified potentially bankrupt. Furthermore, companies having the score between 1.20 to 2.90 are classified critically bankrupt. (Hanafi and Halim, 2005)

Previous Research

Sopiyah Arini and Triyonowati (2013) has performed the research predicting the bankruptcy of pharmaceutical companies in Indonesia registered in the Indonesia Stock Exchange. The research has applied Altman Z-Score technical analysis and sampling criteria is pharmaceutical companies registered in the Indonesia Stock Exchange(BEI) which has issued regular financial report in 2009 up to 2012. This research has identified that Z-Score Altman model can be implemented to detect the probability of pharmaceutical companies' bankruptcy. Z-Score Altman model has classified the related pharmaceutical companies into three categories which is not bankrupt, potential bankrupt, and was bankrupt.

Sheilly Olivia Marcelinda, Hadi Paramy, Novi Puspitasari (2014) have done the research predicting a bankruptcy applying Altman Z-Score model from the perspective of the auditors upon some manufacturing companies registered in the Indonesia Stock Exchange. This research has applied secondary data obtained from yearly financial report of the manufacturing companies in 2010 – 2012 mentioned on website of the Indonesia Stock Exchange. This research has picked the manufacturing companies listed on the Indonesia Stock Exchange during the period of 2010-2012 which are having the report issued by the independent auditors. Method of analysis has applied Altman Z-Score method and figured out the accuracy of Altman Z-Score method which is in line with the auditor's opinion. The result of this research has identified the accuracy of the percentage of Altman Z-Score model which is in accordance with the auditor's opinion refers to the accuracy prediction level of 27.96%. It explains that bankruptcy prediction of Altman Z-Score model having a low level of the accuracy.

RESEARCH METHODOLOGY

This research has applied a descriptive method which is the research that has been done to recognize and to describe the characteristics of the variables being researched at a certain situation. The descriptive research aims to provide the researcher a history or a description of relevant aspects based on the perspective of the individual, organization, industrial oriented and others. Furthermore, this research is an idea to do further research or to make a simple decision.(Sekaran, in Peter and Yoseph, 2011).

The population is the financial report of conventional banks listed or registered on the Indonesia Stock Exchange (BEI). But the samples which is according to Martono (2015) is a part of the population having a specific characteristic or condition to be studied. Sampling technique is purposive sampling. This sampling technique is a technique to select the samples from a certain population and criteria. Sampling criteria are as follows;

1. The conventional banking enterprises listed on the Indonesia Stock Exchange (BEI) which is the companies that have been going public in Indonesia.
2. The conventional banking enterprises having been issued a regular financial report in2013 to 2016 (minimum three years of reporting)

According to the criteria stated in the sampling method, there are 21 conventional banks registered in the Indonesia Stock Exchange in 2013 – 2015 to be studied. The conventional banks are as follows;

1. Bank MNC International Tbk (BABP)
2. Bank Capital Indonesia (BACA)
3. Bank Central Asia (BBCA)
4. Bank Bukopin (BBKP)
5. Bank Mestika Dharma (BBMD)
6. Bank Negara Indonesia (BBNI)
7. Bank Nusantara Parahyangan (BBNP)
8. Bank Rakyat Indonesia (BBRI)
9. Bank Tabungan Negara (BBTN)
10. Bank Jtrust Indonesia (BCIC)
11. Bank Danamon Indonesia (BDMN)
12. Bank Pembangunan Daerah Banten (BEKS)
13. Bank Ina Perdana (BINA)
14. Bank Maspion Indonesia (BMAS)
15. Bank Mandiri (Persero) Tbk (BMRI)
16. Bank CIMB Niaga (BNGA)
17. Bank Maybank Indonesia (BNII)
18. Bank Permata (BNLI)
19. Bank Sinarmar (BSIM)
20. Bank Tabungan Pensiunan Negara (BTPN)
21. Bank Victoria International Tbk (BVIC)

Sampling technique of this research has taken from secondary data resources which is the yearly financial report of the related conventional banks downloaded from legal BEI Web (www.idx.go.id).

The definition of an operational is a determination about the construct which is a measurable variable. So that the identified variable should have to be defined in order to be analyzed and measured the size of the related variable. The variables that are going to be observed in relation with this research are as follows;

1. Ratio of working capital upon the total assets (X_1)

   This ratio is a liquidity ratio indicating the ability of the company to pay the short term obligation / liability. Net total of working capital is total current assets minus total current liability.

2. Ratio of retained earnings upon Total Assets (X_2)

   This ratio is the probability ratio indicating the ability of the company to obtain a retained earnings and total assets of the company. A bigger ratio has indicated the big role of retained earnings building up the company's finance. A smaller ratio has indicated that the company's finance is not good.

3. Ratio of the earnings before tax and interest upon the total assets (X_3)

   This ratio has been indicating the ability of the company to obtain the earnings before interest and tax which is utilizing the company's assets. The smaller the ratio, the less ability of the company to get the earnings before interest and tax from the assets utilized indicating an unhealthy financial condition.

4. Market value of equity upon book value of liability (X_4)

   This ratio has indicated the ability of the company to pay the long term liabilities using its own equity (ordinary shares). Market value of equity has been obtained by multiplying the total of circulated ordinary shares with market value of the equity. Book value of the liability has been obtained by calculating the current liability with the long-term liability. A smaller ratio has indicating an unhealthy financial condition of the company.

5. Sales ratio upon total assets (X_5)
   This ratio is the ratio of the activities being used to measure the ability of the company to increase the sales volume. A lower ratio has indicated small revenue of the company which is showing an unhealthy financial condition of the company.

Data analysis being used in this research is quantitative data analysis which is the data analysis technique using the calculation of all figures on the financial report, such as balance statement, profit and loss statement and sales report which is further more they can be used as the reason to make a decision.

Technique analysis of this research are as follows;

1. Calculating some ratios of company's finance mentioned on the samples of this research.
2. The data or the result of the calculation of the financial ratio will be analyzed using Altman equation;

$$\mathbf{Z_i = 1{,}2X_1 + 1{,}4X_2 + 3{,}3X_3 + 0{,}6X_4 + X_5}$$

description;
X_1 = Ratio of Working Capital upon the Total Assets.
X_2 = Ratio of retained earnings upon the Total Assets.
X_3 = Ratio of earnings before interest and tax upon the Total Assets.
X_4 = Ratio of Market value of equity upon Book value of liability.
X_5 = Sales ratio upon the Total Assets.

3. Classifying each sample of this research based on the bankruptcy criteria.
   Bankruptcy criteria according to Altman are as follows;
   When Z_i > 2.90 : categorizing the company is healthy or good.
   When Z_i < 1.20 : categorizing the company is bankrupt.
   When Z_i is between 1.20 – 2.90 : categorizing the company is crises to bankrupt or in other words the company cannot be defined either in a potential bankrupt or in a healthy one.

RESULT AND DESCRIPTION

From the secondary data evaluated. Table 1 is the result of the analysis, as follows:

Table 1 – value of Z Scores of conventional banks registered in BEI

No	Code name of the Banks on BEI	Z-Score in 2013	Description	Z-Score in 2014	Descriptio n	Z-Score in 2015	Description	Z-Score in 2016	Description
1	BABP	1,315325	Bankrupt	1,659896	Bankrupt	1,626325	Bankrupt	1,626002	Bankrupt
2	BACA	1,560172	Bankrupt	1,496216	Bankrupt	1,451826	Banrupt	1,449982	Bankrupt
3	BBCA	1,586207	Bankrupt	1,694064	Bankrupt	1,742269	Bankrupt	4,739717	Good/healthy
4	BBKP	1,414359	Bankrupt	1,380827	Bankrupt	1,383391	Bankrupt	1,36935	Bankrupt
5	BBMD	1,954127	Grey Area	1,8706	Grey Area	1,845951	Grey Area	1,705705	Bankrupt
6	BBNI	1,565637	Bankrupt	1,612425	Bankrupt	1,551141	Bankrupt	1,550961	Bankrupt
7	BBNP	1,424405	Bankrupt	1,334443	Bankrupt	1,446335	Bankrupt	1,435988	Bankrupt
8	BBRI	1,672173	Bankrupt	1,652283	Bankrupt	1,62373	Bankrupt	1,625827	Bankrupt
9	BBTN	1,423999	Bankrupt	1,385053	Bankrupt	1,832743	Grey Area	1,392469	Bankrupt
10	BCIC	31,29503	Good/healthy	41,7647	Good	45,40281	Good	40,55482	Good/healthy
11	BDMN	1,690695	Bankrupt	1,61993	Bankrupt	1,663797	Bankrupt	1,727304	Bankrupt
12	BEKS	1,396814	Bankrupt	1,234851	Bankrupt			1,339252	Bankrupt
13	BINA			1,592001	Bankrupt	1,571411	Bankrupt	1,559608	Bankrupt
14	BMAS			1,500458	Bankrupt	1,505052	Bankrupt	1,525728	Bankrupt
15	BMRI	1,596163	Bankrupt	1,598474	Bankrupt	1,59486	Bankrupt	2,807482	Grey Area

No	Code name of the Banks on BEI	Z-Score in 2013	Description	Z-Score in 2014	Descriptio n	Z-Score in 2015	Description	Z-Score in 2016	Description
16	BNGA	1,519826	Bankrupt	1,444431	Bankrupt	1,385979	Bankrupt	1,42035	Bankrupt
17	BNII	1,44866	Bankrupt	1,399572	Bankrupt	1,426259	Bankrupt	1,439597	Bankrupt
18	BNLI	1,313508	Bankrupt	1,338687	Bankrupt	1,286769	Bankrupt	1,268751	Bankrupt
19	BSIM	1,508628	Bankrupt	1,4404	Bankrupt	1,40428	Bankrupt	1,556979	Bankrupt
20	BTPN	1,673404	Bankrupt	1,65219	Bankrupt	1,61623	Bankrupt	1,590852	
21	BVIC	1,449149	Bankrupt	1,380284	Bankrupt	1,365277	Bankrupt	1,344615	Bankrupt

Source : Secondary data of BEI (www.idx.go.id)*, processed, 2017*

The aforementioned table 1 has indicated the calculation of the bankruptcy prediction. The lowest value of Z-Score is 1.23 and only one bank is in a good category which is Bank Jtrust Indonesia Tbk (Bank code is BCIC). But Bank Mandiri Tbk (bank code is BMRI) is recovering from bankrupt category to gray area category.

The five ratios applied by Altman to predict a bankruptcy of a company have been influencing each other. Conventional banks have been suffering from the financial condition differently. So that, conventional banks should have been able to improve their financial performance to achieve the maximum result. When the result has been very good, the conventional banks are able to recover their financial condition to become a good company which could invite some investors to invest their money.

The followings are the alternative actions to recover the financial problem which have been described in the Literature Review. Based on how big or small financial problem encountered by a company (Hanafi and Halim, 2005), the following solving problem actions are as follows;

When the condition is not too bad which is only a temporary one and the prospect is still good. Solving the problems are as follows;

1. Extension: to extend the validity time of the liabilities.
2. Composition : to reduce the amount of the claims.
3. Liquidity: to be done when the value of the liquidity is higher than the value of going concern.

When the problem has been in a quite dangerous one, nevertheless, the creditors or investors are eager to get a security and justice, then formal problem solving will involve the third party which is a court. Solving the problems are as follows;

1. If the value of the existing company were going concern > than the value of the company were liquidated, it had to be reorganized by modifying the capital structure to be an acceptable one. This modification can be done by the extension of the liability or composition change, or both.
2. If the value of the existing company were going concern < the value of company were liquidated, the related company had to execute the liquidation decision by selling the company's assets, then transferring it to the investors but under the supervision of the third party.

Methodologically, applying the method of Altman Z-Score can identify the condition of a company referred to the financial report of the related company. As a matter of fact, sometimes it has not been in compliance with, since Altman Z-Score method has still had a weakness. The weakness of this method is that it has not indicated any certain time limit figuring out when the company will bankrupt, though after recognizing the result of Z-Score. However, Altman Z-Score can predict and give an early warning to detect the performance of company accordingly.

CONLUSION AND SUGGESTIONS

Based on the result of this research, it can be concluded that most of the conventional banks registered in the Indonesia Stock Exchange have been within the bankruptcy prediction. The lowest Z-Score value is 1.23. But it is only one bank which is Bank Jtrust Indonesia (bank code is BCIC) is in a good / healthy category. However, Bank Mandiri Tbk (Bank code is BMRI) has been moving up to a gray area category from the bankruptcy prediction category.

Some suggestions for the companies which are categorized in the bankruptcy crises, they should have been carefully to make any decision and to work harder as well as to improve continuously the performance of the companies by using their assets in a proper way to achieve the profit as much as possible. And for the companies which are in a good condition should have maintained and improved their performance achieving the profit in order to avoid any bankruptcy.

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