Estimating Company Bankruptcy

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ABSTRACT

The bankruptcy analysis needs to be done, considering that the bankruptcy of public company will be detrimental to many parties. Furthermore, estimating time for bankruptcy is as important as analyzing financial condition of the company.

In this research we use secondary data from IDX, of which PT. Indofood SuksesMakmurTbk. is chosen as the object. The purpose of this research is to know the financial performance, predict bankruptcy during the period of 2005 until 2014. The analysis methods in this research are financial statement ratio analysis and bankruptcy analysis of Altman's Z-Score model, Springate's model and Zmijewski's model.

The conclusion from the research is bankruptcy of the company can be estimated, but it is still too simple and needs a lot of factors to be inserted to make the equation more realistic. In the other hand, the company is still operating until now, but the result of the bankruptcy prediction model says that the company should have already been bankrupt.

Key Word: *Bankruptcy, Financial Performance, Financial Ratio, Springate, Altman'sZ-score, Zmijewski.*

Preface

Kieso, Weygandt and Warfield (2007:2) define financial statement as*"the principal means through which company communicates its financial information to those outside it. The statement provides a companiy's history quantified in terms of money*." Financial report analysis is really necessary to comprehend the information which is useful for making decisions in the future. Financial report analysis is usually in the form of ratio analysis whether it is done by time series or industry. However, it is not sufficient to provide the information about the financial condition of a company to its possibility of bankruptcy.

Accounting-based bankruptcy prediction models take into considerationfirm's past performance as a base for predicting the firm's future likelihood ofsurvival (Xu, Zhang, 2008). Several studies that include accounting variables forpredicting corporate bankruptcy are Beaver (1966), Altman (1968), Ohlson(1980), Dichev (1998), Shumway (2001), etc.

The most fundamental and crucial works in the bankruptcy prediction fieldis Beaver's empirical study (1966). The author analyzes thirty financial ratiosamong failed and survived firms. Employing univariate analysis, three financialratios i.e., total debt/total assets, net income/total assets and cash flow/total debtare found significant in determining financial distress of a company. A study by Altman(1968) has extended the work of Beaver by employing multivariant discriminant analysis on twenty two financial variables with a sample of 66 (33bankrupt and 33 non-bankrupt) manufacturing companies. In 1980, a study of Ohlson introduces logit models to predict bankruptcy.The author successfully developed O-score by using 9 accounting variablesrepresenting four factors (current liquidity, size of the company, performanceand capital structure).

Furthermore, Ugurlu and Aksoy (2006) study following Altman's (1968) andOhlson's (1980) statistical techniques developed a model for predicting thebankruptcy of Turkish firms.

Another study by Gu (2002) develops MDA model for estimating the failure of USA restaurant firms by declaring that firms with high total liabilities and low EBIT. Eljelly et al.

(2001) develops a three-variable (cashflow/total debt, current asset/current liabilities, operatingprofit/total assets)model for predicting private company's failure in Sudan.

Bankruptcy analysisis well recognized because it is simple and accurate enough to predict bankruptcy. Bankruptcy analysisis done to estimate a company as the evaluation and consideration about the condition of company.

Based on Kartikawati's study entitled"Z-ScoreAnalysis inEvaluating Financial Performance"to estimate bankruptcy in seven manufacturing companies listed in Jakarta Stock Exchange (2009), it concludes that PT. Indofood Sukses Makmur Tbk during the period of2001 - 2006 is in the gray area, which means the company might have gone bankrupt.A company which is publicly known as "good" and "healthy" yet categorized as potentially bankrupt company based on research.

Financial ratio analysis andbankruptcy analysis is conducted by Yosephto reveal the performance of PT. Indofood Sukses Makmur Tbk during 2007 -2009. It concludes that the performance ofPT. Indofood Sukses Makmur Tbk is good in 2005, 2006, 2009 andthe performance is bad in 2007 and 2008. On the other hand, Altman's Z-Score bankruptcy analysis shows that it is potentially bankrupt during the period of 2005-2009. Besides, Springate's bankruptcy analysis shows that it is not potentially bankrupt in 2005, 2006, and 2009, but it is potentially bankrupt in 2007 and 2008. Whilst Zmijewski'sbankruptcy analysis shows that it is not potentially bankrupt during 2005-2009.

This research aims to recognize the bankruptcy time of company which, according to bankruptcy model, it should have gone bankrupt still it can manage to survive. One example of such companies experience this situation is PT. Indofood SuksesMakmurTbk. This research studies the period of 2005 -2014 by using the bankruptcy model of Z Score Altman's, Springgate'sandZmijewski's, then calculating the length of bankruptcy time by usingoperating cash flow owned by the company to calculate the length of bankruptcy time.

Background of Study

Bankruptcy

Financial ratio analysis resulted by financial accounting is useful for classifying or predicting to bankruptcy. Bankruptcy anaysis is done to gain prior warning of bankruptcy (previous signs of bankruptcy). The earlier the signs are found, the better it will be for the management, because the recovery can be managed earlier(Hanafi, 2003:263). Bankruptcy is generally defined as the failure in operating a company to generate profit.

Bankruptcy as a failure in operating a company can be explained as the following definitions:

1.Economic Distressed which means that the company losses money or the company revenuecannot afford its own expenses, implying that profit margin is lower thanits spending or current valueof company cash flowis lower than its obligation.

2.Financial Distressed which meansmonetary trouble whether it is in term of cash or capital expenditure. Partly, asset liability management has an important role in order to avoid financial distressed. Bankruptcy will soon happen to companies in where the country is suffering from economic crisis, becauseeconomic troublewill trigger sooner bankruptcyto the companies which might have been sick to become worse and finally go bankrupt.

Financial failure can also be defined as insolvencyon whichis distinguished between cash flow based and equity based. There are two kinds of insolvency based on cash flow:

a. Technical Insolvency

A company can be considered fail if the company cannot fulfill its obligation when it is mature.

b.Insolvencyin terms of bankruptcy

Insolvencyin terms of bankruptcyis defined as an extentwhen the net resources arenegative in conventional balance sheetorcurrent asset of cash flowis expected to be less than its obligation.

Altman's Z-*Score* Bankruptcy AnalysisModel

Altman finds five kinds of financial ratios which can be combined to see the distinction between bankrupt companies and solventcompanies. Altman'sZ-Score is determined by the following formula:

Z-Score = 0.012X1 + 0.014X2 + 0.033X3 + 0.006X4 + 0.999X5

Where:

X1 = Working Capital to Total Assets.

X2 = Retained Earnings to Total Assets.

X3 = Earnings Before Interest and Taxes to Total Assets.

X4 = Market Value Equity to Book Value of Total Debt.

X5 = Sales to Total Assets.

The first until the fourth ratios are calculated with full percentage, while the fifth ratio is calculated with normal percentage. The criteria used to predict company bankruptcy using this model are: companies with Z-score> 2.99 are classified as healthycompanies, while companies with Z-score< 1.81 are classified as potentially bankrupt companies. Next, companies with Z-score between 1.81 until 2.99 areclassified as companies in grey area, with "cut-off" score for this untuk index is 2.675 (Muslich, 2000: 60).

Companies which do not go-public do not have market value, so Altman develops an alternative model by changing X4 variable which is formerly a comparison between its own capital market valuewith book value of total debt, becomesthe comparison between common and preferencestock value nilai saham biasa with book value of total debt. The result of Altman's modelrevisionin 1983 will be used in this research. The equation of the revision result is as the following:

Z-Score = 0.717X1 + 0.847X2 + 3.107X3 + 0.420X4 + 0.998X5

Where:

X1 = Working Capital to Total Assets.

X2 = Retained Earnings to Total Assets.

X3 =Earnings Before Interest and Taxes to Total Assets.

X4 = Market Value Equity to Book Value of Total Debt.

X5 = Sales to Total Assets.

The criteriaused to estimate company bankruptcy with this model are:companies with Z-score> 2.90 are classified as healthy companies, while companies with Z-score< 1.20 are classified as potentially bankrupt companies. Next, companies with Z-scorebetween 1.20 until 2.90 are classified as companies in grey area. Financial ratios being analyzed are those found in Altman'smodel as the following:

X_1= (Current Asset – Current Liabilities) : Total Asset

X_2= Retained Earnings : Total Asset

X_3= EBIT : Total Asset

X_4= Market Value Equity : Book Value of Total Debt

X_5= Sales : Total Asset

Springate's Bankruptcy Analysis Model

This model was developed by Gorgon L.V. Springate in 1978. By following the procedure developed by Altman, Springate uses step - wise multiple discriminate analysis to choose four of 19 financial ratioswhich are popular in order todistinguishwhether the companies are in bankruptcy zone or safety zone. Springate'smodel is formulated as the following:

$$S=1.03A+3.07B+0.66C+0.4D$$

Financial ratios being analyzed are those found in Springate'smodel as the following:

A = Working Capital : Total Asset

B = Net Profit before Interest and Taxes : Total Asset

C = Net Profit Before Taxes : Current Liabilities

D = Sales : Total Asset

The criteria for that model are: companies with Z-score>0.862 are classified as healthy companies, while companies with Z-score<0.862 are classified as potentially bankrupt companies.

Zmijewski's Bankruptcy AnalysisModel

The development of study about bankruptcy predictionis done by Zmijewski (1983). Financial ratio validity is added as the tool to detect the company financial failure. Zmijewski has conducted a research by reinvestigatingthe result of previousbankruptcystudies for twenty years. The financial ratios arechosen from the financial ratios in the previous studies andthe sample is taken from 75 bankrupt companies as well as 3,573 healthy companiesduring 1972 until1978, F-test indicator toset of ratios, Rate of Return, liquidity, leverage, turnover, fixed paymentcoverage, trends, firm size, and stock return volatility, shows significant distinction between healthy and unhealthy companies. The evaluation standardis:bigger X value means bigger probability for the companies to go bankrupt. A successfully developed model has been presented by Margaretta Fanny dan Sylvia Saputra(2000:4) as the following:

$$X = -4,3 - 4,5X_1 + 5,7X_2 - 0,004X_3$$

Financial ratiosbeing analyzed are those found inZmijewski'smodel as the following:

X_1 = Return On Asset atau Return On Investment

X_2 = Debt Ratio

X_3 = Current Ratio

Method of Research

Type of Research

The type of research used in this study is descriptive research which is a research done in order to reveal and explain the characteristics of variables studied in certain situation. The aim of descriptive research is to provide a scheme that describes aspects which are relevant to phenomena of one's perspective, organization, industry orientation, et cetera, and later on this research helps the researcher give suggestion to investigate and conduct further research or simply make certain decision (UMaSekaran, 2006: 158-160).

Data Source

Source of dataused in this research is secondary data. The researchercollects information from data which have been formedby other party. The data are financial reports ofPT. Indofood SuksesMakmurTbk., which is listed in Indonesia Stock Exchange, during theperiod of 2005-2014.

Data Collecting Method

The methods of collecting data used in this research are conducted in two ways, which are fieldresearchandlibraryresearch.

Result and Analysis

Based on financial report of PT Indofood SuksesMakmur during the period of 2005-2014, the present writer tries to sum up the data in the ratios needed to be used in each bankruptcy prediction model.

The following table presents Altman's Z- Score bankruptcy model:

Working Capital To Asset Ratio (X1)				
Year	Current Assets	Current Liabilities	Total asset	Working Capital to Asset Ratio
2005	6,480,788	4,422,588	14,859,203	0.1385
2006	7,474,205	6,324,301	16,267,483	0.0707
2007	11,766,665	12,776,365	29,527,466	-0.0342
2008	14,323,261	16,262,161	39,591,309	-0.0490
2009	12,954,913	11,158,962	40,382,953	0.0445
2010	20,077,994	9,859,118	47,275,955	0.2162
2011	24,501,734	12,831,304	53,585,933	0.2178
2012	26,235,990	12,805,200	59,389,405	0.2261
2013	32,772,095	19,471,309	77,611,416	0.1714
2014	40,995,736	22,681,686	85,938,885	0.2131

Source: processed data in financial report of PT. Indofood SuksesMakmur

Retained Earning To Total Asset (X2)			
Year	Retained Earning	Total Asset	RETA
2005	0	14,859,203	-
2006	0	16,267,483	-
2007	0	29,527,466	-
2008	0	39,591,309	-
2009	0	40,382,953	-
2010	0	47,275,955	-
2011	0	53,585,933	-
2012	0	59,389,405	-
2013	0	77,611,416	-
2014	0	85,938,885	-

Source: processed data in financial report of PT. Indofood SuksesMakmur

EBIT To Total Asset (X3)			
Year	EBIT	Total Asset	ETA
2005	1,661,061	14,859,203	0.11179
2006	1,971,761	16,267,483	0.12121
2007	2,894,428	29,527,466	0.09802
2008	4,341,476	39,591,309	0.10966
2009	5,004,209	40,382,953	0.12392
2010	6,604,073	47,275,955	0.13969
2011	7,288,449	53,585,933	0.13601
2012	7,424,963	59,389,405	0.12502
2013	6,717,862	77,611,416	0.08656
2014	7,901,313	85,938,885	0.09194

Source: processed data in financial report of PT. Indofood SuksesMakmur

Market Value Equity to Book Value of Total Debt (X4)			
Year	Market Value Equity	Book Value of Total Debt	MVE to BVTD
2005	4,361,301	10,497,902	0.4154
2006	5,034,463	11,233,020	0.4482
2007	7,126,596	22,400,870	0.3181
2008	8,751,533	26,432,369	0.3311
2009	10,155,495	24,886,781	0.4081
2010	16,784,671	22,423,117	0.7485
2011	19,396,797	21,975,708	0.8826
2012	21,206,278	25,249,168	0.8399
2013	23,429,396	39,719,660	0.5899
2014	25,700,334	44,710,509	0.5748

Source: processed data in financial report of PT. Indofood SuksesMakmur

Sales to Total Asset (X5)			
Year	Sales	Total Asset	STA
2005	18,764,650	14,859,203	1.2628
2006	21,941,558	16,267,483	1.3488
2007	27,858,304	29,527,466	0.9435
2008	38,799,279	39,591,309	0.9800
2009	37,140,830	40,382,953	0.9197
2010	38,403,360	47,275,955	0.8123
2011	45,332,256	53,585,933	0.8460
2012	50,059,427	59,389,405	0.8429
2013	13,606,098	77,611,416	0.1753
2014	17,049,806	85,938,885	0.1984

Source: processed data in financial report of PT. Indofood SuksesMakmur

Altman Z-Score Table							
Z-Score = 0,717X1 + 0,847X2 + 3,107X3 + 0,420X4 + 0,998X5							
Year	X1	X2	X3	X4	X5	Z-Score	
2005	0.1385	0	0.11179	0.4154	1.2628	1.87952	Grey Area
2006	0.0707	0	0.12121	0.4482	1.3488	1.95956	Grey Area
2007	-0.0342	0	0.09802	0.3181	0.9435	1.35378	Bankrupt
2008	-0.0490	0	0.10966	0.3311	0.9800	1.42116	Bankrupt
2009	0.0445	0	0.12392	0.4081	0.9197	1.50429	Bankrupt
2010	0.2162	0	0.13969	0.7485	0.8123	1.71065	Bankrupt
2011	0.2178	0	0.13601	0.8826	0.8460	1.78968	Bankrupt
2012	0.2261	0	0.12502	0.8399	0.8429	1.74069	Bankrupt
2013	0.1714	0	0.08656	0.5899	0.1753	0.8118	Bankrupt
2014	0.2131	0	0.09194	0.5748	0.1984	0.87523	Bankrupt

Source: result of data processed by the present writer

The result of Altman Z-Scorestates that PT. Indofood SuksesMakmur should have been bankrupt in 2007, yet until 2014 the company can survive and run its business. This indicates that the equation of Altman'sZ-Score is possibly unable to be fully adopted for condition in Indonesia or there are other factors which are not accommodated in this equation.

Springate'sModel

This model was developed by Gorgon L.V. Springate in 1978. Following the procedure developed by Altman, Springate uses*step – wise multiple discriminate analysis* to choosefour out of 19 financial ratios which are popular so as to distinguish between companies in bankruptcy zone and those in safety zone. That model has standard where companies with Z-score > 0.862 are classified as healthy companies, while companies with Z-score< 0.862 are classified as potentially bankrupt companies. The following is the result of Springate's model:

Working Capital To Asset Ratio (A)				
Year	Current Assets	Current Liabilities	Total asset	Working Capital to Asset Ratio
2005	6,480,788	4,422,588	14,859,203	0.1385
2006	7,474,205	6,324,301	16,267,483	0.0707
2007	11,766,665	12,776,365	29,527,466	-0.0342
2008	14,323,261	16,262,161	39,591,309	-0.0490
2009	12,954,913	11,158,962	40,382,953	0.0445
2010	20,077,994	9,859,118	47,275,955	0.2162
2011	24,501,734	12,831,304	53,585,933	0.2178
2012	26,235,990	12,805,200	59,389,405	0.2261
2013	32,772,095	19,471,309	77,611,416	0.1714
2014	40,995,736	22,681,686	85,938,885	0.2131

Source: processed data in financial report of PT. Indofood SuksesMakmur

EBIT To Total Asset (B)			
Year	EBIT	Total Asset	ETA
2005	1,661,061	14,859,203	0.11179
2006	1,971,761	16,267,483	0.12121
2007	2,894,428	29,527,466	0.09802
2008	4,341,476	39,591,309	0.10966
2009	5,004,209	40,382,953	0.12392
2010	6,604,073	47,275,955	0.13969
2011	7,288,449	53,585,933	0.13601
2012	7,424,963	59,389,405	0.12502
2013	6,717,862	77,611,416	0.08656
2014	7,901,313	85,938,885	0.09194

Source: processed data in financial report of PT. Indofood SuksesMakmur

EBIT To Current Liabilities (C)			
Year	EBIT	CL	ECL
2005	1,661,061	4,422,588	0.37559
2006	1,971,761	6,324,301	0.31178
2007	2,894,428	12,776,365	0.22655
2008	4,341,476	16,262,161	0.26697
2009	5,004,209	11,158,962	0.44845
2010	6,604,073	9,859,118	0.66984
2011	7,288,449	12,831,304	0.56802
2012	7,424,963	12,805,200	0.57984
2013	6,717,862	19,471,309	0.34501
2014	7,901,313	22,681,686	0.34836

Source: processed data in financial report of PT. Indofood SuksesMakmur

Sales to Total Asset (D)			
Year	Sales	Total Asset	STA
2005	18,764,650	14,859,203	1.2628
2006	21,941,558	16,267,483	1.3488
2007	27,858,304	29,527,466	0.9435
2008	38,799,279	39,591,309	0.9800
2009	37,140,830	40,382,953	0.9197
2010	38,403,360	47,275,955	0.8123
2011	45,332,256	53,585,933	0.8460
2012	50,059,427	59,389,405	0.8429
2013	13,606,098	77,611,416	0.1753
2014	17,049,806	85,938,885	0.1984

Source: processed data in financial report of PT. Indofood SuksesMakmur

Springate Model						
S=1.03A+3.07B+0.66C+0.4D						
Year	A	B	C	D	S	
2005	0.1385	0.11179	0.37559	1.2628	1.23887	Good
2006	0.0707	0.12121	0.31178	1.3488	1.19021	Good
2007	-0.0342	0.09802	0.22655	0.9435	0.79262	Bankrupt
2008	-0.0490	0.10966	0.26697	0.9800	0.8544	Bankrupt
2009	0.0445	0.12392	0.44845	0.9197	1.0901	Good
2010	0.2162	0.13969	0.66984	0.8123	1.41852	Good
2011	0.2178	0.13601	0.56802	0.8460	1.35517	Good
2012	0.2261	0.12502	0.57984	0.8429	1.3366	Good
2013	0.1714	0.08656	0.34501	0.1753	0.74008	Bankrupt
2014	0.2131	0.09194	0.34836	0.1984	0.81103	Bankrupt

Source: result of data processed

The result of Springate's model shows distinctions in certain years. In Altman's model the company should have been bankrupt in 2007 until 2014. In Springate'smodel the company is stated to be unhealthy only in 2007 – 2008 and in 2013 – 2014 and the company is stated to be bankrupt for other remaining years. Besides, the case in Altman'sZ-Score also happens in Springate's model. This shows that there may be other factors which are not accommodated inSpringate's equation model.

Zmijewski'sModel

The development of bankruptcy predicting studyis done by Zmijewski (1983). Financial ratio validity is added to detect company financial failure. Zmijewski has conducted a studi by reinvestigating the previous bankruptcy studies for twenty years. A successfully developed model has been presented by Margaretta Fanny and Sylvia Saputra(2000). The following is the calculation result of Zmijewski'smodel:

EAT to Total Asset (X1)			
Year	EAT	Total Asset	EAT to Total Asset
2005	124,018	14,859,203	0.0083
2006	661,210	16,267,483	0.0406
2007	980,357	29,527,466	0.0332
2008	1,034,389	39,591,309	0.0261
2009	2,075,861	40,382,953	0.0514
2010	3,934,808	47,275,955	0.0832
2011	4,891,673	53,585,933	0.0913
2012	4,779,446	59,389,405	0.0805
2013	2,824,151	77,611,416	0.0364
2014	4,401,080	85,938,885	0.0512

Source:PT. Indofood SuksesMakmurfinancial report data processed

Total Debt to Total Asset (X2)			
Year	Total Debt	Total Asset	TDTA
2005	10,497,902	14,859,203	0.7065
2006	11,233,020	16,267,483	0.6905
2007	22,400,870	29,527,466	0.7586
2008	26,432,369	39,591,309	0.6676
2009	24,886,781	40,382,953	0.6163
2010	22,423,117	47,275,955	0.4743
2011	21,975,708	53,585,933	0.4101
2012	25,249,168	59,389,405	0.4251
2013	39,719,660	77,611,416	0.5118
2014	44,710,509	85,938,885	0.5203

Source: PT. Indofood SuksesMakmur financial report data processed

Current Ratio (X3)			
Year	Current Assets	Current Liabilities	Current Ratio
2005	6,480,788	4,422,588	1.4654
2006	7,474,205	6,324,301	1.1818
2007	11,766,665	12,776,365	0.9210
2008	14,323,261	16,262,161	0.8808
2009	12,954,913	11,158,962	1.1609
2010	20,077,994	9,859,118	2.0365
2011	24,501,734	12,831,304	1.9095
2012	26,234,990	12,805,200	2.0488
2013	32,772,095	19,471,309	1.6831
2014	40,995,736	22,681,686	1.8074

Source: PT. Indofood SuksesMakmur financial report data processed

Zmijewski Model					
X = -4,3 – 4,5X + 5,7X - 0,004X					
Year	X1	X2	X3	X	
2005	0.0083	0.7065	1.4654	-0.3164	Good
2006	0.0406	0.6905	1.1818	-0.5517	Good
2007	0.0332	0.7586	0.9210	-0.1288	Good
2008	0.0261	0.6676	0.8808	-0.6156	Good
2009	0.0514	0.6163	1.1609	-1.0232	Good
2010	0.0832	0.4743	2.0365	-1.9792	Good
2011	0.0913	0.4101	1.9095	-2.3808	Good
2012	0.0805	0.4251	2.0488	-2.2470	Good
2013	0.0364	0.5118	1.6831	-1.5534	Good
2014	0.0512	0.5203	1.8074	-1.5722	Good

Source: result of data processed

The result of model developed byZmijewskistates that PT. Indofood SuksesMakmurhas been in good conditionfrom time to time. It is different from Altman's Z-Score model andSpringate's model. This is because of different variables used in the three models, so as to give description about different bankruptcy models based on the standard of each model. Therefore, it cannot be stated that one model is better than the other.

Altman's Z-Score model uses five ratios as dependent variables which are Working Capital to Asset Ratio (X1), Retained Earning to Total Asset (X2), EBIT to Total Asset(X3), Market Value Equity to Book Value of Total Debt (X4),and Sales to Total Asset (X5). Springate's model analyzesbankruptcy using four dependent variableswhich are Working Capital to Asset Ratio (A), EBIT to Total Asset (B), EBIT to Current Liabilities (C), andSales to Total Asset (D). WhileZmijewski'smodel uses threedependent variableswhich are EAT to Total Asset (X1), Total Debt to Total Asset (X2), and Current Ratio (X3)in addition to one particular Constanta in the equation which is not dependent on other dependent variables. The basic differences of the models above are generated from accrual-based model ratios based on cash.This causes different results of bankruptcy in a company.

Based on the result of the three models above, the present writer tries to see objectively that each built model has its own advantages. This is based on the model formingfrom years of research as well as the development of the previous models. Other things need being paid attention to is the difference of the equation in each modelso as to result in different predictions andother things that can affect database as the input for the model being used. This can be seen in the three models used for a company with data of ten years. The result is different one from the other although there are similarities in certain years with prediction for each model.

Conclusion

Bankruptcy analysis using Altman's Z-score model inPT. Indofood Sukses Makmur Tbk. in 2005-2014 concludes that the company is potentially bankrupt during the period.Bankruptcy analysis using Springate's modelin PT. Indofood Sukses Makmur Tbk.in2005, 2006, 2007, 2009 until 2012the company is classified as not potentially bankrupt,while in 2008, 2013 and 2014 the company is classified as potentially bankrupt perusahaan. Bankruptcy analysis using Zmijewski's model in PT.IndofoodSuksesMakmur Tbk. in 2005until 2014the company is classified as not potentially bankrupt company.

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