

## Is the bankruptcy threat affecting the company stock returns?

Posma Sariguna Johnson Kennedy<sup>1</sup>, Yafet Andhika<sup>2</sup>

<sup>1, 2</sup> Universitas Kristen Indonesia, Jakarta , Indonesia

### Abstract

This study aims to examine the projection of the bankruptcy of textile and garment companies and investigate whether there is an effect of the potential bankruptcy of the company on stock returns. The sample in this study were textile and garment companies that went public on the Indonesia Stock Exchange (IDX) in the period 2010 to 2014, where 16 companies met the criteria. The data used is taken from the general description of the company or company profile, the company's financial statements including the balance sheet and income statement. The dependent variable in this study is stock returns, while the independent variable is the Altman Score. Data analysis methods are Altman Z-Score ratio analysis and regression analysis. From the calculation of the financial ratio of Altman Z-Score from 2010 to 2014, most textile and garment companies on the IDX have the potential for bankruptcy. From the regression results, it was concluded that stock returns were not affected by the potential value of bankruptcy. However, management needs to be careful in managing and running the company's operations by continuing to improve the company's performance so as not to disrupt the continuity of its business. Investors must always be careful when buying company shares by always looking at the condition of the company's fundamentals.

**Keywords:** Altman Z-Score, Bankruptcy, Stock Return

### Introduction

The company is an organization that seeks profit as the primary goal, although it does not rule out the possibility of expecting prosperity as another goal <sup>[1]</sup>. Weston & Brigham (2011) said the company is a body established by individuals or institutions created with the primary purpose is to maximize shareholder wealth <sup>[2]</sup>.

Another important goal is, companies must be able to continue to survive in competition and development and can carry out other social functions in society. Internal factors are relatively within the control of company management, while external factors are seen as dynamic conditions that create opportunities, threats, develop resources and information, but are uncontrolled and difficult to predict changes in their development. Given the external interests of the company, it is also important to harmonize the capabilities of the company with changes that occur continuously so that the continuity of the company's development continues to be maintained. The company is deemed not to stop being closed, or liquidated in the future. Companies will be considered to be living and operating in an unlimited period to achieve a goal of prosperity. Prosperity is welfare which is the primary goal in building and advancing the company to be the best to be able to survive in the future. The business can be sustainable if the management in the company is carried out as well as possible so that the resources owned can be utilized effectively. Companies that can be sustainable are also crucial for the company and investors.

Investors will invest their funds in companies that are considered to have long sustainability in the future which aims to get the highest profits. Investors who invest their funds into company stocks have an interest in expected future benefits

and profit stability. Therefore, investors need to analyze the profitability of the company. Among them by analyzing financial statements which are a summary of financial transactions that occur during the relevant fiscal year.

Investors need to have several information about the development of stocks to make decisions where shares are worth investing. Investors will conduct fundamental analysis and technical analysis. In fundamental analysis, investors study the ins and outs of the company's business and learn information about profitability that provides information about stock prices, while in the technical analysis only learn about past stock price records and look for cycles of changes in stock prices, by looking at seasonal patterns on stock profits.

At the time of the global economic crisis, the impact of the closure of several companies was because they were unable to maintain the going concern. One of the sectors affected is towards non-deteriorating goods such as textiles and garments. These companies are most hit and are suspected of experiencing financial difficulties with potential bankruptcy, due to the retention of consumption of clothing needs. The inability or failure of these companies can be caused by two things, first is an economic failure and the second is a financial failure. Commercial failure is related to the imbalance between income and expenditure transacted. Also, economic collapse can also be caused by the company's capital costs which are higher than the return on investment costs.

Weston & Brigham (2011) states that a company is categorized as a financial failure if the company is unable to pay its obligations at maturity even though the total assets exceed its total liabilities. The condition of investors and creditors is worried if the company experiences difficulties in

the field of finance (financial distress) which can have an impact on bankruptcy within the company. Bankruptcy risk for companies can be seen and measured through financial statements issued by the company concerned. Analysis of financial statements is a valuable tool to determine the company's financial position and the results that have been achieved in connection with the selection of corporate strategies that have been implemented. Financial ratio analysis is an alternative to test and analyze whether financial information produced by financial accounting is useful for clarifying or predicting stock prices in the capital market <sup>[2]</sup>.

The level of health of the company is fundamental for investors to be able to invest in companies that are considered healthy and worth funding. For healthy companies, they can improve efficiency in running their business, so that they gain increased profits, which in turn can avoid the possibility of corporate bankruptcy. The occurrence of liquidation or bankruptcy in several companies will undoubtedly cause problems related to the owners and employees who have to lose their jobs within the company.

For the explanation above, the author is interested in analyzing the bankruptcy prediction of the company, especially in the textile and garment industry, and examining whether there is any influence from the potential bankruptcy of the company on stock returns.

## 2. Methods

The data analysis method is used to analyze the research data so that it can be interpreted so that the resulting report is easy to understand. The sample in this study were textile and garment companies that went public on the Indonesia Stock Exchange (IDX) in the period 2010 to 2014, where 16 companies met the criteria. The data used is taken from the

general description of the company or company profile, the company's financial statements including the balance sheet and income statement. The dependent variable in this study is stock returns, while the independent variable is the Altman Score.

### Data analysis methods are Altman Z-Score ratio analysis and regression analysis, namely

1. Altman Analysis of Z-Score Model. Is a method that aims to see the extent to which the variables under study are by the set benchmarks. This analysis is used to describe the results of research data from the variables studied. In this study using an analytical model, namely:

$$Z\text{-Score} = 1.2 X_1 + 1.4 X_2 + 3.3 X_3 + 0.6 X_4 + 1.0 X_5 \quad [3]$$

2. Hypothesis Testing. The null hypothesis proposed in this study is that the bankruptcy rate does not affect stock returns in the Textile and Garment Go-Public company on the Indonesia Stock Exchange. Simple linear regression analysis is used to show the relationship between the dependent variable (Y) and the independent variable (X), namely:

$$Y = a + b. X. ; \text{Notes: } Y = \text{Stock Price (dependent variable); } a = \text{Constant; } b = \text{The coefficient of the independent variable; } X = \text{Value of Z-Score (independent variable).} \quad [4]$$

T-test or partial test is conducted to examine the effect of independent variables on non-independent variables separately/ partially and acceptance or rejection of the hypothesis. For decision making using a significance level (5%) Basic decision making: If the probability is > 0.05 then Ho is accepted. If the expectation is < 0.05, then Ho is rejected.

**Table 1:** Operational Variables for Altman's Z-Score Analysis

	Variable Name	Definition
Z	Z-Score Altman Model	Aims to see the extent to which the variables studied are by the set benchmarks
X <sub>1</sub>	Working capital against total assets	Shows the company's ability to generate net working capital from the total assets it has. This ratio is calculated by dividing net working capital by total assets. Net working capital is obtained using current assets reduced by current liabilities.
X <sub>2</sub>	Retained earnings against total assets	Shows the company's ability to generate retained earnings from the total assets of the company. Retained earnings are profits that are not shared with shareholders. Retained earnings indicate how much corporate income is not paid in the form of dividends to shareholders.
X <sub>3</sub>	Pre-tax and interest income to total assets	Show the company's ability to generate profits from company activities, before paying taxes and interest.
X <sub>4</sub>	Equity market value of book value of debt	Shows the company's ability to fulfill obligations from the market value of its capital (ordinary shares). Own capital market value is obtained by multiplying the number of ordinary shares outstanding at the market price per share of ordinary shares. The book value of debt is obtained by summing current liabilities with long-term liabilities.
X <sub>5</sub>	Sales of total assets	Indicates whether the company produces enough business volume compared to investments in total assets.

## 3. Results

### Altman Analysis of Z-Score Model

With the Altman Z-Score coefficient, the level of bankruptcy

threat can be seen. If viewed from the average Z-score per year reviewed in 5 years (2010-2014), several companies experience potential bankruptcy, as shown in the table below.

**Table 2:** Level of Bankruptcy of Textile and Garment Companies on the IDX for the 2010-2014 Period

Company Code	Average Z-Score Value	
	Z-value	Prediction
ADMG	1.77973	<i>Distress</i>
ARGO	-1.00565	<i>Distress</i>
CNTX	0.11336	<i>Distress</i>
ERTX	1.46330	<i>Distress</i>
HDTX	0.65765	<i>Distress</i>
INDR	3.83507	<i>Grey area</i>
MYRX	2.09884	<i>Grey area</i>
UNIT	1.44770	<i>Distress</i>
PBRX	2.53260	<i>Grey area</i>
POLY	-10.35392	<i>Distress</i>
RICY	2.19746	<i>Grey area</i>
SSTM	0.88852	<i>Distress</i>
TRIS	3.36294	<i>Safe</i>
MYTX	-0.68451	<i>Distress</i>
TFCO	6.51573	<i>Safe</i>
ESTI	2.20332	<i>Grey area</i>

**Source:** Results of data processing

Notes: Zscores>2.99 are classified as healthy/safe companies. Z<1.81 is classified as a potential company to go bankrupt (distress). Scores between 1.81 and 2.99 are classified as companies in gray areas or gray areas.

### Hypothesis Testing

Descriptive data can be seen in the following table:

**Table 3:** Descriptive statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Z-Score Altman	80	-14.81	20.93	1.0657	4.26885
StockReturn	80	-2998.07	9561.93	75.6676	1136.21022
Valid N (listwise)	80				

**Source:** Results of data processing using SPSS

Based on the descriptive statistics above, from 80 data during the observation period (2010-2014), the average stock price is 1,065.7 with a standard deviation of 4,268.85. The minimum value is -14.81 and the maximum value is 20.93. Stock return variables have an average of 75.6676 with a standard deviation of 1,136.21022. The minimum value is -2,998.07 and the maximum value is 9,561.93. The average company can generate profits of 75,667.6 at the level of sales of 1 unit. A large standard deviation (more than 30% of the average) shows a large variation.

The following is a partial regression analysis to see the effect of each independent variable on the dependent variable:

**Table 4:** Results of Regression Calculation

Coefficients <sup>a</sup>						
	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	71.780	131.804		.545	.588
	Z-Score Altman	3.648	30.134	.014	.121	.904

**Source:** Results of data processing using SPSS

From the table above shows the regression equation as follows:  $Y = 71,780 + 3,648 Z\text{-score}$

Where:

- a = intercept at 71,780 means that if the Z-Score is considered to be worth 0, then the stock return is 71,780.
- The coefficient of the value of Z-Score (X) is 3,648, meaning that if the Zscore value decreases by one unit, then the stock return will increase by 3,648.
- T-test to test the significance of constants of the dependent variable. From the table obtained t count 0.121 with a level of significance t Table ( $\alpha$ ) = 5% and with df (degrees of freedom) = several data - 1 or 80-1 = 79 so that t-table=1.452.

The t-test is done to test the significance of constants of the dependent variable, obtained t count with a significance level t Table ( $\alpha$ ) = 5% and with df (degrees of freedom) = number of data - 1 or 80 - 1 = 79, so that t is obtained Table 1.452. Because t count < t Table (0.121<1.452), it can be concluded that there is no influence between Altman's Z-Score value on stock prices in textile and garment companies on the Indonesia Stock Exchange.

From the results of the regression test, the coefficient of determination (R Square) is 2.1% for the Altman Model. This

result means that there are still many other factors that can affect stock returns in addition to the Z-Score value variable.

The results of the study are still contrary to the theory put forward by Beaver<sup>[5]</sup> in his book which states that investors recognize and adjust the new position of the company experiencing bankruptcy, which then provides financial information to the stock price. Although the results of this study both state that most textile and garment companies have the potential for bankruptcy, Argani<sup>[6]</sup> provides findings that stock returns are influenced by the Z-Score bankruptcy value even though the coefficient of determination is minimal.

At present, the companies that fall into the category of bankruptcy are still standing and registered on the IDX because the company gets an injection of funds from investors and government policies that pay attention to the industrial sector.

### 4. Conclusions

The regression test results show that the potential for bankruptcy does not affect stock returns. The coefficient of determination indicates that many other variables can affect stock returns in addition to the potential for bankruptcy. This shows that investors do not heed the bankruptcy rate data in choosing their stock investment to achieve maximum profits.

Nevertheless, management needs to be careful in managing and running the company's operations by continuing to improve the performance of the company so as not to disrupt the continuity of its business. Also, investors must always be careful in buying company shares by always looking at the condition of the company's fundamentals.

Research on the potential for bankruptcy continues to develop with various methods that are more unique to a type of company. For this reason, further research is needed by using other ways to achieve more accurate results.

## 5. References

1. Gitosudarmo, Indriyo. Manajemen Keuangan. Yogyakarta, 2002.
2. Weston J, Fred dan Eugene Brigham F. Dasar-Dasar Manajemen Keuangan. Edisi 11. Jakarta: Salemba Empat, 2011.
3. Riyanto, Bambang. Dasar-Dasar Pembelanjaan Perusahaan . Yogyakarta: BPFE, 2001.
4. Algifari, Analisis Regresi “Teori, Kasus dan Solusi”. Yogyakarta: BPFE, 2000.
5. Beaver W. Financial ratios as predictors of failure. Empirical Research in Accounting: Selected Studies. Journal of Accounting Research, 1966, 4.
6. Argani, Hambang. Analisis Tingkat Kebangkrutan dan Pengaruhnya terhadap Return Saham pada Perusahaan Textile dan Garment Go-Public di Bursa Efek Indonesia, Fakultas Ekonomi Universitas Negeri Semarang, 2010.