

**ANALYSIS OF FINANCIAL DISTRESS OF
TELECOMMUNICATION COMPANIES (2014-2018) IN
INDONESIA USING ALTMAN, SPRINGATE, ZMIJEWSKI AND
GROVER MODEL**

Thesis

**To meet the requirements of attaining Bachelor Degree in Economics
(S1)**

International Business Management Program

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**Faculty of Business and Economics
UNIVERSITAS ATMA JAYA YOGYAKARTA
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Letter of Statement

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Thesis Revision

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STATEMENT

I, the undersigned, truly declare that the thesis entitled :

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is my own work. Statements, idea, or quotations, either directly or indirectly, originating from other people’s writings or ideas are stated in thesis bibliography. If in the future it is proven that I do plagiarism, either partially or completely in this thesis, then the degree and diploma that I get will be declared null and I will return it to Universitas Atma Jaya Yogyakarta.

Yogyakarta, 15 March 2021



Janet Prastyowati A

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The author realizes that the writing of this thesis could be completed well thank to the prayers and support from various parties. Therefore, the author would like to express gratitude to the parties who helped the writing of this thesis. The author would like to thank :

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Thus this thesis could be completed as well as possible. If there are deficiencies, the readers could provide constructive criticism and suggestions. Hopefully, this thesis could be useful for readers.

Yogyakarta, 15 March 2021



Janet Prastyowati A



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Abstract

This research was conducted with the aim to measure financial distress in Indonesia telecommunication company and analyze the best method to measure financial distress in telecommunication company using Altman Z-Scores, Springate Model, Zmijewski Model and Grover Model. To analyze financial distress, this research uses Altman Z-Scores, Springate Model, Zmijewski Model and Grover Model. To analyze the best financial distress prediction model, this research uses accuracy rate model. The type of data used in this research is secondary data taken from Indonesia Stock Exchange and company's official website. The sample used in this research are 4 telecommunication companies in Indonesia.

The result based on Altman, Springate, Zmijewski and Grover mode is company experience financial distress because current liabilities are greater than current assets. Accuracy test results shows that Zmijewski model is the most accurate model because its score is the highest.

Keywords : financial distress, Altman Z-Scores, Springate Model, Zmijewski Model, Grover Model, accuracy rate model, telecommunication company

CHAPTER I

INTRODUCTION

1.1. Background

Globalization make the development of the communication become very fast. Nowadays everything in this world always use internet. That is why people can't live without internet. This is one of the reasons why the competition in telecommunication industry is very intense. All of the telecommunication industry is competing against each other to provide the best service, fast connection, and extensive network.

Pricewaterhouse Cooper predict in the 2050, Indonesia will be the 4th country with the highest GDP in the world. To be the 4th country with the highest GDP in the world, Indonesia must have a good internet connection provided by telecommunication industry. Other than that, Indonesia is the archipelago country. There are many islands that are separated by the sea. In order to connect all of islands, Indonesia need to have a good telecommunication network to communicate between one island to another island.

The Covid-19 pandemic in Indonesia force persons, companies and schools to make digital transformation in various field of life. Before the pandemic, every person work in the office and study in school but after pandemic every person must work, study and communicate through internet. This pandemic make internet usage is increasing and give positive impact to telecommunication company.

Indonesian Internet User survey 2019- Q2 2020 by APJII (Asosiasi Penyelenggara Jasa Internet Indonesia) explained the result of internet users in Indonesia is 73,7% or estimated to be 196.7 million users. It increased 8,9% or around 25.5 million users compared to 2018. Based on the latest We Are

Social report in 2020, it was stated that there were 338.2 million Indonesians who use cell phones. It means that 1 Indonesian have more than 1 cell phone.

There are 4 big telecommunication company that already go public in Indonesia such as PT Telekomunikasi Indonesia Tbk, PT XL Axiata Tbk, PT Indosat Tbk and PT Smartfren Telecom Tbk. The biggest telecommunication company in Indonesia is PT Telekomunikasi Indonesia Tbk. This company founded in 1882, and already have 170.1 million customers. Next is PT XL Axiata Tbk operates since October 1996. Total number of customers is 55.5 million. Third is PT Indosat Tbk established in 1969. Customers of Indosat are 58.7 million. The last one is PT Smartfren Telecom Tbk founded in 2003. This company has 12.3 million customers. Every company has target to increase their customer every year. All of the telecommunication company compete to have satellite, increasing BTS (Base Transceiver Station) and developing new technology by cooperating with other companies.

High level of competition in telecommunication sector lead some of the company to have financial distress. The company can't pay the debt so it will lead to financial distress. According to Gamayuni (2011), financial distress is the state of financial difficulties or liquidity that can be the beginning of bankruptcy. Financial distress can happen in the company not only because of the bad economy condition of the company itself but also from the country. The company will have financial distress before bankrupt but not every company that have financial distress will be bankrupt. Everything is depending on the ability of the company to prevent and handle the financial problem and avoid the financial distress.

One way to know whether the company has financial distress or not is using financial distress prediction model. Financial distress prediction model is very important because it gives information about the condition of the company and prevent the bankruptcy. Financial distress prediction model must be developed to help manager in observing the company's performance and identification of important trend (Ray, 2011).

The research about financial prediction model begin when Beaver (1967) said that financial ratios is used to predict the firm business failure. The first researcher of financial distress prediction model is Altman (1968) by using financial ratios. After that, there are many research and survey developed from Altman's formula like Springate (1978), Zmijewski (1984) and Grover (2001). These three models use financial ratios of profitability, leverage, investment, activity and solvency.

There are 3 method to analyze the financial distress in a company such as financial ratio, financial prediction model and logistic regression. Financial ratio method uses working capital, profitability ratio, debt level or leverage and liquidity to detect sign of the bankruptcy in a company. Financial prediction model uses two or more financial ratio to analyze the financial condition of the company. The example of financial prediction models are Altman Z-Scores, Springate, Zmijewski, Grover, and so on. This model eases the company to count and interpret the ratio as a whole rather than one by one. Logistic regression is a non-linear regression which is specified to the dichotomous dependent variable. The result of this regression determines the probability of occurrence of two responses (0 and 1) or (yes or no) depending upon the definition of two values of the response variable.

This research uses financial prediction model such as Altman Z-Scores, Springate, Zmijewski and Grover to analyze the financial distress in the company. The reason why the research use that 4 methods because Altman was the first one uses Multiple Discriminant Analysis (MDA) to develop a prediction model with a high degree of accuracy and Springate, Zmijewski, Grover are the development of Altman's approach. These 4 methods accuracy of financial distress is high. It will make the research more reliable and can be the guide to save the company.

1.2. Problem Statement

1. How to measure the financial distress in Indonesia telecommunication company based on Altman Z-Scores, Springate model, Zmijewski model and Grover model?
2. What is the best method among Altman Z-Scores, Springate model, Zmijewski model and Grover model to measure financial distress in telecommunication company?

1.3. Objectives of the Research

1. To measure financial distress in Indonesia telecommunication company based on Altman Z-Scores, Springate model, Zmijewski model and Grover model.
2. To analyze the best method among Altman Z-Scores, Springate model, Zmijewski model and Grover model to measure financial distress in telecommunication company.

1.4. Beneficial of the Research

a. Theoretical benefit

Writer hopes the result of this research will be used to increase knowledge and empirical evidence about the real condition of the telecommunication company based on Altman Z-Scores, Springate model, Zmijewski model and Grover model.

b. Practical benefit

The result of this research is expected to give accurate and complete information for the company itself to prevent the bankruptcy. Other than that, information from this research could be the guidance for the investor to invest in a good company which have a good financial condition.

1.5. Scope of the Study

- a. This research used financial statement of telecommunication company in Indonesia that already go public in stock market.
- b. The financial statement that are used are financial statement for 5 years from 2015-2019

1.6. Research Report Outline

Chapter I Introduction

This chapter discuss about the background, problem statement, objectives of the research, beneficial of the research, scope of the study and research report outline.

Chapter II Review of the Literature

This chapter contains theoretical background about financial management, liquidity, profitability, activity ratio, solvency ratio, debt, default, financial distress and bankruptcy. At the end of this chapter, there is the result of previous research.

Chapter III Research Method

This chapter explains types of research, research sample, data types and data sources, research variable and data processing method.

Chapter IV Research Findings and General Discussions

This chapter explain the data that has been collected, the results of data processing and discussion of the results of data processing.

Chapter V Conclusions

This chapter include the answers obtained from the interpretation of data which is the answer to the research problem and advice that will solve the problem of the research.

CHAPTER V

CONCLUSION, WEAKNESS, AND SUGGESTIONS

5.1. Conclusion

The result from analysis of 4 telecommunication companies listed on the Indonesia Stock Exchange (IDX) concluded that the potential bankruptcy of telecommunication company for the period 2014-2018 can be identified by analyzing the ratios of the Altman, Springate, Zmijewski and Grover model. Companies experience financial distress because current liabilities are greater than current asset. Current liabilities greater than current asset will make the earnings before interest and tax (EBIT) become negative. Negative score of EBIT means that the company experience a loss and lead it to have financial distress.

Based on Altman model, 2 companies are predicted to be in distress condition, while 1 company are in a grey area or vulnerable condition and 1 company is in good health financial condition. Based on Springate model, 3 companies are predicted to be in distress condition and 1 company is in good health financial condition. Based on Zmijewski model, 1 company is predicted to be in distress condition and 3 companies are in good health financial condition. Based on Grover model, 3 companies are predicted to be in distress condition and 1 company is in good health financial condition.

Accuracy test result shows that Zmijewski model is the most accurate model than Altman, Springate, and Grover model. It signifies that Zmijewski model more proper used by telecommunication companies to predict their financial distress condition to anticipate companies going bankrupt with precise early handling.

Companies and investors should pay attention to Zmijewski financial distress prediction model because it is the most accurate model and measure performance, leverage and liquidity. The variable used in Zmijewski model are Return on Asset Ratio that measure how effectively assets are being used

for generating profit and how much the company relies on assets to generate profit, Debt Ratio that measure how much the company's assets can bear the debt owned by the company and Current Ratio that measure a company's ability to pay short-term obligations or those due within one year with its current assets. All of the variable in Zmijewski model related to assets and liabilities which is the key of predicting financial distress.

5.2. Weakness of Research

Based on the results of the research that has been done, weakness was found in this thesis. The research samples used in this research have different sizes because PT Telekomunikasi Indonesia Tbk is a very big company compared to other telecommunication companies in Indonesia. This is one of the reasons that the difference in score of financial distress prediction of PT Telekomunikasi Indonesia Tbk to others telecommunication companies is very high.

5.3. Suggestions

Based on the analysis and conclusion that have been presented previously, suggestions that the writer could give are :

- a. For investors, this research could be used as an investment guide. Investors should consider the factors that are quite influential such as current assets and current liabilities.
- b. For companies that experience financial distress, this research is expected to be able to contribute ideas for companies in determining policies and preventing bankruptcy. Weak financial supervision in the companies above could be interpreted that management doesn't have the ability to detect financial condition earlier. In this research, companies that experienced financial distress had a poor financial

composition. The companies that experience financial distress should have better financial control.

- c. For future research, it is better to expand the measurement tools such as adding another financial ratio or another financial distress prediction model in predicting financial difficulties in a company. Future research should develop research samples by adding PT Tower Bersama Infrastructure Tbk and PT Sarana Menara Nusantara Tbk. These companies should be added because they support internet connection of telecommunication companies with their towers which expand connections throughout Indonesia. Adding more research sample can statistically increase the percentage of test power.



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