Prediction Analysis of Financial Distress Potential By Comparing Altman, Springate And Zmijewski Models In Indonesia Eximbank

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ABSTRACT: The present study aims to test the accuracy of financial distress predictions in Indonesia Eximbank over the period of 2011 to 2018. Using three models to see how accurate financial distress predictions are occurring in Indonesia Eximbank. The data used in this study is annual financial reports and analyzed using Altman, Springate and Zmijewski models. Altman uses four types of financial ratios that can be combined to see the difference between a company experiencing financial distress and a company with no financial distress. Z-Score Altman is determined by using the following formula Z-Score = 1.03A + 3.07B + 0.66C + 0.4D with valuation criteria S> 0.862 classified as healthy company, while S <0.862 classified as potential financial distress company. The Zmijewski model uses ratio analysis that measures the performance, leverage, and liquidity of a company for its predictive model with the equation model used Z = 6.56X1 + 3.26X2 + 6.72X3 + 1.05X4, with the rating criteria Z> 2.60 is classified as a healthy company, while Z <1.10 is classified as a potential company experiencing financial distress, then the score between 1.10 to 2.60 is classified as a company in the grey area. Springate uses a stepwise multiple discriminate analysis to choose 4 of the 19 financial ratios that are popular so it can distinguish companies that are within the financial distress zone or secure zone. Model Springate formulated S = 1.03A + 3.07B + 0.66C + 0.4D with valuation criteria S> 0.862 classified as healthy company, while S <0.862 classified as potential financial distress company. The Zmijewski model uses ratio analysis that measures the performance, leverage, and liquidity of a company for its predictive model with the equation model used Z = -4.3 - 4.5X1 + 5.7X2 + 0.004X3. Zmijewski sets the criteria, if the firm's score is less than 0 (X <0), then the company goes into nonfinancial distress (healthy) and if the score is greater than 0 (X> 0), the company is predicted to experience financial distress. Based on the clustering of criteria analysis results show that the financial condition of Indonesia Eximbank in 2011 up to 2018 is included in the criteria of "grey area" condition or can be categorized as "non-distress", if it refers to calculation result using Altman model. In the results of the calculation using the Springate model, the Eximbank Indonesia financial condition is included in the potential distress criteria, whereas based on the calculation using the Zmijewski model, Eximbank Indonesia's financial condition in 2011 is included in the "non-distress" criteria, but in 2012 up to 2018 is included in the "potential distress" criteria. The three models of potential financial distress predictions have been through testing and analysis, whereas in the first test it can be concluded that there is a significant difference from the Altman model comparison model, the Springate model and the Zmijewski model. While in the second test it can be concluded that the Altman model is more accurate in predicting the potential of financial distress in Indonesia Eximbank during the period of 2011 up to 2018 than the Springate model, and model Zmijewski.

Keywords: Financial Distress, Model, Altman, Springate, Zmijewski, Compare.

I. INTRODUCTION

The global financial crisis that happens has a broad dimension. It is known that the financial crisis that started from the United States has had a negative impact on the world economy. These high prices and pressures are causing difficulties, especially for developing countries including Indonesia. Banking as a financial intermediary institution is the sector most in direct contact with the impact of the financial crisis, where liquidity is tight, interest rates rise, real sector turnover slows down even negative, so this can cause deteriorating economic conditions. The biggest threats facing banks are the increase in Non-Performing Loans (NPLs) and losses in capital and the possibility of bankruptcy.

The financial report is a summary of a recording process, a summary of the financial transactions that occurred during the relevant year of the book (Baridwan, 1992: 17). Financial report analysis is needed to understand the financial statement information which will be useful for future decision making. Financial accounting information is specifically addressed to external users, generally the investors and creditors (Kuang and Tin, 2010). The most widely used financial statement analysis is ratio analysis. Financial statement analysis only emphasizes on one financial aspect only.
Financial distress analysis is important in consideration of the financial distress of a banking company or financial institution that will harm many parties. These include, among others, investors who invest in shares or bonds, the creditors who were disadvantaged due to defaults, the employees of the company due to the Termination of Employment and the management of the company itself. By knowing the condition of Financial Distress from the beginning, the company is expected to take measures to address and minimize the occurrence of Financial Distress.

Indonesia Eximbank or the Indonesian Export Financing Institution is previously known as Bank Ekspor Indonesia, was established by the Government in 2009 under Act No. 2 of 2009 in support of the implementation of national export financing activities. Indonesia Eximbank has the task of providing National Export Financing in the form of Financing, Guarantee, Insurance, and Consulting Services. In carrying out its function, Indonesia Eximbank is unlikely to escape the effects and effects of global economic conditions that are likely to deteriorate, this is reflected in the financial condition of Indonesia Eximbank in the last two years that shows signs of decline, especially in terms of the decrease in net profit, but on the other hand, the value of Non-Performing Loan (NPL) and NPL ratios are increasing.

Eximbank Indonesia's net income continues to decline in 2017 and 2018, and on the other hand the value of NPLs is likely to increase and even the NPL ratio continues to increase beyond the threshold set by the Financial Services Authority (OJK) of up to 5%. from the Indonesian financial statements Eximbank shows Net Profit Growth fluctuations. In 2011 until 2015 the value of Net Profit showed an increase in growth, but in 2016 the value of Net Profit decreased by -1.2% from Net Profit value in 2015. In 2017 Net Profit value decreased by -27.92% and even in 2018 Net Profit value decreased significantly by -83.11% to only Rp 171,673 million. Therefore, research on the financial condition of Indonesia Eximbank is conducted by analyzing the accuracy of Financial Distress prediction potential with the purpose to see how much potential occurrence of Financial Distress in Indonesia Eximbank amid the declining world economic growth, so that later can be used to monitor Indonesia Eximbank condition, especially financial aspect of time Time to avoid and anticipate the occurrence of Financial Distress or financial difficulties and furthermore if not dealt with, it will have a permanent bankruptcy.

II. LITERATURE REVIEW

Bank
A bank is a business entity that collects funds from the public in the form of savings and distributes to the public in the form of credit and/or other forms in order to improve the standard of living of many people. More broadly, the Bank is a financial company, meaning that banking activity is always related to finance (Kasmir, 2008: 25-26).

According to Bank Indonesia Regulation No.6 / 10 / PBI / 2004 on the General Bank Health Level Assessment System, bank health assessment assesses the assessment of the following factors: 1) CapitalThe valuation of the capital factor includes the assessment of the following components: , composition, and projections (future trends) of the Bank's capitalization and capability in covering the problematic assets; the ability of the Bank to maintain the need for additional capital derived from profit, Bank's capital plan to support business growth, access to capital resources, and shareholder's financial performance to improve the capitalization of the Bank. 2) Asset Quality Evaluation of asset quality factors includes the assessment of the following components: productive asset quality, concentration of credit risk exposure, non-productive earning assets, and the adequacy of the allowance for possible losses on productive assets, policy and procedure adequacy, internal, documentation system, and performance of problem-solving the assets. 3) Management Assessment of management factors includes assessment of the following components: general management quality and implementation of risk management; the Bank’s compliance with prevailing regulations and commitment to Bank Indonesia and/or other parties. 4) Earning Assessment of the rentability factor includes the assessment of the components, as follows: achievement of return on assets (ROA), return on equity (ROE), net interest margin (NIM), and efficiency level of the Bank; operational profit development, income diversification, application of accounting principles in recognition of revenue and costs, and operating profit prospects. 5) Liquidity Assessment of liquidity factors includes the assessment of the following components: liquidity assets / liabilities ratio, potential maturity mismatch, Loan to Deposit Ratio (LDR), cash flow projections, and funding concentrations; the adequacy of policies and assets and liabilities management (ALMA), access to funding sources, and funding stability. 6) Sensitivity to Market Risk Assessment of sensitivity to market risk includes the assessment of the following components. Bank's ability to cover potential losses as a result of adverse movement of interest rates and exchange rates; the adequacy of the application of market risk management.

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Financial Statements

In the Basis of Preparation and Presentation of Financial Accounting Standards Statements, financial statements are part of the financial reporting process. Complete financial statements generally include a balance sheet, statement of income, statement of changes in financial position (which can be presented in various ways, for example, cash flow statements, or cash flow statements), notes and other reports and explanatory materials that are an integral part of the financial statements. (Indonesian Institute of Accountants, 2007)

According to the Indonesian Institute of Accountants (2007) in PSAK No.31 on Banking Accounting, the Bank's financial statements comprise: 1) The Bank's balance sheet presents assets and liabilities in the balance sheet based on its characteristics and is compiled based on its liquidity order. 2) Profit and Loss Statement. Bank's profit and loss report provides detailed revenue and expense elements and distinguishes between the elements of income and expenses arising from operational and non-operational activities. 3) Cash Flow Statements Cash flow statements should report cash flows for a specified period and are classified according to operating, investing, and financing activities. 4) Statement of Changes in Equity The statement of changes in equity represents the increase and decrease of net assets or bank's assets during the period based on certain measurement principles adopted and should be disclosed in the financial statements. 5) Notes to Financial Statements The notes to the financial statements should be presented systematically.

Financial Report Analysis

Financial Statement Analysis According to SofyanSyafriHarahap (2009: 333) is to describe the financial statement posts into smaller information units and to see their significant or meaningful relationships between quantitative data and non-quantitative data with a goal to know deeper financial conditions that are crucial in the process of producing the right decisions.

Financial statement analysis is a method or technique of analysis of financial statements that serve to convert data derived from financial statements as its raw materials into more useful, deeper, and sharper information with particular techniques. The main objective of financial analysis is the performance analysis in the future.

In analyzing and assessing the financial position, advances and potentials in the future, the main factors that generally get attention by analysts are (1) liquidity, (2) solvability, (3) profitability, (4) the importance of stability and business development, and other analysis focuses (Munawir, 2002: 56-57). To find out about these four factors, it is necessary to analyze the financial statements. There are three commonly used financial report analysis techniques: 1) Horizontal analysis. 2) vertical analysis. 3) Ratio analysis


Financial Ratio Analysis

Financial ratios are the figures obtained from the comparison of one financial statement post with another that has a relevant and significant (meaningful) relationship. This financial ratio only simplifies the information that illustrates the relationship between a particular post and another post. By simplifying this can quickly assess the relationship between the post and can compare with other ratios, so it can obtain information and provide an assessment (Harahap 2007: 297). The types of financial ratios according to Harahap (2007: 301) are as follows: 1) Liquidity Ratios, 2) Solvency Ratios, 3) Profitability / Rentability Ratio, 4) Leverage Ratios, (Market Rating), 8) Productivity Ratios.

Financial Distress

Platt and Platt (2002: 186) state that Financial Distress is a stage of decline in the financial condition of a company prior to bankruptcy or liquidation. Therefore, in order to address and minimize the occurrence of Financial Distress, the company can monitor its financial condition in terms of balance sheet and income statement in the company's financial statements by using financial report analysis techniques, such as using Altman Model, Springate Model and Zmijewski Model. Financial Distress information can be useful for some parties as follows (Mamdhu and Halim, 2012: 261): 1) Lenders (Like Banks), 2) Investors, 3) Government Parties, 4) Accountants, 5) Management. According to Altman in Pramuditya (2014), Financial Distress is classified into four categories: 1) Economic failure, 2) Business failure, 3) Insolvency, 4) Legal bankruptcy. Jauch and Glueck in Peter and Yoseph (2011) the factors that cause the occurrence of Financial Distress in the company, as follows: 1) General Factor, 2) External Factor of the Company, 3) Internal Factor of the Company.

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Altman Z-Score Model
Altman Z-Score has become a very popular statistical model in analyzing company health and determining the tendency of a company to experience Financial Distress in the next one or two years. In its latest revision, Altman (1995) issued a special model for non-manufacturing companies. The Z-score analysis is a tool used to predict a company's Financial Distress rate by calculating the value of some past ratios and then being included in a discriminant equation. To calculate the value of Z, first, we have to calculate the financial ratio type: X1 = Working Capital / Total Asset, X2 = Retained Earnings / Total Asset, X3 = Earning Before Interest and Taxes / Total Asset, X4 = Book Value of Equity / Book Value of Total Debt. Altman finds four types of financial ratios that can be combined to see the difference between a company experiencing financial distress and a company that does not experience Financial Distress. Formulation: Z-Score = 6.56X1 + 3.26X2 + 6.72X3 + 1.05X4

Springate Model
This method was developed in 1978 by Gorgon L.V. Springate. By following the procedure developed by Altman, Springate uses stepwise multiple discriminate analysis to select 4 of the 19 financial ratios that are popular so it can differentiate companies within the Financial Distress zone or secure zone. Springate model formula, as follows: S = 1.03A + 3.07B + 0.66C + 0.4D

Zmijewski Model
Zmijewski (1984) requires a crucial one. The proportion of the sample and population should be determined at the beginning. Model Zmijewski uses a ratio analysis that measures the performance, leverage, and liquidity of a company for its predictive model. The Zmijewski model uses probit analysis applied to 40 bankrupt companies and 800 surviving companies at that time. Zmijewski has measured the accuracy of its model and gets a score of 94.9% accuracy. Here is the model of the equation developed by Zmijewski, as follows:
Z = -4.3 – 4.5X1 + 5.7X2 + 0.004X3

Hypotheses Development
The hypotheses of this study are as follows:
H1: There is a significant difference from the model comparison analysis of Altman, Springate and Zmijewski as a predictive measure of financial distress in Indonesia Eximbank period 2011 - 2018.
H2: Altman model has better accuracy as a predictive measure of financial distress predictability in Indonesia Eximbank period from 2011 - 2018 than on Springate model and Zmijewski model.
H3: The Springate model has better accuracy as a predictive measure of financial distress predictability in Indonesia Eximbank period 2011 - 2018 from the Altman model and Zmijewski model.
H4: The Zmijewski model has better accuracy as a predictive measure of financial distress predictability in Indonesia Eximbank period 2011 - 2018 from the Altman model and Springate model.

III. RESEARCH METHODS
The type of research in this research is quantitative research, the nature of the research is comparative descriptive. The population in this study is the financial statements of Indonesia Eximbank. The sample was taken from the company's financial statements for the past eight years, namely, in 2011, 2012, 2013, 2014, 2015, 2016, 2017 and 2018. The scope of this study is the company's financial ratio, and the change Company predicts financial distress. In this case, Eximbank Indonesia's financial statements comprise the Balance Sheet and Income Statement Report for 2011-2018. The data used in this study are secondary data in the form of the Indonesian financial statement Eximbank. The technique of collecting data in this research is the documentation technique. Data analysis technique used in this research is by using descriptive analysis and comparative analysis.

IV. RESULTS & DISCUSSION
Altman Model Analysis
Z-Score Altman is determined using the formula, as follows: Z-Score = 6.56X1 + 3.26X2 + 6.72X3 + 1.05X4

The X1 ratio multiplied by the constant 6.56 plus the X2 ratio multiplied by the constant 3.26, then multiplied by the X3 ratio multiplied by the constant of 6.72, then added the ratio X4 with the constant 1.05.
Prediction Analysis of Financial Distress Potential By Comparing Altman, Springate And…

Table.1 Calculations of Z-Score Altman

<table>
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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>X1</td>
<td>0.26</td>
<td>0.23</td>
<td>0.18</td>
<td>0.17</td>
<td>0.14</td>
<td>0.16</td>
<td>0.18</td>
<td>0.16</td>
</tr>
<tr>
<td>X2</td>
<td>0.02</td>
<td>0.04</td>
<td>0.04</td>
<td>0.05</td>
<td>0.03</td>
<td>0.03</td>
<td>0.02</td>
<td>0.01</td>
</tr>
<tr>
<td>X3</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.01</td>
<td>0.00</td>
</tr>
<tr>
<td>X4</td>
<td>0.60</td>
<td>0.66</td>
<td>0.41</td>
<td>0.39</td>
<td>0.32</td>
<td>0.45</td>
<td>0.48</td>
<td>0.42</td>
</tr>
<tr>
<td>Z-Score</td>
<td>2.57</td>
<td>2.47</td>
<td>1.90</td>
<td>1.89</td>
<td>1.50</td>
<td>1.75</td>
<td>1.84</td>
<td>1.58</td>
</tr>
</tbody>
</table>

Based on the calculations in Table. 1 shows the value of the Z-Score in each period, wherein the period 2011 to 2015 the value of Z-Score has a tendency to decline, but in 2016 and 2017 the value starts to rise, then in 2018 its value goes down.

Springate Model Analysis
Springate model formulated, as follows:
\[ S = 1.03A + 3.07B + 0.66C + 0.4D \]
The ratio A is multiplied by the constant 1.03 plus the B ratio multiplied by the constant 3.07, then plus the ratio C constant multiplied by 0.66, then added the ratio D by 0.4 constant.

Table.2 Calculation of value S (Springate)

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<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0.26</td>
<td>0.23</td>
<td>0.18</td>
<td>0.17</td>
<td>0.14</td>
<td>0.16</td>
<td>0.18</td>
<td>0.16</td>
</tr>
<tr>
<td>B</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.01</td>
<td>0.00</td>
</tr>
<tr>
<td>C</td>
<td>0.03</td>
<td>0.03</td>
<td>0.03</td>
<td>0.03</td>
<td>0.03</td>
<td>0.02</td>
<td>0.01</td>
<td>0.00</td>
</tr>
<tr>
<td>D</td>
<td>0.06</td>
<td>0.06</td>
<td>0.06</td>
<td>0.07</td>
<td>0.06</td>
<td>0.06</td>
<td>0.07</td>
<td>0.06</td>
</tr>
<tr>
<td>S</td>
<td>0.38</td>
<td>0.35</td>
<td>0.29</td>
<td>0.30</td>
<td>0.25</td>
<td>0.26</td>
<td>0.26</td>
<td>0.20</td>
</tr>
</tbody>
</table>

Based on the calculations in Table. 2 shows the value of S in each period, wherein 2011 to 2013 the value of S has a tendency to decline, but in 2014 the value is slightly increased. In 2015, the S value will decline, then increase again in 2016 and in 2017 the value will remain or equal to 2016. In 2018 the value is decreased with a significant decrease in value.

Zmijewski Model Analysis
Zmijewski score is determined using the formula, as follows:
\[ Z = -4.3 - 4.5X_1 + 5.7X_2 + 0.004X_3 \]
The constant -4.3 is reduced by X1 Ratio multiplied by the 4.5 constant plus the ratio X2 multiplied by the constant 5.7, then plus the X3 ratio multiplied by the constant of 0.004.

Table. 3 Calculation of the value of Z (Zmijewski)

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>X1</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.01</td>
<td>0.01</td>
<td>0.00</td>
</tr>
<tr>
<td>X2</td>
<td>0.74</td>
<td>0.77</td>
<td>0.82</td>
<td>0.83</td>
<td>0.85</td>
<td>0.83</td>
<td>0.81</td>
<td>0.82</td>
</tr>
<tr>
<td>X3</td>
<td>1.36</td>
<td>1.30</td>
<td>1.22</td>
<td>1.21</td>
<td>1.17</td>
<td>1.20</td>
<td>1.23</td>
<td>1.20</td>
</tr>
<tr>
<td>Z</td>
<td>-0.18</td>
<td>0.04</td>
<td>0.31</td>
<td>0.33</td>
<td>0.50</td>
<td>0.35</td>
<td>0.27</td>
<td>0.39</td>
</tr>
</tbody>
</table>

Based on the calculations in Table. 3 shows the value of Z in each period, wherein 2011 the value is -0.18, then its value starts to show an increasing trend from 2012 to 2015, but in 2016 and 2017 the value starts to decline. In 2018 its value began to rebound.
Descriptive Analysis of Models from Altman, Springate and Zmijewski

The results of the calculation and criteria to predict the condition of Financial Distress in Indonesia Eximbank by using Altman Model, Springate Model and Model Zmijewski, as follows:

Table 4: Descriptive Analysis of Altman, Springate and Zmijewski Models

<table>
<thead>
<tr>
<th>Tahun</th>
<th>Model Altman</th>
<th>Model Springate</th>
<th>Model Zmijewski</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nilai</td>
<td>Kriteria</td>
<td>Nilai</td>
</tr>
<tr>
<td>2011</td>
<td>2,57</td>
<td>Grey Area (Non Distress)</td>
<td>0,38</td>
</tr>
<tr>
<td>2012</td>
<td>2,47</td>
<td>Grey Area (Non Distress)</td>
<td>0,35</td>
</tr>
<tr>
<td>2013</td>
<td>1,90</td>
<td>Grey Area (Non Distress)</td>
<td>0,29</td>
</tr>
<tr>
<td>2014</td>
<td>1,89</td>
<td>Grey Area (Non Distress)</td>
<td>0,30</td>
</tr>
<tr>
<td>2015</td>
<td>1,50</td>
<td>Grey Area (Non Distress)</td>
<td>0,25</td>
</tr>
<tr>
<td>2016</td>
<td>1,75</td>
<td>Grey Area (Non Distress)</td>
<td>0,26</td>
</tr>
<tr>
<td>2017</td>
<td>1,84</td>
<td>Grey Area (Non Distress)</td>
<td>0,26</td>
</tr>
<tr>
<td>2018</td>
<td>1,58</td>
<td>Grey Area (Non Distress)</td>
<td>0,20</td>
</tr>
</tbody>
</table>

Based on the grouping of criteria in Table 4 shows that the financial condition of Indonesia Eximbank in 2011 up to 2018 falls within the criteria of the "Gray Area" condition or can be categorized as "Non Distress" if it refers to the results of the calculation using the Altman Model. In the results of the calculation using the Springate Model, Eximbank Indonesia's financial condition is included in the "Potential Distress" criteria, whereas based on the calculation results using Model Zmijewski, the Indonesian Eximbank financial condition in 2011 is included in the "Non Distress" criteria, but in 2012 up to 2018 is included in the "Potential Distress" criteria.

However, if analyzed deeper in the results of Altman Model calculation can be known as the tendency to show the condition towards the occurrence of Potential Distress. The Altman Z-Score value in 2018 is 1.58 approaching the criteria limit of 1.10 (Z-Score value of <1.10 including Potential Financial Distress criteria).

One-Way ANOVA Test with SPSS

Altman models, Springate models and Zmijewski models use the analysis of the One-Way ANOVA Test. The research hypotheses are:

H1: There is a significant difference from the Altman model comparison model, the Springate model and the Zmijewski model as a tool for measuring financial distress potential in Indonesia Eximbank period 2011 - 2018.

Table 5: Descriptive Results

<table>
<thead>
<tr>
<th>Model</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error</th>
<th>95% Confidence Interval for Mean Lower Bound</th>
<th>Upper Bound</th>
<th>Minim um</th>
<th>Maxim um</th>
</tr>
</thead>
<tbody>
<tr>
<td>Altman</td>
<td>8</td>
<td>1,9375</td>
<td>.38751</td>
<td>.13701</td>
<td>1,6135 - 2,2615</td>
<td>.150</td>
<td>2,57</td>
<td></td>
</tr>
<tr>
<td>Springate</td>
<td>8</td>
<td>.2863</td>
<td>.05755</td>
<td>.02035</td>
<td>.2381 - .3344</td>
<td>.20</td>
<td>.38</td>
<td></td>
</tr>
<tr>
<td>Zmijewski</td>
<td>8</td>
<td>.2513</td>
<td>.21761</td>
<td>.07694</td>
<td>.0693 - .4332</td>
<td>-.18</td>
<td>.50</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>24</td>
<td>.8250</td>
<td>.84087</td>
<td>.17164</td>
<td>.4699 - 1,1801</td>
<td>-.18</td>
<td>2,57</td>
<td></td>
</tr>
</tbody>
</table>

The first output is descriptives, with explanatory results, as follows:
1) The Altman model has an average value of the ratio of 1.9375.
2) Springate model has a mean value of 0.2863.
3) The Zmijewski model has a mean value of 0.22513.

In our hypothesis test, we use SPSS output that is "Test ANOVA" with the output of P-Value of 0.000. Based on the "Anova Test" output in Table 6 above, it is known that P-Value is 0.000. Because the value is 0.000 smaller <0.050, it can be concluded that "Hypotheses are accepted," meaning there is a significant
difference from the Altman model comparison model, the Springate model and the Zmijewski model as a predictive measure of financial distress predictability in Indonesia Eximbank period 2011 - 2018.

Post Hoc Test

In this Post Hoc Test analysis used the Games-Howell Test, with the output of SPSS, as follows:

<table>
<thead>
<tr>
<th>(I) model</th>
<th>(J) model</th>
<th>Mean Difference (I-J)</th>
<th>Std. Error</th>
<th>Sig.</th>
<th>95% Confidence Interval</th>
</tr>
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<tr>
<td>Games-Howell</td>
<td>Altman</td>
<td>1.65125*</td>
<td>,13851</td>
<td>.00 0</td>
<td>1.2475 - 2.0550</td>
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<tr>
<td></td>
<td>Springate</td>
<td>1.68625*</td>
<td>,15713</td>
<td>.00 0</td>
<td>1.2620 - 2.1105</td>
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<tr>
<td></td>
<td>zmijewski</td>
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<td>,13851</td>
<td>.00 0</td>
<td>1.2475 - 2.0550</td>
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<td>Springate</td>
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<td>.00 0</td>
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<td>-.03500</td>
<td>,07958</td>
<td>.90 0</td>
<td>-.2626 - 1.926</td>
</tr>
</tbody>
</table>

Based on the results of the Post Hoc Games-Howell test, it can be analyzed, as follows:
1) The Altman model test on the Springate model has a mean difference of 1.65255 with the P-Value value of the Sig column. for 0.000 (<0.050).
2) Altman model test on Zmijewski model there is a difference of average ratio equal to 1.68625 with P-Value in Sig column. for 0.000 (<0.050).
3) The test on the Springate model on the Zmijewski model there is a difference of the average ratio of 0.03500 with P-value value in Sig column. for 0.900 (> 0.050).

From the output of the SPSS output and the analysis can be seen which hypothesis is received with the result, as follows:

In Altman Model Hypotheses, it is concluded that the Altman Model has better accuracy as a predictive measure of Financial Distress potential in Indonesia Eximbank period from 2011 to 2018 from Model Springate and Model Zmijewski. Thus the hypothesis is accepted.

In Springate Model Hypotheses, it is concluded that the Springate Model has no better accuracy as a predictable measure of Potential Financial Distress in Indonesia Eximbank period from 2011 to 2018 from Altman Model and Model Zmijewski. Thus the hypothesis is rejected.

In the Zmijewski Model Hypothesis, it is concluded that the Zmijewski Model does not have a better accuracy level as a predictive measure of Financial Distress potential in Indonesia Eximbank period from 2011 to 2018 from Altman model and Springate model. Thus the hypothesis is rejected.

V. DISCUSSION

The three prediction models of Financial Distress potential have gone through testing and analysis, wherein the first test it can be concluded that there is a significant difference from the results of the comparative analysis of Altman models, the Springate model and the Zmijewski model as a measure for predicting financial distress in Indonesia Eximbank for the period 2011 - 2018. Whereas in the second test it can be concluded that the Altman model is more accurate in predicting the potential of financial distress at Indonesia Eximbank for the period 2011 to 2018 than the Springate model and the Zmijewski model.

In the first test, where there were significant differences in the Altman model, the Springate model and the Zmijewski model due to differences in the ratios used in the calculation. The Altman model uses 4 ratios: Working capital on Assets, Retained earnings on Assets, EBIT on Assets, and Capital on debt, while on the Springate Model uses different ratios, namely: Working Capital on Assets, EBIT on Assets, Pre-tax profit on Current Liabilities and Sales on Assets. The Zmijewski Model uses 3 ratios, namely: Net Profit to Assets, Liabilities to Assets and Current Assets to Current Liabilities. In addition to differences in the ratio used, there is also a difference in weighting constants used in the calculation of each model.
In the second test, it was concluded that the Altman Model is more accurate in predicting the Financial Distress potential of Indonesia Eximbank than the Springate Model and the Zmijewski Model. This is because the ratio used by the Altman Model is more suitable to be used to calculate financial conditions in the banking industry, wherein the X4 ratio compares the Equity value with the Total Loan value. In the banking industry the value of Equity or Capital is the main component to determine the level of health and financial strength of the Bank, as it is known that the banking industry in Indonesia is required to have a capital adequacy ratio (CAR) of 8%, so that capital becomes the main component in the banking industry. The X3 ratio compares the value of Operating Income with Total Assets. The value of operating profit is also strongly related to the health of the Bank’s financial condition. Profit is strongly influenced by the condition of NPL, where the value of bad credit (Collectibility 3, Collectability 4 and Collectibility 5) will impact the erosion of Profit due to provisions for impairment losses that must be taken from the on-going profit post every year.

VI. CONCLUSIONS & SUGGESTIONS

Conclusion
Based on the results of the research and discussion, some of the conclusions that can be taken are as follows:

Based on the results of the Altman Model analysis on Indonesia Eximbank in 2011 to 2018, it was found that Indonesia Eximbank's financial condition was in the "Grey Area" condition/criteria or could be classified as "Non Distress" with the lowest Z-score in 2018 of 1.58 which begins to approach the criteria limit of 1.10 (Z-Score value of <1.10 is included in the criteria for Potential Financial Distress).

Based on the results of the Springate Model analysis on Indonesia Eximbank in 2011 to 2018, it was found that Indonesia Eximbank's financial condition throughout the period had entered into the condition/criteria of "Potential Financial Distress" with the lowest S value in 2018 of 0.20.

Based on the results of the Zmijewski Model analysis on Indonesia Eximbank from 2011 to 2018, it was found that Indonesia Eximbank's financial condition in 2011 was included in the "Non Distress" criteria, but in 2012 to 2018 was included in the "Potential Financial Distress" criteria with a value The highest Z in 2015 was 0.50 and 2018 was 0.39.

Based on the One-Way ANOVA Test statistic calculation, the results show that there are significant differences from the results of the Altman Model comparative analysis, the Springate Model and the Zmijewski Model as a predictor of Financial Distress potential in Indonesia Eximbank for the period 2011 - 2018.

Based on the calculation of Post-Hoc Games-Howell test statistics, it was found that the Altman Model has a better level of accuracy as a predictor of Financial Distress potential in Indonesia Eximbank for the period 2011 - 2018 than the Springate Model and Zmijewski Model.

Suggestions
For companies and stakeholders, earlier predictions about the potential for financial difficulties or financial distress are needed as a form of financial monitoring to immediately take preventative and strategic steps in order to avoid worse conditions such as bankruptcy. The Altman model can be used as a parameter tool to analyze the company's financial condition, especially the condition of Financial Distress. The Altman model can also be used as one of the analytical tools in lending to prospective debtors, where the Alman Model can be used as part of a qualitative analysis tool that relates to the company's financial aspects in the interest of making credit decision decisions to debtors / prospective debtors. Future studies are expected to create a new prediction model of Financial Distress potential, so that research can be further developed.

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