

FINANCIAL REPORT ANALYSIS OF PT PAKUWON JATI Tbk USING Z-SCORE ALTMAN, S-SCORE SPRINGATE, AND X-SCORE ZMIJEWSKI MODELS TO ANALYZE COMPANY'S BANKRUPTCY

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ABSTRACT

Every big company has the potential of having a financial condition that leads to financial distress. Financial distress is a situation that indicates a company's financial condition that occurred before the bankruptcy or liquidation. This stage might happen in various sectors, and one of them is the property sector such as PT Pakuwon Jati Tbk. PT Pakuwon Jati Tbk is one of the biggest property companies in Surabaya, which attracts the author's attention because of its popularity among the Surabaya's residents. This research aims to analyze the financial performance of PT Pakuwon Jati Tbk reviewed by three models of financial distress which are Z-Score Altman, Springate, and X-Score Zmijewski models for the period 2015 until 2019. The data used in this research was based on secondary data that referred to the financial report on the company's official website. The data methodology used in this research is an observation method and data study based on PT Pakuwon Jati Tbk financial from 2015 until 2019. The result of the financial report analysis using Z-score Altman, Springate, and X-Score Zmijewski models measurement, is suggested to measure the company's financial position related to profitability, financial condition, and help the process of decision making regarding the strategies development of the company in the future.

Key words: Financial distress, Financial performance, Z-Score Altman, Score Springate, X-Score Zmijewski

INTRODUCTION

Business is an organized activity of individuals or groups to produce and sell goods or services to get profit by meeting the needs of the market (Sugiyono, 2003). Based on the statement, a business that takes place in various sectors in the market, especially the real estate sector has one of the same goals, namely profit. Certainly, in gaining profit, companies should be able to analyze the financial performance of their company from previous years. It aims to help the company to predict and develop the company's strategies in the future. Besides, it can also help companies to detect the financial condition, whether it is in good health or unhealthy condition towards bankruptcy or commonly referred to as financial distress analysis. If a company already understands and knows the financial condition of the company itself, then the company can develop strategies to maintain a healthy condition or provide corrective or preventive actions before bankruptcy occurs to the company.

Analyzing financial distress can be done by various methods with some combination of financial ratio analysis in the company's financial statements. Financial statement analysis can distinguish shareholder profitability arising from operations arising from loans to financial operations. Also, analysis of financial statements that distinguishes leverage in operations from leverage in financing distinguishes differences in contemporary and future profitability between firms. Financial analysts commonly use ratio analysis to measure the performance of firms. Finance and accounting texts devote a section to ratio analysis as a summary of accumulated knowledge necessary for the preparation of financial statements that are designed to report the performance of the entities to the stakeholder (E. H. Feroz et al., 2003).

PT Pakuwon Jati Tbk is a public company (IDX: PWON) that was established in 1082 and focused on the real estate industry. The head office is located in Surabaya, East Java, Indonesia. Some of the project list of property types that they handle are superblocks, apartments, office towers, hotels, shopping malls, and housing. The company's core value is to become the leading non-strata retail shopping centers developer in Indonesia, to develop the best superblocks and townships toward better living quality, to become the best working place in the country's property industry, and to optimize the returns on investments for our tenants and buyers.

LITERATURE REVIEW

Profit

Profits are often used as a measure of the progress of a company, whether they are experiencing success or even nearing bankruptcy. The basic proposition of economic theory is that in competition, the rate of profit will tend towards equality. This means that increased money capital will not only increase the total profits of the firm but because it puts the firm in a higher position than the imperfectly competing capital group.

Financial Statement

Financial statement analysis has traditionally been performed using a set of ratios to highlight the relative performance of a firm as compared to its industry. The number of ratios that can be computed based on financial data is constrained only by the imagination of the analyst (E. H. Feroz et al., 2003). Financial statement analysis identifies aspects of financial statements that are relevant to investment decisions.

Financial Ratio

Ratio analysis is a well-established tool to evaluate an organization's profitability, liquidity, and financial stability (Damodaran 2001; Glynn et al 2003; Block and Hirt 2005). As such it can be used to answer a variety of questions. A financial ratio is a relationship between two numbers drawn from the organization's balance sheet, operating statement, and related records. Analysis of a ratio such as tuition revenues to instructional expenditures provides a better understanding of the financial condition and institutional priorities than either of these data standing alone (Kent John Chabotar, 1989).

Financial Distress

A company may experience financial distress or financial difficulties if the company shows negative figures on operating profit, net profit, and the book value of equity and the company merges (Brahmin 2007). When a company is in that position, it must transition to the next strategy to improve their company's performance. If their company's performance worsens, then what must happen is that the company goes into bankruptcy. According to Damodaran (1997), several factors cause financial distress. Here are some factors that cause financial distress in the company:

- a. Cash flow difficulties
- b. Amount of debt
- c. Losses in the company's operational activities for several years

Several analytical methods can be used to assess the company's performance condition in this research, namely:

- a. Altman's Z-Score Method

Introduced by Edward Altman in 1968, the bankruptcy prediction model Z-score is a method for predicting the financial health of a company and its likelihood of going bankrupt.

- b. Springate's S-Score Method

Introduced by Gordon L.V. In 1978, the Springate bankruptcy prediction model found four ratios used to predict the potential financial difficulties of a company.

- c. Zmijewski's Z-Score Method

Introduced by Zmijewski in 1984, used financial ratio analysis that measures the performance of debt or leverage and liquidity of a company.

Financial Condition

Financial condition is defined as a government's ability to finance its services continually, including a government's ability to maintain existing service levels, to withstand systematic and unsystematic risk, and to meet the demands of natural change over time (Nollenberger, 2003). This definition is supported with a methodology that contains over 40 financial and environmental indicators that reflect dimensions of financial condition and dimensions that impact financial condition, respectively, taking into account the characteristics of time, environment, multidimensional relationships, and implicit and explicit obligations (Berne, 1996).

METHODOLOGY

This research used secondary data of PT Pakuwon Jati Tbk's financial statements. The data observed in the five years from 2015 until 2019 based on financial statements on the official company's website and calculated by three models of financial distress analysis to determine the yearly financial condition of PT Pakuwon Jati Tbk, which are:

Z-Score Altman

Altman model can be used to analyze the financial condition of a company using five variables of financial ratio such as:

$$Z = 0.717X_1 + 0.874X_2 + 3.107X_3 + 0.420X_4 + 0.998X_5$$

Remarks:

- X₁ = Ratio of Working Capital to Total Assets
- X₂ = Ratio of Retained Earnings to Total Assets
- X₃ = Ratio of Income before Interest and Taxes to Total Assets
- X₄ = Ratio of Market Value of Equity to Book Value of Debt
- X₅ = Ratio of Total Sales to Total Assets (Asset Turnover)

The X₁ is used to determine the short-term company's solvency. The X₂ indicated how the assets were financed from the profit retention rather than paying profit out as dividends. The X₃ is considered to be an indicator of how effectively a company is using its assets to generate earnings. The X₄ showed how much the firm's assets can decline in value (measured by the market value of equity) before the liabilities exceed the assets and the firm becomes insolvent. And the X₅ indicated how the company effectively used its assets to generate sales.

The result criteria showed in Table 1

Table 1: Result Criteria of Z-Score Altman Model

Z-Score Value	Result
$Z < 1.81$	Not Healthy (Bankrupt)
$1.81 < Z < 2.99$	Grey Area
$2.99 < Z$	Healthy

Based on result criteria of the Z-Score Altman Model, if Z-Score value is under 1,81 the company is categorized as not healthy or bankrupt. If Z-Score value is between 1,81 and 2,99 the company is categorized as grey area, and if Z-Score value is less than 2,99 the company is categorized as healthy.

S-Score Springate

Springate model can be used to analyze the financial condition of a company using four variables of financial ratio such as:

$$S = 1.03X_1 + 3.07X_2 + 0.66X_3 + 0.4X_4$$

Remarks:

- X₁ = Ratio of Working Capital to Total Assets
- X₂ = Ratio of Earnings before Deducted Interest and Taxes to Total Assets
- X₃ = Ratio of Net Profit before Deducted Taxes to Current Liabilities
- X₄ = Ratio of Total Sales to Total Assets (Asset Turnover)

The X₁ is to measure the liquidity of the total and the net working capital position. The X₂ is used to determine how much profit a company generates from its operational activities. The X₃ analyzes the profitability of a company without the impact of its tax regime. The X₄ is to measure the ability of a business to generate sales on as small a base of assets as possible.

The result criteria showed in Table 2

Table 2: Result Criteria of S-Score Springate Model

S-Score Value	Result
$S < .862$	Not Healthy (Bankrupt)
$.862 < S$	Healthy

Based on result criteria of the S-Score Springate Model, if S-Score is under 0.862 then the company is categorized as not healthy or bankrupt. If S-Score upper 0.862 then the company is categorized as healthy.

X-Score Zmijewski

Zmijewski model can be used to analyze the financial condition of a company using three variables of financial ratio such as:

$$X = - 4.3 - 4.5X_1 + 5.7X_2 + 0.004X_3$$

Remarks:

- X₁ = Ratio of Net Income to Total Assets (Return of Asset)
- X₂ = Ratio of Total Debt to Total Assets (Debt Ratio)
- X₃ = Ratio of Current Assets to Current Liabilities (Current Ratio)

The X₁ measured how efficient a company's management is in generating earnings from its economic resources. The X₂ is interpreted as the proportion of a company's assets that are financed by debt. The X₃ measured the capacity of a company to hedge its short-term obligations with the current assets.

The result criteria showed in Table 3

Table 3: Result Criteria of X-Score Zmijewski Model

X-Score Value	Result
$0 < X$, positive value	Not Healthy (Bankrupt)
$X < 0$, negative value	Healthy

Based on result criteria of X-Score Zmijewski Model, if X-Score upper zero or has positive value, then the company is categorized as not healthy or bankrupt. If X-Score under 0 or has negative value, then the company is categorized as healthy.

LIMITATION

This research only focused on the financial performance of PT Pakuwon Jati Tbk from 2015 until 2019, before the pandemic situation. Also, the result of this research only refers to three methods of scoring analysis which are Z-Score, S-Score, and X-Score, without calculating the accuracy of each analysis ratio. It is strongly recommended to measure the financial performance of PT Pakuwon Jati Tbk and determine its financial condition by considering the COVID-19 pandemic as a potential factor that will affect the financial performance and condition of PT Pakuwon Jati Tbk.

RESULT AND ANALYSIS

Z-Score Altman

The result of the calculation with the Z-Score Altman model showed in Table 4

Table 4: Z-Score Altman Calculation on 2015-2019

Variable	2015	2016	2017	2018	2019	Average
X ₁	.052	.073	.150	.223	.240	.148
X ₂	.301	.344	.375	.435	.513	.394
X ₃	.090	.077	.091	.111	.110	.096
X ₄	4.876	5.403	5.835	5.322	5.986	5.484
X ₅	.246	.234	.246	.280	.276	.257
Z-Score	2.875	3.095	3.414	3.400	3.754	3.308

Table 4 showed on average five years, the Z-Score of PT Pakuwon Jati Tbk was 3.308 which means that the financial performance was still in healthy condition. But every year, in 2015 the Z-Score was 2.875 which means that the financial performance was in grey area condition or prone to bankruptcy. In 2016 the Z-Score increased to 3.095 and was classified as a healthy financial condition. In 2017 the Z-Score increased to 3.414 and was classified as a healthy financial condition. In 2018 the Z-Score decreased to 3.400 but was still classified as a healthy financial condition. In 2019 the Z-Score increased to 3.754 and was classified as a healthy financial condition.

S-Score Springate

The result of the calculation with the S-Score Springate model showed in Table 5

Table 5: S-Score Springate Calculation on 2015-2019

Variable	2015	2016	2017	2018	2019	Average
X ₁	.052	.073	.150	.223	.240	.148
X ₂	.075	.086	.087	.112	.124	.097
X ₃	.0153	.179	.196	.294	.409	.246
X ₄	.246	.234	.246	.280	.276	.257
S-Score	.0482	.551	.649	.879	1.009	.714

Table 5 showed on average five years, the S-Score of PT Pakuwon Jati Tbk was 0,704 which means that the financial performance was not in healthy condition (bankrupt). Yearly, in 2015 the S-Score was 0.0482 which means that the financial performance was still in unhealthy financial condition. In 2016 the S-Score increased to 0.551 but is still in unhealthy financial condition. In 2017 the S-Score increased to 0.649 and is still classified as an unhealthy financial condition. In 2018 the S-Score increased to 0.879 and was classified as a healthy financial condition. In 2019 the S-Score also increased to 1.009 and classified as healthy financial condition (safe from bankruptcy).

X-Score Zmijewski

The result of the calculation with the X-Score Zmijewski model shown in Table 6

Table 6: X-Score Zmijewski Calculation on 2015-2019

Variable	2015	2016	2017	2018	2019	Average
X ₁	.075	.086	.087	.112	.124	.097
X ₂	.496	.467	.452	.384	.307	.421
X ₃	1.223	1.327	1.715	2.379	2.859	1.900
X-Score	-1.801	-2.020	-2.105	-2.606	-3.100	-2.326

Table 6 showed on average five years, the X-Score of PT Pakuwon Jati Tbk was -2.326 which is a healthy condition of financial performance. Yearly, in 2015 the X-Score was -1.801 which means that the financial performance is in healthy condition. In 2016 the X-Score was -2.020 which means that the financial performance is in healthy condition, and in 2017 X-Score was increased to

-2.105 which also means that the financial performance is in healthy condition. In 2018 the X-Score was -3.100, which means the company is not at risk of bankruptcy, and in 2019 the X-Score was at the lowest level of -3.100 which means that the financial performance is in healthy condition.

CONCLUSION

Table 7: Financial Distress Results from 2015-2019 by Z-Score, S-Score, and X-Score Models

	Z-Score	S-Score	X-Score
2015	2.875	.0482	-1.801
2016	3.095	.551	-2.020
2017	3.414	.649	-2.105
2018	3.400	.879	-2.606
2019	3.308	1.009	-3.100
Average	3.308	0.714	-2.326

Based on this research, the Z-Score Altman, S-Score Springate, and X-Score Zmijewski can be used to analyze the financial condition of PT Pakuwon Jati Tbk. Table 7 showed the financial condition from three different models. Based on the average results from five periods in 2015-2019, the Z-Score and X-Score model showed healthy financial conditions which means the company is still safe from bankruptcy, meanwhile the S-Score model showed unhealthy financial conditions which means that there is a possibility of bankruptcy in the future.

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