

ANALYSIS OF FINANCIAL DISTRESS IN INDONESIA STATE-OWNED ENTERPRISE

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Abstract This study aims to provide empirical evidence related to the potential for financial distress experienced by State-Owned Enterprises. Through this research, a description of the potential financial distress experienced by PT Wijaya Karya (Persero) Tbk and PT Adhi Karya (Persero) Tbk can be obtained during the period 2010 - 2019. The Financial distress prediction model uses the Altman Model (Z-Score) and Springate Model (S-Score). The results show that from 2010 – 2019, PT Wijaya Karya (Persero) Tbk is still in a healthy condition so that the possibility of going bankrupt is very small. However, year by year, the condition of PT Wijaya Karya (Persero) Tbk is still in a gray condition where in this condition the company is prone to bankruptcy and experiencing financial problems that must be handled by the company's management appropriately. Meanwhile, PT Adhi Karya (Persero) from 2010 – 2019 showed the potential for financial distress which was strengthened by an unhealthy balance sheet because most of the funding sources came from debt. This study shows that the potential for financial distress arises because of a shift in government policy in development.

Keyword :

INTRODUCTION

Corporate governance and its impact on corporate financial distress, is one of the most researched areas in corporate finance (Younas et al., 2021). This also raises doubts about the current corporate governance mechanism, whether corporate governance is effective in preventing financial distress in companies (Alabede, 2016). Further, Core et al. (1999) argue that the prevalence of weak corporate governance mechanisms within an entity may increase the likelihood of agency problems. Financial distress is usually considered an embarrassing situation for the company because it is unable to pay debts or fees that are due, which involves liquidity problems, insufficient equity, debt defaults and lack of current assets (Hui & Jing-Jing, 2008). Financial distress can force companies to go bankrupt or forced liquidation (Samanta & Johnston, 2019).

Companies experiencing financial distress cannot pay their financial obligations to creditors. In addition, financial distress situations arise due to uncontrolled growth, expansion with low working capital, poor cash flow forecasting techniques and the inability to predict and calculate cash flows (Younas et al., 2021). Financial distress causes various problems such as low company sales, high expenses, unrealistic budgeting and pricing, companies not

having sufficient cash flow to run business operations smoothly, insufficient account balances and poor debt management.

Wruck (1990) states that companies will fall into financial distress situations due to economic pressures, poor management or decreased performance. According to the Organization for Economic Cooperation and Development (OECD), poor corporate governance mechanisms push companies into financial distress situations. In developing countries, many studies have been conducted to study the relationship between corporate governance and financial distress (Dhamija et al., 2014; Al-Tamimi & Hassan, 2012; Lajili & Zeghal, 2010; Lee & Yeh, 2004). Previous studies agree that the success of a company is associated with good governance; transparency of business contracts; ethical standards; legal and constitutional agreements; effective decision making and correct disclosure of financial information.

Predicting corporate bankruptcy has long been an important research topic because bankruptcy incurs enormous costs on market participants, as well as on the economy as a whole. As a result, shareholders, companies, and financial institutions are all interested in financial distress prediction (FDP) models to help identify problematic companies in the early stages of financial distress (Kumar & Ravi, 2007; Lin, Hu, & Tsai, 2012; Olson, Delen, & Meng, 2012; Sun, Li, Huang, & He, 2014)

In the past, the financial distress prediction method has used a lot of statistical models. For example, Fitzpatrick (1932) compared 13 financial ratios between bankrupt and normal firms. Furthermore, other financial distress prediction methods such as univariate analysis (Beaver, 1966), discriminant analysis (Altman, 1968), and logit analysis (Ohlson, 1980) have been used. Among them, the model developed by Altman (1968), which uses a linear combination of five financial ratios, provides good predictive accuracy; it has been widely used in the literature to represent bankruptcy risk.

The construction industry in Indonesia is one of the sectors that makes a high contribution to Gross Domestic Product (GDP) in the fourth quarter of 2019, which is 11.26 percent (BPS, 2020). Structurally, the Indonesian economy during 2019 was supported by the industrial sector 19.62 percent, the agricultural sector 13.45 percent, the trade sector 13.09 percent, and the construction sector by 10 percent which contributed to GDP (CNBC, 2019). This indicates that the construction sector occupies the fourth place as the driver of economic growth in 2019. Although the 2019 economic growth only grew by 5.02 percent, lower than the 2018 achievement of 5.17 percent, this was also due to the slowing growth of the GDP supporting sector.

In recent years, the performance of the construction sector has remained unstable and fluctuated. Although the company's performance posted a good performance, the company's health is questionable. Minister of Finance of the Republic of Indonesia Sri Mulyani at a Working Meeting with Commission IX of the DPR on December 2, 2019 explained an assessment of SOEs through the Z-Score to monitor the vulnerability of SOEs' financial conditions (Alinia.id, 2019). The assessment conducted by the Ministry of Finance includes the ratio of the company's ability to generate profits or return of equity (ROE) and the ability to pay debts or debt to equity ratio (DER). The Minister of Finance's explanation, especially SOEs in the construction sector, indicates that the capital structure of SOEs in the construction sector is dominated by debt with a DER value of 3.7 times. Furthermore, Construction SOEs get a Z-score of 1.7 which indicates that the vulnerability of SOEs' financial condition is in the alert category. However, the performance of construction SOEs indicates an ROE of 15.1%.

In order to promote equitable development in Indonesia, the government has encouraged infrastructure development. The government believes that infrastructure is the most influential factor in economic growth. The government's efforts to encourage infrastructure development are supported by an abundant infrastructure budget. However, infrastructure projects are not fully financed by the Government. This resulted in the weakening of the SOE's balance sheet.

Standard & Poor's Global Ratings pays attention to the balance sheets of SOEs involved in government infrastructure development assignments (Kontan, 2018). The debt ratio of 20 SOEs listed on the Indonesia Stock Exchange and involved in government infrastructure development projects showed a 5-fold increase in EBITDA. Even though SOE debt is getting higher, in general the government does not mind this because the weakening of the company's balance sheet reflects the productivity of SOEs in working on many projects (Kompas, 2018).

This study aims to provide empirical evidence related to the potential for financial distress experienced by State-Owned Enterprises. This potential for financial distress arises due to a shift in government policy in development. In this case study, the company used is PT Wijaya Karya (Persero) Tbk, which is one of the State-Owned Enterprises affected by government infrastructure projects.

In the next section, we will discuss the methods and models of financial distress prediction used in this study.

RESEARCH METHODS

This research is descriptive research. Sekaran & Bougie (2016) explained that descriptive research is a type of conclusive research that has the main goal of describing something, usually an explanation of market characteristics or functions. Through this type of descriptive research, a description of the potential financial distress experienced by PT Wijaya Karya (Persero) Tbk can be obtained during the period 2010 – 2019.

Financial distress prediction aims to predict whether debtors (both individuals and companies) will go bankrupt or not. In the past, methods commonly used to predict financial distress or bankruptcy were based on statistical analysis, particularly univariate analysis (Beaver, 1966). Multivariate analysis was first used for financial distress prediction by Altman (1968), who created the Z-score. The Z-score is a linear combination of the five FRs, weighted by the coefficients:

$$Z = 1,2X_1 + 1,4X_2 + 3,3X_3 + 0,6X_4 + 1,0X_5$$

Keterangan

- X₁ : Working Capital / Total Assets
- X₂ : Retained Earnings / Total Total Assets
- X₃ : EBIT / Total Assets
- X₄ : FV of Equity / BV of Liability
- X₅ : Sales / Total Assets

The use of the Altman model as a measure of bankruptcy performance is not permanent but develops over time, the testing and discovery of the model continues to be expanded by Altman. In its development there are 3 Altman (Z-Score) formulas, namely the First Altman (Z-Score) Model (I), the Revised Altman (Z-Score) Model (II), and the Modified Altman (Z-

Score) Model (III). In non-manufacturing companies using Altman Model III, namely by removing X5. Thus, the equation that will be used in this study is

$$Z = 6,56X_1 + 3,26X_2 + 6,72X_3 + 1,05X_4$$

Description:

- X₁ : Working Capital / Total Assets
- X₂ : Retained Earnings / Total Assets
- X₃ : EBIT / Total Assets
- X₄ : FV of Equity / BV of Liability

The larger the X1, X2, X3 and X4 values, the smaller the potential for the company to go bankrupt. The smaller the value of X1, X2, X3 and X4, the greater the potential for the company to go bankrupt. The condition of a company's bankruptcy can be seen from its Z-Score value. If:

1. The Z-Score value is less than or equal to 1.1, meaning that the company is predicted to go bankrupt.
2. The Z-Score value is between 1.1 to 2.6, then the company is in a gray zone where in this condition the company is prone to bankruptcy and experiencing financial problems that must be handled by the company's management appropriately. If the handling is too late or improper, the company can go bankrupt. So, in this condition the company may go bankrupt and there is also the possibility that the company will not go bankrupt, depending on the handling by the management of the company.
3. Z-Score value greater than 2.6 indicates that the company is still in a healthy condition so that the possibility of bankruptcy is very small.

Another financial distress assessment model is the Springate Model (S-Score), this model was developed by Springate. Gordon L.V. Springate (1978) conducted a study to find a model that can be used to predict the potential (indication) of bankruptcy. Springate (1978) uses 19 popular financial ratios that can be used to predict financial distress. After going through the statistical test of multiple discriminant analysis which is the same as that done by Altman (1968), which distinguishes between companies that are in distress and those that are not. The sample used by Springate is 40 manufacturing companies located in Canada, namely 20 companies experiencing financial difficulties and 20 in good health. Springate finally found 4 ratios that can be used to predict the potential (indications) of corporate bankruptcy which according to Ghodrati has an accuracy rate of up to 92.5% (2012).

$$S = 1,03X_1 + 3,07X_2 + 0,66X_3 + 0,4X_4$$

Description:

- X₁ : Working Capital / Total Assets
- X₂ : EBIT / Total Assets
- X₃ : EBIT / Current Liabilities
- X₄ : Sales / Total Assets

The condition of a company's bankruptcy can be seen from its S-Score. If:

1. S-Score value > 0.862, the company is predicted to be a company that has the potential healthy (no potential for bankruptcy).

2. S-Score < 0.862, the company is predicted to be a company that has the potential to go bankrupt.

RESULT

Based on the results of data processing, it shows that from 2010 – 2019, PT Wijaya Karya (Persero) Tbk is still in a healthy condition so that the possibility of going bankrupt is very small. However, year by year, the condition of PT Wijaya Karya (Persero) Tbk is still in a gray condition where in this condition the company is prone to bankruptcy and experiencing financial problems that must be handled by the company's management appropriately. If the handling is too late or improper, the company can go bankrupt. So, in this condition the company may go bankrupt and there is also the possibility that the company will not go bankrupt, depending on the handling by the management of the company.

Table 1
Altman Z-Score PT Wijaya Karya (Persero) Tbk.

YEAR	C	X1	C	X2	C	X3	C	X4	ALTMAN Z-SCORE	CONCLUSION
2019	6.56	0.193	3.26	0.059	6.72	0.045	1.05	0.448	2.23106	GREY ZONE
2018	6.56	0.295	3.26	0.091	6.72	0.040	1.05	0.410	2.92894	SAFE ZONE
2017	6.56	0.196	3.26	0.060	6.72	0.032	1.05	0.471	2.18841	GREY ZONE
2016	6.56	0.279	3.26	0.086	6.72	0.041	1.05	0.684	3.10397	SAFE ZONE
2015	6.56	0.125	3.26	0.038	6.72	0.039	1.05	0.387	1.61058	GREY ZONE
2014	6.56	0.263	3.26	0.081	6.72	0.047	1.05	0.455	2.78876	SAFE ZONE
2013	6.56	0.238	3.26	0.073	6.72	0.049	1.05	0.344	2.48455	GREY ZONE
2012	6.56	0.187	3.26	0.057	6.72	0.042	1.05	0.346	2.06043	GREY ZONE
2011	6.56	0.361	3.26	0.111	6.72	0.040	1.05	0.364	3.37781	SAFE ZONE
2010	6.56	0.388	3.26	0.119	6.72	0.039	1.05	0.412	3.62483	SAFE ZONE
RATA - RATA									2.63993	SAFE ZONE

Table 2
Altman Z-Score PT Adhi Karya (Persero) Tbk.

YEAR	C	X1	C	X2	C	X3	C	X4	ALTMAN Z-SCORE	CONCLUSION
2019	6.56	0.159	3.26	0.018	6.72	0.019	1.05	0.230	1.47338	GREY ZONE
2018	6.56	0.214	3.26	0.021	6.72	0.022	1.05	0.264	1.89872	GREY ZONE
2017	6.56	0.254	3.26	0.018	6.72	0.034	1.05	0.261	2.22434	GREY ZONE
2016	6.56	0.190	3.26	0.016	6.72	0.031	1.05	0.373	1.89420	GREY ZONE
2015	6.56	0.315	3.26	0.028	6.72	0.045	1.05	0.445	2.92209	SAFE ZONE
2014	6.56	0.203	3.26	0.032	6.72	0.057	1.05	0.186	2.01699	GREY ZONE
2013	6.56	0.263	3.26	0.042	6.72	0.073	1.05	0.189	2.55584	GREY ZONE
2012	6.56	0.182	3.26	0.027	6.72	0.054	1.05	0.176	1.82711	GREY ZONE
2011	6.56	0.082	3.26	0.030	6.72	0.053	1.05	0.193	1.19812	GREY ZONE
2010	6.56	0.133	3.26	0.039	6.72	0.065	1.05	0.214	1.66074	GREY ZONE
RATA - RATA									1.96715	GREY ZONE

Based on the results of data processing, it shows that from 2010 – 2019, PT Wijaya Karya (Persero) Tbk is still in a healthy condition so that the possibility of going bankrupt is very small. However, year by year, the condition of PT Wijaya Karya (Persero) Tbk is still in a gray condition where in this condition the company is prone to bankruptcy and experiencing financial problems that must be handled by the company's management appropriately. If the handling is too late or improper, the company can go bankrupt. So, in this condition the company may go bankrupt and there is also the possibility that the company will not go bankrupt, depending on the handling by the management of the company.

Based on the results of data processing, it shows that from 2010 – 2019, PT Adhi Karya (Persero) Tbk is still in a gray condition. In this condition, the company is prone to going bankrupt and experiencing financial problems that must be handled by the company's management appropriately. If the handling is too late or improper, the company can go bankrupt. So, in this condition the company may go bankrupt and there is also the possibility that the company will not go bankrupt, depending on the handling by the management of the company. This is exacerbated by the condition of the balance sheet of PT Adhi Karya (Persero) Tbk, which is mostly financed by debt, which is 80% (see Table 3).

Table 3
Capital Structure of PT Wijaya Karya (Persero) Tbk & PT Adhi Karya (Persero) Tbk

YEAR	Capital Structure PT Wijaya Karya (Persero) Tbk	Capital Structure PT Adhi Karya (Persero) Tbk
2019	0.691	0.813
2018	0.709	0.791
2017	0.680	0.793
2016	0.594	0.728
2015	0.721	0.692
2014	0.687	0.843
2013	0.744	0.841
2012	0.743	0.850

2011	0.733	0.838
2010	0.708	0.824

The S-Score results show that from 2010 – 2019, PT Wijaya Karya (Persero) is still in a healthy condition. This result is in line with the result of Altman Z-Score

Table 4
S-Score PT Wijaya Karya (Persero)

YEAR	C	X1	C	X2	C	X3	C	X4	S-SCORE	CONCLUSION
2019	1.03	0.193	3.07	0.063	0.66	0.092	1.05	0.438	0.91244	SAFE ZONE
2018	1.03	0.295	3.07	0.096	0.66	0.083	1.05	0.526	1.20655	SAFE ZONE
2017	1.03	0.196	3.07	0.064	0.66	0.056	1.05	0.573	1.03581	SAFE ZONE
2016	1.03	0.279	3.07	0.091	0.66	0.087	1.05	0.500	1.14807	SAFE ZONE
2015	1.03	0.125	3.07	0.041	0.66	0.072	1.05	0.693	1.02794	SAFE ZONE
2014	1.03	0.263	3.07	0.086	0.66	0.107	1.05	0.646	1.28438	SAFE ZONE
2013	1.03	0.238	3.07	0.077	0.66	0.097	1.05	0.769	1.35397	SAFE ZONE
2012	1.03	0.187	3.07	0.061	0.66	0.082	1.05	0.805	1.27906	SAFE ZONE
2011	1.03	0.361	3.07	0.118	0.66	0.083	1.05	0.874	1.70519	SAFE ZONE
2010	1.03	0.388	3.07	0.126	0.66	0.076	1.05	0.948	1.83310	SAFE ZONE
RATA - RATA									1.27865	SAFE ZONE

Sumber: Data Diolah

The S-Score results show that from 2010 – 2019, PT Adhi Karya (Persero) Tbk is still in a healthy condition. However, in 2019, 2018, and 2016 PT Adhi Karya (Persero) Tbk has a high potential for bankruptcy and is accompanied by an unhealthy balance sheet (see Table 3)

Table 5
S-Score PT Adhi Karya (Persero) Tbk.

TAHUN	C	X1	C	X2	C	X3	C	X4	S-SCORE	CONCLUSION
2019	1.03	0.159	3.07	0.018	0.66	0.027	1.05	0.419	0.67823	DISTRESS ZONE
2018	1.03	0.214	3.07	0.021	0.66	0.034	1.05	0.520	0.85541	DISTRESS ZONE
2017	1.03	0.254	3.07	0.018	0.66	0.029	1.05	0.535	0.89823	SAFE ZONE
2016	1.03	0.190	3.07	0.016	0.66	0.024	1.05	0.552	0.83968	DISTRESS ZONE
2015	1.03	0.315	3.07	0.028	0.66	0.049	1.05	0.560	1.03025	SAFE ZONE
2014	1.03	0.203	3.07	0.032	0.66	0.047	1.05	0.827	1.20650	SAFE ZONE
2013	1.03	0.263	3.07	0.042	0.66	0.062	1.05	1.008	1.49971	SAFE ZONE
2012	1.03	0.182	3.07	0.027	0.66	0.036	1.05	0.969	1.31183	SAFE ZONE
2011	1.03	0.082	3.07	0.030	0.66	0.037	1.05	1.095	1.35109	SAFE ZONE
2010	1.03	0.133	3.07	0.039	0.66	0.056	1.05	1.152	1.50170	SAFE ZONE
RATA - RATA									1.11726	SAFE ZONE

Sumber: Data Diolah

CONCLUSION

The results show that from 2010 – 2019, PT Wijaya Karya (Persero) Tbk is still in a healthy condition so that the possibility of going bankrupt is very small. However, year by year, the condition of PT Wijaya Karya (Persero) Tbk is still in a gray condition where in this condition the company is prone to bankruptcy and experiencing financial problems that must be handled by the company's management appropriately. Meanwhile, PT Adhi Karya (Persero) from 2010 – 2019 showed the potential for financial distress which was

strengthened by an unhealthy balance sheet because most of the funding sources came from debt.

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