Jurnal Administrare: Jurnal Pemikiran Ilmiah dan Pendidikan Administrasi Perkantoran
Vol. 8, Issue 1, January-June 2021, Pages 213-224
Homepage: http://ojs.unm.ac.id/index.php/administrare/index

Financial Distress Analysis as Strategy and Policy Determinants Mining Company

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ABSTRACT

Financial distress is the initial condition of a company before going bankrupt. The financial position is experiencing severe liquidity difficulties, so the company cannot carry out operational activities properly. This study aims to determine the results of the assessment of financial distress in mining sector companies listed on BEI for the 2015-2019 period as material for determining the company's strategy and policies. This research uses a quantitative approach with a descriptive analysis method. There are 15 companies as samples based on the purposive sampling technique. The analysis technique using the Altman Z-Score model. The results showed that seven companies were experiencing financial distress, five companies experiencing gray area conditions, and three companies are declared in non-distress condition. The results of this analysis will be taken into consideration for internal and external parties of the company for making future decisions so that both are profitable

Keywords: Financial distress, Altman z-score, mining company

INTRODUCTION

Mining companies need a large enough capital to implement mining activities (Folwarczny, 2020; Hosseinzadeh et al., 2018; Kuranchie-Mensah & Amponsah-Tawiah, 2016), therefore most mining companies enter into the capital market to collect investment to strengthen their financial position ("Financial Performance and Firm Value Lesson from Mining Sub-Sector Companies on the Indonesia Stock Exchange," 2019; Surahman et al., 2020; Sutomo et al., 2020). The only capital market in Indonesia is Bursa Efek Indonesia and there are 49 companies listed on the Bursa Efek Indonesia as a public company in the sector mining. Mining companies always experience an increase in number from 2015 to 2019.

The spread of the oversupply phenomenon in many mining companies has resulted in the decline in prices and the number of exports makes many companies experience financial distress (Analytica, 2015; Cornot-Gandolphe, 2013; Sanzillo, 2014). Coupled with the reduced number of production due to delays in smelter procurement. The decline in mining commodity prices causes difficulties for companies in getting profit and cost gains operational costs, because operating costs are fixed while the selling price of goods has a decrease that causes profits to decrease or even a deficit (Gorajek & Rees, 2015; Slade, 1982; Von Below, 1993). If things happen continuously, it can be ascertained that the company's operational activities will be disturbed and many mining companies will experience financial distress which if ignored will result in the bankruptcy of the company. Platt (in Ardian et al, 2017) defines financial distress as a stage of decline in the company's financial condition that occurs before bankruptcy or liquidation. Therefore company management must immediately take action to overcome

financial distress and prevent bankruptcy (Manyaeva et al., 2016; Nikolaev, 2018; Schulte & Hallstedt, 2018; Vrbka & Rowland, 2020).

(Subramanyam & Das, 2014) says that Altman's Z-Score uses the statistical technique of Multiple Discriminant Analysis to produce a predictive tool which is a linear function of several explanatory variables. Judging from the calculation model that is capable of linking the solvency, liquidity, and profitability of the company to bankruptcy. Altman Z-Score model can be applied in all types of companies (Al-Manaseer & Al-Oshaibat, 2018; Prasetiyani & Sofyan, 2020; Thai et al., 2014; Tung & Phung, 2019). The variables contained in the Z-Score calculation are Net Working Capital to Total Assets, Retained Earnings to Total Assets, Earning Before Interest and Taxes to Total Assets, Market Value of Equity to Book Value of Debt and Sales to Total Assets. Therefore, this research aims to determine the results of the assessment of financial distress in sector companies mining companies listed on the BEI with the Altman Z-Score model that can prevent problems before bankruptcy occurs.

METHOD

This research is quantitative research that uses descriptive analysis. The independent variable in this study is Net Working Capital/Total Assets, Retained Earnings/Total Assets, Earning Before Interest and Taxes/Total Assets, Box Value of Equity/Book Value of Total Debt, Sales/Total Assets and the dependent variable is financial distress. The population in this study is the company mining sector listed on BEI for the 2015-2019 period. As for the sample, research was determined using the purposive sampling technique.

Table 1.
List of Sample Companies

Company Name
Adaro Energy Tbk
Baramulti Suksessarana Tbk
Dian Swastatika Sentosa Tbk
Golden Energy Mines Tbk
Indo Tambangraya Megah Tbk
Resources Alam Indonesia Tbk
Mitrabara Adiperdana Tbk
Bukit Asam Tbk
Toba Bara Sejahtera Tbk
Elnusa Tbk
Radiant Utama Interinsco Tbk
Aneka Tambang Tbk
J Resources Asia Pasifik Tbk
Timah Tbk
Samindo Resources Tbk

Source: www.idx.co.id

RESULT AND DISCUSSION

Predictive analysis of financial distress by calculating the results of each Altman Z-Score model variables using the formula:

Z= 1,2X1+1,4X2+3,3X3+0,6X4+1,0X5

Which is:

X1 = Net Working Capital to Total Assets
X2 = Retained Earnings to Total Assets
X3 = Earning Before Interest and Taxes to Total Assets
X4 = Market Value of Equity to Book Value of Debt
X5 = Sales to Total Assets

Table 2.
Assessment Criteria for Altman Z-Score Model

Criteria	Score
Non-distress	> 2,99
Grey Area	1,81 – 2,99
Distress	< 1,81

Source: Pangkey et al (2018)

Based on the calculation results of the Altrman Z-Score Model, there are seven distress companies are PT Adaro Energy Tbk, PT Dian Swastatika Sentosa Tbk, PT Toba Bara Sejahtera Tbk, PT Radiant Utama Interinsco Tbk, PT Aneka Tambang Tbk, PT J Resources Asia Pacific Tbk and PT Timah Tbk. Five companies categorized in the condition of the gray area, namely PT Golden Energy Mines Tbk, PT Indo Tambangraya Megah Tbk, PT Resources Alam Indonesia Tbk, PT Bukit Asam Tbk, and PT PT Elnusa Tbk. Three companies expressed non-distress in successively PT Baramulti Suksessarana Tbk, PT Mitrabana Adiperna Tbk, and PT Samindo Resources Tbk.

PT Adaro Energy Tbk
Table 3.
Calculation Results of ADRO

RATIO	2015	2016	2017	2018	2019
X1	0,107	0,145	0,177	0,111	0,122
X2	0,233	0,25	0,289	0,306	0,317
X3	0,047	0,084	0,136	0,116	0,091
X4	0,089	0,087	0,087	0,081	0,071
X5	0,451	0,387	0,478	0,513	0,479
Z-Score	1,114	1,240	1,596	1,506	1,412
Category	D	D	D	D	D

Source: Data processed, 2021

The increase in Z value in 2016 was dominated by an increase of the X1 variable. This is caused by an increase in the company's cash and receivable balances. ADRO's efficiency and productivity measures have strengthened its balance sheet position to support growth and protect it in difficult times. In 2017 the ADRO value increased again, but the increase was

dominantly found in the company's X5 variable due to the issuance of strategies and sales policy. ADRO deals with market uncertainty in 2018 by always strive for direct sales to end consumers. ADRO continues to expand its market in ASEAN developing countries such as Vietnam and the Philippines.

PT Baramulti Suksessarana Tbk
Table 4.
Calculation Results of BSSR

RATIO	2015	2016	2017	2018	2019
X1	-0,053	0,029	0,116	0,065	0,053
X2	0,196	0,307	0,351	0,302	0,375
X3	0,21	0,193	0,532	0,381	0,165
X4	0,277	0,346	0,322	0,192	0,234
X5	1,49	1,319	1,868	1,809	1,668
Z-Score	2,560	2,268	4,447	3,682	2,942
Category	GA	GA	ND	ND	ND

Source: Data processed by researchers, 2021

The causes of the company can get out from the gray area condition in 2017 are all variable X has increased, except X4. The biggest increase occurred in the X5 variable because of an increase in the average selling price of the company's coal. The policy issued by BSSR in pushing up the Z value is the recovery in 2017, which also became the company's long-term foundation to be able to face future challenges. Management explained that if the coal price becomes more stable and is at the level better in 2018, the company will develop a new brand on the entity subsidiary, namely GAR 3800. In 2018 BSSR also conducted exploration in various potential areas in Indonesia and prepare areas for development plans company. This exploration is a step that will always be guarded by the company to increase coal reserves and to maximize the potential of resources and steps to expand market share to Korea.

PT Dian Swastatika Sentosa Tbk
Table 5.
Calculation Results of DSSA

RATIO	2015	2016	2017	2018	2019
X1	0,072	0,081	0,1	0,042	0,053
X2	0,15	0,247	0,232	0,214	0,208
X3	0,064	0,044	0,07	0,057	0,036
X4	0,016	0,015	0,011	0,007	0,007
X5	0,38	0,319	0,483	0,522	0,448
Z-Score	0,897	0,916	1,165	1,064	0,926
Category	D	D	D	D	D

Source: Data processed, 2021

The increase that occurred in 2016 was dominated by the X2 variable. Effort company in improving its balance sheet is reflected in the increase in value of Z in 2017. The increase was dominated by the X5 variable. The company performs operational cost efficiency in coal mining and trading business lines. The increase in several sales volumes of the company's products explains that DSSA is capable of detecting and analyzing the presence of signs.

The efforts made by DSSA in maintaining the loyalty of external parties are always prioritizing timely delivery of coal under specifications. DSSA Company and subsidiaries are also always trying to explore new markets domestic and export to increase coal sales, including participating in a 35.000 MW power plant project that has been designed by the government.

PT Golden Energy Mines Tbk
Table 6.
Calculation Results of GEMS

RATIO	2015	2016	2017	2018	2019
X1	0,34	0,396	0,285	0,09	0,115
X2	0,07	0,117	0,121	0,135	0,174
X3	0,006	0,13	0,284	0,194	0,129
X4	0,351	0,39	0,146	0,106	0,1
X5	0,955	0,949	1,286	1,491	1,419
Z-Score	1,691	2,251	2,822	2,492	2,286
Category	D	GA	GA	GA	GA

Source: Data processed, 2021

The most significant increase in 2016 occurred in the X3 variable. The strategy taken by the company is to optimize operational costs during 2016 by centralizing transportation infrastructure at an adequate cost and saving time for coal transportation activities. These conditions have a positive impact on GEMS was able to increase its net sales by 8.8% to USD384,340 thousand.

The increase in the value of Z in 2017 was caused X5 variable which was quite large dominant. GEMS sales volume in 2017 was 11 tons, higher than the target is set at 10.7 tons. This was caused by sales from the segment higher coal trade throughout 2017. This was due to the existence of company policies, namely reducing the amount of supply and increasing prices in the second semester of 2017.

PT Indo Tambangraya Megah Tbk
Table 7.
Calculation Results of ITMG

RATIO	2015	2016	2017	2018	2019
X1	0,193	0,284	0,346	0,346	0,198
X2	0,364	0,43	0,421	0,416	0,426
X3	0,118	0,159	0,266	0,255	0,154
X4	0,12	0,14	0,105	0,083	0,125
X5	1,349	1,13	1,244	0,269	0,132
Z-Score	2,552	2,638	3,189	2,158	1,549

RATIO	2015	2016	2017	2018	2019
Category	GA	GA	ND	GA	D

Source: Data processed, 2021

The most significant increase in 2017 occurred in the X3 variable. There are two factors which cause the company's profit to improve. First, the increase in gcNEWC makes management issued a policy to increase the average selling price (ASP) by 43% from USD51 per tonne in 2016 to USD73. Second, ITMG implementing cost-saving and efficiency measures that have contributed to improvement in financial performance is also the company's long-term competitiveness. The policy among others, establishing a Short Term Supply Chain (STSC) department that is responsible for coordinating between the company's production and sales departments with the ship scheduling department. One of the advantages of procuring this department is significant savings in the annual demurrage cost bill and reduce idling time for main equipment and mining contractors.

PT Resources Alam Indonesia Tbk

Table 8.
Calculation Results of KKGI

RATIO	2015	2016	2017	2018	2019
X1	0,215	0,302	0,275	0,08	0,167
X2	0,954	1,036	1,05	0,941	0,918
X3	0,092	0,149	0,187	0,01	0,064
X4	0,167	0,262	0,226	0,114	0,109
X5	1,127	0,938	0,797	0,486	0,909
Z-Score	3,124	3,4	3,35	2,001	2,671
Category	ND	ND	ND	GA	GA

Source: Data processed, 2021

The increase in 2016 was dominated by the X4 variable. The strategy implemented by KKGI by regulating the level of liability is to apply a policy to pay off trade payables about 15 days after receiving the invoice from the contractor or supplier. The decrease in the value of Z in 2018 was due to a decrease in the entire value of variable X. There was encouraging the Board of Directors to issue policies for increased sales to the domestic market. Thing The aim is to meet the Domestic Market Obligation (DMO) target of 25% and the completion of the construction of the Cicatih Mini Hydro Power Plant 2x3.2 MW. Management carried out internal improvements by increasing the capacity of heavy equipment, provision of adequate infrastructure, and improve the competence of human resources to strengthen the foundation of the KKGI.

PT Mitrabara Adiperdana Tbk

Table 9.
Calculation Results of MBAP

RATIO	2015	2016	2017	2018	2019
X1	0,325	6,482	0,462	0,386	0,496
X2	0,436	0,562	0,597	0,564	0,619
X3	0,434	0,311	0,49	0,39	0,252
X4	0,253	0,371	0,237	0,173	0,181
X5	2,007	1,608	1,608	1,488	1,355
Z-Score	4,591	11,422	4,757	4,132	3,757
Category	ND	ND	ND	ND	ND

Source: Data processed, 2021

The high increase in Z value occurred in 2016 due to the presence of an increase in the X1 variable. Although in 2017 the value of Z has decreased, however, does not change the company's position in a non-distress condition. High-value X5 illustrates that the company has made efficient using all assets owned by the company to increase sales and generate profits. Fluctuation again occurred in the Z value in 2018 and 2019. In 2018 the Z value was lower than in 2017, this was due to a decrease in the X3 variable by 0,1.

PT Bukit Asam Tbk
Table 10.
Calculation Results of PTBA

RATIO	2015	2016	2017	2018	2019
X1	0,158	0,178	0,3	0,269	0,268
X2	0,094	0,076	0,146	0,18	0,127
X3	0,161	0,147	0,278	0,284	0,209
X4	0,151	0,144	0,141	0,146	0,15
X5	0,82	0,757	0,886	0,876	0,835
Z-Score	1,763	1,649	2,452	2,476	2,114
Category	D	D	GA	GA	GA

Source: Data processed, 2021

The company was able to get out of distress in 2017 because all variables X increased, except the X4 variable. Company assets in 2017 amounted to Rp21.9 Rp trillion and an increase of 18.36% compared to 2016. The increase was due to the increase in performance guarantees and the value of trade receivables in line with the increase in domestic sales. PTBA seeks to optimize its business performance by implementing several strategies, such as optimizing BA64 sales to the premium market, optimizing the selling price to the PLN group, and adding new market share both in terms of scale domestic and global.

PT Toba Bara Sejahtera Tbk
Table 11.
Calculation Results of TOBA

RATIO	2015	2016	2017	2018	2019
X1	0,098	-0,009	0,099	0,052	-0,012
X2	0,042	0,134	0,16	0,188	0,189
X3	0,139	0,099	0,173	0,194	0,099
X4	0,23	0,264	0,172	0,098	0,078
X5	1,235	0,987	0,892	0,874	0,828
Z-Score	2,008	1,649	1,909	1,899	1,452
Category	GA	D	GA	GA	D

Source: Data processed, 2021

The decreasing value of Z that occurred in 2016 was due to the decrease in the value of variable X5. A decrease in sales of 25.9% compared to the previous year and became US$258.3 million. The decrease was due to the weakening of ASP value and volume sales are declining. The increase in 2017 was dominated by the X3 variable. Several policies and strategies implemented by TOBA in increasing company profits are through proper implementation of mine planning and cost management initiatives.

Management TOBA managed to maintain the stability of Stripping Ratio (SR) and Free on Board (FOB) Cash Cost which closed at 13.1x (SR) and USD 40.0/ton (FOB Cash Cost) as of 31 December 2017. The increase in ASP in 2016 made a positive contribution to the realization profit margin and EBITDA of the company.

PT Elnusa Tbk
Table 12.
Calculation Results of ELSA

RATIO	2015	2016	2017	2018	2019
(a)	(b)	(c)	(d)	(e)	(f)
X1	0,143	0,146	0,128	0,184	0,175
X2	0,321	0,386	0,374	0,361	0,342
X3	0,116	0,102	0,069	0,067	0,073
X4	0,412	0,556	0,405	0,31	0,226
X5	0,857	0,864	1,025	1,171	1,232
Z-Score	2,108	2,25	2,173	2,304	2,297
Category	GA	GA	GA	GA	GA

Source: Data processed, 2021

The increase in Z value in 2016 was caused by several factors, such as an increase in the JCI performance which was quite significant compared to the previous year. One of the pillars of the JCI in 2016 was the improvement in the commodity sector, especially coal prices which in the end pushed the mining stock index soaring high. The cause is the price of coal which since mid-2016 has increased from a low of USD49 to again penetrated the level of five years ago, at the end of 2016 to USD115 per tonne. Ascension variable X4 is also supported by a

decrease in the company's short-term liabilities of 13.4% compared to 2015. ELSA made faster repayments on some bank loans when compared to the previous year. This step was carried out by ELSA as a form of corporate strategy to reduce the financial burden.

PT Radiant Utama Interinsco Tbk
Table 13.
Calculation Results of RUIS

RATIO	2015	2016	2017	2018	2019
X1	-0,081	-0,053	0,002	0,051	0,016
X2	0,198	0,243	0,269	0,087	0,078
X3	0,064	0,056	0,039	0,045	0,04
X4	0,102	0,124	0,133	0,132	0,094
X5	1,464	1,344	1,173	1,311	1,276
Z-Score	1,916	1,88	1,761	1,722	1,593
Category	GA	GA	D	D	D

Source: Data Processed, 2021

RUIS's current ratio decreased and was in the position of 0.87x in 2015. This was caused by the existence of long-term debt and obligations to institutions other financial maturing in mid-2016 coupled with the decrease in receivables owned by the company. There are signs of bankruptcy that make RUIS management review and issue policies to manage risk liquidity. RUIS implements a risk management policy that aims to minimize the effect of market uncertainty on the company's financial performance. Liquidity risk emerges mainly from the general funding of company operations. The group has a policy for manage liquidity prudently by maintaining adequate cash balance and availability of working capital. The maintenance is carried out by maintaining adequate reserves adequate, banking facilities by continuously monitoring the plan and realization of cash flows by matching the maturity profile of financial assets and financial liabilities.

PT Aneka Tambang Tbk
Table 14.
Calculation Results of ANTM

RATIO	2015	2016	2017	2018	2019
X1	0,228	0,209	0,115	0,053	0,079
X2	-0,067	-0,056	-0,062	0,23	0,246
X3	-0,055	0,008	0,015	0,038	0,023
X4	0,2	0,208	0,209	0,177	0,199
X5	0,347	0,304	0,422	0,758	1,084
Z-Score	0,465	0,615	0,648	1.375	1,719
Category	D	D	D	D	D

Source: Data processed, 2021

The increase in Z value in 2018 was due to a considerable increase significant on the variables X2 and X5. This increase was due to the growing production and sales performance of ANTM's main commodities as well as increased efficiency led to a stable level of ANTM's

operating cash costs. There is a negative value in the profit ratio detained (X2) from 2015 to 2017. In 2018 ANTM continued its gold sales cooperation with PT POS Indonesia (Persero) which was started in 2017. People can buy gold ANTM at various POS offices in Indonesia. Finally, with this strategy ANTM was able to post a sales value in 2018 of Rp25.24 trillion which experienced growth by 99,48% compared ti the previous year.

PT J Resources Asia Pasifik Tbk
Table 15.
Calculation Results of PSAB

RATIO	2015	2016	2017	2018	2019
X1	-0,19	-0,111	-0.043	-0,054	-0,14
X2	0,129	0,158	0,156	0,177	0,167
X3	0,064	0,049	0,03	0,032	0,012
X4	0,075	0,077	0,069	0,067	0,06
X5	0,276	0,359	0,238	0,243	0,247
Z-Score	0,485	0,655	0,545	0,572	0,388
Category	D	D	D	D	D

Source: Data processed, 2021

PSAB's gross profit margin increased to 59% and operating profit also rose to 35.8% compared to last year. There is a minus value in variable X1 that occurred in 2015 to 2019 shows that PT J Resources Asia Pacific Tbk is experiencing a fairly bad liquidity condition due to its working capital the company has a very small value compared to the company's total assets. The signal able to be arrested well by PSAB to carrying out and implementing several strategies in managing the company's liquidity risk, namely the management monitors and maintains the amount of cash that is considered adequate to finance operational activities and to overcome the impacts of cash flow fluctuations. Management also conducts periodic evaluations of cash flow projections and cash flows actual cash.

PT Timah Tbk
Table 16.
Calculation Results of TINS

RATIO	2015	2016	2017	2018	2019
X1	0,246	0,228	0,303	0,158	0,017
X2	0,058	0,072	0,079	0,036	-0,03
X3	0,018	0,043	0,06	0,051	-0,035
X4	0,095	0,096	0,064	0,043	0,025
X5	0,741	0,73	0,776	0,731	0,948
Z-Score	1,255	1,304	1,487	1,165	0,826
Category	D	D	D	D	D

Source: Data processed, 2021

In 2016, almost all X variables increased, except X1 and X5. In 2016 TINS began to respond to the signs of bankruptcy by implementing several strategies by starting to implement the corporation in the next five years to maintain the company's profit growth from the

development of tin mining business activities and minerals. Preparation of healthy and competitive new businesses is carried out through children companies engaged in non-tin mining, downstream industry, and business others that can increase added value for TINS.

PT Samindo Resources Tbk
Table 17.
Calculation Results of MYOH

RATIO	2015	2016	2017	2018	2019
X1	0,293	0,438	0,41	0,483	0,495
X2	0,316	0,418	0,418	0,465	0,482
X3	0,208	0,2	0,125	0,274	0,218
X4	0,474	0,83	0,976	0,822	0,839
X5	1,404	1,291	1,382	1,593	1,589
Z-Score	3,169	3,56	3,457	4,221	4,081
Category	ND	ND	ND	ND	ND

Source: Data processed, 2021

The most visible increase in 2016 was from the X4 variable. Up to Z value reached its highest point in 2018. Variable X5 is a variable that experiences a predominant increase. Most of the MYOH coefficient values are below the standard values normal coefficient of the Z-Score equation, but the Z-Score index owned by the company shows very good value because its equity market value ratio value and sales ratio (X5) is above the normal standard value that has been set in the Z-Score equation for five consecutive periods, so that is the reason why the company's Z-Score index is sufficient good and included in the category of non-distress during the study period

CONCLUSION

The Z-Score value generated by the 15 companies that became the research sample, seven companies are in distress condition, five companies are in gray area condition and three companies were declared non-distress, respectively. Companies can detect signs of bankruptcy early on and review and analyze steps improvement by implementing various strategies and policies by the conditions each company, both from working capital, profit, sales and other the company did not go bankrupt.

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