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PREDICTION OF FINANCIAL DISTRESS IN PUBLICLY LISTED CONSTRUCTION COMPANIES FOR THE PERIOD 2017-2021

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ABSTRACT

Publicly listed state-owned construction companies have received attention from economic experts because their financial performance has decreased drastically and has the potential for financial distress. This is due to the high liabilities borne as an effect of the government's incessant strategic projects in the last 9 years. The methods used to calculate financial distress are Altman's, Springate's, and Grover's theories. Of these three theories Altman and Springate's stated that BUMN Karya (Construction SOE) has the potential for deep financial distress while Grover's theory, on the contrary, the issuer is not experiencing financial distress.

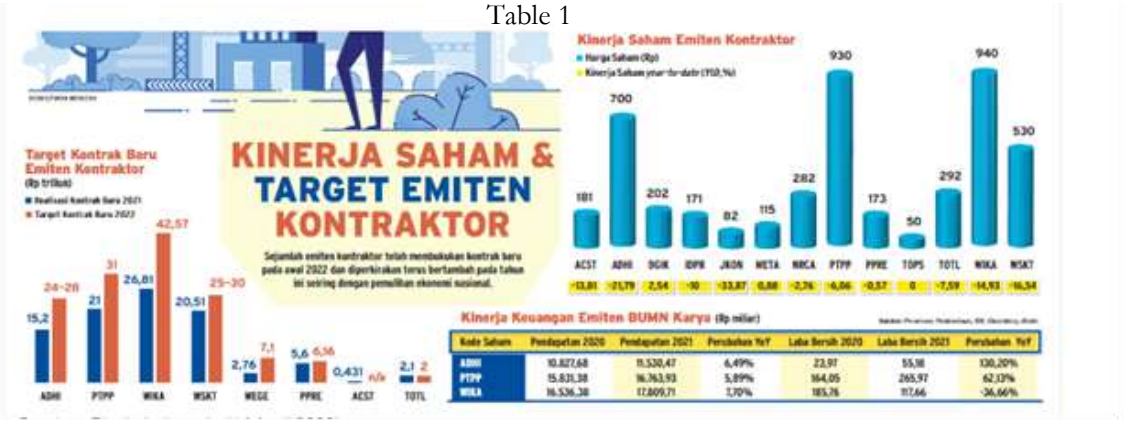
Keywords: Government, BUMN Karya, Strategic Projects, Liability, Financial Distress

INTRODUCTION

Indonesia in the last nine years has spurred the development of strategic infrastructure in all fields ranging from transportation facilities such as toll roads, Light Rail Transit (LRT), Yogyakarta International Airport, Kertajati Airport, agricultural facilities such as dams, automotive sports facilities such as the formula 1 track in Mandalika, West Nusa Tenggara and finally the construction of the Ibu Kota Nusantara or IKN in East Kalimantan province. These strategic projects are the duties and responsibilities of state-owned construction companies or BUMN such as PT Wijaya Karya Tbk (WIKA), PT Adhi Karya Tbk (ADHI), PT Pembangunan Perumahan Tbk (PTPP) and PT Waskita Karya Tbk (WSKT). These strategic development projects are mostly funded by third-party funds or debt either by issuing bonds or direct loans from abroad. In the opinion of BUMN observer Toto Pranoto, in 2021 the financial condition of several BUMNs is fragile because the projects are financed by debt, as a result,z the issuer bears the interest burden while revenue decreases due to the influence of Covid 19 (Nanda Mulyana, 2021). Based on the records of the investment division of the daily "Kontan", the total liabilities of state-owned enterprises such as PT Waskita Karya Tbk, PT Wijaya Karya Tbk, PT Adhi Karya Tbk, PT PP Tbk reached IDR 214.18 trillion as of the third quarter of 2022. The average construction SOE issuer also has a debt-to-equity ratio (DER) above 300% (Andi, 2023).

The following is the performance of BUMN construction companies compared to other construction issuers listed on the Indonesian Stock Exchange (Indonesia, 2022):

Table 1



Source: Bisnis Indonesia (April 14th 2022)

Entity failure begins with economic and financial failure, starting from economic failure (Economic Distress), namely the failure of the entity due to loss of money and income which results in not being able to cover the capital costs incurred for the entity's operations, while financial failure (Financial Distress) is that the entity has difficulties funding, in this case working capital (Prasetiyani & Sofyan, 2020).These two failures have the potential to cause financial distress to the entity that can be detected by several Z-Score financial distress symptom calculation models such as the Altman Model, Model, Springate's Model, and Grover Model. Of the three models above, several researchers have their respective opinions about the accuracy and precision of financial distress assessment (Saputri, 2016).

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Table 2

	WIKA	ADHI	PTPP	WSKT	SMBR
TATO	41%	41%	41%	28%	566%
ROE	8%	6%	0,44%	-32%	2%
ROA	2%	1%	0,13%	-1%	1%
NPM	5%	3%	0,30%	-13%	0,2%
DER	255%	477%	259%	634%	55%
Sumber : Data penulis					

Source: Writer's Data

RESEARCH METHOD

The data collected is secondary data, namely financial reports published by listed SOEs going public for the Indonesia Stock Exchange (IDX.net) from the period 2016-2021. The data is processed using financial distress theories including:

Altman's Z-Score

[Zi = 1.2X1 + 1.4X2 + 3.3X3 + 0.6X4 + 1.0X5]

Description of the formula above:

X1 = (Current assets - Current liabilities) / Total assets

X2 = Retained profit / Total assets

X3 = Profit before interest and taxes / Total assets

X4 = Market value of common and preferred stock / Book value of total liabilities

X5 = Sales/Total assets

The assessment of Zi < 1.81, including financial distress issuers, the value of 1.81 < Z < 2.99 including gray areas (cannot be determined whether the issuer is healthy or in financial distress, the value of Z> 2.99 including issuers not in financial distress.

Springate's Z-Score

[Zi = 1.03A + 3.07B + 0.66C + 0.4D]

A = Working capital / Total assets

B = Net profit before interest and taxes / Total assets

C = Net profit before tax / Current liabilities

D = Sales / Total assets

Financial distress assessment with cut off Z score < 0.862 potential financial distress 0.862 < Zi < 1.062 gray area Z score > 1.062 has no potential for financial distress.

Grover's Z-Score

[Zi=1,650X1+3,404X2+0,414ROA+0,057]

X1 = Working Capital / Total Assets

X2 = Earnings Before Interest and Taxes / Total Assets

ROA = Net Income / Total Assets

Assessment with cut off Zi < -0.02 financial distress -0.02 < Zi < 0.02 and Z Score > 0.02 is not experiencing financial distress (Nurcahyanti, 2015).

RESULTS AND DISCUSSION

To analyze the condition of the issuer based on the score of the Altman Z-Score and Springate's methods, the following table describes the recapitulation of the score calculation results along with the issuer's condition. Analyzing the score at the end is done by adding up the scores on 2013-2018 and then dividing it by the number of years of prediction. The average score is then matched with the cut-off value of the Altman and Springate's methods to determine the current condition of the issuer.

Tabel3. Altman Z Score

	2021	2020	2019	2018	2017	Zi	Hasil
WIKA	0,31819	0,36341	0,93807	1,19069	1,11506	0,78508	FD
ADHI	0,18409	0,24874	1,15472	1,67221	1,8098	1,01391	FD
PTPP	0,56295	0,61033	0,86616	1,06179	1,27286	0,87482	FD
WSKT	0,45287	-0,1488	0,36781	0,68708	0,71685	0,41517	FD
SMBR	2,98773	3,68197	6,45	10,0329	10,9864	6,8278	Non FD

Sumber : Data penulis 2022 diolah FD = Financial Distress

Source: Writer's Processed Data 2022

Zi < 1.81 = FD, 1.81 < Zi < 2.99 = Gray, Zi> 2.99 Healthy

The above calculation shows that WIKA, ADHI, PTPP, and WKT are experiencing deep financial distress because the average value of Zi is below 1.81, only SMBR does not experience financial distress, and the value of Zi is above 1.81.

Tabel 4. Springate,s

	2021	2020	2019	2018	2017	Zi	Hasil
WIKA	0,16215	0,1919	0,55552	0,72644	0,63429	0,45406	FD
ADHI	-0,1055	-0,1281	0,79684	1,2769	1,39855	0,64774	FD
PTPP	0,27108	0,30097	0,47326	0,62587	0,76927	0,48809	FD
WSKT	0,20618	0,01944	0,31422	0,57818	0,69463	0,36253	FD
SMBR	1,2749	1,44453	2,63759	3,92966	3,9174	2,64081	Non FD
Sumber : Data penulis 2022 diolah					FD=Financial Distress		

Source: Writer's Processed Data 2022

Zi < 0.862 potential for financial distress 0.862 < Zi < 1.062 gray area Zi > 1.062 no potential for financial distress

For calculations based on Springate's, the issuers WIKA, ADHI, PTPP, and WSKT still show the potential for financial distress because the Zi score shows a value below the cut-off of 0.862, only SMBR shows a healthy issuer.

Tabel 5. Grover

	2021	2020	2019	2018	2017	Zi	Hasil
WIKA	0,106558	0,179694	0,51449	0,705457	0,543088	0,409857	Non FD
ADHI	-0,13637	-0,10735	0,742723	1,1846	1,317814	0,600281	Non FD
PTPP	0,281558	0,33417	0,495202	0,637635	0,853418	0,520397	Non FD
WSKT	0,434689	-0,36396	0,156622	0,356025	0,285256	0,173727	Non FD
SMBR	0,555746	0,376276	0,484194	0,519603	0,433632	0,47389	Non FD
Sumber : Data penulis 2022 diolah					FD=Financial Distress		

Source: Writer's Processed Data 2022

Zi < -0.02 financial distress -0.02 < Zi < 0.02 and Z Score > 0.02 is not experiencing financial distress.

Grover's calculation shows that all issuers do not experience financial distress because the score is still above the cut-off value, this shows that Grover's bankruptcy theory is very careful in assessing the financial condition of issuers.

CONCLUSION

The results show that two of the three financial distress/bankruptcy theories Altman and Springate's show that the financial condition of construction BUMN is declared to experience potential financial distress, this is triggered by high liabilities because most of the strategic projects mandated by the government are financed with third-party funding. Meanwhile, Grover's theory requires a very small score to show the potential for financial distress / bankruptcy is only -0.02 to 0.02. Grover's theory is stated as the most conservative or very careful theory by economists in determining the financial distress/bankruptcy score of a publicly listed issuer compared to Altman and Springate's theory (Pratama,

2018). The potential for financial distress / bankruptcy in this study is not entirely absolute and will be realized because there are other entities as determinants of whether an issuer will experience bankruptcy, this can be overcome by management with an independent corporate strategy without any intervention from parties outside management.

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