FINANCIAL HEALTH ANALYSIS IN PROPERTY AND REAL ESTATE COMPANIES: BEFORE AND DURING THE COVID-19 PANDEMIC

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ABSTRACT

The Covid-19 pandemic, which has spread worldwide, including Indonesia, has turned into an epidemic that has struck the economy's foundation, especially the capital or stock market. The stock market experienced a decline of 5.09% throughout 2020, and the most significant contribution to the decrease in shares came from the property and real estate industry, amounting to 21.23%. Therefore, this study aims to analyze the financial health of companies in the property and real estate industry with the company's Altman Z-score bankruptcy approach before and during the Covid-19 pandemic. The sample used in this study were 18 companies in the property and real estate industry that have been listed on the Indonesian Stock Exchange. This study indicates that the Covid-19 pandemic has impacted the performance of property and real estate companies. This can be seen in the Altman Z-Score change, which shows that in 2020, 16 companies (88,89% of the sample) experienced a decrease in the Altman Z-Score and there are additional companies that enter the distressed category. The findings in this study can be used as input and consideration for managers to make decisions in facing economic turbulence due to the Covid-19 pandemic.

Keywords: Covid-19, Property, Real estate, Altman Z-score

INTRODUCTION

The global economy, including Indonesia, experienced a deep contraction due to the impact of the Covid-19 pandemic. The economic slowdown has had a further impact on increasing poverty, unemployment, and decreasing purchasing power of the people. This situation has a significant impact on the financial markets. The financial and stock markets have been under pressure due to significant volatility. The Rupiah exchange rate depreciated, and the Indonesia Composite Index fell by 5.09% throughout 2020, with the property and real estate sector losing the most ground, with a loss of 21.23%.

In alignment with the condition, Tambunan (2020) shows that stocks in the consumer industry sector, the telecommunications sector such as data, towers, and the health sector, such as pharmaceuticals and hospitals, are become the sectors that investors choose to invest their shares during the COVID-19 pandemic. This fact further strengthens Maslow's (1970) theory that hierarchically, the fulfillment of basic physiological needs is the main thing, especially in conditions of economic uncertainty.

Actually, the government has delivered market stimulus in the form of fiscal and monetary stimulus to the property and real estate industries. Nevertheless, its impact found still inadequate to increase performance in the property sector and stimulate the industry during the pandemic. For instance, fiscal incentives have been implemented in a VAT discount and a lowering on the BI 7-Day Reverse Repo Rate.

However, the policy is still insufficient, as evidenced by Junaedi and Salistia's (2020) study, which found that the internal situation of the Covid-19 pandemic and social distancing policies impacted the Indonesian capital market. Meanwhile, Dewi et al. (2021) showed that Covid-19 affected the property business by declining purchases and demand, stagnant property prices, and stagnation in the distribution of homeowner loans (KPR). Thus, the performance of the property business also affects the considerations of investors in placing their shares. This sector also has a strategic role in the absorption of labor, where according to REI data (2020), direct and indirect labor is absorbed by 30.34 million workers or absorbs around 23% of the workforce in Indonesia. In addition, the property sector (real estate) also contributes about 3% of the national GDP.

Long-term economic uncertainty can seriously affect the property and real estate company's sustainability. On the other hand, business actors in the property sector are also still holding on, this is indicated by the presence of property issuers in the stock market and investors are still in great demand. This condition is proof that the property sector has good financial health so that it is able to survive and grow in the midst of economic uncertainty.

The company's financial health can be seen from several financial indicators. Altman (1968) has presented several indicators to assess a company's financial health, including working capital, Retained Earnings, Earnings Before Interest and Taxes, Market Value of Equity, and Sales as a ratio of total assets known as the Altman Z-score. This model, which is still capable of analyzing the company's financial health and at the same time serves as a guide in identifying the bankruptcy of a company.

Several studies using the Almant Z-score approach to financial health have been conducted, including those by Silitonga and Daryanto (2020); Daryanto et al. (2020); Marshella & Musadieq (2017), and Mastuti et al. (2013). These studies are more focused on one object of research or only a few actors or companies in specific sectors, and the object of research is the manufacturing industry, so they are less representative to describe the condition of the property industry during the COVID-19 pandemic storm. Meanwhile, Marsella & Musadieq (2017) research on the property and real estate industry was carried out before the Covid-19 pandemic occurred.

Therefore, this study attempts to supplement previous studies by analyzing the financial health of the property and real estate industries listed on the Indonesian Stock Exchange by involving more samples from previous studies, resulting in more representative results to describe the performance condition of the property industry and real estate before and during the covid-19 pandemic.

LITERATURE REVIEW

Property and Real Estate

The real estate industry, in general, is a property company that provides, procures, and develops land for industrial businesses, including the tourism industry. Products from the property and real estate industry are diverse. However, it can be divided into two categories, first is landed property; for example, housing, apartments, shop houses, office buildings, and second is a commercial building, for example; shopping centers in the form of malls, plazas, or trade centers (Aji, 2014).

Financial statements

The definition of financial statements in Financial Accounting Standards, according to the Institute of Indonesia Chartered Accountants/IAI (2015), is a structured presentation of an entity's financial position and financial performance. A balance sheet, income statement, and cash flow statement are all common components of financial statements. In this study, the report used in this study is the financial statement contained in the annual report of companies in the property and real estate industry from 2019 and 2020.

Bankruptcy: Altman's Model Approach

Jha & Vaidya (2021) use the Almant Z-score formula for non-manufacturing companies operating in emerging markets using four financial ratios in this model. Meanwhile, Jha & Vaidya (2021) and Marshela & Musadieq (2017) formulated the modified Altman Z-Score as follows:

$$Z = 6{,}65X_1 + 3{,}26X_2 + 6{,}72X_3 + 1{,}05X_4$$

Information:

Z = bankruptcy index
X_1 = working capital/total assets
X_2 = retained earnings/total assets
X_3 = earning before interest and tax/total assets
X_4 = market value of common stock and preferred stock/book value of total debt

The Z value is the overall index of the multiple discriminant analysis function. According to Altman, there are cut off figures for the Z value that can explain whether the company will fail or not in the future. Altman divides it into three categories, namely:

1. It is a safe zone (companies that are not bankrupt) if Z value > 2.6;
2. It is a gray zone (it cannot be determined whether the company is healthy or bankrupt) if the value is 1.1 < Z < 2.6; .
3. It is a distress zone (a bankrupt company) if the Z value < 1.1.

RESEARCH METHOD

The researchers used a quantitative approach in this study. The description of financial ratios and the paired sample t-test were used in this study to show differences in the financial performance of 18 companies in the property and real estate industry sectors before (2019) and during the pandemic (2020). Secondary data is collected from the annual financial statements of 18 companies in 2019 and 2020. Then it is processed and analyzed by using the comparative analysis method.

The population in this study was 78 companies from the property and real estate industry sector, and the researchers adjusted the criteria for companies that were listed before 2019 and still exist in 2020, as well as annual financial reports that can be accessed by the public, so that 18 samples were selected. The sample was chosen in the order of highest capitalization value in the property and real estate sector. The total capitalization of the research sample of 18 issuers is 69.03 percent of the total property and real estate industry sectors listed on the Indonesia Stock Exchange. The following are the 18 issuers/companies:

Table 1. List of Sample Issuers

No	Issuers	Name of Companies	Capitalization (Rp. in billion)	Share to Total property and real estate industry
1	MKPI	Metropolitan Kentjana Tbk	23.894	9,58%
2	PWON	Pakuwon Jati Tbk	22.442	9,00%
3	BSDE	PT Bumi Serpong Damai Tbk	21.488	8,62%
4	CTRA	Ciputra Development Tbk	18.003	7,22%
5	LPKR	Lippo Karawaci Tbk	13.257	5,32%
6	SMRA	PT Summarecon Agung Tbk	12.334	4,95%
7	DMAS	PT Puradelta Lestari Tbk.	10.410	4,17%
8	PLIN	Plaza Indonesia Realty Tbk	8.697	3,49%
9	DUTI	Duta Pertiwi Tbk	6.660	2,67%
10	PPRO	PT PP Properti Tbk.	5.304	2,13%
11	BKSL	Sentul City Tbk	4.360	1,75%

12	RISE	PT Jaya Sukses Makmur Sentosa Tbk.	4.278	1,72%
13	KIJA	PT Jababeka Tbk.	4.019	1,61%
14	ASRI	Alam Sutera Realty Tbk.	3.753	1,50%
15	APLN	Agung Podomoro Land Tbk.	3.518	1,41%
16	NIRO	Nirvana Development Tbk	3.307	1,33%
17	MLTA	Metropolitan Land Tbk	3.215	1.29%
18	LPCK	PT Lippo Cikarang Tbk	3.161	1.27%
		Total	**172.100**	**69,03%**

Source: processed data, 2021
Note: share capitalization value is taken based on the valuation up to 15 June 2021 at https://lembarsaham.com/

Research Concept Framework

The research concept framework is based on previous research theory and study results. The purpose of this research is to examine the financial health of companies in the property and real estate industries that were listed on the Indonesia Stock Exchange before and during the Covid-19 pandemic. The Altman Z-Score model bankruptcy indicator is used to determine the company's financial health.

The Altman Z-score model, used in this study to identify corporate bankruptcies, refers to Jha and Vaidya (2021) and Marshela and Musadieq (2017) studies because this formula is applicable to non-manufacturing companies, with the following variables:
1. *Working Capital to Total Assets*
2. *Retained Earning to Total Assets*
3. *Earning Before Interest & Taxes to Total Assets*
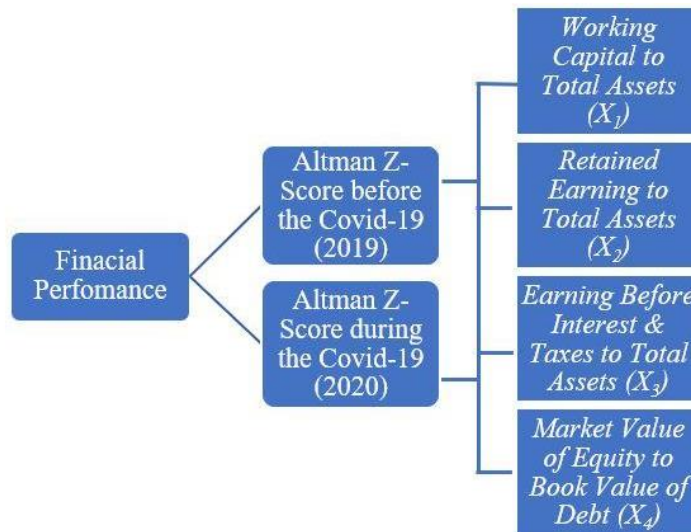4. *Market Value of Equity to Book Value of Debt*

Figure 1. Research Concept Framework
Source: writer, 2021

Variable Operational Definition

Working Capital to Total Asset(X_1)

This ratio shows the ability of a company to generate networking capital from its total assets. This ratio is calculated by dividing net working capital by total assets. The formula for X_1 is:

$$X_1 = \frac{Net\ Working\ Capital}{Total\ Sales}$$

Retained Earnings to Total Assets (X_2)

This ratio is used to measure the cumulative profit against the company's age, which shows the strength of earnings. This ratio shows the company's ability to generate retained earnings from the company's total assets. The formula for X_2 is:

$$X_2 = \frac{Retained\ Earnings}{Total\ Assets}$$

Earnings Before Interest and Tax to Total Assets (X_3)

This ratio shows the company's ability to generate profits from the company's assets before interest and tax payments. The formula for X_3 is:

$$X_3 = \frac{EBIT}{Total\ Assets}$$

Market Value of Equity to Total Liabilities (X_4)

This ratio shows the company's ability to meet its obligations and obligations from the market value of its capital (common stock). The formula for X_4 is:

$$X_4 = \frac{Market\ Value\ of\ Equity}{Book\ Value\ of\ Debt}$$

RESULT AND DISCUSSION

According to the findings of the analysis, there are differences in the company's conditions before (2019) and during the pandemic (2020). According to the Altman Z Score analysis, 16 out of 18 companies (88.89 percent) experienced a decrease in the Altman Z Score in 2020. In 2019, there was only one company in the Distress Zone, whereas there were two companies in the Distress Zone in 2020. In 2020, there were nine companies in the Safe Zone category, compared to ten in 2019, while the number of companies in the Gray Zone remained at five. Alam Sutera Realty Tbk (ASRI) is classified as a distressed zone category. This occurs as a result of a decrease in income, which results in a net loss of Rp. 1.03 trillion. Meanwhile, PT. Lippo Karawaci Tbk. (LPKR) was also hit by the pandemic and fell into the gray zone. LPKR suffered a net loss attributable to owners of the parent entity of Rp 8.89 trillion in 2020.

Two major issues impacted the company's financial performance in the real estate and property sectors in 2020, and these are the subjects of this research. First, the COVID-19 pandemic has prompted the government to implement a policy of Large-Scale Social Restrictions (LSSR) to reduce community mobility in order to break the chain of virus spread. Second, there is a change in the Implementation of Financial Accountancy Standards Notice (PSAK) 72. According to PSAK 72, companies can recognize revenue when (or as long as) the company fulfills its performance obligations by transferring promised assets to customers, whereas asset transfer occurs when (or during) the customer obtains control of the asset.

Table 2. Analysis Results of Altman-Z-score

No	Issuer	2019		2020		Changes (point)
		Altman Z-Score 2019	Zone	Altman Z-Score 2020	Zone	
1	MKPI	3,89	Safe	3,28	Safe	-0,61
2	PWON	7,69	Safe	5,86	Safe	-1,83
3	BSDE	5,48	Safe	3,98	Safe	-1,5
4	CTRA	3,72	Safe	3,22	Safe	-0,5
5	LPKR	4,35	Safe	1,86	Grey	-2,49
6	SMRA	1,84	Grey	1,81	Grey	-0,03
7	DMAS	17,62	Safe	14,18	Safe	-3,44
8	PLIN	15,92	Safe	10,64	Safe	-5,28
9	DUTI	7,76	Safe	6,13	Safe	-1,63
10	PPRO	1,89	Grey	2,17	Grey	0,27
11	BKSL	1,09	Distress	0,38	Distress	-0,71
12	RISE	15,8	Safe	10,8	Safe	-5
13	KIJA	5,57	Safe	5,16	Safe	-0,41
14	ASRI	2,13	Grey	0,83	Distress	-1,3
15	APLN	1,61	Grey	1,99	Grey	0,38
16	NIRO	2,06	Grey	1,12	Grey	-0,94
17	MTLA	6,86	Safe	6,76	Safe	-0,11
18	LPCK	5,33	Safe	4,21	Safe	-1,12

Source: processed, 2021

Indonesia financial accounting standarts PSAK 72 changes have significant ramifications, including the creation of some unfinished assets that cannot be recognized as income. Companies, particularly those in the real estate and property sectors, strive to have their products accepted by buyers as soon as possible. Nonetheless, in this industry, certain factors can cause the construction process to be slower or faster. Pre-sale or sales advance is a term used in the property business. The buyer can deposit a specific amount of down payment or even settle with several alternative payments, which are recorded in contractual liabilities, sales advances, or other down payment terms.

The pandemic, which resulted in a drop in the public health index and the establishment of the LSSR policy, affected the completion process of property and real estate project development. This frequently resulted in a slow conversion of inventory

into income. Meanwhile, several companies had numerous development projects before the pandemic. When PSAK 72 was implemented in 2020, it caused an increase in inventories and had an impact on the turnover ratio of stocks and assets.

Table 3. Calculation Results of Altman Z-score Variable, 2020

No	Issuer	Altman Z-Score 2020	Zone	Changes (Points)	X1	X2	X3	X4
1	MKPI	5,58	Safe	▼ -0,57	▼ -0,24	▲ 0,04	▼ -0,39	▲ 0,03
2	PWON	5,86	Safe	▼ -1,83	▼ -0,52	▼ -0,07	▼ -0,55	▼ -0,69
3	BSD	3,98	Safe	▼ -1,5	▼ -0,41	▼ -0,15	▼ -0,76	▼ -0,18
4	CTRA	3,22	Safe	▼ -0,5	▼ -0,27	▼ -0,05	0,00	▼ -0,17
5	LPKR	1,86	Grey	▼ -2,49	▼ -0,76	▼ -0,59	▼ -1,00	▼ -0,13
6	SMRA	1,81	Grey	▼ -0,03	0,36	▼ 0,00	▼ -0,14	▼ -0,25
7	DMAS	14,18	Safe	▼ -3,44	▼ -0,02	▼ -0,40	0,16	▼ -3,19
8	PLIN	10,64	Safe	▼ -5,28	0,26	▼ -0,08	▼ -0,66	▼ -4,79
9	DUTI	6,13	Safe	▼ -1,63	▼ -0,37	▼ -0,05	▼ -0,32	▼ -0,88
10	PPRO	2,17	Grey	0,41	0,35	0,00	▼ -0,05	0,11
11	BKSL	0,38	Distress	▼ -0,71	▲ -0,07	▼ -0,37	▼ -0,23	▼ -0,04
12	RISE	10,8	Safe	▼ -5	▼ -0,05	▼ -0,07	▼ -0,13	▼ -4,77
13	KIJA	5,16	Safe	▼ -0,41	▼ -0,01	▼ -0,03	▲ -0,07	▼ -0,30
14	ASRI	0,83	Distress	▼ -1,3	▼ -0,05	▼ -0,14	▼ -0,65	▼ -0,01
15	APLN	1,99	Grey	▲ 0,38	▲ 0,46	▼ -0,12	▲ 0,02	▲ 0,02
16	NIRO	1,12	Grey	▼ -0,94	▼ -1,10	▲ 0,04	▲ 0,13	▲ 0,00
17	MTLA	6,76	Safe	▼ -0,11	▲ 0,37	▼ -0,03	▼ -0,24	▼ -0,20
18	LPCK	4,21	Safe	▼ -1,12	▲ 0,23	▼ -0,70	▼ -2,72	▲ 2,07

source: processed data, 2021

According to table 3, it can be seen that of the 18 companies, variable X_2 and X_3 experienced the most decline cases, namely decreased in 15 companies, then X_1 and X_4 each decreased in 12 and 13 companies. In X_2 and X_3, some components are closely related to profit. The first is retained earnings or retained earnings in X_2 and X_3 is profit before tax. There are several exciting minority phenomena based on the Altman Z-score calculation results in 16 companies, namely, two companies that have succeeded in increasing the Altman Z-Score and increasing X_1 to X_4 in a small number of companies. there are two companies that have succeeded in increasing the Altman Z-Score and increasing X_1 to X_4 in a small number of companies. The increase in Altman Z Score on PPRO was due to the company increasing operating revenues from sales by 27.77% from 2019. When the property segment such as malls, hotels, and edutainment was the most affected by COVID-19, the realty segment increased sales by Rp. 540 billion, or an increase of 36.90% compared to the previous year. This was dominated by an increase in apartment sales of Rp. 902 billion during the last year and contributed to 99% of the realty segment's revenue, which increased the company's current assets to Rp. 18.59 trillion, and this figure increased by 3.24% from 2019.

In addition, PPRO's performance was supported by an increase in Accounts Receivable. The company's trade receivables in 2020 amounted to Rp. 2.24 trillion, an increase compared to trade receivables in 2019 of Rp.1.97 trillion. In other words, there was an increase in trade receivables by 13.27% or equivalent to Rp. 262.18 billion. This increase was due to an increase in trade receivables originating from the sale of apartments which increased in 2020, even though in a pandemic condition, the handover process with consumers continues even though some consumers apply for an extension or installment reduction during the pandemic. The good performance of PPRO is also supported by the increase in Inventory. Inventory value in 2020 is Rp. 8.31 trillion, an increase of 4.60% or equivalent to Rp. 365.69 billion compared to the 2019 inventory of Rp. 7.95 trillion. This is possible due to an increase in the physical progress of the field from new and existing projects included in the realty inventory of buildings under construction during the 2020 period.

Therefore, even though this company suffered a loss due to the pandemic of Rp.268 billion, they had an increased value of X_1 and X_4, X_1 increased due to changes in working capital that were greater than the increase in assets. Changes in working capital grew by 20% compared to asset growth which only grew 3%. Then X_4 increased due to a rise in the equity market value, which rose more than total liabilities, 38% compared to 7%. Although X_3 has the most significant coefficient in the Altman Z score, the increase in other variables can increase the Altman Z score in 2020.

Another exciting thing also happened to APLN issuers. The Altman Z-score increased due to an increase in X_1, X_3, and X_4 variables. X_1 increased because working capital growth was greater than asset growth, working capital grew by 69%, while assets only grew by 3%. The increase in working capital was due to the increase in current assets, which grew larger than current liabilities, namely 42% and 25%. APLN is the few companies that can increase profits. This is resulted from the increase in EBIT and affects the increase in X_3. EBIT increased by 57 percent, while assets grew only 25%. Then X_4, this figure increased due to an increase in the market value of equity by 24% which was greater than the increase in liabilities of 14%. In addition to these indicators, the performance of X_1 and X_4 is also supported by the following factors:

1. **Increase in current assets.** Current assets, as of 31 December 2020, amounted to Rp. 11,676.6 billion, or there is an increase of 42.9% from Rp. 8,170.8 billion in 2019. The increase in current assets was mainly due to an increase in real estate assets inventory value by 100.4%, from Rp. 3,671.7 billion in 2019 to Rp. 7,356.3 billion (2020) due to the impact of the implementation of PSAK No. 72 in 2020 amounting to Rp.2,099.8 billion, and the addition of land assets under development by 845.3% from Rp. 205.1 billion in 2019 to Rp.1,938.9 billion.

2. **Increased Inventory (real estate assets).** The increase in current assets was contributed by the increase in real estate assets which reached more than 100.5%. The real estate inventory of Rp. 3.67 trillion in 2019 and then increased to Rp.7.36 trillion in 2020.

3. **Short-Term Liabilities.** Short-term liabilities of Rp. 6,158.9 billion, an increase of 25.5% in 2019. The increase in current liabilities was mainly due to increased sales advances and unearned income – the realized portion in one year of Rp. 3,078.6 billion, or an increase of 110.5% from 2019. Sales advances and unearned revenues consist of advances for sales and customer deposits as well as unearned revenues for rentals and sales that have not met the criteria for revenue acknowledgment.

4. **Long-Term Liabilities.** Long-term liability of Rp. 12,877.2 billion, or an increase of 9.9% from 2019. The increase in long-term liabilities was mainly due to:
   a. Sales advances and unearned revenue – the share realized over one year increased by 43.1% from Rp. 2,248.8 billion (2019) to Rp. 3,218.0 billion (2020).
   b. Long-term debt – after deducting the portion maturing within one year, consisting of bank loans, bonds payable, and other financial institutions payable, increased by 3.8% from Rp. 8,828.0 billion (2019) to Rp. 9,163.3 billion (2020).

5. **Application of PSAK No. 72** also impacted the company's opening retained earnings in the consolidated financial statements related to the return of revenue previously recognized using the percentage-of-completion method, amounting to Rp.1,317.3 billion.

Table 4. X_1 Growth, Working Capital, Current Assets, and Liabilities, in 2020

No	Issuer	Growth X_1	Growth of Working Capital	Asset Growth	Current Assets Growth	Current Liabilities Growth
1	MKPI	-24%	-130,6%	4,8%	-22,9%	-0,6%
2	PWON	-52%	-32,2%	1,4%	-10,9%	28,6%
3	BSDE	-41%	-9,4%	11,6%	16,9%	93,7%
4	CTRA	-27%	-8,0%	8,5%	13,5%	38,7%
5	LPKR	-76%	-25,8%	-5,8%	-11,1%	53,7%
6	SMRA	36%	65,5%	2,0%	6,6%	-7,3%
7	DMAS	-2%	20,5%	-11,4%	-6,7%	8,0%
8	PLIN	26%	118,0%	-5,8%	29,1%	-28,1%
9	DUTI	-37%	-16,0%	-0,3%	-9,7%	8,3%
10	PPRO	35%	19,6%	3,2%	3,3%	-5,8%
11	BKSL	-7%	-7,3%	6,3%	-2,9%	-1,0%
12	RISE	-5%	-2,1%	0,0%	2,6%	16,6%
13	KIJA	-1%	-0,1%	0,1%	-0,2%	-1,2%
14	ASRI	-50%	-274,5%	-3,0%	-14,5%	66,2%
15	APLN	46%	69,2%	3,2%	42,9%	25,5%
16	NIRO	-110%	-43,8%	28,8%	-13,3%	120,3%
17	MTLA	9,02%	6%	-2,86%	0,89%	-45,71%
18	LPCK	8,10%	-14%	-20,46%	7,27%	61,45%

Source: processed data, 2021

There are interesting things that can be seen in Table 3, namely the increase in X_2 for NIRO companies. The increase in X_2 in NIRO occurred because they were able to increase sales and carry out efficiencies which led to an increase in retained earnings through profits from acquisitions made by the company. From the NIRO equity change report, it can be seen that in 2020 the company received an increase in total comprehensive income during the current year.

Then in X_3 (Table 3), it can be seen that three companies experienced an increase, namely DMAS, APLN, and NIRO. These companies are few of the companies that have managed to increase profits in the pandemic era. Furthermore, in X_4, four companies experienced an increase in X_4, namely MKPI, PPRO, APLN, NIRO, and LPCK. These companies have a higher market value of equity growth than liabilities.

Table 5. Comparison of Profitability Indicators (Rp.)

No	Issuer	Changes I Profit/Loss	NPM	Changes in Reatined Earnings	Changes in EBIT
1	MKPI	▼ -383.525.000.000	▼ -13,87%	▲ 79.479.806.963	▼ -391.949.977.545
2	PWON	▼ -2.120.682.217.000	▼ -16.85%	▼ -351.743.666.000	▼ -2.121.718.480.000
3	BSDE	▼ -2.643.818.000.000	▼ -36,31%	▼ -266.095.000.000	▼ -2.668.880.000.000
4	CTRA	▲ 162.800.000.000	▲ 1,14%	▼ -10.631.000.000	▲ 104.018.000.000
5	LPKR	▼ -7.427.509.000.000	▼ -63,41%	▼ -9.622.190.000.000	▼ -7.645.608.000.000
6	SMRA	▼ -367.111.283.000	▼ -5,43%	▼ -518.577.685	▼ -483.152.319.000
7	DMAS	▲ 23.405.590.424	▲ 1,29%	▼ -967.813.850.482	▲ 11.000.0000.000
8	PLIN	▼ -1.162.680.000.000	▼ -101,89%	▼ -921.987.443.000	▼ -1.192.679.148.000
9	DUTI	▼ -651.535.592.042	▼ -15,43%	▼ -218.278.346.382	▼ -657.64.607.747
10	PPRO	▼ -258.268.150.571	▼ -17,33%	▼ -6.344.083.817	▼ -140.553.007.236
11	BKSL	▼ -625.229.860.041	▼ -130,36%	▼ -1.954.788.474.273	▼ -622.252.000.000
12	RISE	▼ -45.864.758.147	▼ -28,32%	▼ -48.386.841.034	▼ -45.861.098.420
13	KIJA	▼ -95.890.433.533	▲ 0,00%	▼ -101.268.527.929	▼ -135.788.812.414
14	ASRI	▼ -2.049.565.177.000	▼ -102,49%	▼ -1.167.433.614.000	▼ -2.071.358.806.000
15	APLN	▲ 59.332.991.000	▲ 0,45%	▼ -907.681.416.000	▲ 75.790.892.000
16	NIRO	▲ 200.055.799.972	▲ 38,06%	▲ 55.781.392.676	▲ 200.823.095.194
17	MTLA	▼ -89.416.000.000	▼ -10,00%	▼ -65.685.000.000	▼ -230.0000.000.000
18	LPCK	▼ -2.148.474.000.000	▼ -225,29%	▼ -2.148.474.000.000	▼ -4.026.699.000.000

Source: processed data, 2021

Furthermore, the policies of several companies that still feel they can pay dividends and wish to complete construction for their business expansion are at risk of using retained earnings. From Table 5, there are 16 companies that experienced a decrease in retained earnings due to this policy choice. However, they need to do this in welcoming the opportunities that lie behind the pandemic and remaining competitive in economic uncertainty, and this choice risks a decline in company equity and assets.

Company management must continue to take specific policies because the pandemic still opens opportunities for companies to continue and exist in business. When compared between changes in revenue and contract liabilities, there is an interesting fact, namely that almost all of the company's revenues have decreased, but almost all of the company's contract liabilities have increased, except for PPRO, BKSL, MKPI, and MLTA (see Table 6).

This is due to two factors. First, changes to PSAK 72 that cause units or products that are still under construction and have not been handed over to the buyer cannot be recognized as revenue, thereby increasing contractual liabilities in the short term, which impacts the increase in company liabilities. Second, the potential in the residential segment, almost all companies that have sales in the residential segment, especially landed houses, experienced an increase in sales in 2020. Even the increase in revenue from the residential segment was experienced by the company with the largest number of losses from these 18 companies, namely LPKR. LPKR suffered heavy losses due to past legal cases, one of which was the legal dispute over the Meikarta Mega Project. In addition, LPKR has problems in efficiency and the number of loans they apply for in operational financing costs and developing business by focusing on selling the residential segment, especially landed houses. Of the 18 companies, CTRA managed to record an increase in sales in the residential segment of landed houses and even the highest apartment.

This demonstrates that, even in the face of a pandemic, the community's need for housing cannot be eliminated. Housing demand can be delayed, but it cannot be stopped. Contract Liabilities increased by nearly 14 companies as a result of this. So, based on the explanation above, we can conclude that four factors cause the Altman Z score to decrease in most businesses. **First**, the decline in revenue acquisition has significantly reduced the company's ability to generate profits, as evidenced by the decrease in net income. The impact of a decrease in net income can also be seen in the company's ability to generate profits with the assets and equity that it owns.

Table 6. Comparison of Changes in Contract Revenues and Liabilities

No	Issuer	Changes in Revenue		Changes in Contract Liabilities	
1	MKPI	▼	-653.140.497.082	▼	-7.080.584.744
2	PWON	▼	-3.224.789.882.000	▲	1.871238.120.000
3	BSDE	▼	-904.275.000.000	▲	568.287.117.447
4	CTRA	▲	462.500.000.000	▲	1.375.534.000.000
5	LPKR	▼	-366.218.000.000	▲	2.040.658.000.000
6	SMRA	▼	-911.641.663.000	▲	530.909.496.000
7	DMAS	▼	-20.954.453.188	▲	123.320.830.766
8	PLIN	▼	-550.480.161.000	▲	35.693.836.000
9	DUTI	▼	-735.014.867.129	▲	197.004.747.887
10	PPRO	▲	451.072.507.177	▼	-1.070.459.278.544
11	BKSL	▼	-499.573.800.763	▼	-1.081.777.068.241
12	RISE	▼	-106.399.659.116	▲	56.083.940.460
13	KIJA	▲	142.141.690.383	▲	47.581.592.397
14	ASRI	▼	-2.062.425.214.000	▲	1.195.882.805.000
15	APLN	▲	1.163.849.089.000	▲	1.616.268.316.000
16	NIRO	▲	16.678.666.225	▲	19.558.899.406
17	MTLA	▲	11.976.000.000	▼	-41.604.000.000
18	LPCK	▲	149.564.000.000	▲	1.104.504.000.000

Source: processed data, 2021

Second, the decline in revenue was accompanied by an increase in liabilities as a result of the increase in contract liabilities, which had an impact on X_1 and X_4, which also contributed to the decline in this figure, as this involved changes in assets, working capital, liabilities, and Market Value of Equity. The data presented in tables 6 and 7 describe this condition.

The increase in contract liabilities is in addition to liabilities, thereby reducing the working capital contained in X_1. Although liabilities throughout the company increase, this affects the decrease in working capital in most companies, and this can be seen in 12 companies that experienced a decline in working capital. However, not all companies experience a decrease in working capital due to an increase in liabilities because this depends on the growth of current assets and current liabilities.

When there is a decrease in working capital, the space for companies to move and innovate is reduced so that the strategic options they have are increasingly limited. In this pandemic era, many companies apply for loans or issue debt securities in various forms to finance operations and carry out business development, and most of the businesses developed are the landed house residential segment.

Table 7. Comparison of Working Capital, Assets, Liabilities, and Market Prices of Equity

No	Issuer	Changes in Working Capital		Changes in Assets		Changes in Liabilites		Changes in Stock Prices	
1	MKPI	▼	-255.102.000.000	▲	347.684.000.000	▲	243.988.000.000	▲	680.057.000.000
2	PWON	▼	-2.017.000.000.000	▲	363.652.034.000	▲	860.599.820.000	▼	-2.889.576.144.000
3	BSDE	▼	-1.698.608.197.425	▲	6.321.949.000.000	▲	5.476.260.000.000	▲	1.780.319.398.740
4	CTRA	▼	-790.805.000.000	▲	3.059.163.000.000	▲	3.363.203.000.000	▼	-304.040.000.000
5	LPKR	▼	-7.812.000.000.000	▼	-3.214.105.000.000	▲	7.588.579.000.000	▲	1.985.144.514.332
6	SMRA	▲	1.396.349.918.000	▲	480.886.948.000	▲	846.548.330.000	▼	-2.885.356.336.000
7	DMAS	▲	600.858.486.000	▼	-864.737.789.516	▲	102.944.845.997	▼	-2.409.905.555.000
8	PLIN	▲	441.550.000.000	▼	-732.119.825.000	▲	189.864.897.000	▼	-3.017.500.000.000
9	DUTI	▼	-76.394.623.381	▼	-34.602.721.075	▲	225.945.527.513	▼	-2.220.000.000.000
10	PPRO	▲	776.776.964.250	▲	582.792.431.431	▲	559.692.036.750	▲	1.603.567.468.958

No	Issuer	Changes in Working Capital	Changes in Assets	Changes in Liabilites	Changes in Stock Prices
11	BKSL	▼ -104.195.000.000	▲ 1.095.957.364.608	▲ 1.542.781.206.352	▼ -193.405.326.835
12	RISE	▼ -16.646.309.420	▲ 592.962.050	▲ 46.010.904.877	▼ -1.800.950.000.000
13	KIJA	▼ -3.996.965.746	▲ 15.564.400.558	▲ 62.325.121.293	▼ -1.624.341.292.782
14	ASRI	▼ -1.639.385.526.000	▼ -667.457.134.000	▲ 508.614.570.000	▲ 78.597.647.552
15	APLN	▲ 2.256.258.031.000	▲ 931.014.876.000	▲ 2.411.735.452.000	▲ 839.946.013.552
16	NIRO	▼ -1.074.944.468.012	▲ 2.369.555.468.026	▲ 2.218.549.524.295	▲ 488.375.179.688
17	MTLA	▲ 227.086.000.000	▼ -174.881.000.000	▼ -401.967.000.000	▼ -1.148.268.949.500
18	LPCK	▼ -749.494.000.000	▼ -2.499.658.000.000	▲ 1.803.702.000.000	▲ 1.085.238.000.000

source: processed data, 2021

Third, the increase in liabilities, the decrease in sales, and the increase in contractual liabilities affected the increase in inventories in most companies. The increase in inventory will result in additional operating expenses and lower profits, and the company will then tend to add new assets when the market trend changes. As a result, the company's old inventory often stalls and becomes a burden. This can reduce the company's efficiency, so companies need to think about how to convert inventory, especially old inventory, to cash or use the inventory into long-term assets. Then, with declining sales conditions and rising inventories, this is a sign that businesses are increasingly struggling to sell their inventory, particularly products sourced from old inventories. High pre-sales will be a problem if they are not accompanied by asset management, particularly when it comes to converting old inventory into revenue. Except for LPKR, DMAS, and PLIN, almost all these companies experienced an increase in inventories (Table 8).

Fourth, the drop in the market value of equity was influenced by the decline in stock prices in most companies as a result of the COVID-19 pandemic. The market value of equity represents the evaluation of the company's actors and shareholders. If the company's fundamental performance improves, this number will rise, influencing the Altman Z score. This value is better if the value or growth in the market value of equity is greater than the liability because greater liability indicates that the company is more dominated by liabilities than the company's capital.

Table 8. Inventory Change

No	Issuer	Changes in Inventory
1	MKPI	▲ 1.218.218.738
2	PWON	▲ 980.921.548.000
3	BSDE	▲ 520.522.000.000
4	CTRA	▲ 1.579.506.000.000
5	LPKR	▼ -893.727.000.000
6	SMRA	▲ 672.656.517.000
7	DMAS	▼ -96.146.065.559
8	PLIN	▼ -3.809.751.000
9	DUTI	▲ 130.216.184.334
10	PPRO	▲ 365.690.240.732
11	BKSL	▲ 620.770.064.686
12	RISE	▲ 165.219.546.147
13	KIJA	▲ 114.435..951.338
14	ASRI	▲ 618.885.320.000
15	APLN	▲ 3.683.190.258.000
16	NIRO	▲ 9.711.671.376
17	MTLA	▲ 20.395.000.000
18	LPCK	▲ 646.832.000.000

source: processed data, 2021

CONCLUSION

The Covid-19 pandemic has had an impact on the performance of companies in the property and real estate industry. This is demonstrated by the difference in the composition of the Altman Z-score during the pandemic (in 2020) and before pandemic (2019). The analysis results also support the findings, which show that 88.89% of the companies that were the sample of the study experienced a decrease in the Altman Z-Score. Changes in contract liability policies, economic uncertainty, weakening public purchasing power, and the LSRR policy have contributed to the decline in the financial performance of companies in the property and real estate industry.

The findings of this study can be used as input and consideration for companies and governments to focus on choosing the right policies in developing the realty industry during the pandemic era. For the academics, involving more samples from previous studies, resulting in more representative results to describe the performance condition of the realty industry before and during the covid-19 pandemic. Then, investors can be a consideration in conducting transactions on the capital market. This research will have different results if applied to industries outside the property and real estate industry.

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