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Determinants of Financial Distress in Property and Real Estate Companies Listed on The Indonesian Stock Exchange

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ABSTRACT

The purpose of this study is to analyze financial performance of property and real estate companies before and during the Covid-19 pandemic. Next is to analyze financial distress by using the Zmijewski calculation methods and to analyze the factors of financial distress. The populations in this study are property and real estate companies listed on the IDX in year 2018 to 2022. Based on purposive sampling methods, samples obtained are 15 companies in 5 years, so obtained 300 observations. The descriptive methods are used to analyze financial performance, and to analyze Zmijewski's financial distress using the panel data regression. The result of descriptive analysis show that before the pandemic there were 15 companies in a healthy condition but during the pandemic there was one company experiencing financial distress namely MDLN, and based on the direction of financial distress trends, there are three groups of companies that tend to worsen, improve, and stagnate. The results of data panel regression showed that profitability ratio (ROE), liquidity ratio (CR), and leverage ratio (DER) have a significant value to predict financial distress, whilst activity ratio (TATO), sales growth, interest rate (IR) and exchange rate (ER) which not significant. The trend of financial distress (that are worsening, improving and stagnant), can be used by companies or investors as an early warning system in predicting financial distress in property and real estate companies.

Keywords: *financial distress, panel data, property, real estate, zmijewski.*
JEL classification*: C33,C58,G11,G33,R30*

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INTRODUCTION

The property and real estate sector plays an important role in economic development in Indonesia. This sector can attract and encourage activities in various economic sectors, influence the development of the financial industry, and impact economic growth and employment. According to Real Estate Indonesia/REI (2021), the property industry has a multiplier effect on 174 other sectors and 350 types of small-scale related industries. On the other hand, this sector also contributes to the National GDP of 14-16%, absorbing 13.8 million workers, a tax contribution of 9.3% and PAD (regional original income) of 31.9% (Saptowalyono 2023).

The growth rate of the property and real estate sector fluctuated between 2014-2022 and tended to be influenced by various economic conditions. In 2020, the growth rate of the property and real estate sector and the nation experienced a decline due to the coronavirus 2019 (COVID-19) pandemic. The national GDP growth rate in 2021-2022 increased due to the start of economic recovery, but it was not followed by the property and real estate sector, as shown in Figure 1.

The declining growth rate of the sector can also be seen from the slowing growth of demand and supply for commercial property. From 2020 to 2021, the demand for office and retail leases declined due to working-from-home (WFH) regulations and the supply of commercial property also stagnated in line with the high business uncertainty during the pandemic. At the end of 2022, there was also a slowdown in demand for commercial property as indicated by the decline in demand for apartment rentals by expatriates who decided to return to their home countries and the supply of industrial office commercial property, which tended to stagnate (Bank Indonesia 2023).

These conditions affected sales and revenues received by property and real estate companies, prompting the government to issue fiscal incentive policies to drive the sector. The government provides VAT borne by the government (PPN-DTP) incentives and also provides Administrative Fee Assistance (BBA) for Low-Income Communities (MBR) (Ministry of Finance, 2021). These government policies are expected to encourage sales in this sector, resulting in an increase in GDP (Kemenkop 2023).

GDP growth factors, pandemic conditions, and economic policies also affect the financial performance of several companies, as shown in Table 1. The Covid-19 pandemic caused a decrease in corporate profits from an average of 15 property and real estate companies. Other financial performance proxied by ROA, ROE, and CR also jointly decreased during the Covid-19 pandemic. The company's profitability proxied by ROA and ROE values experienced a significant decline until it obtained a negative value.

Source: Central Bureau of Statistics (2022)

Figure 1. GDP growth rate of property and real estate sector and national GDP (in %)

Table 1. Financial condition of property and real estate companies in 2018-2022

Average	2018	2019	2020	2021	2022
Net Profit (IDR Billion)	914.187	768.352	-692.012	376.725	723.392
Return on assets/ ROA (ratio)	0.060	0.053	-0.023	0.026	0.044
Return on equity/ ROE (ratio)	0.091	0.079	-0.058	0.033	0.066
Current ratio/ CR (ratio)	3.626	3.462	2.880	2.831	3.096
Debt to assets ratio/ DAR (ratio)	0.381	0.365	0.423	0.415	0.404
Debt to equity ratio/ DER (ratio)	0.723	0.657	0.909	0.904	0.837

Source: IDX financial statements, processed (2023)

Reduced income from an operating activity makes the company seek external funding for further operating activities, namely from debt. Increasing debt can also disrupt the company's financial condition, indicated by a decrease in the company's activity ratio, and allow for unsustainable company growth (Kumar and Anand 2017). The level of debt that is increasing and too large will also reduce the liquidity ratio and increase the leverage ratio of a company so that the company is vulnerable to entering into financial distress. The CR value and the company's debt level indicate the company's declining liquidity, characterized by the increasing DAR and DER values.

Weak business activities decrease company profits, so one of the company's efforts to maintain financial liquidity is by seeking capital loans from third parties. An increase in the number of companies that cannot meet their obligations to banks, characterized by an increase in the Non-Performing Loan (NPL) ratio, may indicate that the company is in financial distress. Based on the Indonesian Banking Statistics report, the NPL ratio for the property and real estate sector fluctuates annually, and the highest NPL ratio in 2021 reached 3.29% (Table 2).

Financial distress is a condition of financial decline before the company experiences bankruptcy or liquidation (Platt and Platt 2002). The characteristics of companies categorized as experiencing financial distress are indicated by negative numbers in operating profit, net income and book value of equity, and the company is merging (Brahmana 2007).

Research on financial distress in the property and real estate industry has been widely studied with various prediction methods. Fakoano (2016) examines the potential for financial distress in property companies using the Zmijewski calculation method. The Zmijewski method uses an analysis of the profitability (ROA), leverage (DAR), and liquidity (CR) ratios of a company for its prediction model. According to Anggraeni and Safriliana (2019), the Zmijewski model is an effective analysis method in predicting the level of financial difficulty of property and real estate companies because it already represents the value of equity, net income, and company assets.

Meanwhile, Sari and Yulianto (2018) who compared two methods of measuring financial distress and the Zmijewski model showed better accuracy than Springate due to the emphasis on the aspect of the amount of debt in predicting financial distress, where two of the three ratios used by this model are influenced by debt (debt ratio & current ratio). The greater the amount of debt, the Zmijewski model will predict the company to experience financial distress.

Bankruptcy predictions in property and real estate companies usually analyze the relationship between financial distress and financial performance or external conditions of the company. Fakoano (2016), Dwiantarai and Artini (2021), Desiyanti et al. (2019), Syuhada et al. (2020), Hidayat and Meiranto (2014), and Susilowati et al. (2019) analyzed the effect of operating expense growth, COGS growth, sales growth, DER and TATO on financial distress. Financial distress conditions can also be influenced by macroeconomic conditions, including interest rates and exchange rates, as studied by Fakoano (2016), Santosa (2019), and Ceylan (2021). Furthermore, Kassidy and Handoko (2022), Heriyanto (2022), and Silindung and Yanti (2023), who compared the analysis of the financial performance of property and real estate companies between before and after the Covid-19 pandemic, showed a significant difference.

Table 2. NPL ratio of the property and real estate sector 2016-2022

Year	Credit (IDR Billion)	NPL (IDR Billion)	Ratio (%)
2016	2 319 702	66.802	2.879
2017	2 533 120	71.786	2.833
2018	2 789 209	68.016	2.438
2019	3 087 658	63.714	2.063
2020	3 174 680	82.022	2.583
2021	3 080 054	101.396	3.292
2022	3 438 475	91.357	2.656

Source: Financial Services Authority, processed (2023)

The study of financial distress is important because it can provide signals to company management or investors about companies experiencing a decline in financial performance, which can impact bankruptcy if not handled quickly and appropriately. The importance of the study also considers that the property and real estate sector plays an important role in encouraging the development of other sectors, employment, and its contribution to national economic growth. In this study, the companies studied will be grouped based on financial distress trends into groups of companies that tend to worsen, improve, and stagnate. This kind of analysis has never been done in previous studies.

Based on the background that has been described, the objectives of this study are to analyze the financial performance of property and real estate sector companies on the Indonesia Stock Exchange and macroeconomic conditions in the 2018-2022 period, analyze the factors that influence financial distress, and produce strategiesfor property and real estate companies to avoid financial distress.

METHOD

This research uses descriptive and quantitative methods by analyzing the company's financial statements supported by panel data regression analysis. The data used comes from secondary data of property and real estate sector companies listed on the Indonesia Stock Exchange (2018-2022). Sampling using the purposive sampling method, with 15 company samples for five years, so that the total observations were 300 (Table 3).

Quantitative analysis uses descriptive analysis methods to analyze the condition of the company's financial performance by grouping companies into financial distress categories that tend to worsen, improve, and stagnate. Panel data regression is carried out to analyze the company's financial distress factors. Data is processed with the help of Microsoft Excel 2019 and EViews 13 software.The dependent variable in this study is financial distress, using the Zmijewski value as a proxy for measurement (Zmijewski 1984). The Zmijewski equation is described as follows:

$$Zm = - 4.336 – 4.513X_1 + 5.679X_2 – 0.004X_3$$

Information:

Zm : Zmijewski's score
X_1 : *net income / total assets*
X_2 : *total liabilities / total assets*
X_3 : *current assets/ current liabilities*

Table 3. Total observation sample

Criteria of Sample	Number of Companies
Property and real estate companies listed on the IDX	88
Property and real estate companies other than the main IDX listing board	(60)
Companies with incomplete financial statements for the period Q12018 - Q42022	(13)
Sample of property and real estate companies in the study	15
Total observation sample (15x4x5)	300

Source: IDX financial statements (2023)

Table 4. Operational definition of variables

No	Variable	Measurement	Source	Scale
1	Return on Equity (ROE)	Net Income / Total Equity	Financial Statements	Ratio
2	Current Ratio (CR)	Current Assets / Current Liabilities	Financial Statements	Ratio
3	Total Assets Turn Over (TATO)	Sales / Total Assets	Financial Statements	Ratio
4	Debt to Equity Ratio (DER)	Total Liabilities / Total Equity	Financial Statements	Ratio
5	Sales Growth	((Sales t) – (Sales t-1)) / (Sales t-1)	Financial Statements	Ratio
6	Interest Rate (IR)	BI Rate (i) – Inflation (π)	Bank Indonesia	Ratio
7	Exchange Rate (ER)	LN_ER = LN [(selling rate+buying rate)/2]	Bank Indonesia	Ratio

The independent variables observed are profitability ratio (ROE), liquidity ratio (CR), activity ratio (TATO), solvency ratio (DER), sales growth, interest rate, and rupiah exchange rate. The following is an explanation of the independent variables used in the study (Table 4).

Panel data regression is a regression analysis combining two data types, namely cross-section and time series. The following is the panel data regression equation used in the study referring to the research of Nurfajrina (2016) and Fakoano (2016)

$$y_{it} = \beta_0 + \beta_1 ROE_{it} + \beta_2 CR_{it} + \beta_3 TATO_{it} + \beta_4 DER_{it} + \beta_5 Sales\_Growth_{it} + \beta_6 IR_t + \beta_7 LN\_ER_t + e_{it}$$

Description: y_{it} (Zmijewski value of the i company and year t), ROE_{it} (Profitability value of the i company and year t), CR_{it} (Liquidity value of the i company and year t), $TATO_{it}$ (Activity value of the i company and year t), $Sales\_Growth_{it}$ (Sales growth value of the i company and year t), IR_t (Interest rate value year t), and LN_ER_t (Natural logarithm of exchange rate year t).

RESULT AND DISCUSSION

Analisis Deskriptif

Descriptive analysis is carried out on all research variables which include the Zmijewski value, *return on equity, current ratio, total assets turn over, debt to equity ratio, sales growth, interest rate,* dan *exchange rate.*

Tabel 5. Descriptive statistic

Variable	Mean	Median	Maximum	Minimum	Std. Dev.
Zmijewski (ratio)	-2.15	-2.29	0.28	-4.62	1.04
ROE (%)	2.87	2.30	38.58	-55.41	8.10
CR (%)	308.84	247.31	1.447	24.41	232.30
TATO (%)	10.40	8.91	39.86	0.07	7.24
DER (%)	82.09	61.89	296.29	4.32	56.43
Sales Growth (%)	16.83	1.65	1.683	-94.59	112.00
Interest Rate (%)	1.68	2.10	3.52	-1.70	1.26
LN_Exchange Rate (desimal)	9.58	9.57	9.70	9.52	0.04

The LPCK company obtained the highest ROE value of 38.58% in the third quarter of 2018, while the lowest ROE value of -55.41% was acquired by the LPCK company in the fourth quarter of 2020. The highest CR value of 1,447% was obtained by the BEST company in the first quarter of 2020, and MDLN obtained the lowest, 24.41%, in the second quarter of 2021. The DMAS company obtained the highest TATO value of 39.86% in the fourth quarter of 2020, and the lowest was 0.07% obtained by DMAS in the first quarter of 2019. The highest DER value of 296.92% was acquired by the MDLN company in the third quarter of 2021, and the DMAS company obtained the lowest value of 4.32% in the fourth quarter of 2018. The DMAS company obtained the highest sales growth value of 1,683% in the first quarter of 2020, and the lowest value of -94.95% was obtained by the DMAS company in the first quarter of 2018.

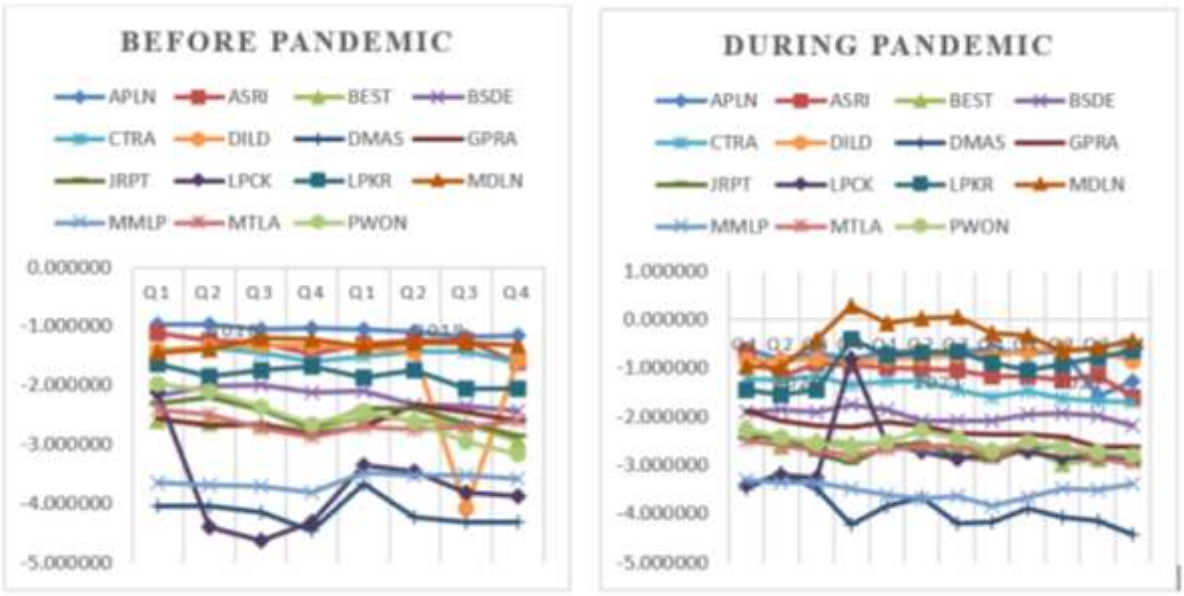
The maximum value of the interest rate (IR) of 3.52% was obtained in the first quarter of 2019 due to the increase in the BI-7day-ReverseRepo Rate six times from the first period of 2018 to 2019. The lowest value of IR of -1.7% occurred in the third quarter of 2022 due to high inflation reaching 5.9%. The maximum value of the rupiah exchange rate (ER) occurred in the first quarter of 2020. The weakest rupiah exchange rate was achieved during the observation period, and the lowest ER value occurred in the first quarter of 2018.

Financial distress

Figure 2 shows that the financial distress of 15 property and real estate companies before the pandemic together was at a negative Zmijewski value. This indicates that the company did not experience financial distress before the Covid-19 pandemic. During the COVID-19 pandemic, it is known that the company experienced an increase in the Zmijewski value and even moved to a positive Zmijewski value shared by the company MDLN. MDLN recorded a consistent net loss from 2020 to 2021. The company experienced a loss because its operations were greatly affected by the COVID-19 pandemic, which caused a significant decrease in operating income in the residential segment, which is the main contributor to the company's revenue.

In this study, financial distress in 15 property and real estate companies is divided into three groups of companies, namely companies with Zmijewski values tending to worsen during the observation period, companies with Zmijewski values tending to improve during the observation period, and companies with Zmijewski values tending to stagnate during the observation period.

Property and real estate companies with financial distress that tend to worsen, including PT Modernland Realty Tbk (MDLN), PT Intiland Development, Tbk (DILD), PT Lippo Karawaci, Tbk (LPKR), PT Lippo Cikarang Tbk (LPCK), and PT Mega Manunggal Property, Tbk (MMLP). The five companies obtained a Zmijewski value that rose closer to 0 (zero) and even positive, which indicated that the company was in financial distress. In the five companies, only MDLN obtained a positive zmijewski value. While the other four companies still recorded a Zmijewski value below 0 (zero), the movement of the Zmijewski value increased. LPKR has the largest total assets compared to the other four companies in this group, which amounted to IDR 49.870 billion, but LPKR recorded a sizable net loss in the 4th quarter of 2020 due to increased interest expenses. This was also experienced by LPCK and DILD, which experienced a decrease in current profit, which affected the decline in profitability ratios and the increase in Zmijewski scores. MDLN, which has main business activities in the residential, commercial, and industrial segments, also obtained an increase in Zmijewski score (even positive, financial distress) due to recording a net loss for the year due to a decrease in sales and temporary suspension of securities trading. MMLP obtained an increase in Zmijewski's score due to a decrease in the company's liquidity, where the company recorded an increase in current debt.



Source: IDX financial statements, processed (2023)

Figure 2. Financial distress of companies before and during the pandemic

Property and real estate companies with financial distress that tend to improve, including PT Alam Sutera Realty, Tbk (ASRI), PT Ciputra Development, Tbk (CTRA), PT Jaya Real Property, Tbk (JRPT), and PT Puradelta Lestari, Tbk (DMAS). The four companies have a Zmijewski value range from -1 to -4, which is below the critical point of 0 (zero), which means the company is not in financial distress and shows a downward trend until the end of the observation period. These four companies, together, have main business activities in the residential and commercial segments and experienced a decrease in the Zmijewski's score from 2020-2022. Financial distress conditions that improve are supported by good financial performance. DMAS obtained the best financial distress value of -3,996 and the best average financial ratio among others. DMAS obtained the largest liquidity ratio (CR) due to an increase in current assets in the form of cash and cash equivalents. Increased liquidity also occurs in CTRA, ASRI, and JRPT companies due to the acquisition of large current assets and a decrease in current liabilities. Companies in this group are also effective in utilizing their assets to generate profits, as shown by the high value of profitability ratio (ROE), activity ratio (TATO), and sales growth, as well as good debt management seen from the low value of leverage ratio (DER)

Property and real estate companies with financial distress tend to stagnate, including PT Agung Podomoro Land, Tbk (APLN), PT Bumi Serpong Damai, Tbk (BSDE), PT Perdana Gapuraprima, Tbk (GPRA), PT Pakuwon Jati Tbk (PWON), PT Bekasi Fajar Industrial Estate, Tbk (BEST), and PT Metropolitan Land, Tbk (MTLA). Stagnant financial distress is indicated by the company's well-maintained financial performance during the observation period and shows a stable trend in the movement of the Zmijewski value. The best Zmijewski's score is owned by MTLA, with an average total Zmijewski's score during the observation period of -2.676. MTLA focuses on the residential and commercial segments in its main business activities. In 2022, MTLA set a business strategy to continue developing residential projects and increase investment in commercial properties with the hope that the company can make a recurring contribution to support long-term housing development. MTLA also obtained an increase in profit and the lowest solvency ratio at the end of 2022. The financial performance of the stagnant group companies is quite good, as shown by the enormous profitability (ROE), liquidity (CR), and activity (TATO) ratios and the low solvency ratio (DER).

Table 6. Company groups based on average financial distress and financial performance

	Worsening	Improved	Stagnant
Financial distress	High	Low	Low
ROE	Low	High	High
CR	Low	Low	High
DER	High	Low	Low
TATO	Low	High	High
Sales growth	Low	High	Low

Based on the grouping, the characteristics of property and real estate companies can be identified based on financial distress values and financial performance (Table 6). Companies with financial distress above the average are classified as High (high potential for financial distress), and below the average are classified as Low (low potential for financial distress). Companies with ROE, CR, TATO, and sales growth values above the average are classified as High (good financial performance), and those below the average are classified as Low (poor financial performance). Companies with DER values above the average are classified as High (poor financial performance) and below the average are classified as Low (good financial performance).

The group of companies with financial distress tends to worsen, characterized by high financial distress scores, low profitability, low liquidity, high solvency, low activity, and low sales. The group of companies with financial distress tends to improve, characterized by low financial distress, high profitability, low liquidity, low solvency, high activity, and high sales.Groups of companies with financial distress tend to be stagnant or stable, characterized by low financial distress, high profitability, high liquidity, low solvency, high activity, and low sales.

Panel data regression result

Panel data regression analysis begins by selecting the best model using the Chow test. The Chow Test results show a chi-square probability value of 0.000 < 0.05, which means the Fixed Effect Model (FEM) is the best model. FEM has passed the classical assumption test except the normality test, which shows that the data is not normally distributed. However, Lind et al. (2018) explained that based on the central limit theorem, the larger the number of samples, the sample distribution will approach a normal distribution.

Based on Table 7, it can be seen that the adjusted adjusted R-squared value on Fixed Effect Model (FEM) is 0.989 with Prob. F-statistic < 0.05. This shows that 98% of the variation in financial distress in 15 property and real estate companies in Indonesia can be explained by the variables return on equity (ROE), current ratio (CR), total assets turnover (TATO), debt to equity ratio (DER), sales growth, interest rate (IR), and exchange rate (ER). In comparison, other factors outside the model explain the remaining 2% of the variation.

The profitability ratio or ROE has a probability value of (0.0000) < 0.05 with a coefficient of -2.1524, which means that the profitability ratio has a negative effect on the Zmijewski value at a significant level of 5%. This shows that a decrease in profitability will impact the increase in the Zmijewski value, which means that the company is entering a condition of financial distress. These results align with research by Dwiantari and Artini (2021) and Desiyanti et al. (2019). In the group of companies experiencing financial distress, which tends to worsen, a decrease in profitability ratios will further increase the potential for financial distress. On the other hand, for companies experiencing financial distress that are typically to improve, an increase in the profitability ratio will further reduce the potential for financial distress. Companies that experience financial distress tend to stagnate, so the profitability ratio must be maintained so that it does not fall and does not put the company into financial distress.

The liquidity ratio or CR has a probability value of (0.0000) < 0.05 with a coefficient of -0.0218, which means that the liquidity ratio has a negative effect on the Zmijewski value at a significance level of 5%. These results are in line with research by Dini (2023) and Santosa (2019). The negative relationship that occurs between CR

and financial distress is because it is assumed that companies with high liquidity ratios will use less debt so that the company's financial burden is maintained and reduces the company's financial distress risk (Kiraci 2019). In the group of companies experiencing financial distress, which tends to worsen, a decrease in the liquidity ratio will further increase the potential for financial distress. On the other hand, for companies experiencing financial distress that tend to improve, an increase in the liquidity ratio will further reduce the potential for financial distress. As for companies experiencing financial distress that tend to stagnate, the liquidity ratio must be maintained so that it does not fall and does not put the company into financial distress.

The solvency ratio or DER obtained a probability value of (0.0000) < 0.05 with a coefficient of 1.1549, which means that the solvency ratio positively affects the Zmijewski value at a significant level of 5%. The greater the DER value indicates that the company's activities are financed more from debt than from its capital. These results align with research by Susilowati et al. (2019). In the group of companies experiencing financial distress, which tends to worsen, an increase in the solvency ratio will further increase the potential for financial distress. Meanwhile, companies experiencing financial distress tend to improve, so a decrease in the solvency ratio will further reduce the potential for financial distress. Meanwhile, companies experiencing financial distress tend to stagnate, so the solvency ratio must be maintained so that it does not increase and does not increase the potential for the company to enter financial distress.

The activity ratio or TATO obtained a probability value of (0.1615) > 0.05 with a coefficient of -0.1150, which means that the activity ratio has no effect on the Zmijewski value at the 5% significance level. These results align with Kholisoh and Dwiarti (2020) and Restianti and Agustina (2018) research. The activity ratio (TATO) measures a company's ability to meet its short-term obligations. Thus, this activity ratio will not influence the three groups of companies based on financial distress trends.

Table 7. Panel data regression results of the financial distress regression model

	Common Effect	**Fixed Effect**	**Random Effect**
ROE	-2.5280*	-2.1524*	-2.6313*
	{0.0000}	{0.0000}	{0.0000}
CR	-0.0146*	-0.0218*	-0.361*
	{0.0104}	{0.0000}	{0.0000}
TATO	0.0556	-0.1150	-0.1078
	{0.7348}	{0.1615}	{0.5427}
DER	1,5645*	1.1549*	1.1043*
	{0.0000}	{0.0000}	{0.0000}
SALES_GROWTH	-0.0247	0.0005	-0.0087
	{0.2277}	{0.9377}	{0.3836}
IR	0.8260	0.3994	0.1588
	{0.3098}	{0.2872}	{0.8606}
LN_ER	-0.1368	0.0637	0.2829
	{0.5695}	{0.5799}	{0.3143}
C	-1.9394	-3.5835	-5.5806
	{0.4016}	{0.0013}	{0.0392}
R-squared	0.9546	0.9906	0.8144
Adjusted R-Squared	0.9535	0.9899	0.8099
F-statistic	878.642	1401.986	183.057
Prob(F-statistic)	0.0000*	0.0000*	0.0000*
N	300	300	300

Information: *significant at the 5% real level, {} probability value

Sales growth obtained a probability value of (0.9377) > 0.05 with a coefficient of 0.0005, which means that sales growth has no effect on the Zmijewski value at the 5% significance level. This is in line with research by Septarini and Bulan (2022), which states that property and real estate companies tend to use large debts to deal with their financial conditions so debt movements have more influence on financial distress conditions than profit movements. Thus, sales growth does not influence financial distress conditions in groups of companies where financial distress tends to worsen, improve or stagnate.

The interest rate has a probability value of (0.2872) > 0.05 with a coefficient of 0.3994, which means that the interest rate has no effect on the Zmijewski value at the 5% significance level. This happens because the large interest costs on debt have been agreed upon at the beginning of the loan contract so that an increase in the interest rate that is the company's burden does not affect the size of the company's existing interest costs (Nurrahmi 2023). Apart from that, the companies in the research sample are major companies with large total assets, so they are suspected to rely more on financing from their own capital or equity rather than bank loans. Thus, an increase in the interest rate will not affect the potential for financial distress in groups of companies with financial distress trends tending to worsen, improve, or stagnate.

The exchange rate has a probability value of (0.5799) > 0.05 with a coefficient of 0.0637, which means the exchange rate has no effect on the Zmijewski value at the 5% significance level. When the rupiah exchange rate weakens, inflation will increase and affect production costs and other company liability costs, thereby increasing the company's probability of experiencing financial distress. The results of the regression analysis are in line with research by Priyatnasari and Hartono (2019) and Myllariza (2021), which states that there is no influence of the rupiah exchange rate on financial distress because the hedging system implemented by Bank Indonesia protects company finances. Thus, an increase in the exchange rate, which increases the burden on companies in their operations and fulfilling their obligations, will not affect the potential for financial distress in groups of companies with financial distress trends tending to worsen, improve, or stagnate.

CONCLUSION

The results of the descriptive financial distress analysis of 15 property and real estate companies show that before the pandemic, there were 15 companies in healthy condition, but during the pandemic, there was one company experiencing financial distress, namely MDLN, due to a low profitability ratio (-0.033), a low liquidity ratio (1,260), and a high solvency ratio (1,819) compared to the average of other companies. Based on the direction of financial distress trends, three groups of companies were found that tended to get worse (low profitability/liquidity/activity/sales ratios, and high leverage), improve (high profitability/activity/sales ratios and low liquidity/leverage), and stagnate (high profitability/ liquidity/ activity ratios, and low leverage/sales).

Factors that influence the financial distress conditions of property and real estate companies are profitability ratios (return on equity/ ROE), liquidity ratios (current ratio/ CR), and leverage ratios (debt to equity ratio/ DER). Meanwhile, the activity ratio (total assets turnover/TATO), sales growth, interest rate, and rupiah exchange rate have no effect.

The results of the research can formulate several managerial implications for companies and the government that lead to increasing profitability and liquidity ratios, as well as controlling leverage ratios such as increasing company sales, maintaining smooth cash flow, supporting accessibility (infrastructure), and ease of licensing. Companies in the financial distress group that tend to worsen must improve the performance of profitability (ROE), liquidity (CR), and leverage (DER) in order to reduce the financial distress experienced. As for companies in the financial distress group that tend to improve, they must pay attention to liquidity performance (CR). Meanwhile, companies in the financial distress group that tend to be stagnant or stable must maintain the performance that has been achieved so far, so as not to experience a decline

and push the company into financial distress. Financial distress trends (tend to worsen, improve, and stagnate) can be used by companies or investors as an early warning system in predicting financial distress in property and real estate companies.

In choosing a company, it will be safer if investors choose a group of companies that are classified as stagnant or stable, where the company has consistently good financial performance over a certain period and carries out effective operational management. However, if the investor's goal is more to gain from fluctuations in the value of the shares of property companies, then they can choose to invest in a group of companies that tend to improve. Regarding government policies, in addition to the VAT-DTP fiscal incentive policy, it is also necessary to consider other stimuli that can affect the growth of business segments in the property and real estate sectors.

In this study, sample selection was aimed at main listed companies with large total assets. Therefore, it is recommended that future research determine samples from various company business scales or various property and real estate business segments (residential, commercial, and industrial). Financial distress studies of lower-middle property and real estate companies can also be carried out because companies of this scale are more vulnerable to experiencing financial distress conditions due to the structure of business capital, which tends to rely more on sources from banks than large-scale and capital-intensive companies. One of the limitations of this study is that it still uses a linear regression approach as an analytical tool. At the same time, the variable value (Zmijewksi) has a threshold value where a more appropriate method is a limited dependent variable.

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