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The Effect of Liquidity, Activity, Profitability, and Leverage on The Financial Distress of Properties And Real Estate Companies in 2019-2022

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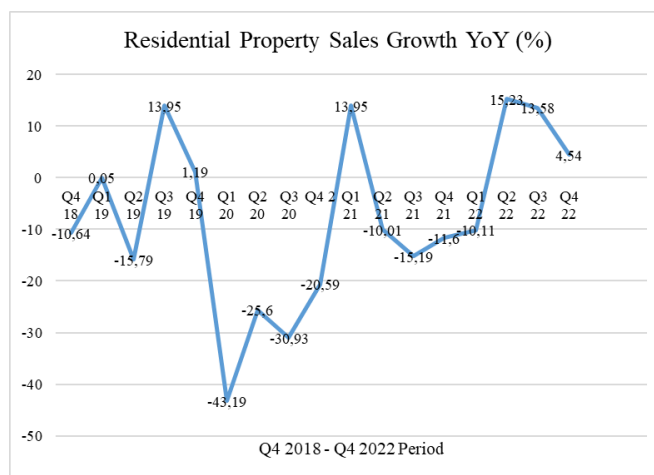
Abstract: *The purpose of this study is to examine how financial distress is affected by liquidity, activity, profitability, and leverage in real estate and property companies that are listed on the Indonesia Stock Exchange between 2019 and 2022. This study is inspired by the recent financial distress of major industry participants such as FORZ, COWL, MYRX, and ARMY. The approach in this study is quantitative, and the data was gathered using a documentation technique with a sample of 33 companies. This study is conducted with panel data regression using Eviews 12. The results of this study reveal that liquidity, activity, profitability, and leverage simultaneously have a significant impact on financial distress. Liquidity and profitability partially exhibit negative and significant effects on financial distress, while leverage has a positive and significant impact on financial distress. However, activity alone does not significantly affect financial distress. In addition, the findings affirm that the risk of financial distress can be influenced by financial factors such as liquidity, activity, profitability, and leverage.*

Keyword: Financial Distress, Financial Ratios, Liquidity, Activity, Profitability, Leverage

INTRODUCTION

The common objective and motive among all companies are to achieve goals such as profit generation, sales growth, maximizing corporate value, and enhancing shareholder welfare. In pursuit of these goals, companies must diligently work towards improving their overall performance, ensuring not only their continuity but also safeguarding against the threat of bankruptcy (Kisman & Krisandi, 2019). This underscores the need for businesses to strategically enhance their operational efficiency, financial stability, and resilience for long-term success.

Despite this awareness, numerous businesses often encounter challenges or even failures in the pursuit of these goals throughout their existence. This is evident in the property and real estate sectors, which experienced a decline in performance from 2019 to 2022, as illustrated by the following graph.



Source: (Bank Indonesia, n.d.)
Figure 1. Residential Property Sales Growth

The graph above depicts the negative trend in residential property sales growth. Simultaneously, there has been a phenomenon of financial distress faced by several property and real estate companies. Notable instances include PT Forza Land Indonesia Tbk (FORZ) in 2022, PT Cowell Development Tbk (COWL), PT Hanson Internasional Tbk (MYRX), and PT Armidian Karyatama (ARMY) in 2020, as declared through bankruptcy decisions issued by the Central Jakarta Commercial Court (Direktorat Jenderal Badan Peradilan Umum, 2022).

Financial distress is a condition when a company is unable to meet its obligations due to a depletion of funds resulting from a continuous decline in operational revenues that do not align with its impending debt obligations. This state suggests that the company is currently experiencing a financial crisis. If this situation persists, it poses a serious threat to the company's operational sustainability and exposes it to the risk of collapse or closure (Sutra & Mais, 2019). In essence, financial distress is a state in which a company encounters financial difficulties while conducting its activities, often serving as an early indicator before the company goes into actual bankruptcy (Kisman & Krisandi, 2019).

A critical factor contributing to financial distress in companies is the poor performance of financial management (Sehgal et al., 2021). As highlighted by (Astuti et al., 2022) in their book, financial management is pivotal for companies in determining the success or failure of a business as it serves as the foundation of organizational activities. The accomplishments of financial management can be measured through the analysis of financial statements. Several indicators in financial statement analysis include liquidity ratios, activity ratios, profitability ratios, and leverage ratios (Munawir, 2010).

High liquidity ratios indicate that a company can meet its short-term obligations using its current assets. Conversely, low liquidity poses challenges for fulfilling current liabilities, potentially leading to financial distress (Sutra & Mais, 2019). In this study, liquidity is proxied by the Quick Ratio, which is considered superior for depicting a company's liquidity as it excludes less liquid items like inventory and prepaid expenses that cannot be readily converted to cash and have low certainty levels (Utami & Dewi Kartika, 2019).

The slowdown in sales in the property and real estate sectors in recent years necessitates attention when assessing factors contributing to a company's financial distress. The company's revenue-generating effectiveness is measured by activity ratios, with a high Total Asset Turnover (TATO) indicating a healthy condition and resilience against the risk of financial distress (Bukhori et al., 2022).

Profitability plays a crucial role in a company's sustainability (Pradnyanita Sukmayanti & Triaryati, 2018). A lower profitability ratio indicates poor performance, which could harm

the company's finances and increase the possibility of financial difficulty (Pawitri & Alteza, 2020). Return On Assets (ROA) is used as a proxy for profitability in this study, measuring a company's effectiveness in generating profits from its assets (Hidayat & Dewi, 2022).

The inability to meet obligations when due is a symptom of financial distress (Septarini, 2022), often caused by a high level of obligations compared to assets (Pawitri & Alteza, 2020). Leverage ratios assess a firm's capacity to pay its debts. One such ratio is the Debt to Asset Ratio (DAR), which gives a comprehensive overview of the risk the company faces from its debt by comparing its entire debt to its assets (Bukhori et al., 2022).

Referring to the background, the following research problems can be formulated as follows: 1. Is there a significant negative effect of liquidity on financial distress?; 2. Is there a significant negative effect of activity on financial distress?; 3. Is there a significant negative effect of profitability on financial distress?; 4. Is there a significant positive effect of leverage on financial distress?; 5. Is there a significant effect of liquidity, activity, profitability, and leverage simultaneously on financial distress?

LITERATURE REVIEW

Agency Theory

Agency theory illustrates a contractual agreement between investors and company managers, whereby the former delegates decision-making authority to the latter by entrusting their funds and expecting efficient and profitable management (Jensen & Meckling, 1976). This theory explains the cooperative yet divergent relationship between investors and company managers engaged in disparate goals and risk attitudes (Angga Negoro & Wakan, 2022). The theory suggests that managers wield increased authority and information due to their direct involvement in company operations, potentially exploiting this for personal gain, thereby creating an agency problem (Dwi Urip Wardoyo et al., 2021). To mitigate this issue, transparency in the form of comprehensive reporting by company managers to investors is deemed essential (Luayyi, 2012).

Signalling Theory

Signaling theory suggests that corporate actions, such as the systematic creation of financial reports, can effectively convey information about a company's current state to both internal and external stakeholders (Restianti T & Agustina L, 2018). Managers generate financial reports as a form of accountability for the company's performance over a specific period, addressing the interests of both internal and external parties (Purwanti, 2021). These reports serve as signals, indicating a positive or negative indication of the company's performance and overall condition (Sutra & Mais, 2019).

Financial Distress

The state in which a company's operational outcomes fall short of meeting its financial obligations, leading to a state of crisis or financial difficulty, is referred to as financial distress (Maulida et al., 2018). Financial distress arises from poor financial performance, escalating business risks such as liquidity pressure, resulting in a decline in company assets and an inability to meet its commitments. Financial distress in this research is measured using the Modified Altman Z-Score as a proxy, with the formula as follows:

$$Z = 6.56 (X1) + 3.26 (X2) + 6.72 (X3) + 1.05 (X4)$$

Where :

X1 = Working Capital / Total Assets

X2 = Retained Earning / Total Assets

X3 = EBIT / Total Assets

X4 = Book Value of Equity / Book Value of Liability

A progressively larger Altman Z Score indicates that a company is moving further away from financial distress. The value depicted by the Altman Z Score linked to financial distress is inverted. This implies that a higher Altman Z Score represents a lower level of financial distress, while a lower Altman Z Score reflects a higher level of financial distress in a company (Max L. Heine, 2000).

Liquidity

Liquidity is a measure depicting a company's ability to meet its short-term financial obligations within a specified time frame (Sutra & Mais, 2019). The proxy for liquidity ratio used in this research is the Quick ratio, with the formula as follows:

$$\text{Quick Ratio} = (\text{Current Assets} - \text{Inventory} - \text{Prepaid Expenses}) / \text{Current Liabilities}$$

Activity

Activity is a financial ratio that measures how effectively a company manages its resources or assets to generate revenue (Atika et al., 2016). The proxy for activity ratio used in this research is the Total Assets Turnover (TATO), with the formula as follows:

$$\text{TATO} = \text{Total Revenue} / \text{Total Assets}$$

Profitability

Profitability can be defined as a key indicator of a company's financial performance commonly used to measure the effectiveness of a company in generating profits from its operational activities by leveraging assets, sales, and capital (Damayanti & Sucipto, 2022). The proxy for profitability ratio used in this research is the Return On Assets (ROA), with the formula as follows:

$$\text{ROA} = \text{Net Income} / \text{Total Assets}$$

Leverage

Leverage is a financial ratio that measures the extent to which a company's assets or capital are funded through external debt (Damayanti & Sucipto, 2022). The proxy for leverage ratio used in this research is the Debt to Assets Ratio (DAR), with the formula as follows:

$$\text{DAR} = \text{Total Debt} / \text{Total Assets}$$

METHOD

This research adopts a quantitative approach to investigate the relationship between variables. The data obtained for this research is secondary data from the financial reports of sample companies. The method of data collection involves using documentation techniques to gather relevant information from the financial reports of the sample companies. The sampling technique used in this research is purposive sampling, resulting in 33 sample companies out of the population of 84 companies in the property and real estate sectors in IDX 2019-2022.

To analyze the collected data, this study utilizes panel data regression through EViews 12 application. This research conducts several tests to ensure the robustness of the findings and to obtain answers to the hypothesis. Firstly, the most appropriate panel data regression model is assessed through the Chow test and the Hausman test. Subsequently, classical assumption tests like the multicollinearity test and the heteroscedasticity test are applied to evaluate and ensure the statistical soundness of the analysis. Furthermore, simultant hypothesis and partial hypothesis testing is conducted to ascertain the significance of the identified effect between variables.

RESULTS AND DISCUSSION

Results

The following table shows the descriptive statistics generated from the processed variables data:

Table 1. Descriptive Statistic

	Altman	QR	TATO	ROA	DAR
Mean	5.4936	1.2465	0.1337	0.0117	0.2004
Median	4.4444	0.7053	0.1369	0.0097	0.1872
Max	25.6102	12.2285	0.3099	0.2774	0.5398
Min	-2.7304	0.0463	0.0043	-0.3752	0.0000
Std. Dev.	4.7817	1.5787	0.074	0.0649	0.1361
Observations	132	132	132	132	132

Source: Research data, *Eviews 12*

From an analysis of 33 samples representing property and real estate companies from 2019–2022, it can be seen that the total number of observations is 132. The estimated averages reveal an Altman Z-Score of 5.4936, a Quick Ratio of 1.2465, a TATO of 0.1337, a ROA of 0.0117, and a DAR of 0.2004.

The maximum value of Altman Z Score is 25.6102, quick ratio is 12.2285, TATO is 0.3099, ROA is 0.2774, and DAR is 0.5398. While the minimum value of Altman Z Score is -2.7304, which indicates a serious condition of financial distress, quick ratio is 0.0463, TATO is 0.0043, ROA is -0.3752, the negative represents that the company was experiencing loss, and DAR is 0.0000.

To determine the optimal panel data regression model among the Common Effect Model, Fixed Effect Model, and Random Effect Model, various tests are conducted to identify the suitable model and enhance the reliability of the regression analysis, ensuring that the chosen model corresponds well with the data characteristics (Zulfikar, 2018).

Table 2. Chow Test

Effects Test	d.f.	Prob.
Cross-Section F	(32.95)	0.0000
Cross-Section Chi-Square	388.5076	0.0000

Source: Research data, *Eviews 12*

Based on the results of the Chow test above, it can be identified that the probability score is less than 0.05, indicating that the Fixed Effect Model is preferred over the Common Effect Model. Therefore, the analysis proceeds to the Hausman test.

Table 3. Hausman Test

Test Summary	Chi-Sq.	Chi-Sq. d.f.	Prob.
Cross-Section Random	18.3271	4	0.0011

Source: Research data, *Eviews 12*

Based on the results of the Hausman test above, it can be identified that the probability score is less than 0.05, indicating that the Fixed Effect Model is preferred over the Random Effect Model. Therefore, it can be concluded that the most appropriate panel data regression model for this research is the Fixed Effect Model.

To ensure the adherence of the regression model to classical assumptions, a series of classical assumption tests were conducted in the analysis, as below:

Table 4. Multicollinearity Test

	QR	TATO	ROA	DAR
QR	1.0000	-0.2108	0.1172	-0.1977
TATO	-0.2108	1.0000	0.2052	-0.0003
ROA	0.1172	0.2052	1.0000	-0.2221
DAR	-0.1977	-0.0003	-0,2221	1.0000

Source: Research data, *Eviews 12*

The examination of the correlation among independent variables reveals that none exceeds the value of 0.8. This indicates that the data processed in this research is free of multicollinearity symptoms, ensuring the integrity of the regression analysis and mitigating potential issues associated with high inter-variable correlations.

Table 5. Heteroscedasticity Test

Variables	Prob.
C	0.1034
QR	0.1940
TATO	0.9911
ROA	0.9386
DAR	0.6673

Source: Research data, *Eviews 12*

From the heteroskedasticity test outcome using the absolute residual test (Glejser), it is evident that the probability of each variable is greater than 0.05. Therefore, it can be concluded that the data processed in this research is free from heteroskedasticity, indicating robustness in the variance across the variables under analysis.

Given the previous findings, which have determined the fixed effect model as the preferred model for panel data regression, the output of the fixed effect model utilized for hypothesis testing is as follows:

Table 6. Fixed Effect Model Panel Data Regression

Variables	Coefficient	Std, Error	t-statistic	Prob.
QR	0.3191	0.0729	4.3788	0.0000
TATO	1.2296	2.6961	0.4561	0.6494
ROA	10.1026	1.7316	5.8342	0.0000
DAR	-6.5832	2.0352	-3.2348	0.0017
C	6.1323	0.525	11.6810	0.0000

R-squared	0.9734
Adjusted R-squared	0.9633
F-statistic	96.4203
Prob(F-statistic)	0.0000

Source: Research data, *Eviews 12*

The results obtained from the panel data regression analysis reveal a remarkable Adjusted R-Squared value of 0.9633, implying that approximately 96.33% of the variability in the dependent variable, financial distress, is explained by the independent variables—namely, liquidity, activity, profitability, and leverage. This high Adjusted R-Squared underscores the significant collective contribution of these variables to the predictive power of the model.

Additionally, the F-statistics score is 96.42, greater than F-table of 2.9467, and the probability was found to be 0.0000, which is below the conventional significance level of 0.05 (<0.05). This suggests that liquidity, activity, profitability, and leverage ratios all collectively play a significant role in determining financial distress.

Moving forward to assess the partial effects among the variables, it is notable that t-statistic is 4.3788 which is greater than t-table of 1.692, and the significance value associated with the quick ratio variable is 0.0000 which falls below the error of 0.05 (<0.05). These indicate that H1 is accepted and demonstrating that the liquidity ratio has a significant impact on financial distress. The correlation coefficient between the quick ratio and the Altman Z-Score is 0.3191, signifying a negative direction of its influence on financial distress.

The observed significance value associated with the TATO variable is 0.6494 which is above the error of 0.05 (>0.05), and the t-statistic is 0.4561 which is lower than the t-table. These results suggest that H0 is accepted, confirming that the activity ratio does not significantly influence financial distress.

The significance value associated with the ROA variable is 0.0000 which falls below the error of 0.05 (<0.05), and the t-statistic of this variable equals to 5.8342 which is above the t-table. These results indicate that H1 has been accepted, confirming that the profitability ratio significantly influences financial distress. The correlation coefficient between ROA and Altman Z Score is recorded at 10.1026, suggesting that the influence of ROA on financial distress is negative.

Finally, the t-statistic of DAR is -3.2348, this number is lower than the t-table of -1.692, and the significance value for the DAR variable is 0.0017, falling below the error of 0.05 (<0.05). These results explain the significant influence of the leverage ratio on financial distress. The correlation coefficient between DAR and the Altman Z Score is recorded at -6.5832, indicating that DAR has either a positive influence on the Altman Z Score or, consequently, financial distress. This outcome confirms the acceptance of H1, which assumes that leverage has a positive and significant impact on financial distress.

Discussion

In this study, liquidity exhibits a negative influence on financial distress. This can be explained by the higher liquidity levels, which can provide companies with accessible funds to cover their current liabilities. Consequently, companies with increased liquidity are less prone to financial difficulties or low financial distress, and vice versa (Dwiantari et al., 2021). Other research also suggests that high liquidity can be utilized for investment opportunities, generating positive cash flows that serve to mitigate the potential for financial distress. Conversely, low liquidity may impede operations, prompting investors to withdraw their funds from the company, exacerbating liquidity issues and leading to financial distress (Bukhori et al., 2022). These findings align with previous research by (Kisman & Krisandi, 2019; Lumbantobing, 2020; Masdupi et al., 2018; Setyawati et al., 2023).

The insignificant impact of activity ratios on financial distress demonstrated that a company can experience financial difficulties regardless of its total asset turnover. When a company has high sales, it also comes with substantial costs that need to be covered. This means that whether a company has poor or excellent activity ratios, if its expenses are poorly

managed, it faces an equal likelihood of experiencing financial distress. (Bernardin & Indriani, 2020; Restianti T & Agustina L, 2018). This findings is in line with (Lumbantobing, 2020; Pawitri & Alteza, 2020; Septarini, 2022).

High profitability is a sign that a business has made the best use of its resources to produce maximum earnings, which means that there are enough assets available for retention or operational funding even in challenging economic conditions. This helps to explain why profitability has a significant negative impact on financial distress. The higher the profitability, the lower the likelihood that the business will run into financial difficulty or financial distress (Arini et al., 2021; Sasongko et al., 2021). These results are consistent with research by (Angga Negoro & Wakan, 2022; Arini et al., 2021; Kisman & Krisandi, 2019).

The greater the company's debt, the higher the liabilities and interest expenses that the company must fulfill in the future. This circumstance can elevate the risk of default or financial difficulties, thereby escalating the potential threat of financial distress (Pawitri & Alteza, 2020). This phenomenon explains the positive impact of leverage on financial distress. Another explanation suggests that the increased risk resulting from huge debt may lead to a loss of investor confidence in the company. As a consequence, investors might withdraw their funds from the company, further complicating the company's financial position as it struggles to meet investor withdrawals using its available assets (Bukhori et al., 2022). The outcome of this research is in accordance with the research conducted by (Azis, 2021; Dwiantari et al., 2021; Kisman & Krisandi, 2019; Setyawati et al., 2023).

The simultaneous and significant impact of liquidity, activity, profitability, and leverage on financial distress explains that when these metrics are evaluated in tandem, their collective influence offers a comprehensive understanding of the factors contributing to financial distress. This holistic assessment allows for a complex interpretation of financial distress, capturing the multifaceted nature of these interconnected financial variables (Arini et al., 2021; Sasongko et al., 2021). This outcome aligns with previous research findings by (Arini et al., 2021; Kisman & Krisandi, 2019; Sasongko et al., 2021), validating the simultaneous influence of these financial metrics on financial distress phenomena.

CONCLUSION

In accordance to the research findings and discussions related to the study on the impact of liquidity, activity, profitability, and leverage on financial distress, it can be concluded that: 1. Liquidity has a significant negative effect on financial distress; 2. Activity has no significant negative effect on financial distress; 3. Profitability has a significant negative effect on financial distress; 4. Leverage has a significant positive effect on financial distress; 5. Liquidity, activity, profitability, and leverage simultaneously have a significant impact on financial distress. Based on these conclusion, it is important to take serious considerations on these financial metrics to identifies the risk of financial distress nearly in the future.

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