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# The Effect of Liquidity, Profitability, Operating Cash Flow, and Ownership Structure on Financial Distress (Study on Property and Real Estate Companies Listed on the IDX)

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**ABSTRACT**

Financial distress is recognized as the preliminary phase of bankruptcy, resulting from numerous financial and non-financial factors. This study aims to assess the effect of liquidity, profitability, operating cash flow as financial ratios, also managerial and institutional ownership as ownership structure on financial distress. This study use real estate and property companies listed on the Indonesia Stock Exchange (IDX) in the period 2018-2021 as the population. From a total of 80 companies, 28 were selected as the sample for this study using a purposive sampling method that applies several specific criteria. The data were processed using SPSS version 25 with a quantitative approach through multiple linear regression analysis techniques. Since the classical assumption test results of this research do not meet the requirements, the data are modified using log-modulus transformation. The results show that liquidity, profitability, and operating cash flow variables affect financial distress. Moreover, managerial ownership and institutional ownership do not affect financial distress. The results of this study suggest that management should be able to maintain financial performance efficiently to avoid financial distress.

**Keywords:** Financial Distress, Institutional Ownership, Liquidity, Managerial Ownership, Operating Cash Flow, Profitability

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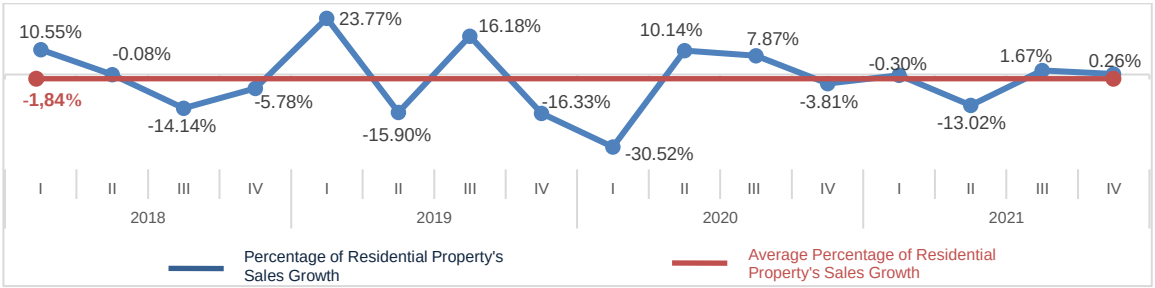
## INTRODUCTION

Globally, the world economy has experienced instability due to China and US trade wars in 2018 and the COVID-19 pandemic in 2021. These circumstances have also rendered the economy in Indonesia less conducive, including in the property and real estate sector. The impact of this outbreak is reflected through the uncertainty of stock prices, where around the world have shown different degrees (Gusti, Yuliarto, & Kusrini, 2021). The strong relationship between the country's economic conditions and the property and real estate sector can be seen in Grahadyarini (2023) who state that in Indonesia, property and real estate sector is linked to 185 other industrial sectors and employs around 20 million workers. As a result of this multiplier effect, there are many expectations that this sector could boost the country's economy. However, in reality, this sector has facing some issues. Firstly, residential property's sales growth has been very slow and some of them stay below 0 with an average of -1,84%. This can be seen in figure 1.

**Figure 1. Percentage Chart of Residential Property Sales Growth**




Source: Survei Harga Properti Residensial (SHPR) Report of Bank Indonesia, 2018 – 2021.

The sharpest decline occurred in the first quarter of 2020 where the performance of property issuers on average experienced a decline in revenue and net profit of up to 60% (Fadliyansyah, 2020). A decrease in sales growth of residential properties could pose financial challenges for companies operating within this sector, as well as those in related sectors such as construction and financing.

Furthermore, in 2020, there are numerous companies in this sector that were suspended due to the involvement of their shareholders in the Asabri-Jiwasraya's investment fund corruption case. PT Hanson International (MYRX) and PT Rimo International Lestari (RIMO), partly owned by their main director, PT Asabri, and PT Jiwasraya, received suspensions and repeated delisting warnings from the IDX. As such, PT Bliss Properti Indonesia (POSA) and PT Armidian Karyatama (ARMY) also recently received suspensions due to some of their shares being affiliated with the main director of PT Hanson International. In line with Azizah and Ramli (2023), the IDX usually suspends or delists shares from the list of traded shares due to financial difficulties or financial distress of the companies involved.

Financial distress can be detected at an early stage by examining a company's financial performance which usually prepared on financial statement. The analysis results of a company's financial statements can provide fundamental data for decision-making by company owners, managers, and stakeholders (Dirman, 2021). There are various significant financial indicators commonly used to anticipate financial difficulties during a specific period, such as liquidity, profitability, leverage, and cash flow (Fatimah, Toha, & Prakoso, 2019).

The capacity of a bussiness to finance its operations and meet short-term liabilities may be indicated using liquidity (Hakim, Abbas, & Nasution, 2020). Next ratio is profitability which applied in measuring capability of the company to generate profit in a particular period (Kasmir, 2019). The other instrument is the operating cash flow ratio, which forms part of the cash flow ratio. Apart from using financial performance, ownership structure can also be used in analysing the occurrence of financial distress. Ownership structure can be categorised into institutional ownership and individual ownership. A share that owned by an institution or organisation such as banks, private companies, and other institutions is called as institutional ownership (Suryadi & Serly, 2022). Managerial ownership is part of individual ownership. The proportion of shares held by the company's management is explained by managerial ownership (Kurniawati & Aligarh, 2021).

In previous studies there is a research gap where between one study and another has different results in evaluating the effect of financial performance and ownership structure on financial distress. Due to the research gap and some previously-discussed problems, this study want to identify the impact of liquidity, profitability, operating cash flow, managerial ownership, and institutional ownership on financial distress of the property and real estate sector listed on the IDX through empirical evidence.

## LITERATURE REVIEW

### Agency Theory

Agency theory explained as a contract between management (agent) and the owner (principal) (Jensen & Meckling, 1976; Finishtya, 2019). In a recent study by Panda and Leepsa (2017), agency problems can be classified into three types. Type-1, principal-agent, is where problems arise due to corporate control, information asymmetry, and a lack of proper monitoring. Type-2, principal-principal, where problems arise due to majority shareholders dominate decision-making. Lastly, type-3, principal-creditor, is characterized by differences in risk preferences. Agency theory is considered to be able to reduce the possibility of financial difficulties (Kurniawati & Aligarh, 2021).

### Signalling Theory

According to Brigham and Houston (2019), companies provide investors with indications of how management views the company's prospects through signals because it contains information, records, or descriptions of the company. This theory is appropriate to explain the relationship between financial distress with financial performance and ownership structure because company stakeholders can make the right decision after knowing the company's health condition through the signals provided.

### Financial Distress

Financial distress usually known as company's status when it is on the edge of liquidation or bankruptcy. The reasons for financial distress mainly arise from internal factors at a micro level, including cash flow difficulties, high levels of debt, and sustained losses over several years, meanwhile, external factors are in macro level, such as government policies on tax rates and loan interest rates (Damodaran, 2001; Fitri & Syamwil, 2020). One of the models that can be used as bankruptcy prediction is the Grover model. This model founded by Jeffrey S. Grover in 2001 by using a sample based on the Altman Z-Score model and incorporates thirteen additional financial ratios. Fitriyani's (2023) research indicates that the Grover method yields the most precise results compared to other methods.

**Liquidity**
Liquidity shows company's capability on using its current asset when fulfilling short-term obligations. High liquidity suggests lower chances of financial distress for a company and vice versa. This ratio may be applied to be a measurng tool of the company's ability on paying its liabilities, identify the company's weaknesses and be a trigger for management to improve performance. Kasmir (2019) identifies various types of liquidity ratios, including acid-test ratios, current ratios, cash ratios, and cash turnover ratios.

**Profitability**
Profitability refers to a company's capability on generating profits. High levels of profitability indicate that the company is resilient to financial difficulties (Purwaningsih & Safitri, 2022). This ratio can be utilised to examine the company's ability on gaining profit, assess the position of profit and measure the profit trend over time (Hery, 2018). According to Kasmir (2019), there are four types of profitability ratios - net profit return on equity (ROE), margin on sales (NPM), earnings per share of common stock, and return on assets (ROA).

**Operating Cash Flow**
PSAK No. 2 (Revised 2016) state that operating cash flow is a useful measure of an entity's ability on earning cash to repay debt, pay dividends and make new investments without recourse to external financing. Investors like to focus their attention on operating cash flow to evaluate which the company is able to pay dividends. Investors can also assess management performance by looking at the company's operating cash flow (Mondayri & Tresnajaya, 2020).

**Ownership Structure**
Ownership structure is important because the ratio between the number of shares owned by internal parties (management) and by external parties (investors). This aspect is important because this structure addresses the relationship between inside investors and outside investors. Sujatmika & Suryaningsum (2014) argue that ownership structure based on ownership type is categorised into two, namely institutional ownership and individual ownership.

Proportion of share ownership by institutions, namely ownership by other companies or institutions is called institutional ownership (Pandegirot, Van Rate, & Tulung, 2019). Institutional share ownership will provide encouragement for management to work better in improving company performance because management is being supervised in order to make the company prevent the possibility of financial distress. One form of individual ownership is managerial ownership. This type of ownership is referred to as director or manager share ownership within the firm. If the managerial ownership is high, it will encourage management to develop its performance and not only care about its own interests (Raflis & Arita, 2021).

**The Hypothesis**
***The Effect of Liquidity on Financial Distress***
The liquidity ratio in this study is the current ratio (CR) whose calculation is obtained from current assets divided by current debt. The high of the current ratio will show the ability of the company on paying off obligations and paying off interest expenses through funding from current assets. Research conducted by Hakim, Abbas, and Nasution (2020), Feanie and Dillak (2021), and Sukarno, Yacobus, and Satmoko (2023) shows that liquidity with the current ratio proxy affects financial distress.

H1 = Liquidity affects financial distress.

***The Effect of Profitability on Financial Distress***

This study use net profit margin (NPM) as the profitability ratio which calculates profit against sales. Adequate profit that calculated in net profit margin and can be distributed to shareholders is profit after interest and tax. The higher NPM ratio, the more efficient the company's management in earning profits and improving financial performance and decreasing chances of facing financial distress. Research by Stephanie et al (2020), Afiezan et al (2021), and Purwaningsih and Safitri (2022) show that profitability affects financial distress.

H2 = Profitability affects financial distress.

***The Effect of Operating Cash Flow on Financial Distress***

Operating cash flow in this study use OCF with the calculation on operating cash flow divided by current liability.The increasing cash flow may lead to the increasing of the company's profit and will cause the possibility of the company experiencing financial distress to become smaller (Annabila & Rasyid, 2022). Research conducted by Ramadhanti & Subagyo (2022) and Syuhada et al (2020) state that operating cash flow affects financial distress conditions.

H3 = Operating cash flow affects financial distress.

***The Effect of Managerial Ownership on Financial Distress***

Managerial ownership in this study use MO with the calculaion on share owned by managerial divided by total outstanding shares. This ratio is useful to overcome agency conflicts because it is considered capable of aligning the level of interest between managers and external parties (Ramadhanti & Subagyo, 2022). Research conducted by Feanie & Dillak (2021) and Nilasari (2021) concluded that managerial ownership affects financial distress conditions.

H4 = Managerial ownership affects financial distress.

***The Effect of Institusional Ownership on Financial Distress***

Institutional ownership in this study use IO with the calculaion on share owned by other institution divided by total outstanding shares. Institutional ownership with an amount above 5% will make supervision and control of management performance tighter (Widhiadnyana & Ratnadi, 2018). An enhanced monitoring process would ensure managers do not make decisions that could lead to financial distress. Research conducted by Pranita and Kristanti (2021) and Ramadhanti & Subagyo (2022) concluded that financial distress affected by institutional ownership.

H5 = Institutional ownership affects financial distress.

## RESEARCH METHOD

This research employs a quantitative methodology with secondary data consisting of financial reports from the company. The population used in this study are property and real estate sector companies listed on the Indonesia Stock Exchange (IDX) from 2018 to 2021. Data sources come from the Indonesia Stock Exchange (IDX) publication site, each company's website, and other supporting sources. The sampling technique used is the purposive sampling method with the following criteria.

**Table 1. Purposive Sampling Method**

| No. | Criteria | Number of Companies |
|---|---|---|
| 1 | Property and real estate companies listed on the Indonesia Stock Exchange (IDX) | 80 |
| 2 | Property and real estate companies listed on the Indonesia Stock Exchange (IDX) on the 2018-2021 period | (23) |
| 3 | Property and real estate companies on IDX that did not report financial statements on 2018 - 2021 period | (8) |
| 4 | Property and real estate companies that do not report information needed in this study on 2018 – 2021 period | (21) |
| | Number of companies that pass the criteria | 28 |
| | Number of observation's year | 4 |
| | Number of analysis unit | 112 |

To test the effect of one independent variable on the dependent variable, this study use multiplier linear regression (Ghozali, 2018). The multiple linear regression was used in this study:

$$Y = a + b1X1 + b2X2 + b3X3 + b4X4 + b5X5e$$

## RESULTS

### Descriptive Statistical Analysis

This analysis is being applied to get the descriptive data of of each variable.

**Table 2. Descriptive Statistical Analysis Result (*N* = 112)**

| | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|
| CR (X1) | ,15 | 24,80 | 2,9584 | 3,36986 |
| NPM (X2) | -3,07 | 1,70 | ,0015 | ,72113 |
| OCF (X3) | -4,74 | 2,48 | ,1298 | ,82760 |
| MO (X4) | ,00 | ,77 | ,0923 | ,19138 |
| IO (X5) | ,00 | 1,00 | ,7784 | ,24898 |
| FD (Y) | -,38 | 1,60 | ,4178 | ,40536 |

### Normality Test

This test applied to assess the contribution of the dependent variable regression model and the independent variable. This research will be tested using non-parametric Kolmogorov Smirnov (K-S) statistics. The result shows that the value of Asymp. Sig. (2-tailed) of 0.095. It indicates that the data in this study follows a normal distribution, as the probability value has exceeded 5%.

### Classic Assumption Test

#### *Heteroscedasticity Test – Before Transformation*

Heteroscedasticity refers to imbalance of the variance of the residuals for all outcomes in the regression model. The researchers in this study applied the Spearman test. The probability result will be called significant if the value is above the confidence level of 5% (Ghozali, 2018).

**Table 3. Heteroscedasticity Test Using Spearman Test Result**

| Variabel | Sig. | Conclusion |
|---|---|---|
| CR (X1) | 0,000 | Heteroscedasticity occurs |
| NPM (X2) | 0,506 | Heteroscedasticity doesn't occurs |
| OCF (X3) | 0,758 | Heteroscedasticity doesn't occurs |
| MO (X4) | 0,362 | Heteroscedasticity doesn't occurs |
| IO (X5) | 0,100 | Heteroscedasticity doesn't occurs |

Based on table 3, data in this study will be transformed to reduce the level of heteroscedasticity.

***Data Transformation***

Data transformation is carried out with the aim of to change the measurement scale of the data into another form so that it can fulfil the assumptions of an analysis. According to John and Draper (1980), modification using log-modulus transformation can help distribute the amount of data while keeping the data number the same as the original scale. According to Triguerios and Sam (2016), the log-modulus formula is as follows:

$$sign(X)*log(abs(X)+1)$$

In this study, the transformed data is added with underscore 2 (_2) on the back to facilitate identification between data.

***Heteroscedasticity Test – After Transformation***

After being retested, there was no evidence of heteroscedasticity in the research data, as the probability value exceeded 0.05.

**Table 4. Heteroscedasticity Test Using Spearman Test Result**

| Variabel | Sig. | Conclusion |
|---|---|---|
| CR (X1) | 0,220 | Heteroscedasticity doesn't occurs |
| NPM (X2) | 0,490 | Heteroscedasticity doesn't occurs |
| OCF (X3) | 0,864 | Heteroscedasticity doesn't occurs |
| MO (X4) | 0,400 | Heteroscedasticity doesn't occurs |
| IO (X5) | 0,251 | Heteroscedasticity doesn't occurs |

***Autocorrelation Test***

This test is applied to test the linear regression model which use the Run-Test (Ghozali, 2018).

**Table 5. Autocorrelation Test Using Run Test Result**

| | Unstandardized Residual | Conslusion |
|---|---|---|
| Asymp. Sig. (2-tailed) | ,849 | Autocorrelation doesn't occur |

***Multicollinearity Test***

This test is provided by the tolerance value and variance inflation factor (VIF). The tolerance value has a limit of ≤ 0.10, or the VIF value equivalent to ≥ 10 (Ghozali, 2018).

**Table 7. Multicollinearity Test Result**

| Variabel | Tolerance | VIF | Conclusion |
|---|---|---|---|
| CR (X1_2) | 0,766 | 1,306 | Multicollinearity doesn't occurs |
| NPM (X2_2) | 0,781 | 1,281 | Multicollinearity doesn't occurs |
| OCF (X3_2) | 0,856 | 1,168 | Multicollinearity doesn't occurs |
| MO (X4_2) | 0,430 | 2,324 | Multicollinearity doesn't occurs |
| IO (X5_2) | 0,429 | 2,329 | Multicollinearity doesn't occurs |

**Multiple Linear Regression Analysis Result**
The multiple linear regression test results produce a regression equation as follows:

$$Y = -0,036 + 0,288X1 + 0,170X2 + 0,197X3 + 0,137X4 + 0,044X5$$

**Hypothesis Test**
***Coefficient of Determination Test Result***
The result show that an Adjusted R Square value of 0.633 or 63.3%. This shows that the independent variables affect dependent variables in this study by 63.3%.

***Anova Test or F Test***
The regression results show that the significance value is 0.000 or smaller than 0.05, which means that the regression model can be used to predict financial distress and the independent variables are able to influence the dependent variable.

***Individual Parametric Test (T Statistical Test)***
The results of this test show that the liquidity ratio with current ratio proxy, profitability ratio with net profit margin proxy, and operating cash flow ratio have a significance value of 0.000 which indicates that H1, H2, and H3 are accepted. Meanwhile, managerial ownership and institutional ownership have a significance value of 0.398 and 0.771 consecutively, which means that H4 and H5 are not accepted.

## DISCUSSION

**Liquidity on Financial Distress**
This study results show that when the liquidity ratio is high, the G-Score value would also go higher which indicates that the probability of financial distress is getting smaller.

In terms of agency theory, low liquidity associated with a decrease in outstanding debt that is not accompanied by an increase in assets will make debtors reluctant to provide funding. If this situation continues for a long time, it can cause financial distress. Similarly, signal theory states that when the company is liquid, investors will receive it as a good signal sign that the company is able to settle its short-term debt. This can make the company get more funding from investors so as to reduce the probability of the company experiencing financial distress. The results of this study are in line with research by Hakim, Abbas, and Nasution (2020), Syuhada et al (2020), and Avianty & Lestari (2023) which state that liquidity affects financial distress.

**Profitability on Financial Distress**
The results of this study indicate that the higher the profitability ratio with the net profit margin proxy, the higher the G-Score value which indicates that the probability of financial distress is getting smaller. Agency theory argues that management can manage all activities within the company including generating profits and increasing profitability.

The results of this study are in line with agency theory which argues that management can manage all activities within the company including generating profits and increasing profitability. In addition, this study also supports the signal theory which states that the net profit margin reported by the company, the information can be received as a good signal, while if the loss reported by the company will be received as a bad signal and will be a consideration for investors in investing their funds in the company. The results of this study are in line with research by Hakim, Abbas, and Nasution (2020), Afiezan et al, and Christy & Natalylova (2023) which state that profitability affects financial distress.

**Operating Cash Flow on Financial Distress**

The results of this study indicate that the increasing of the operating cash flow ratio in line with the G-Score value which indicates that the probability of financial distress is getting smaller. This can occur because operating cash flow have an significant part in determining the continuity of the firm, where operating cash flow directly related to the company's business (Mondayri & Tresnajaya, 2022).

As said in signal theory, management will send good signals to investors when it has efficient cash flow management because it indicates that the company has sufficient cash to finance its obligations, thus they can avoid the potential for financial distress. This is accordance with the research of Afiezan et al (2021) dan Bachtiar & Handayani (2022), which state that operating cash flow affects financial distress.

**Managerial Ownership on Financial Distress**

The results of this study indicate that managerial ownership is unable to influence financial distress. This can occur due to some companies in this sector in Indonesia having a relatively small amount of managerial ownership. Thus, the majority shareholder will dominate decision making.

The incapacity of managerial ownership in influencing financial distress is partly due to the companies in property and real estate sector in Indonesia which has a relatively small amount of managerial ownership. When the proportion of managerial ownership of a company is small, the role of management in making decisions will also be small and it is very difficult to be able to influence financial distress conditions. This is related to the type-2 agency theory which states that majority shareholders will dominate decision making, so that minority shareholders only follow without influencing decisions.

In addition, in Law Number 40 of 2007 in article 85 section 4 that in voting, members of the board of directors, members of the board of commissioners, and employees of the company concerned are prohibited from acting as proxies for shareholders. This rule explains that managerial ownership will not be able to control decision making over the company in order to avoid financial distress. Company owners and management who are still in the family sphere or there is a family relationship can cause managerial shareholders' decisions to be inseparable from the decisions made by the company owner.

The results of this study are in line with the results of research by Hakim, Abbas, and Nasution (2020), and Nilasari (2021) which state that managerial ownership has no effect on financial distress.

**Institusional Ownership on Financial Distress**

The results of this study indicate that institutional ownership is unable to influence financial distress. This can happen because in the property and real estate sector, many companies have institutional ownership mostly owned by one shareholder. Where centralised ownership causes the inability of institutions to supervise management regardless of investor interests.

Based on agency theory, high institutional ownership will help oversee management performance. In the other hand, the decisions to be taken by the company do not fully come from the institutional party, because the company's financial condition is more influenced by the company's own managers, namely management. Property and real estate sector companies in Indonesia listed on the IDX in the 2018-2021 period tend to have institutional ownership, which is mostly owned by one shareholder. One example is PT Pakuwon Jati Tbk (PWON), which in 2020 the institutional ownership is only owned by PT Pakuwon Arthaniaga by 69%.

According to Bodroastuti (2009) in Kusanti & Andayani (2015), centralized and uneven ownership will cause the inability of institutions to supervise management so that management has the possibility to make policies that can benefit themselves regardless of investor interests.

Thus, with the presence or absence of institutional ownership, the company will still have a probability of experiencing financial distress. This research is in line with the research of Hakim, Abbas, and Nasution (2020), Pranita and Kristanti, (2020) and Feanie & Dillak (2021) which state that institutional ownership has no effect on financial distress.

## CONCLUSION

According to the analysis on this research, it can be summarized that liquidity could effect on financial distress. Then, profitability can influence financial distress. Also, operating cash flow has an impact on financial distress. Meanwhile, managerial ownership and institutional ownership have no effect on financial distress. Researchers suggest that further research explore other variables, both microeconomically and macroeconomically. Furthermore, companies have to pay more attention to the use of Law Number 40 of 2007 concerning Limited Liability Companies, Law Number 5 of 1999 concerning Prohibition of Monopolistic Practices, and Unfair Business Competition, and also try to establish regulations that secure the lawful concerns of minority shareholders even though managerial ownership and institutional ownership are not proven to have an influence on financial distress in this study.

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## DECLARATION OF CONFLICTING INTERESTS

We state that we dont have any conflict of interest with the WIMAYA Yogyakarta 2023 or staff from AIPBM or any conflict regarding the publication of this article.

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