Factors Influencing Cash Holding in Property, Real Estate, and Construction Companies

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Abstract: This study aims to examine academically the relationship between operating cash flow, growth opportunity, and financial distress on the company's cash holding. 43 samples were taken from 79 of property, real estate, and construction sector companies on the IDX period 2018 to 2021. Data analysis began with the multicollinearity and heteroscedasticity test. After that, a hypothesis test was carried out which consisted of a t-test and an R² test. The analysis was performed using Multiple Regression Model. The findings from this study are growth opportunity and operating cash flow have a positive effect on the company's cash holding, while financial distress has a negative effect on cash holding. The implication of this finding is that companies need to control the amount of cash holding so that the amount of cash supply in the company can be maintained at an optimal point so that the company can avoid bankruptcy.

Keywords: Cash Holding; Financial Distressed; Operating Cash Flow; Growth Opportunity.

INTRODUCTION

The existence of investment opportunities in companies belonging to the property, real estate, and construction sectors which are increasingly intensive in Indonesia is very interesting to study, especially with regard to Cash Holding in this group of companies. This is because currently activity in the property, real estate, and construction sectors has started to flourish, after experiencing a slowdown in activity during the pandemic.

Development in the property, real estate, and construction sectors does not only apply to Jakarta and the island of Java, but also extends to regions throughout Indonesia. The construction of toll roads throughout Indonesia is thousands of kilometers long. In Kalimantan, infrastructure development is also being carried out on a large scale to prepare for a new capital city.

Construction of housing and other properties seems to never stop because demand is also increasing. The impact of this development is that land prices continue to rise. The condition of rising land prices occurred in various regions in Indonesia such as Bandung,
Padang, Jakarta, even Papua and various other Indonesian regions. This increase in land prices is inseparable from the ongoing massive construction and infrastructure development which is planned to be completed in 2024 in several areas. This is also due to the increasing demand for property and real estate in line with the growing population of Indonesia, the construction of a new capital city, and the arrival of foreigners to invest. Moreover, according to data, the Indonesian property and real estate market, when Indonesia's economic situation was stable, there was an increase in property prices of around 8 per cent a year (Rachman, 2017). The factors that cause an increase in property prices every year can be caused by the following: a) The first is that the supply of land has never increased, the increasing number of people's requests for houses and other property while the large demand is not accompanied by an increase in land area or available buildings. b) The second cause is due to the increasing number of population which continues to increase every year. c) The third cause is due to inflation and the effects of infrastructure development that occurred in 2017. d) The fourth is the increase in the price of raw materials for the construction of houses and others. d) The fifth cause is due to an increase in the population of middle and upper class Indonesians, especially people who live in urban areas so that the need to own a property in urban areas will also increase.

As a result of high activity in the property, real estate and construction sectors with conditions of high demand for the products of this sector, many investors are interested in investing their money in the property and real estate sector, both local investors and foreign investors. This increase in property and real estate investment has the potential to influence the company's cash holding policy. This is because cash holding is an alternative source of funding that can be used from the internal side of the company to be used to finance investment activities and fulfill the company's operational financing needs.

Cash holding on generally interpreted as cash which provided by something organization or companies that are intended to minimize costs from outside the company, can be in the form of investment on the better assets available to fund when the company is faced with financial obligations that must be repaid, including when dealing with circumstances others that related to corporate spending. Every company will definitely try to implement the best investment policy, where the cash supply or cash return is maximized in the inventory company. Cash very important because related with ability for financing a number of activity something organization.

Referring to statistics market capital which released by OJK in the site www.ojk.go.id on month December 2020, show happening decline on index on sector real estate throughout 2020. Its stock index was IDR 396.820 at the end of December 2020 and experienced a decrease YTD the largest compared to other sectors, namely a decrease of 21.230 per cent. Transaction capital and equity in the property sector real estate of 5.480 per cent. This sector fell to the bottom third place under the two sectors others ie various industrial and agricultural sectors. Jakarta Composite Index (IHSG) at the end 2020 closed below the IDR. 6,000, to be precise, IDR 5,979,073. This figure is 5.090 per cent lower from beginning year. This figure then decreased due to the impact of the COVID-19 outbreak that hit Indonesia since early March 2020. On the national level, enactment Large Scale Social Restrictions, government rules which aims to inhibit its increase positive cases of COVID-19, raises impacts to performance market. Several project developments have had to experience temporary halts or delays due to regulations that prioritize medical procedures. Many businesses and developers are shocked by the economy due to this pandemic.
Mistakes in calculating a company's cash balance can lead to financial difficulties in the future and even bankruptcy of the company. An example experienced by an Indonesian company is the liquidity problem that occurred at PT. ELTY in 2018. At that time Bakrie Land’s debt structure reached IDR 4.170T, of which IDR 671.480 billion was owed to PT Bank Mayapada Internasional Tbk, IDR 313.500 billion was owed to PT Geo Link Indonesia (Ayuningtyas, 2019).

Corporate Cash Holding or the availability of company cash aims to build the ability to pay short-term debt, and also to fund investments that have promising opportunities, and use them as inventory in the event of unplanned expenses. A company should be free to manage cash at will. This means that available cash must be available to meet procurement or all company needs when needed. If funds are not managed properly, the company's operations have the potential to become difficult or impossible to run.

Operating cash flow is one of the parameters that can be referred to in determining the cash holding level of a company. Operating cash flow requires cash to be able to carry out its activities by financing or funding operational activities in the company. Referring to the research conducted by (Gupta and Bedi, 2019) and (Sethi and Swain, 2019). It was found that operating cash flow had a significant positive effect on Cash Holding. Meanwhile, based on research. (Thu and Khuong, 2018) found evidence that operating cash flow has a negative effect on cash holding.

Financial distress is known as a condition where a company is experiencing problems with a lack of funds to fulfill or pay the company's obligations, or liquidity difficulties that start with mild difficulties to a serious level so that the amount of debt is greater than the company's assets.

Research conducted by (Nafees et al., 2017) shows that there is a negative relationship between financial distress and corporate cash holding. Another study conducted by (Hadjaat et al., 2021) showed a positive relationship. This is also in line with research findings of (Aftab et al., 2018) that a positive relationship was found between financial distress and corporate cash holding.

Growth opportunities are a company's ability to develop in the future. In a study by (Serly and Melandy, 2021) states that growth opportunities have a unidirectional (positive) effect on corporate cash holding. These findings are in line with research findings by (Calvina and Setyawan, 2019) where growth opportunities have a positive impact on 'corporate cash holding'. This unidirectional or positive relationship is in contrast to research findings by (Sari and Intan, 2021) where there is a negative relationship between growth opportunities and corporate Cash Holding .

From the explanation above, it can be seen that research on Cash Holding in companies has so far not yielded similar results. In addition, there is still very little research on cash ownership in the property, real estate and construction group of companies on the Indonesia Stock Exchange after the pandemic and after the discourse of moving the capital to Kalimantan. Therefore, this research wants to be contributed as research whose results can later be used by related parties to develop their business or develop further research.

THEORETICAL REVIEW

The Grand Theory that supports this research consists of Trade-off Theory, Pecking Order Theory, and Free Cash Flow Theory.

**The Trade-Off Theory** states that the firm's value will be maximized when the
increase in the benefits of having cash equals the additional costs of having cash. Thus, the
cOMPANY maintains an optimal level of Cash Holding while taking into account the
marginal costs and benefits of holding cash. Holding funds reduces the possibility of
financial difficulties, reduces transaction costs, and provides greater opportunities to carry
out investment activities that were previously pessimistic that they could run due to
financial limitations (Guizani, 2017). Opportunity cost is the difference between cash
income and interest on loans that are made when needed. There are two motives for the
benefit of having cash. The trade off theory states that companies should get high benefits
when they are forced to pay increased costs due to cash holding policy decisions. High
quantity asset in the company will increase the company's tax aggressiveness (Rianto and
Sunandar, 2021).

**Pecking Order Theory** was developed by Myers and Majluf in 1984 to provide an
explanation of company investment and financial decisions based on the availability of
disproportionate information. This is because management has a better understanding than
outside investors regarding the company's profitability and future activity plans. So, if the
activity plan has the potential to make a profit, then a logical strategy to finance it is to
utilize the existing retained earnings. Asymmetric information comes from investors who
believe they know only a fraction about the company's opportunities, strengths, and value.
When a company maintains a surplus of its internal funding sources, it means the company
is repaying its debts as it raises cash and pays off its debts. On the other hand, insufficient
internal funding sources will reduce cash balances and increase debt. In this case, changes
in domestic resources determine changes in cash balances, whether these domestic
resources are used to collect cash or pay debts (Calvina and Setyawan, 2019).

**Free Cashflow Theory.** Referring to this theory a manager prefers to implement a
strategy of holding cash rather than distributing it to shareholders when investment
opportunities are dismal (Guizani, 2017). This theory assumes that company managers and
investors have unequal interests. The implication does not rule out the possibility of
managers using company money to support their interests. The greater the cash available,
the more managers have many options in using that cash. This kind of thing has the
potential to hurt investment and company value, distorting the company's core principle of
maximizing shareholder wealth. The existence of free cash flow is possible to be used by
managers for personal gain by placing the interests of shareholders in second place. The
Free Cash Flow does not indicate the optimal cash level.

**Operating Cash Flow** is cash that the company obtains from the results of carrying
out its business activities. The company's increasingly volatile cash flow will have an
increasingly volatile impact on profits (Thu and Khuong, 2018). If the cash flow received
(inflow) exceeds the cash outflow (outflow), then the amount of the company's net cash
flow will be positive, and also applies to the opposite situation. Cash flow describes the
amount of cash obtained through business activities. The results of research by (Gupta and
Bedi, 2019) show that cash flow has a positive impact on the company's Cash Holding.
(Sethi and Swain, 2019) found that operating cash flow had a positive effect on Cash
Holding. These findings are in line with research (Thu and Khuong, 2018) which found
that operating cash flows have a negative effect on corporate Cash Holding.

**Financial distress** is defined as a condition experienced by a company when the
company is unable to achieve adequate profit or income. The Z-Score is a measure of
financial distress. To reduce the risk of default, companies must increase their level of
Cash Holding (Nafees et al., 2017). This condition causes the company to be unable to
Financial distress is a phase where there is a decline in financial performance that has the potential for the company to be liquidated and go bankrupt. Financial distress is a condition in which a company is experiencing difficulty with funds to meet or pay the company's obligations or liquidity difficulties that start with mild difficulties to a serious level so that the amount of debt is greater than the company's assets. Research performed by (Nafees et al., 2017) shows there is a negative relation between financial distress and corporate cash holding. Another research performed by (Hadjaat et al., 2021) showed a positive relationship. This is also supported by research (Aftab et al., 2018) that a positive relationship was found between financial distress and corporate cash holding.

**Growth Opportunities** are prospects for companies to seek profit through investment because companies generally save cash so they can meet their needs to make profitable investments in the future (Serly and Melandy, 2021). It can be concluded that holding liquid assets is more profitable for companies with high investment opportunities than companies with uncertain investment opportunities due to lack of funds (Siddiqua et al., 2019). The higher the growth opportunities, the higher the bankruptcy costs and the more likely it is that the company's value will fall sharply. As a result, these companies tend to raise more money to cover bankruptcy costs and financial problems. A study by (Serly and Melandy, 2021) proves that growth opportunities have a positive effect on corporate cash holding. This finding is also in line with research conducted by (Calvina and Setyawan, 2019) where growth opportunities have a positive impact on corporate Cash Holding. This positive relationship is in contrast to research findings of (Sari and Zoraya, 2021) where there is a negative relation among growth opportunities and corporate cash holding.

From the description and development of the hypothesis above, the research model and research hypothesis are formulated in the Figure 1.

**METHODS**

The design of this study is descriptive and conclusive causality. The sample selected by adopting a purposive method where the criteria for determining the sample had been determined beforehand. The research subjects were selected in the property, realestate and
construction sector corporations registered on the Indonesia Stock Exchange (IDX). The secondary data in the panel form extracted from the corporation’s financial statements. The criteria for the sample to be selected are determined as follows: (1) Companies are continuously listed on the IDX during the 2018 to 2021 research period. (2) Have complete financial reports for the 2018 to 2021 period. (3) Have the data needed for this research. All collected data is then processed with the help of Eviews-9 software.

The object of the study consists of corporate cash holding as the dependent variable, while for the independent variables it includes operating cash flow, financial distress, and growth opportunities. Data analysis is carried out using multiple regression models, starting with multicollinearity and heteroscedasticity tests. After that the hypothesis test was carried out to answer the problems in this study. The hypothesis test conducted includes t-test and test $R^2$.

**Operationalization Variable.** The corporate cash holding variable is the dependent variable whose position will be evaluated or analyzed as a result of the influence of the independent variables. The independent variables here only use 3 variables, namely Operating Cash Flow, Growth Opportunity, and Financial Distress. In order to analyze the effect of the independent variable on the dependent variable, measurement of each variable must be carried out. The following is a formulation of these measurements.

**Dependent Variable.** The Cash holding as a dependent variable is measured by calculating the proportion of cash and cash equivalents to total assets (Thu and Khuong, 2018). Refers to (Ali et al., 2016) cash holding means cash that is held and ready to be used as a tangible asset investment where the results can be distributed to shareholders. Cash holding is generally used for transactions, as a reserve fund to be used in important conditions, and also as speculation. Referring to Thu and Khuong (2018) the proxies for Cash Holding are as follows:

$$\text{Cash Holding} = \frac{\text{Cash and Cash Equivalent}}{\text{Total Assets}}$$ \hspace{1cm} (1)

**Independent Variables.** Operating Cash Flow is defined as cash deposits obtained from the operational activities of a company that is run. The more increasing the fluctuation of the company's cash flow, the greater the fluctuation in profits (Thu and Khuong, 2018). Cash inflow that exceeds cash outflow indicates a positive cash flow inventory, and vice versa. Failure to produce short-term cash flow will result in financing from external parties. A company whose operations contain high risk, will try to hold large amounts of cash reserves. Based on research findings by (Gupta and Bedi, 2019) it proves that cash flow has a positive impact on the company's Cash Holding. Other researchers from (Sethi and Swain, 2019) in their research found findings stating that operating cash flow affected positively on Cash Holding. This finding is not in accordance with the research finding of (Thu and Khuong, 2018) whose states that operating cash flow affected corporate Cash Holding in negative direction. The proxies used to calculate operating cash flow in research referring to research (Gupta and Bedi, 2019) are as follows:

$$\text{Operating Cash Flow} = \frac{\text{Operating Cash Flow}}{\text{Total Assets}}$$ \hspace{1cm} (2)

**Financial Distress** is a condition of a corporation experiencing financial difficulties, namely the situation experienced by the company when the company failed to generate
adequate profits and revenues. The Z-Score is a measure of financial distress. To reduce the risk of default, companies must increase their level of Cash Holding (Nafees et al., 2017). This condition causes the company to be unable to pay its financial obligations. Financial distress is a phase where corporate financial performance has begun to deteriorate which will lead to the threat of liquidation or bankruptcy. Financial difficulties bring a lot of costs to the company. These costs may be directly related to bankruptcy proceedings or reduced sales revenue due to loss of customer confidence in the company’s survival. The Z-Score is a measure of financial distress. To reduce the risk of default, the company must escalate the level of Cash Holding. The research conducted by (Nafees et al., 2017) found that there was an opposite or negative relation among financial distress and company’s cash holding. In studies conducted through research by (Hadjaat et al., 2021) the results show a positive relationship. This situation is in line with a study by (Aftab et al., 2018) which found a positive relation among financial distress and company’s cash holding. The measurement used to calculate financial distress here refers to (Sethi and Swain, 2019) as follows:

\[
\text{Financial Distress} = \text{Inverse Altman's Z Score} \left( \frac{1}{Z} \right) 
\]

(3)

**Growth Opportunities.** Growth opportunities are prospects for companies to seek profit through investment because companies generally save cash so they can meet their needs to make profitable investments in the future (Serly and Melandy, 2021). Growth opportunity can also be defined as an investment opportunity that can be obtained or achieved by a company. The higher the growth opportunity, the higher the bankruptcy costs and the more likely it is that the company’s value will fall sharply. As a result, these companies tend to raise more money to cover bankruptcy costs and financial problems. Research by (Sari and Zoraya, 2021) detected a negative relation among growth opportunities and corporate cash holding. Research conducted by (Serly and Melandy, 2021) states that growth opportunities affected positively on corporate cash holding. This finding is also supported by research by (Calvina and Setyaw, 2019) where growth opportunities have a positive impact on corporate cash holding. The proxies used to calculate growth opportunities refer to (Darya and Maesaroh, 2016) are as follows:

\[
\text{Growth Opportunity} = \frac{\text{Total Asset}(t) - \text{Total Asset}(t-1)}{\text{Total Assets}(t-1)} 
\]

(4)

Based on the explanation of the variables above, the following is a summary of the proxies used on variables in research that have been made in tabular form for convenience reading.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Measurement</th>
<th>Scale</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash Holding</td>
<td>Cash and Cash Equivalent/Total Assets</td>
<td>Ratio</td>
<td>(Thu and Khuong, 2018)</td>
</tr>
<tr>
<td>Operating Cash Flow</td>
<td>Operating Cash Flow/Total Assets</td>
<td>Ratio</td>
<td>(Gupta and Bedi, 2019)</td>
</tr>
</tbody>
</table>
Analysis Data. To perform data analysis, several statistical tests were carried out, which includes descriptive statistical analysis followed by a classic assumption test. Then an analysis to select the appropriate regression model conducted using the Chow, followed by Hausman and also Lagrange Multiplier tests. In the final stage is the partial test and also the coefficient of determination test as the final test that will answer the problems of this research.

Testing the Classic Assumption. The multicollinearity test is intended to investigate the possibility that there is a strong relationship between the independent variables in the model. The existence of multicollinearity problems is detected from the correlation coefficients between two variables in the correlation matrix. If the correlation coefficient between an independent variable and a different independent variable is smaller than 0.800, then the existence of multicollinearity is not indicated.

Meanwhile the Heteroscedasticity Test is intended to investigate whether there are symptoms of heteroscedasticity. The heteroscedasticity test will be accurate only on cross-sectional data. Because panel data has characteristics that resemble cross-section data compared to time-series, the heteroscedasticity test is still carried out (Mardani, 2021)

Selection of Regression Model. Panel data consists of a combination of cross-section and time-series data. In panel data analysis, researchers have three choices of regression models, namely the common effects model, random effects model, and fixed effects model. The choice of model to be used must be tested first to ensure the suitability of the model with the symptoms (existing data). Of the three, which model will be selected which is the best in identifying the research data model that has been obtained, along with the explanation:

Common Effect Model (CEM). CEM is a projection or estimate that combines all cross-section and time-series data. This method assumes that the model is without individual influence indicated from the intercept $\beta_0$ and slope $\beta$ are considered the same. The following is the Common Effect Model equation:

$$Y_{it} = \beta_0 + X_{it}\beta + \epsilon_{it}; \quad i = 1, 2, \ldots, N; t = 1, 2, \ldots, T \quad \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ldots \ ld
where:

\[ Y_{it} = \alpha_i + \beta_i + \sum_{k=2}^{N} \alpha_k D_{kt} + \beta X_{it} + \epsilon_{it} \] .................................................. (6)

\[ Y_n = \beta_0 + \beta X_{it} + \epsilon_{it} + u_{it} \] .................................................. (7)

**Random-Effect-Model (REM).** In the REM model, there are differences between individual company characteristics and time through errors in the model, where there are two components that affect the error, namely the company as an individual and time. The following is the Random Effect Model (REM) equation:

**Selection of Panel Data Model.** According to (Widarjono, 2018) there are a number of techniques available to determine the most suitable regression model for estimating panel data regression, as follows:

**Chow test.** This test is carried out to obtain a model that is more appropriate in testing panel data, this test is done by adding a dummy variable so that different intercepts can be tested. The test hypothesis used is as follows:

\[ H_0: a_1 = a_2 = \cdots = a_N = a \text{(model common effect)} \]

\[ H_a: \text{at least } a_1 \neq a, \text{with } i = 1, 2, \ldots, N \text{ (fixed effect model).} \]

That is, if \( H_0 \) in this test shows the same intercept value, then the common effect model is more suitable. However, if the intercepts are not the same, then the fixed effect model is more appropriate to use.

If the calculated probability cross section F value is lower than the significance value (\( \alpha = 0.050 \)) then the initial hypothesis (\( H_0 \)) is rejected, means that the more appropriate model is the FEM model. Conversely, if the prob. cross section F count exceeds the significance value (\( \alpha = 0.050 \)), then the initial hypothesis (\( H_0 \)) is accepted, meaning that the common effect model is more suitable to use.

**Hausman Test (Hausman Test).** The test is used to estimate a more precise regression model, between the FEM or REM. The test step according to (Kacapyr, 2022) is to estimate through the random effect mode, then do the Hausman test with the following hypothesis:

\[ H_0: \text{Correlation } (X_{it} , \epsilon_{it}) = 0 \text{(the cross-section effect has nothing to do with other regressors, or it is also called a random effect model)} \]

\[ H_a: \text{Correlation } (X_{it} , \epsilon_{it}) \neq 0 \text{(the cross-section effect is related to other regressors or} \]
is called a fixed effect model)

If the probability value of F Chi-square less than 0.050, then the initial hypothesis (Ho) is rejected, meaning that the fixed effect model is better. Conversely, if the value of prob F and prob Chi_Square greater than 0.050, then the initial hypothesis (Ho) is accepted, which means that the model that should be adopted is REM. If the Hausman test results show that the REM model is selected, then the test must proceed to the Lagrangian Multiplier test to obtain certainty whether to use the random-effect-model or the common-effect-model.

**Lagrange-Multiplier test.** This Lagrange Multiplier test is carried out to determine whether we will continue to use REM or CEM. The stages of testing according to (Widarjono, 2018) start with estimating the Common Effect Model, followed by carrying out Lagrange Multiplier testing. If the prob F and Chi_Square values are less than the significance value (α of 0.050), then the initial hypothesis (H0) is rejected, which means that the random effect model should be used. Conversely, if the prob F and Chi-square values exceed the significance value (α of 0.050), then the initial hypothesis (H0) is accepted, meaning that the CEM model is more suitable for use.

**Hypothesis test. t-test** The t test was conducted to determine how much influence each independent variable partially had on the dependent variable. The significance level uses α of 0.050. Some things that must be known in carrying out the t-test according to (Widarjono, 2013) are as follows: The hypothesis of the t-test is formulated as follows.

Ho: there is no significant effect of variable X on variable Y
Ha: there is a significant influence of variable X on Y

While the decision making criteria is based on Prob value. If Prob t smaller than 0.050, then Ho is rejected. If Prob t greater than 0.050, then Ho is accepted

**Testing the Coefficient of Determination (R-squared).** In research it is necessary to know about how big the role of the independent variables used in bringing changes to the dependent variable. That is, when there is a change in the independent variable, will it potentially bring changes to the dependent variable as well. The coefficient of determination test (R²) is intended to answer this question. The higher the R² value, the greater the potential for changes in the dependent variable caused by independent changes. (Ghozali, 2016).

**RESULTS**

**Population and Sample.** The population is 79 companies from property, real estate and construction which are listed on the Stock Exchange. By utilizing the sample selection criteria with a predetermined purposive sampling technique, 43 companies were selected that met these criteria

**Statistics Descriptive.** Descriptive statistics in research are useful for analyzing data where the test provides an overview of the characteristics of the research variables without providing any conclusions. Descriptive statistics provide an overview of the state of the data with only a few indicators that can be observed from the average value, the central value, the largest value, the smallest value, and the standard deviation value.

The standard deviation is one indicator that is often considered in descriptive statistics. The standard deviation is a reflection of the average deviation of the data from the mean. The standard deviation can describe how large the variation in the data is, where if the standard deviation value is greater than the mean value, it means that the mean value
is a poor representation of the entire data. However, if the standard deviation value is less than the mean value, this indicates that the mean value can be used as a representation of the entire data.

An explanation of the results of the descriptive statistics shown in Table 2.

### Table 2. Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>CCH</th>
<th>OCF</th>
<th>FD</th>
<th>GO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>0.068</td>
<td>0.005</td>
<td>1.290</td>
<td>0.049</td>
</tr>
<tr>
<td>Median</td>
<td>0.051</td>
<td>0.000</td>
<td>0.528</td>
<td>0.027</td>
</tr>
<tr>
<td>Maximum</td>
<td>0.396</td>
<td>0.121</td>
<td>61.482</td>
<td>1.078</td>
</tr>
<tr>
<td>Minimum</td>
<td>0.000</td>
<td>-0.142</td>
<td>-6.660</td>
<td>-0.259</td>
</tr>
<tr>
<td>Std. Dev</td>
<td>0.065</td>
<td>0.050</td>
<td>5.815</td>
<td>0.142</td>
</tr>
</tbody>
</table>

Results of data processing by the author

During the research period Corporate Cash Holding reached the highest value of 0.395 in 2018. The highest value was achieved by City Retail Developments Tbk or NIRO. Meanwhile, the lowest Corporate Cash Holding value, which was 0.000, was recorded by Eureka Prima Jakarta Tbk or LCGP in 2020. The average value for the Corporate Cash Holding variable was recorded at 0.068. Other information is the recorded standard deviation of 0.065 and the median of 0.051. It can be seen here that the average value is bigger than the standard deviation, where these results indicate that the data is quite homogeneous, so that the average value can be used as a reflection of the entire data.

For the variable of Operating Cash Flow (OCF), during the research period Operating Cash Flow reached the highest value of 0.121 in 2019 which was achieved by the company Metropolitan Kentjana Tbk or MKPI. Meanwhile, the lowest Operating Cash Flow value was recorded at -0.142 by the company Cahayasakti Investindo Sukses Tbk or CSIS. The average value is 0.005, while the standard deviation is 0.050. Here it can be seen that the average value is much smaller than the standard deviation. This shows that the data distribution is quite heterogeneous and means that the mean value is a poor representation of the entire Operating Cash Flow data.

In the descriptive statistics of the Financial Distress (FD) variable, the largest value is 61.482, which is recorded on behalf of the company Binakarya Jaya Abadi Tbk or BIKA in 2020, while the lowest value is -6.660 owned by the company Bukit Darmo Property Tbk or BKDP in 2020. The median is 0.528, the average value is 1.290 and the standard deviation is 5.815. When compared between the average value and the standard deviation, it shows that the deviation value is much bigger than the mean. These results indicate that the data is heterogeneously distributed and the average value is not a good reflection of the Financial Distress data.

Descriptive Statistics for the Growth Opportunities (GO) variable obtained the highest value of 1.078 which was recorded as owned by the company Ristia Bintang Mahkotasejati Tbk or RBMS in 2018. The lowest Growth Opportunities value is -0.259 occurred in 2018 by the company Lippo Cikarang Tbk or LPCK. The mean, standard deviation and median values were recorded at 0.049, 0.142 and 0.027, respectively. From this last information it can be seen that the average value is lower than the standard deviation. These results indicate a heterogeneous distribution of data, so that the mean value cannot be used as a reflection of the Growth Opportunity population.

Classical Assumption Test Results. Multicollinearity Test. The
multicollinearity test is useful for detecting whether there are multicollinearity problems. From the correlation matrix that is formed, note whether the correlation of each element of the matrix that connects different variables is lower than 0.80. If the correlation coefficient is less than 0.80, it means that it can be said that there is no indication of multicollinearity in the research data. If the correlation value exceeds 0.80, it means that there is multicollinearity in the research data (Ghozali, 2016).

<table>
<thead>
<tr>
<th>Table 3. Output from Multicollinearity Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>OCF</td>
</tr>
<tr>
<td>FD</td>
</tr>
<tr>
<td>GO</td>
</tr>
</tbody>
</table>

Results of data processing by the author

Looking at the output of the multicollinearity test in Table 3, none of the elements of the correlation coefficient matrix exceeds 0.80, except for the diagonal element which has a value of 1.000. From the multicollinearity test output in the table above there is no indication of the existence of a high correlation between the two variables so that the research data does not experience multicollinearity.

**Heteroscedasticity Test.** Heteroscedasticity testing is useful for detecting the occurrence of model deviations due to variance disturbances that are different from the residuals from one observation to another. The output of the heteroscedasticity test are presented in the following Table 4.

<table>
<thead>
<tr>
<th>Table 4. Output from Heteroscedasticity Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factors</td>
</tr>
<tr>
<td>OCF</td>
</tr>
<tr>
<td>FD</td>
</tr>
<tr>
<td>GO</td>
</tr>
</tbody>
</table>

Results of data processing by the author

From the Table 4 shows of heteroscedasticity test results above, the probability of OCF, FD, and GO exceeds 0.05, so the conclusion is no symptoms of a heteroscedasticity problem among the observations.

**Selection of the Best Regression Model.** Panel data analysis must be carried out with the appropriate model. Of the three panel data regression models namely REM, FEM and CEM must be selected the one that best fits the model. Model selection most suitably done with testing Chow, Hausman, and Lagrange test Multiplier.

**Chow Test Result.** Chow test implemented for selecting model which more in accordance used between estimate CEM or FEM estimation. Hypothesis in chow test thats:

- **Ho:** use estimate CEM
- **Ha:** use estimate FEM

In the event that the probability of the cross_section F count is smaller than the significance value (α = 0.050) then initial hypothesis (H0) is rejected, which means the model that should be adopted is the fixed_effect model. On the other side, if the calculated cross_section F prob value is more than the significance value (α of 0.050), then the
hypothesis H0 is accepted, meaning the most appropriate model should be adopted namely the common effect model. Below is shown the results of the Chow test

Table 5. Chow test results

<table>
<thead>
<tr>
<th>Effects-Test</th>
<th>Statistic</th>
<th>df</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross Section F</td>
<td>5.579</td>
<td>(42.830)</td>
<td>0.000</td>
</tr>
<tr>
<td>Cross Section $\chi^2$</td>
<td>172.997</td>
<td>42</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Source: Data processing by author

From the statistical test shown in Table 5, the probability, F is 0.000, where is the number is less than the number 0.050, so the Ho hypothesis is rejected, means that for the time being the model is selected on this test that is fixed effect model.

The next step is to carry out further testing, namely by implementing the Hausman test.

**Hausman Test Result.** Hausman test was applied with the aim of obtaining the appropriate model and the best between FEM and REM. hypothesis testing formulated as:

$H_0$: random effect model

$H_a$: fixed effect models

Decisions are taken based on the Probability value of Cross Section Random. If the data regression in this test gives a random-cross-section number exceeding 0.050, then $H_0$ is accepted so the random effect model is more appropriate. If the data regression shows that the random cross section Prob number is below 0.050, it means that $H_0$ is rejected, so the appropriate approach is the fixed effect model.

The Hausman test results produce a Probability value. From Random cross-section of 0.020. This value is lower than 0.050, so the implication is that the hypothesis $H_0$ is rejected, which means that the chosen approach to the Hausman test is a fixed effect.

**Test Lagrange Multipliers.** From the results of the Chow and Hausman tests, the same decision was obtained, namely the Fixed Effect Model as the most appropriate regression model. Therefore, LM testing is no longer needed.

**Multiple Linear Regression Analysis.** Modeling with regression is useful for predicting the value of the dependent variable, besides that it can also show the direction and magnitude of the contribution of the independent variables in influencing the dependent variable (Basuki and Prawoto, 2017). The results of the multiple analysis displayed can show the magnitude of the influence of operating cash flow (OCF), Financial Distress (FD), and Growth Opportunity (GO) variables on Financial Cash Holding (FCH) in property, real estate and construction companies listed on the IDX for the period 2018 to 2021. Referring to the test results for selecting the most suitable model, the research approach used is the fixed effect model.

Table 6. Analysis of Regression against Operational Cash Holding (CCH)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.064</td>
</tr>
<tr>
<td>OCF</td>
<td>0.040</td>
</tr>
<tr>
<td>FD</td>
<td>-0.001</td>
</tr>
<tr>
<td>GO</td>
<td>0.083</td>
</tr>
</tbody>
</table>

Source: Data processing by author
From the results of regression obtained in the **Table 6**, it can be formulated equality regression models research namely:

\[
CCH = 0.064 + 0.040\text{OCF} - 0.001\text{FD} + 0.083\text{GO} .................................................. (8)
\]

The interpretation of the regression equation formed can be interpreted as follows. The constant C in the regression model is 0.064. Here C is the intercept of the model. The mathematical definition of intercept is an intersection point between a line and the Y axis on a Cartesian diagram when the value X = 0.000. While the statistical definition is the average value of variable Y if the value of variable X is 0.000. In other words, if X does not contribute anything to Y, then the average Y variable will be worth the intercept. In the regression model above, the intercept is 0.064. The interpretation is that if the values of the OCF (operating cash flow), FD (financial distress), and GO (growth opportunities) variables are at zero, then CCH (corporate cash holding) will have a value of 0.064.

The coefficient of OCF shows the effect of OCF on CCH. Here it can be seen that the influence of OCF on CCH is positive or unidirectional. The interpretation is that every increase of one unit of OCF will push the CCH value up by 0.040, conversely if there is a decrease in the value of OCF by one unit then the value of CCH will also be pushed down by 0.040, assuming FD and GO are fixed values.

In the next line, the coefficient on the FD variable shows the magnitude and direction of the influence of FD on CCH, which appears to have a negative sign, so that the direction of change in FD and CCH will be opposite. Thus, based on the processing results above, it can be interpreted that every increase of one unit of FD will cause a decrease of 0.001 CCH units, conversely, every decrease of one unit of FD will push up CCH by 0.001 units, assuming the variables OCF and GO are constant.

The coefficient on the GO variable shows the direction and magnitude of GO's influence on CCH. Here it can be seen that it is found a positive or unidirectional GO effect on changes in CCH. This means that when GO increases in value by one unit, CCH will be pushed up by 0.083 units, conversely when GO decreases in value by one unit, CCH will also be pushed down by 0.083, assuming the OCF and FD variables are fixed.

**Statistical-t Test.** The t-test statistic is implemented as a tool to statistically prove whether each independent variable has an impact on the dependent variable partially. Here used a significance level of 0.050. The conclusion is whether there is an influence obtained from the t-test indicated by the probability value (Prob) on each independent variable. A prob value of less than 0.050 means statistically that the independent variable significantly affects the dependent variable, conversely in a situation where the prob value is greater then 0.050 means that it is not found a statistically and significant effect of the independent variable on the dependent variable. The results of the t test are shown in the **Table 7**.

**Table 7.** t-test result on Corporate Cash Holding (CCH)

<table>
<thead>
<tr>
<th>Factor</th>
<th>Coefficient</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.064</td>
<td>0.000</td>
</tr>
<tr>
<td>OCF</td>
<td>0.040</td>
<td>0.207</td>
</tr>
<tr>
<td>FD</td>
<td>-0.001</td>
<td>0.001</td>
</tr>
<tr>
<td>GO</td>
<td>0.083</td>
<td>0.002</td>
</tr>
</tbody>
</table>

Source: Data processing by author
From the results of the t-statistic test on the CCH variable, it can be interpreted as follows, the Probability value on the OCF variable is 0.207. The probability value is above 0.050 so that the effect of OCF is not significant on CCH, meaning that any changes that occur to OCF will bring insignificant changes to CCF.

Probability value of FD variable is 0.001 is obtained, where the value is lower than the significance value of 0.050. These results lead to the conclusion that any changes in FD will have a meaningful effect on changes in CCH.

The Probability value for the GO variable is 0.002, which is much smaller than the significance level of 0.050, so it can be interpreted that the GO variable has a meaningful effect on the CCH variable. This result can be interpreted that changes in the GO variable will encourage significant changes to CCH.

**The Results of Coefficient of Determination (R²).** Testing the coefficient of determination is intended to obtain statistical information about the magnitude of the contribution of the three independent variables in explaining the dependent variable.

The test results of the coefficient of determination test show an Adjusted R² value of 0.694 or around 70 per cent. This result means that operating cash flow, financial distress, and growth opportunities can contribute 70 per cent in explaining or predicting the value of Corporate Cash Holding. While the remaining 30 per cent is the contribution of other variables not involved in this study. If the Adjusted R-squared value is getting closer to 100 per cent, it means that it is getting better at choosing independent variables that contribute high to the research. The better in selecting independent variables who contribute greatly study.

**DISCUSSION**

This research was carried out with the aim of obtaining statistically strong evidence about the factors that have an impact on changes in Cash Holding in companies. For this reason, three independent variables were selected as predictors involved in this study, namely operating cash flow, financial distress, and growth opportunities. The research was conducted on corporations under the property, real estate and construction sectors that were continuously registered on the Indonesia Stock Exchange (IDX) throughout the 2018 to 2021 period. IDX is a party engaged in buying and selling securities, has a good system and technology to support securities buying and selling transactions with the support of qualified IT devices so that everyone can easily obtain information on companies that are incorporated under it, including the ease of obtaining information on the financial statements of its members issuer. The results of the research that has been done will be discussed as follows.

**Influence Operating Cash Flow to Corporate Cash Holding.** Operating Cash Flow is understood as cash held by the company originating from the business activities it carries out. Operating Cash Flow requires funding to ensure the smooth running of these activities by applying methods of financing or funding to support the company's operational activities. From the results of the statistical analysis in Table 7, it was found that the Operating Cashflow variable affects Corporate Cash Holding in the same direction (positive), but not significantly. The findings in this study confirm research conducted by (Gupta and Bedi, 2019) and (Sethi and Swain, 2019), where the two researchers also found evidence that operating cash flow has a positive impact on Company Cash Holding. On the other hand, this study did not provide the same output as research (Thu and Khuong,
2018) which found evidence that Operational Cash Flow had a negative effect on company Cash Holding. The positive influence shown in the coefficient section is not in line with the explanation by the free cash flow theory, where this theory does not recommend providing company cash at an optimal level. This is happens because there are differences in interests of managers and shareholders. Due to differences in interests, managers tend to be more free to use or spend Corporate Cash Holding for the manager's personal interests.

**Influence of Financial Distress to Corporate Cash Holding.** Financial distress is a situation when a company is no longer able to earn sufficient profit or income. This condition causes the company to be unable to pay its financial obligations and lead to bankruptcy. Financial distress uses a proxy from the inverse Altman Z-score. From the result of statistical analysis shown in Table 7, it was found that financial distress bring a negative and meaningful effect on corporate Cash Holding. The findings of this study are consistent with research findings of (Nafees et al., 2017) indicating that there is an influence in a negative direction between financial distress and corporate cash holding. Aside from that, the result of this study is not inline to the research findings of previous study by (Hadjaat et al., 2020) which yielded positive results. This is similar to research conducted by (Aftab et al., 2018) that a positive relationship was found between financial distress and corporate cash holding.

**Influence of Growth Opportunities to Corporate Cash Holding.** Growth opportunities are opportunities for companies to pursue a return on their investment as they usually save money to meet their future investment needs. Growth opportunities use proxies to reduce year-end earnings from previous year's earnings. From the results of statistical data processing, an explanation can be given that these figures indicate growth opportunities have a unidirectional and meaningful impact on corporate Cash Holding. The results of these findings are in line with findings by (Serly and Melandy, 2021) and (Calvina and Setyawan, 2019) which state that growth opportunities have a significant positive effect on corporate cash holding. However, this study is in contrast to research (Sari and Intan, 2021) which found a negative relation between growth opportunities and corporate cash holding. The positive number shown in the coefficient section is in line with the trade-off theory, where this theory shows a positive or unidirectional relationship among growth opportunities and company's Cash Holding.

**Conclusion, Implications and Limitations.** This study aims to investigate the effect of dependent variables of operating cash flow, financial distress, and growth opportunities on corporate cash holding. The number of samples used was 43 companies out of a total of 79 companies, while the population includes all companies under the auspices of the property, real estate and construction sectors which have been recorded on the Indonesia Stock Exchange throughout the 2018 to 2021 period. The purposive sampling method was chosen in selecting the sample. The finding of this study give indication that operating cash flow has no significant effect on corporate cash holding, while financial distress and growth opportunities have a significant effects on corporate cash holding variables.

From the statistical analysis carried out in this study, the results were listed in the following summary a) Operating cash flow has a positive and insignificant effects on the company's cash holding, b) Financial distress has a negative and significant effect on the company's cash holding and c) Growth opportunity has a positive and significant effect on the company's Cash Holding.
Another result in this study is that the determination coefficient test produces an $R^2$ output of 70 per cent. This means that the independent variables operating cash flow, financial distress and grow opportunity in this study are able to contribute to explaining cash holding by only 70 per cent, while 30 per cent of the cash holding variable in property, real estate and construction companies can be explained by other variables not included in the this research.

Some of the limitations of this study can be described as follows: (a) From the testing on the coefficient of determination, the Adjusted $R^2$ value is only 70 per cent, this means that the variables included in this study are not sufficient to explain the Corporate Cash Holding variable. There are still about 30 per cent more variables that are not here. Here, researchers are less observant in identifying variables that play a role in explaining corporate cash holding. (b) This research is still very small in scope compared to all sectors on the IDX. There are still many other sectors that have not been processed in this study, such as the banking, manufacturing, and other sectors. (c) Another limitation is the election for the 2018-2021 period. Actually, they wanted to complete it until 2022 so that the company's movements since the pandemic could be included, but they were hampered because at the time this research was carried out, not all companies had released financial reports for 2022.

Based on some of the limitations as described above, some useful suggestions are given for the development of further research, namely: (a) It is suggested to further researchers to be able to identify and add other variables that have not been included in this study in order to obtain a more holistic picture of the factors that influence corporate cash holding. With more complete research results, it is hoped that companies in the property, real estate and construction sectors can manage their Cash Holding more optimally. (b) Similar research can also be extended to other broader sectors, especially companies whose operations fluctuate with unstable funding needs.

REFERENCES


