Factors Influencing Cash Holding In Property, Real Estate And Construction Companies

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Abstract: This study aims to ˮexamine 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 R^2 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.ˮ

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

Abstrak: Penelitian ini bermaksud mengkaji secara akademis keterkaitan antara variabel *operating cash flow, growth opportunity*, dan *financial distress* terhadap variabel *cash holding* perusahaan. Sampel diambil sebanyak 43 dari 79 korporasi pada kelompok properti, real estat dan konstruksi di BEI rentang waktu 2018 hingga 2021. Analisis data dimulai dengan uji multikolinearitas dan heteroskedastisitas. Setelah itu dilakukan uji hipotesis yang meliputi uji parsial t dan uji R^2. Analisis dilakukan dengan menggunakan Model Regresi Berganda. Temuan dari studi ini yaitu *growth opportunity* dan *operating cash flow* mempunyai pengaruh positif terhadap *cash holding* perusahaan, sedangkan *financial distress* berpengaruh negatif terhadap *cash holding*. Konsekuensi dari temuan ini yaitu perusahaan perlu mengendalikan jumlah *cash holding* agar jumlah *cash supply* di perusahaan dapat dipertahankan pada titik optimal sehingga perusahaan terhindar dari kebangkrutan.

Kata Kunci: *Cash Holding*; *Operating Cash Flow*; *Financial Distressed*; *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

pay its financial obligations 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**.
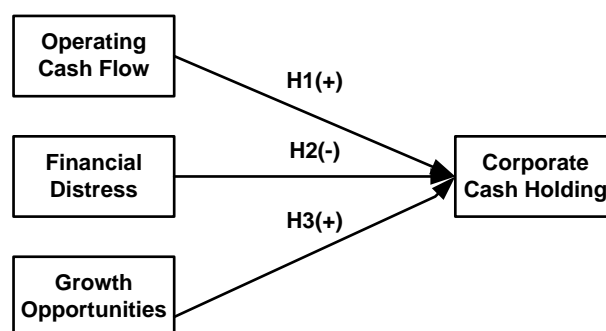
Figure 1. Research Model

H1: Operating Cash Flow influential positive to corporate Cash Holding
H2: Financial Distress give a negative affect on Corporate Cash Holding
H3: Growth Opportunities influential positively to corporate Cash Holding

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:

$$Cash\ Holding = \frac{Cash\ and\ Cash\ Equivalent}{Total\ Assets} \dots\dots\dots\dots\dots (1)$$

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:

$$Operating\ Cash\ Flow = \frac{Operating\ Cash\ Flow}{Total\ Assets} \dots\dots\dots\dots\dots (2)$$

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 the coporate 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:

$$Financial\ Distress = Inverse\ Altman's\ Z\ Score\ \left(\frac{1}{z}\right)$$ …………….………........ (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 Setyawan, 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:

$$Growth\ Oppotunity = \frac{Total\ Asset(t) - Total\ Asset\ (t-1)}{Total\ Assets\ (t-1)}$$ ……………………………....
(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 1. Operationalization Variable

Variable	Measurement	Scale	Source
Cash Holding	$\dfrac{\text{Cash and Cash Equivalent}}{\text{Total Assets}}$	Ratio	(Thu and Khuong, 2018)
Operating Cash Flow	$\dfrac{\text{Operating Cash Flow}}{\text{Total Assets}}$	Ratio	(Gupta and Bedi, 2019

Financial Distress	Inverse Altman's Z Score $\left(\frac{1}{Z}\right)$	Ratio	(Sethi and Swain, 2019)
Growth Opportunity	$\dfrac{\text{Total Asset(t)} - \text{Total Asset (t} - 1)}{\text{Total Assets (t} - 1)}$	Ratio	(Darya and Maesaroh, 2016)

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.

Testimg 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 β_0 and slope β are considered the same. The following is the Common Effect Model equation:

$$Y_{it} = \beta_0 + X_{it}\beta + \varepsilon_{it}; \; i = 1, 2, ., N; t = 1, 2, \dots, T \dots\dots\dots (5)$$

where:

Y_{it} is the value of the dependent variable in the ith cross section and the tth time, β_0 states the intercept from units cross section, x_{it} is the vectors of independent variables with size $(1 \times k)$, β is is the gradient vector of the regression coefficient of the independent variable with dimension $(1 \times k)$, while ε_{it} is regression errors on units cross-section at time t.

Fixed-Effect-Model (FEM). Estimation of panel data parameters in the Fixed-Effect-Model (FEM) is done by adding a dummy variable, which results in this method being often called the Least-Square-Dummy-Variable model. The FEM model assumes that the slope coefficient is constant while the intercept is not constant. The following is the regression formula from the Fixed-Effect-Model (FEM):

$$Y_{it} = \alpha_1 + \beta_i + \sum_{k=2}^{N} \alpha_k D_{ki} + \beta X_{it} + \varepsilon_{it}$$

.... (6)

where:

Y_{it} is the the value of the dependent variable in the ith cross-section unit and the tth time, α is the intercepts, β_i is the intercept from ith units cross-section, x_{it} is a vector of independent variables of size $(1 \times k)$, β is a gradient vector with dimension $(1 \times k)$ of the regression coefficient of k independent variables, while ε_{it} express the error in the ith of unit cross-section at the tth time, and D express the Dummy

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:

$$Y_n = \beta_0 + \beta X_{it} + \varepsilon_{it} + u_{it}$$ ....

(7)

where:

Y_{it} is the the value of the dependent variable in the ith individual (company) cross-section in the t-period, β_0 is the intercept of the individual unit cross-section, x_{it} is a vector of independent variables of size $(1 \times k)$, β is a gradient vector with dimension $(1 \times k)$ of the regression coefficient of k independent variables, while ε_{it} express the error in the ith of unit cross-section at the tth time, and u_{it} describe the random- error- term

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:

Ho: $a_1 = a_2 = \cdots = a_N = a$ (model common effect)

Ha: at least − at least one $a1 \neq a$, with $i = 1,2, . . , N$ (fixed effect model).

That is, if Ho 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 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 (Ho) is rejected, means that the more appropriate model is the FEM model. Conversely, if the prob. cross section F count exceeds the significance value (α of 0.050), then the initial hypothesis (Ho) 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:

Ho: Correlation $(x_{it}, \varepsilon_{it}) = 0$ (the cross-section effect has nothing to do with other regressors, or it is also called a random effect model)

Ha: Correlation $(x_{it}, \varepsilon_{it}) \neq 0$ (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 (R^2) is intended to answer this question. The higher the R^2 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

	CCH	**OCF**	**FD**	**GO**
Mean	0.068	0.005	1.290	0.049
Median	0.051	0.000	0.528	0.027
Maximum	0.396	0.121	61.482	1.078
Minimum	0.000	-0.142	-6.660	-0.259
Std. Dev	0.065	0.050	5.815	0.142

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 0.800. If the correlation coefficient is less than 0.800, it means that it can be said that there is no indication of multicollinearity in the research data. If the correlation value exceeds 0.800, it means that there is multicollinearity in the research data (Ghozali, 2016).

Table 3. Output from Multicollinearity Test

	OCF	FD	GO
OCF	1.000	0.045	0.237
FD	0.045	1.000	0.178
GO	0.237	0.178	1.000

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 0.800, 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 4. Output from Heteroscedasticity Test

Factors	Coefficient	Standard Error	t-Statistic	Probability
OCF	-0.014	0.038	-0.372	0.711
FD	-0.000	0.000	-0.700	0.487
GO	0.037	0.014	2.703	0.078

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 0.050, 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

Effects-Test	Statistic	df	Probability
Cross Section F	5.579	(42.830)	0.000
Cross Section X^2	172.997	42	0.000

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:

Ho: random effect model

Ha: fixed effect models

Decisions are taken based on the Probability valueof Cross Section Random. If the data regression in this test gives a random-cross-section number exceeding 0.050, then Ho 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 Ho 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 Ho 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)

Variable	Coefficient
C	0.064
OCF	0.040
FD	-0.001
GO	0.083

Source: Data processing by author

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

$$CCH = 0.064 + 0.040 OCF - 0.001 FD + 0.083 GO \dots\dots\dots (8)$$

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)

Factor	Coefficient	Probability.
C	0.064	0.000
OCF	0.040	0.207
FD	-0.001	0.001
GO	0.083	0.002

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 (R^2). 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 R^2 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 purpossive 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

Aftab, U., Javid, A. Y., and Akhter, W. (2018). The Determinants of Cash Holding around Different Regions of the World. *Business and Economic Review*, *10*(2), 151–182. https://doi.org/10.22547/ber/10.2.7.

Ali, S., Ullah, M., and Ullah, N. (2016). Determinants of Corporate Cash Holding : "A Case of Textile Sector in Pakistan." *SSRN Electronic Journal*, *September 2020*. https://doi.org/10.2139/ssrn.2728200.

Ayuningtyas, D. (2019). *Tak Jadi RUPST Hari Ini, Bagaimana Nasib Utang Bakrieland?* CNBC Indonesia. https://www.cnbcindonesia.com/market/20190626101446-17-80673/tak-jadi-rupst-hari-ini-bagaimana-nasib-utang-bakrieland.

Basuki, A. T., and Prawoto, N. (2017). *Analisis Regresi Dalam Penelitian Ekonom* (Ed.1, Cet.). PT. RajaGrafindo Persada.

Calvina, C., and Setyawan, I. R. (2019). Faktor Penentu Corporate Cash Holding Perusahaan Manufaktur Di BEI. *Jurnal Manajerial Dan Kewirausahaan*, *1*(2), 133. https://doi.org/10.24912/jmk.v1i2.5072.

Darya, G. P., and Maesaroh, S. (2016). The Influence of Asset Structural, Growth Opportunity, Profitability and Sales Growth To Capital Structural in Consumer Goods Company Listed in Indonesia Stock Exchange (Idx). *IOSR Journal of Economics and Finance*, *07*(04), 29–39. https://doi.org/10.9790/5933-0704012939.

Ghozali, I. (2016). *Multivariate Analysis Application with IBM SPSS 23*. BPFE Universitas Diponegoro.

Guizani, M. (2017). The Financial Determinants of Corporate Cash Holding in an Oil Rich Country: Evidence from Kingdom of Saudi Arabia. *Borsa Istanbul Review*, *17*(3), 133–143. https://doi.org/10.1016/j.bir.2017.05.003.

Gupta, C. P., and Bedi, P. (2019). Determinants of Corporate Cash Holding : Evidence from India. *Journal of Banking and Finance*, *32*(7), 1209–1220. https://doi.org/10.1016/j.jbankfin.2007.10.005.

Hadjaat, M., Yudaruddin, R., and Riadi, S. S. (2021). The Impact of Financial Distress on Cash Holding in Indonesia: Does Business Group Affiliation Matter? *Journal of Asian Finance, Economics and Business*, *8*(3), 373–381. https://doi.org/10.13106/jafeb.2021.vol8.no3.0373.

Kacapyr, E. (2022). Essential Econometric Techniques. A guide to Concepts and Applications, Third Edition. In *Essential Econometric Techniques*. Routledge Taylor and Francis Group. https://doi.org/10.4324/9781003213758.

Mardani, R. (2021). *T Hitung Negatif? Bukan Berarti Tidak Signifikan! Ini Solusinya*. Mjurnal.Com. https://mjurnal.com/skripsi/t-hitung-negatif-signifikan/.

Nafees, B., Ahmad, N., and Rasheed, A. (2017). The Determinants of Cash Holding : Evidence from SMEs in Pakistan. *Paradigms: A Research Journal of Commerce, Economics, and Social Sciences*, *11*(1), 111–116.

Rachman, F. F. (2017). *Ngeri, Kenaikan Harga Rumah Lebih Tinggi dari Inflasi*. DetikFinance.

Rianto, and Sunandar, A. (2021). Faktor yang Mempengaruhi Agresivitas Pajak pada Perusahaan Manufaktur Periode 2015-2020. *AKRUAL Jurnal Akuntansi Dan Keuangan*, *3*(2), 1–23.

Sari, M., and Intan, Z. (2021). Analisis Faktor-Faktor Yang Memengaruhi Cash Holding Pada Perusahaan Industri Sektor Barang Konsumsi Yang Terdaftar Di Bursa Efek Indonesia Tahun 2009-2018. *Jurnal Ilmiah Manajemen*, *16*(1), 61–80.

Sari, M., and Zoraya, I. (2021). Analisis Faktor-Faktor yang Mempengaruhi Cash Holding Pada Perusahaan Industri Sektor Barang Konsumsi Yang Terdaftar Di Bursa Efek Indonesia Tahun 2009-2018. *Managament Insight: Jurnal Ilmiah Manajemen*, *16*(1), 61–80.

Serly, and Melandy, D. (2021). Analisis Faktor Penentu Tingkat Cash Holding pada Perusahaan di Indonesia. *Conference on Management, Business, Innovation, Education and Social Sciences*, *1*(1), 1210–1219.

Sethi, M., and Swain, R. K. (2019). Determinants of Cash Holding: A Study of Manufacturing Firms in India. *International Journal of Management Studies.*

Siddiqua, G. A., Rehman, A. ur, and Hussain, S. (2019). Asymmetric Targeting of Corporate Cash Holding and Financial Constraints in Pakistani Firms. *Journal of Asian Business and Economic Studies*, *26*(1), 76–97. https://doi.org/10.1108/JABES-07-2018-0056.

Thu, P. A., and Khuong, N. V. (2018). Factors effect on corporate Cash Holding of the energy enterprises listed on vietnam's stock market. *International Journal of Energy Economics and Policy*, *8*(5), 29–34.

Widarjono, A. (2018). *Ekonometrika pengantar dan aplikasinya disertai panduan eviews* (Ed 5). UPP STIM YKPN Yogyakarta.