

The Effect of Leverage, Growth Opportunity, Net Working Capital And Dividend Payment Towards Cash Holding Manufacturing Companies Listed On IDX Period 2018-2020

Natasha Audrey¹, Nunik Bhekti Pratiwi¹, Aries Wicaksono^{1*}, Stella Tio Carolineto¹

¹Accounting Department, BINUS Online Learning, Bina Nusantara University, Jakarta, Indonesia 11480

Abstract. The purpose of the research is to examine about the effect of leverage, growth opportunity, net working capital and dividend payment on cash holding in manufacture companies listed on the Indonesia Stock Exchange for the period 2018 - 2020. The research used 47 manufacture companies that were selected using purposive sampling method for a total of 141 data in three years. Eviews 12.0 used as a data processing program to assist the research process and the research also used panel data regression analysis. The result of the research shows that all independent variables have effects on cash holding simultaneously. The result show that net working capital and dividend payment have positive effects on cash holding, however leverage and growth opportunity have negative effects on cash holding. Thus, this study can be directly contributed to investors, company and further researchers about the specific view of the cash holding on manufacture company in Indonesia.

1 Introduction

Manufacturing industries play a vital role in the Indonesian economy. Referred to the 2016 United Nations Statistics Division data, Indonesia was ranked fourth in the world out of 15 countries that contribute more than 10 percent of Gross Domestic Product (GDP) in the manufacturing industry. Indonesia had a GDP growth of 22 percent, while South Korea, China, and Germany were 29 percent, 27 percent, and 23 percent respectively. Manufacturing companies that earn profits within a certain period have to possess a healthy financial performance and productively use assets.

Cash is an asset that plays an important role in the operational activities of a company. Cash is a part of the current liquid assets to be used in improving the company's performance, especially to earn profits and pay obligations. Therefore, companies have to properly manage their finances in order to achieve efficiency in running operational activities optimally. The amount of available cash can affect the company's liquidity and reflect the company's ability to fulfill all its obligations on time [1].

Cash is a liquid asset, so companies need to have cash that will later be used to manage their operational activities. Having large amounts of cash can provide advantages and disadvantages. The advantages are to finance unexpected cash needs and help the company in supporting its business sustainability. However, having large amounts of cash gives disadvantages such as the loss of opportunity to earn income for the company due to idle funds [2]. Cash availability is related to the cash holding owned by the company. Cash holding can be

used for daily company operations and to cover sudden cash needs. Therefore, companies need to determine the exact amount of cash holding so that it can be utilized properly by the company.

The phenomenon of leverage on cash holding occurred in PT. Sariwangi Agricultural Estate Agency (SAEA) in 2018. As cited from www.kompas.com, PT. The Sariwangi Agricultural Estate Agency (SAEA) was declared bankrupt by the Commercial Court of the Central Jakarta District due to unable to pay a debt of Rp 1.5 trillion to some banks. This is because this company has spent a large amount of money to develop water irrigation technology, but the results obtained from this development are far from the expectation. The company has failed to make investments to increase plantation production and bring more profits to the company. Consequently, the company could not pay its debts to some banks.

During the COVID-19 pandemic, one of the growth opportunity phenomena on cash holding occurred in one of the world's top cleaning product manufacturers, namely Clorox and Reckitt Benckiser. It is undeniable, that this pandemic encourages people to be more active in living a cleaner life. This is beneficial for companies that produce cleaning products. According to www.finance.detik.com, sales of Clorox (CLX) reached 15% in the first quarter of 2020. Meanwhile, sales of Reckitt Benckiser (RBGLY) with its flagship products, namely Lysol and Dettol, reached 13.5%. With the increasing sales, the company has the opportunity to grow and increase revenue. This indicates that the increased income can be used to increase the company's cash holding.

* Corresponding author: aries.wicaksono@binus.ac.id

Net working capital is a company asset and it can replace cash easily and even can be used to finance company operations without disturbing the company's liquidity. In 2018, Bank Mandiri extended credit to SNP Finance. SNP Finance is a multi-finance company that provides customers with the option of buying in cash or credit. Due to its high number of customers, SNP Finance needs a large amount of working capital to cover the customer's credit. In obtaining credit from banks, SNP Finance manipulated financial statement data, such as creating account receivables. The receivables are used as collateral to banks as creditors to obtain capital loans. Under the pretext, that if the receivables are successfully collected, the money will be used to repay the loans. As reported in www.katadata.co.id, due to this case, Bank Mandiri has reserved a credit loss of Rp 1.2 trillion. This was done so that the case did not affect the performance and ratio of non-performing loans (NPLs) of Bank Mandiri in that year. Through the credit loss reserve, Bank Mandiri can carry out its operational activities without disturbing the company's cash.

Concerning the dividend payment factor on holding, there is a case at PT. Hero Supermarket Tbk. As stated in www.kontan.co.id, through the annual General Meeting of Shareholders (GMS) in August 2020 ago, PT. Hero Supermarket Tbk decided not to distribute dividends to shareholders even though in 2019 the company managed to make a profit of IDR 70.64 billion. Compared to 2018 when the company suffered a loss of up to IDR 1.25 trillion, this is much better. The profit earned in 2019 was used to strengthen the capital structure in order to support the company's sustainable expansion.

This study aims to identify the effect of leverage, growth opportunity, net working capital, and dividend payment on cash holding in manufacturing companies listed on the Indonesia Stock Exchange for the 2018 – 2020 period. This study involved 47 manufacturing companies determined using the purposive sampling technique with a total of 141 data in three years. Data were analyzed with the help of the Eviews 12.0 program, and this study also used panel data regression analysis. The results showed that all independent variables had a simultaneous effect on cash holding. The partial test showed that net working capital and dividend payments had a positive effect on cash holding, but leverage and growth opportunity had a negative effect on cash holding.

1.1 Objectives

This study was conducted as the results of previous studies were inconsistent regarding cash holding. This study further explains how manufacturing companies in Indonesia experienced a continuous decline during 2018-2020 which may be due to the Covid-19 pandemic and studies concerning this issue are still limited. The key objective of this study is to examine factors affecting cash holding. The processed data were from independent variables consisting of leverage, growth opportunity, net working capital, and dividend payments as well as the dependent variable, namely, cash holding.

This study involved manufacturing companies in Indonesia listed on the Indonesia Stock Exchange (IDX) for the 2018-2020 period. This study involved 47 manufacturing companies determined using a purposive sampling technique with a total of 141 data in three years.

2 Literature Review

2.1 Agency Theory

[3] explain that agency theory is a contract between the principal and the related agent, by looking at the delegation of some decision-making authority that is handed over to the agent. In this case, agents refer to company management, while the principals are shareholders. In this theory, it is assumed that the principal only has an interest in return on investment, while the agent only has an interest in the results of the compensation received when managing the company. Agency theory assumes that each individual, either the agent or principal, operates according to their respective interests so that the agent and principal are vulnerable to conflict.

[4] state that conflicts of interest between shareholders and management can be overcome by concentrated ownership as it can increase oversight of management decisions. However, this can cause new problems, namely conflicts between the majority and minority principals. By increasing ownership, the owner can obtain control rights of the company by increasing equity participation. Conflicts, there is a change in conflict from the principal with the agent to the minority and majority shareholder.

2.2 Trade off Theory

This theory states that the company's cash holding is managed by considering the boundaries between costs and benefits obtained from cash holding [5]. [6] reveal that in a perfect capital market, there are no transaction costs in increasing the amount of cash, and holding current assets will not affect the value of the company. However, the field condition showed that the capital market was far from perfect and there were also irrelevant transaction costs. Therefore, companies have to be careful in determining the level of cash holding in order to obtain optimal results. This theory also explains that the optimal cash holding can be seen by considering the costs incurred from holding the cash with the benefits to be obtained by the company.

2.3 Pecking Order Theory

Pecking order theory, as proposed by [7], emphasizes that companies will finance their new investments by using funds from internal sources. If these funds are insufficient in financing investment, the company will use debt and finally use equity to minimize costs related to information asymmetry. It is important to be noted that information asymmetry is a condition in which one party has superior information to the other. Indeed,

management has more information about the company than the shareholders. If the company issues new shares related to information asymmetry so that the company prefers internal funding over external funding in making investments, the company will incur more costs.

2.4 Cash holding

Based on PSAK No. 2 (2014 adjustment) regarding the cash flow statement, cash consists of cash on hand and demand deposits. Meanwhile, cash equivalents are investments that are highly liquid, short-term, and quickly convertible into cash in a predetermined amount and have an insignificant risk of changes in value.

[8] defines cash as a current asset with the highest level of liquidity, meaning that with sufficient cash availability, the company will not experience difficulties in paying short-term obligations. If the company has a larger amount of cash, the level of liquidity will also be higher. Cash is something important because the company needs to maintain its level of liquidity. However, if the amount of cash owned by the company is too small, it will also affect the level of liquidity. Therefore, the profits obtained by the company can be influenced by the availability of the optimal amount of cash.

[9] states that cash holding is based on some types of motives from companies holding cash, covering transaction motive, precaution motive, speculation motive, and arbitrage motive.

2.5 Leverage

Nurwani (2021) [1] defines leverage as the company's ability to the extent to which the company's assets are financed by debt. Leverage shows that the assets owned by the company come from purchases on credit which affect the company's cash holding. Leverage is also a company's financial ratio by comparing the total debt with the company's total assets. [10] reveal that companies with a high level of leverage have a very high dependence on external loans to finance their assets, while companies with a low level of leverage indicate that the company's funding comes from their own capital.

Based on this understanding, to meet the company's funding needs, the company can use its capital or capital from other parties in the form of loans or debts. When the company uses the funds from the loan, the company will pay interest on the loan regularly which will become a fixed burden for the company. Leverage will arise because the company uses debt (loans from other parties) for company funding which causes the company to bear a fixed burden that must be fulfilled. On the other hand, firms with high levels of leverage are more likely to face financial difficulties and, therefore, are more likely to accumulate more cash holdings to minimize the risk of costly bankruptcy. Companies that have financial limitations are more likely to have large cash balances. Therefore, to the extent that highly leveraged firms are more likely to be constrained in raising external finance,

they are likely to increase their cash balances as a precautionary motive.

2.6 Growth Opportunity

[11] explain that a growth opportunity can be said as an investment opportunity in the future supported by assets owned by a company. In line with the pecking order theory, high growth opportunities may encourage companies to make policies by preferring to hold high cash to finance their investment opportunities.

A growth opportunity is an investment opportunity of a company that can be used by a company. The increase in company sales causes companies that are experiencing growth to have a greater chance to have greater cash holdings. Companies can see growth opportunities through the company's profit growth rate. A company can be said to have a positive response from the market if it has high growth and the company's growth potential is hope for investors to get returns or profits in the future [12].

2.7 Net Working Capital

Net working capital is a company asset and it can replace cash easily and even can be used to finance company operations without disturbing the company's liquidity. [11] reveal that net working capital is a part of current assets that can be used to finance the company's operational costs without disturbing the company's liquidity. Therefore, working capital has to be used ideally in order to meet the need for working capital or operational needs.

Net working capital can be regarded as the internal strength of the company's operating activities. Net working capital is also the amount of money used to generate short-term income (current income) of the company during the accounting period. Therefore, net working capital must be managed wisely so that it is sufficient so that the company can continue to operate effectively, efficiently and economically. Net working capital is closely related to investment policy, and a company's financial manager must be able to allocate company cash for various investments that can benefit the company in the future. The implementation of investment policy is strongly influenced by the availability of company funds or cash from internal funding sources (internal financing) or through external funding sources (external financing). Funding decisions can also be linked to Net Working Capital as a decision on the source of funds to be used by the company. The source of funds within the company itself is divided into 2, namely internal funding sources originating from the company's cash reserves and external funding sources originating from the company's debt and capital.

2.8 Dividend Payment

A dividend is profits obtained from the company's activities for shareholders. Dividends can be described as gifts given by public companies to their shareholders, and the source is the net income of the company.

Dividend Payment and amount are determined by the company's board of directors. A dividend payment is a payment made by a public company to reward investors for putting their money into the business. [13] state that payments to shareholders can be made in the form of cash dividends and buyback shares. Companies that will pay dividends with sufficient cash flow or will buy back shares with the aim of the company having low liquid assets can refer to the Trade-off theory. The advantage for companies that pay dividends is getting convenience of obtaining funds through external funding. The pecking order theory also states that the company will hold smaller cash if the company pays dividends.

2.9 Hypotheses Development

2.9.1 Leverage

Leverage can be measured by the amount of debt compared to the number of assets. Companies try to make the best debt possible. When debt is due, companies need cash to pay off debt. Thus, companies with high leverage need more cash and less profit. Then, the cash holding that will be received is getting smaller. Therefore, the researcher proposes the following hypothesis:

H1 : Leverage has a negative effect on cash holding in manufacturing companies listed on the IDX for the 2018 – 2020 period.

2.9.2 Growth Opportunity

Growth Opportunities can be measured by the market-to-book ratio. Growth Opportunities can affect the cash holding policy as companies with high growth opportunities will not miss this opportunity, so they will create large enough cash reserves until this opportunity is utilized. The development of total assets for a year shows that companies with high growth opportunities generally keep opportunities that can develop the company to that it is not ignored. Thus, when the opportunity arises, the company will create cash reserves until the opportunity can be developed to provide added value to the company. The market to book ratio is used as a proxy to measure the company's growth opportunity because companies with high growth opportunities prefer to use external funding to take advantage of high growth opportunities. Thus, the researcher proposes the following hypothesis:

H2 : growth opportunity has a positive effect on cash holding in manufacturing companies listed on the IDX for the 2018 – 2020 period.

2.9.3 Net Working Capital

Net Working Capital can be easily converted into cash when the company needs it. According to the trade-off theory, there is a negative correlation between Net Working Capital and cash holding. Net Working Capital is used as a proxy for investment in current assets that can be used as a substitute for cash. Net Working Capital can be quickly liquidated to cover the cash shortage

when needed. Converting non-cash current assets into cash is cheaper than other assets, so companies don't always rely on the capital market when their cash is running low. In general, companies with negative Net Working Capital have cash reserves. However, if the company has a larger net working capital, the cash balance will automatically decrease. Therefore, the researcher proposes the following hypothesis:

H3 : Net Working Capital has a positive effect on cash holding in manufacturing companies listed on the IDX for the 2018 – 2020 period

2.9.4 Dividend Payment

Dividend Payment is the payment of dividends or profits to shareholders. If the level or ratio of dividend payment is high, most of the profits earned by the company can be paid to shareholders as dividends. Thus, the company has to prepare funds to meet the needs of paying dividends. Cash holding is a way for companies to be able to pay dividends to shareholders. Companies that have high profits usually have high cash holdings as well. This is in line with the cash holding motive, which is a precautionary motive where the company assumes that through cash holding, the company will be able to pay its obligations in the future. Therefore, the researcher proposes the following hypothesis.

H4 : Dividend Payment has a positive effect on cash holding in manufacturing companies listed on the IDX for the 2018 – 2020 period.

3 Methods

This study was conducted on companies in the manufacturing industry sector listed on the Indonesia Stock Exchange (IDX) for the 2018-2020 period. This study was conducted due to the inconsistent results of previous studies on cash holding. This present study used quantitative methods with secondary data taken from the financial statements of manufacturing companies listed on the Indonesia Stock Exchange (IDX) published on its official website of www.idx.co.id.

This study explains the theoretical framework which describes the effect of the independent variables of Leverage (X1), Growth Opportunity (X2), Net Working Capital (X3) and Dividend Payment (X4) on the dependent variable of Cash Holding (Y).

Table 1. Operational and Measurement

Research Variable	Indicator	Symbol
Cash Holding	$CH = \frac{\text{Cash and Cash Equivalent}}{\text{Total Asset}}$	Y
Leverage	$LEV = \frac{\text{Total Debt}}{\text{Total Asset}}$	X1
Growth Opportunity	$GWO = \frac{\text{Total Asset year } i - \text{Total Asset year } (i-1)}{\text{Total Asset year } (i-1)} \times 100\%$	X2
Net Working Capital	$NWC = \frac{\text{Current Assets} - \text{Current Liabilities}}{\text{Total Asset}}$	X3
Dividend Payment	$DP = \frac{\text{Dividend Per Share}}{\text{Earning Per Share}}$	X4

This study used panel data regression analysis carried out with a model approach with regression specifications of the common effects model, fixed-effect model, and random-effects model. The selection of the best model specifications was by using the Chow test, Hausman test, and Lagrange multiplier. The common effect test is the simplest approach to the panel data model as it assumes that the existing combined data show the actual condition. The results of the regression analysis are considered valid for all objects at all times [14].

The regression equation in the common effects model is presented below [15]:

$$Y_{it} = \alpha + X_{it} \beta + \epsilon_{it}$$

A fixed effect test is where the condition of each object is different, even one object at a time will be very different from the condition of the object at another time. Therefore, a model that can show differences in constants between objects, even with the same regression coefficient is needed. The fixed effect here means that an object has a constant of a fixed magnitude for various periods. Furthermore, the regression coefficient is constant from time to time (time-invariant)

To distinguish one object from another, it used a dummy variable. Therefore, this model is often also called the Least Square Dummy Variables (LSDV) [14]. Therefore, in the fixed-effect model, each unknown parameter and will be estimated using a dummy variable technique is as follows [15]:

$$Y_{it} = \alpha + \alpha_{it} + X'_{it} \beta + \epsilon_{it}$$

The random effect test is used to overcome the weakness of the fixed effect method which uses quasi-variables so that the model is uncertain. Without using quasi-variables, the random effects method uses residuals, which are thought to have a relationship between time and between objects [14].

In contrast to the fixed-effect model, the effect specification of each individual is treated as part of the error component which is random and uncorrelated with the observed explanatory variables, such model is called the random effect model (REM). This model is often referred to as the error component model (ECM). Thus, the equation for the random effect model is as follows [15]:

$$y_{it} = \alpha + X'_{it}\beta + w_{it}$$

The Chow test is a test to determine the most appropriate Fixed Effect or Random Effect model to estimate panel data.

The hypothesis established in the Chow test is as follows [16]:

H0 = Common Effect Model

H1 = Fixed Effect Model

H0 is rejected if the P-value is lower than the value of α . On the other hand, H1 is accepted if the P-value is higher than the value of α . The value of α is 5%.

The Lagrange multiplier (LM) test is used to determine whether the Random Effect model is better than the Common Effect (OLS) method [15].

Formally, there are three test procedures, namely the F statistic test which is used to choose between:

- 1) Common effects or fixed-effects models;
- 2) Lagrange Multiplier (LM) test is used to choose between the common effects model or the random-effects model;
- 3) Hausman test is used to choose between the fixed effects model or the random-effects model.

Hausman test is a statistical test to choose whether the Fixed Effect or Random Effect model is the most appropriate to use [15].

4 Data Collection

Data were collected from observation by directly observing without the help of any tools [17]. The manufacturing companies were selected because they are one of the largest contributors to GDP in Indonesia. This study involved 47 samples of manufacturing companies listed on the Indonesia Stock Exchange (IDX) for the 2018-2020 period.

The criteria used in determining the sample:

Table 2. Description of Sample Criteria

Description of Company Criteria	Number
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Companies listed in the manufacturing sector on the Indonesia Stock Exchange (IDX) before or during 2018.	194
Companies that are not included in the sample because they have just entered the Indonesia Stock Exchange (IDX) in 2019 and 2020	(30)
Manufacturing companies that do not have complete financial statement data published on the Indonesia Stock Exchange (IDX) and which report financial statements regularly and consistently.	(14)
The company presents financial statements in foreign currency.	(26)
Companies that experience losses in their annual financial statements from 31 December 2018 to 31 December 2020.	(48)
Companies that do not pay dividends during the 2018 – 2020 period	(29)
Number of companies involved as sample	47

Source: Processed Data, 2022

Based on the above criteria, 47 manufacturing companies match the predetermined criteria. A total of 30 companies were not included as samples because they had just entered the Indonesia Stock Exchange in 2019 and 2020. Then, 14 companies were also not included as samples because they were incomplete in displaying financial statements during the 2018-2020 period. A total of 26 companies were not included as samples because they presented financial statements in foreign currency. Then, 48 companies were not included as samples because they suffered losses in the annual financial statements from 31 December 2018 to 31 December 2020 and 29 companies did not pay dividends in the 2018 – 2020 period.

5 Results and Discussion

5.1 Numerical Results

Table 3. Stastical Descriptive Analysis

Variables	Mean	Std Dev	Max	Min
Y	0.136603	0.117104	0.632000	0.001000
X1	0.371589	0.179189	0.783000	0.092000
X2	0.106794	0.205002	1.676000	- 0.287000
X3	0.282922	0.225900	0.869000	- 0.300000
X4	0.659184	1.057400	10.00000	0.001000

Table 3 shows the mean value, maximum value, minimum value, and standard deviation value as required to perform descriptive statistical tests. The independent variables used in this study are Leverage (X1), Growth Opportunity (X2), Net Working Capital (X3) and Dividend Payment (X4) and the dependent variable is Cash Holding (Y).

Based on the table above, X1 which is Leverage has a minimum value of 0.092000 and a maximum value of 0.783000. The lowest X1 value is PT Indospring Tbk in 2019 and the highest X1 value is PT Indal Aluminum Industry Tbk in 2018. X1 has a mean value of 0.371589 and a standard deviation of 0.179189. This shows that the data have presented the X1 variable well because they have a higher mean value (>) than the standard deviation value.

X2 which is a Growth opportunity has a minimum value of -0.287000 and a maximum value of 1.676000. The lowest X2 value is PT Merck Indonesia Tbk in 2020 and the highest X2 value is PT Indofood CBP Sukses Makmur Tbk in 2018. X2 has a mean value of 0.106794 and a standard deviation of 0.205002. This shows that the data have not presented the X2 variable well because they have a lower mean value (<) than the standard deviation value. As this study uses panel data regression, this is not a problem in the study.

X3 which is Net working capital has a minimum value of -0.300000 and a maximum value of 0.869000. The lowest X3 value is PT Astra International Tbk in 2018 and the highest X3 value is PT Hartadinata Abadi Tbk in 2020. X3 has a mean value of 0.282922 and a standard deviation of 0.225900. This shows that the data have presented the X3 variable well because they have a higher mean value (>) than the standard deviation value.

X4 which is a Dividend payment has a minimum value of 0.001000 and a maximum value of 10,000000. The lowest X4 value is PT Multi Bintang Indonesia Tbk in 2020 and the highest X4 value by PT Chitose International Tbk in 2020. X4 has a mean value of 0.659184 and a standard deviation value of 1.057400. This shows the data have not presented the X4 variable well because they have a lower mean value (<) than the standard deviation value. As this study uses panel data regression, this is not a problem in the study.

The dependent variable used in this study is Y. Y has a minimum value of 0.001000 and a maximum value of 0.632000. The lowest Y value is PT. Wilmar Cahaya Indonesia Tbk in 2018 and the highest Y value is PT Delta Djakarta Tbk in 2018. Y has a mean value of 0.136603 and a standard deviation of 0.117104. This shows that the data have presented the Y variable well because they have a higher mean value (>) than the standard deviation value.

Table 4. The Result of Panel Data Regression

Variables	CEM		FEM		REM	
	Coeff.	t-Stat	Coeff.	t-Stat	Coeff.	t-Stat
Y	0.116 696	3.136 460	0.071 692	1.373 530	0.094 651	2.272 079

X1	- 0.122 998	- 1.923 665	- 0.026 783	- 0.280 665	- 0.076 402	- 1.076 400
X2	- 0.048 885	- 1.252 009	- 0.010 650	- 0.389 076	- 0.019 154	- 0.729 402
X3	0.231 896	4.560 508	0.272 552	2.971 261	0.255 808	4.265 886
X4	0.007 925	1.044 685	- 0.001 685	- 0.321 934	2.11E -05	0.004 179

Table 4 shows that the R-squared results obtained from the common effect (CEM) test are 0.367362. This shows that the contribution of the independent variable used in the common effect test can explain the dependent variable by 36.7%. Moreover, one independent variable of X3, namely net working capital, has a significant influence on the dependent variable of Y, namely cash holding.

Based on the results of the fixed effect (FEM) test, the independent variables simultaneously have a significant influence on the dependent variable of 0.875472 or 87%, higher than the common effect test. Then, one independent variable of X3 namely net working capital has a significant influence on the dependent variable of Y, namely cash holding.

Then, the R-squared result from the random effect test (REM) is 0.231523. This shows that the contribution of the independent variable used in the random effect test can explain the dependent variable by 23%. The independent variable of X3 namely the net working capital has a significant influence on the dependent variable of Y, namely cash holding.

5.2 Validation

Table 5. The Summary of Results of Panel Data Regression Analysis

Variables	Symbol	Expected Relationship	Relationship Realization
Leverage	X1	-	-
Growth Opportunity	X2	+	-
Net Working Capital	X3	+	+
Dividend Payment	X4	+	+

The first hypothesis emphasizes that X1 has a negative effect on Y in manufacturing companies listed on the Indonesia Stock Exchange for the 2018-2020 period with a coefficient value of -0.076402. This means that the higher X1, the lower Y. This happens as companies that have debts have to pay back the debt. So the company has to spend funds to pay debts so that at the end of the year cash holding tends to be low.

The results of this study are in line with the previous study by [18] and Bagh et al. (2021) [19] that X1 had a negative effect on Y. However, this contradicts [10] and [13] that X1 had a positive effect on Y.

The second hypothesis emphasizes that X2 has a negative effect on Y. However, this is not in line with the results of the present study that X2 is not proven to have a positive influence on Y with a coefficient value of -0.019154 in manufacturing companies listed on the Indonesia Stock Exchange (IDX) in the 2018 – 2020 period. This happens because growth opportunity is a combination of possible future investment opportunities with real assets owned by the company. Meanwhile, during the COVID-19 pandemic, only a few companies had the opportunity to grow and growth is an increase in the assets owned by the company. Meanwhile, the increasing income indicates that the company can use the income to increase the company's cash holding. Therefore, the results of this study are in line with the previous study by [18, 20] that X2 does not have a significant effect on Y. However, [19] state that X2 has a negative effect on Y in Bangladesh. However, this contradicts [21, 22] that X2 has a positive influence on Y.

The third hypothesis emphasizes that X3 has a positive influence on Y in manufacturing companies listed on the Indonesia Stock Exchange for the 2018-2020 period with a coefficient value of 0.255808 and this is in line with the results of this study. This means that the higher the net working capital, the higher the cash holding. This happens because Net working capital is a company asset and can replace cash easily and even can be used to finance company operations without disrupting liquidity. So the company must have net working capital to carry out the company's operational activities. The results of this study are in line with the previous studies by [11] and [23] that X3 has a positive effect on Y. However, this contradicts with [13] and [20] that X3 has a negative effect on Y.

The fourth hypothesis emphasizes that X4 has a positive influence on Y in manufacturing companies listed on the Indonesia Stock Exchange for the 2018-2020 period with a coefficient value of 2.11 and this is in line with the results of this study. This means that the higher the dividend payment, the higher the cash holding. This happens because the dividend payment is a distribution of company profits, which means that the company's profits also increase and the dividends distributed are cash dividends meaning that the company's cash holding is also larger.

The results of this study are in line with the previous study by [13] and [24] that X4 has a positive effect on Y. However, this is in contrast with [19] that X4 has a negative effect on Y in the context Bangladesh, Pakistan, and India.

6 Conclusion

6.1 Conclusion

Based on the data analysis and testing, it can be concluded that:

1. The independent variable of leverage (X1) has no significant effect on the dependent variable of cash

holding (Y) in manufacturing companies listed on the Indonesia Stock Exchange for the 2018-2020 period. Leverage (X1) has a significance value of 0.2837 ($0.2837 > 0.05$) and has a negative coefficient value of -0.076402 which means the hypothesis is accepted. Then, it can be concluded that leverage (X1) has no significant effect on cash holding (Y) in manufacturing companies listed on the Indonesia Stock Exchange for the 2018-2020 period.

2. The independent variable of growth opportunity (X2) has no significant effect on the dependent variable of cash holding (Y) in manufacturing companies listed on the Indonesia Stock Exchange for the 2018-2020 period. Growth opportunity (X2) has a significance value of 0.4670 ($0.4670 > 0.05$) and has a negative coefficient value of -0.019154 which means the hypothesis is rejected. It can be concluded that growth opportunity (X2) has no significant effect on cash holding (Y) in manufacturing companies listed on the Indonesia Stock Exchange for the 2018-2020 period.
3. The independent variable of net working capital (X3) has a significant effect on the dependent variable of cash holding (Y) in manufacturing companies listed on the Indonesia Stock Exchange for the 2018-2020 period. Net working capital (X3) has a significance value of 0.0000 ($0.000 < 0.05$) and has a positive coefficient value of 0.255808 which means the hypothesis is accepted. It can be concluded that net working capital (X3) has a significant effect on cash holding (Y) in manufacturing companies listed on the Indonesia Stock Exchange for the 2018-2020 period.
4. The independent variable of dividend payment (X4) has no significant effect on the dependent variable of cash holding (Y) in manufacturing companies listed on the Indonesia Stock Exchange for the 2018-2020 period. Dividend payment (X4) has a significance value of 0.9967 ($0.9967 > 0.05$) and has a positive coefficient value of 2.11 which means the hypothesis is accepted. It can be concluded that dividend payment (X4) has no significant effect on cash holding (Y) in manufacturing companies listed on the Indonesia Stock Exchange for the 2018-2020 period.

6.2 Research Limitations

This research has the following limitations:

1. The research conducted is limited to companies in the manufacturing sector listed on the Indonesia Stock Exchange (IDX).
2. The data collection is limited to the 2018-2020 period.
3. This research only uses independent variables of leverage (X1), growth opportunity (X2), net working capital (X3), and dividend payment (X4), where these variables are only one of some factors affecting cash holding (Y).

5. Not all companies in the manufacturing sector can be used as a population in this study because some companies do not meet the criteria.
6. Not all manufacturing companies present complete financial statement information related to the variables studied so there is a significant reduction in the sample in the population

6.3 Suggestions

Based on the results of the study, the researcher proposes the following suggestions:

1. Potential investors who want to invest in manufacturing companies listed on the Indonesia Stock Exchange (IDX) can use the results of this study as a reference in making investment decisions.
2. Companies are suggested to make cash reserves according to their needs so that the cash reserves can be used effectively considering that optimal cash holding planning can help for the company's daily operational activities or sudden needs.
3. Future studies that use one of the four variables used in this study are suggested to focus on other industries such as mining, property, or real estate listed on the Indonesia Stock Exchange (IDX).
4. Future studies are suggested to use or look for other variables that have not been studied in this study to enrich the factors affecting the company's cash holding.
5. Future studies are also suggested to extend the period so that the data from the sample can clearly represent and describe the condition of the company's cash holding from year to year.

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