

DETERMINANTS OF CASH HOLDINGS OF CONSUMER NON-CYCLICALS FIRM LISTED IN INDONESIA STOCK EXCHANGE

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ABSTRACT

Cash is one of the most important asset owned by a firm. Cash functions to finance all firm's operating activities. Without cash firm's operational activities can't run smoothly. Firms hold a certain amount of cash, this is called cash holdings. The level of cash holdings owned by a firm surely need to be managed well. This research aimed to empirically prove the effect of financial leverage, profitability, capital expenditure, firm size, and growth opportunity on cash holdings. The populations used in this research was 105 consumer non-cyclicals firms that was listed on Indonesia Stock Exchange (IDX) during the 2020-2022 period. The sampling method used was the purposive sampling method. The sample used in this research was 50 consumer non-cyclicals firms that was listed in IDX during the 2020-2022 period. The data used for this research was secondary data. The hypothesis testing method used was multiple linear regression method. The statistical tool used for data processing in this research was Eviews version 12.0. The model that was most suited for this research was the Random Effect Model (REM). The results of this research showed that financial leverage, capital expenditure, and growth opportunity had a negative effect on cash holdings, profitability had a positive effect on cash holdings, while firm size didn't have any effect on cash holdings. The results of this research implied that managers and investors should consider the level of financial leverage, profitability, and capital expenditure in assessing cash holdings to make a decision.

Keywords: Financial Ratio, Capital Expenditure, Firm Size, Growth Opportunity, Cash Holdings

1. INTRODUCTION

Firm in consumer non-cyclicals sector are firm whose business isn't affected by seasonal changes or economic growth, such as food and beverages, household product, etc. The firm in this sector have a large market share so the competition is very tight. Therefore, it is beneficial for firm in consumer non-cyclicals sector to maintain liquidity in order to grow their business. Maintaining liquidity can be done by managing their cash well.

Cash and cash equivalents are one of the most important items in the financial statements which are located in the statement of financial position. This item can be used as a basis for decision making of both internal and external parties. Cash is the most liquid asset owned by a firm and it is very necessary to fund their operational activities. Kieso, Weygandt, and Warfield (2020) define cash as the most liquid assets that function as a standard medium of exchange, as well as a basis for measuring and calculating other items, while cash equivalents are short term, highly liquid investments that can be easily converted into cash and have an insignificant risk of changes in value.

Firms need to hold a certain amount of cash, so they don't run out of cash, this is called cash holdings. According to Ogundipe, Ogundipe, and Ajao (2012) cash holdings is cash owned by the firm or can be invested in physical assets and distributed to investors. Therefore, cash holdings are viewed as cash and also cash equivalents that can easily be converted into cash. The

level of firm's cash holdings certainly needs to be managed properly. If a firm holds a large amount of cash, it can function as a reserve for unexpected expenses, reducing the risk of financial distress, and less dependent on external source of financing. However, if the amount of cash is too large, it will become an idle funds.

Ali, Ullah, and Ullah (2016) explained there are three motives for holding cash namely transaction motive, precautionary motive, and speculative motive. The first motive is the transaction motive, the firm holds cash to pay for its transaction activities. The second motive is the precautionary motive, which the firm holds cash to act as a reserve to fulfill cash demands that arise unexpectedly. The third motive is the speculative motive, which the firm holds cash by estimating they will gain profit in the future from increase in interest rates or changes in foreign exchange rates.

This study aimed to empirically prove the influence of factors that could affect the level of firm's cash holdings. There are many research that examined the factors that influence cash holdings but there are inconsistencies. For example, research done by Arfan *et al.* (2017) and Aftab, Javid, and Akhter (2018) showed that financial leverage has significant negative effect on cash holdings but these results contradicted research done by Endri *et al.* (2020) and Selcuk and Yilmaz (2017) that showed financial leverage has significant positive effect on cash holdings, and many others.

Trade-off Theory

Trade-off theory was developed by Modigliani dan Miller (1963) which explained about managing cash by comparing costs and benefits of holding cash. According to Marfiah and Zuhilmi (2015), firms consider the boundaries between costs and benefits for holding cash. If a firm manages their cash holdings well, it will be consistent with their goal, which is to maximize firm value. Guizani (2017) said that the benefits of holding cash can be explained by two motives, namely transaction and precautionary motives. Per the transaction motive, the main benefit for holding cash is save transaction costs to raise funds and preventing the needs to liquidate other firm assets to make payments. As for the precautionary motives, it explains that firm will use current assets to finance their investing and other activities if other sources of funding are not available or to costly.

Signalling Theory

According to signaling theory, companies provide signals to their financial statements user, especially investors, regarding information about the decisions taken by management to achieve their goals. The information presented to investors must be relevant, reliable, accurate, complete and timely to help make quick decision. The signals provided by the company are useful so that investors can take appropriate and quick steps in making investment decisions. The information provided can be good or bad news about the company. Good or bad signals given by a company to investors can influence the amount of cash the company has (Rustam & Rasyid, 2022).

Agency Theory

Agency theory was first stated by Jensen and Meckling (1976) which explains the need for a clear separation between ownership and management functions in firms to avoid problems. Jensen (1986) said that the principal assigned a job to one or more people which is called the agents, the agents act on behalf of the principal and in accordance with the agreements between two parties. This theory explains the relationship between managers and shareholders, where shareholders trust the managers to manage firm's assets so that the shareholders obtain a return

in the form of dividends. According to Jinkar (2013) the relationship between the principal and agent is often associated with a conflict of interest. This agency problems can give rise to agency costs which are costs that arise due to differences in goals between managers and shareholders. Christina and Ekawati (2014) stated that the relationship between agency theory and cash holdings is that firm's cash is the most liquid item so it is very vulnerable to misuse by managers for their own interest, which can create a conflict of interest between managers and shareholders.

Pecking Order Theory

Pecking order theory was developed by Myers and Majluf (1984) which explains there is an order of funding sources used by managers. Andreas and Tjakrawala (2023) explained that firms prefer to use fund generated from internal sources rather than fund generated from external sources. When internal funds are insufficient or can't be used, the firm will seek funds through safe debt, then risky debt, and the last option equity financing. Kariuki, Namusonge, and Orwa (2015) said that in pecking order theory there is no target for determining the level of cash holdings, but cash act as a buffer between retained earnings and the need for investments. Firms hold cash to avoid external fundings, so retained earnings will be used to finance firm's investment needs.

Financial Leverage Effect on Cash Holdings

According to trade-off theory, leverage can reduce company's cash holdings. If high financial leverage is viewed as company's ability to easily obtain funds from creditors the company doesn't need to hold a large amount of cash. (Le, Tran, Ta, & Vu, 2018). In the agency theory view, companies with high leverage tend to hold less cash due to high level of supervision from external parties (Chireka and Fakoya, 2017). Research conducted by Endri et al. (2020) and Selcuk and Yilmaz (2017) show that leverage has a significant positive effect on cash holdings. Research conducted by Arfan et al. (2017), Aftab et al. (2018), and Shabbir, Hashmi, and Chaudhary (2016) show that leverage has a significant negative effect on cash holdings.

Profitability Effect on Cash Holdings

According to signalling theory, profitability has a significant positive effect on company's cash holdings. A high level of profitability will provide a good signal to investors so that they invest in the company. This resulted in an increase in cash holdings owned by the company (Rustam and Rasyid, 2022). This is supported by research conducted by Vuković, Mijić, Jakšić, dan Saković (2022) and Lintungan and Surjadi (2023) which show that profitability has a significant positive effect on cash holdings.

Capital Expenditure Effect on Cash Holdings

Based on pecking order theory, capital expenditure has a negative relationship cash holdings because companies that incur high costs for capital expenditure activities will have few internal sources of funds to invest in current asset reserves. Apart from that, companies with high levels of capital expenditure will also have more fixed assets that can be used as a collateral for debt, so this can reduce the need to hold large amounts of cash (Guizani, 2017). This is in line with research conducted by Bayyurt and Nizaeva (2016) and Andreas and Tjakrawala (2023) which shows that capital expenditure has a significant negative effect on cash holdings.

Firm Size Effect on Cash Holdings

According to trade-off theory, firm size has a negative relationship with cash holdings. Small companies are likely to face more risks than larger companies, so small companies tend to hold more cash (Le et al., 2018). According to Chireka and Fakoya (2017), in agency theory,

companies with larger shareholders are more dispersed. This causes managers to have more power to hold more cash for their own interests. So, in agency theory, firm size has a positive relationship with cash holdings. Research conducted by Bayyurt and Nizaeva (2016) and Shabbir et al. (2016) shows that firm size has a significant positive effect on cash holdings. Research conducted by Selcuk and Yilmaz (2017) and Suherman (2017) shows that firm size has a significant negative effect on cash holdings.

Growth Opportunity Effect on Cash Holdings

According to signalling theory, growth opportunity has a significant positive effect on company's cash holdings. An increase in Growth Opportunity, which is measured by the increase in company sales, will attract the interest of investors in investing into the company so that the amount of cash holdings owned by the company increases. An increase in sales can be an estimation that the profits generated by the company will also increase (Rustam & Rasyid, 2022). According to trade-off theory, growth opportunity has a significant negative effect on company's cash holdings. Companies that have a high level of growth opportunities will hold a lot of cash in accordance with the precautionary motive because of higher risk of financial distress. According to agency theory, growth opportunity has a negative relationship with cash holdings because in companies with a low level of growth opportunity, managers may still collect large amounts of cash to invest in projects they want even if the projects are not profitable without much supervision by the capital market (Chireka and Fakoya, 2017). Research conducted by Romadhoni, Kufepaksi, and Hendrawaty (2018) and Suherman (2017) show that growth opportunity has a significant positive effect on cash holdings. Research conducted by Lintungan and Surjadi (2023) and Nurjanah, Widati, Asiah, and Audiana (2023) shows that growth opportunity has a significant negative effect on cash holdings.

The financial leverage ratio shows how much company uses external funds in the form of debt. Companies with a high level of financial leverage indicate that the company relies heavily on debt to finance its activities. High financial leverage will reduce the company's level of cash holdings because the company needs to pay the debt along with its interest. Financial leverage can also be viewed as a substitute for cash. H_{a1} : Financial leverage has a significant negative effect on company's cash holdings.

The profitability ratio shows the company's ability to earn profits during a certain period. Companies with high profitability will be viewed more favorably by investors so that they are more willing to invest in the company, which will result in the increase of company's cash holdings. Companies with high profitability are better able to pay off debt, distribute dividends and obtain loans from external sources. Companies with a high level of profitability will hold more cash to maintain their liquidity and to face uncertainty. H_{a2} : Profitability has a significant positive effect on company's cash holdings.

Capital Expenditure is an activity carried out by a company to invest in fixed assets to provide benefits for the company's operational activities. These activities usually require a large cost, so the company needs to spend a large amount of cash to finance these activities. Companies with high capital expenditure also have many fixed assets that can be used as collateral for debt, thereby reducing the need to hold a large amount of cash. H_{a3} : Capital expenditure has a significant negative effect on company's cash holdings.

Firm size is a measurement scale that shows how big or small a company is. Large companies are considered to have better performance than smaller companies. Large companies are also

easier to enter the capital market to obtain external funds compared to smaller companies. Large companies also have more needs and obligations compared to smaller companies. This causes larger companies to hold more cash than smaller companies. Ha₄: Firm size has a significant positive effect on company's cash holdings.

Growth opportunity shows how much opportunity a company has to develop in the future by utilizing investment activities available. Growth opportunity is usually measured by an increase such as an increase in sales. When sales increase, investment opportunity also increases. The company will try to take advantage of these opportunities to maximize company's returns. The company will of course spend cash to finance this investment activities in order to maximize the return obtained which results in the company's cash holdings decreasing. Ha₅: Growth opportunity has a significant negative effect on company's cash holdings.

From the description above, the research framework model is as following:

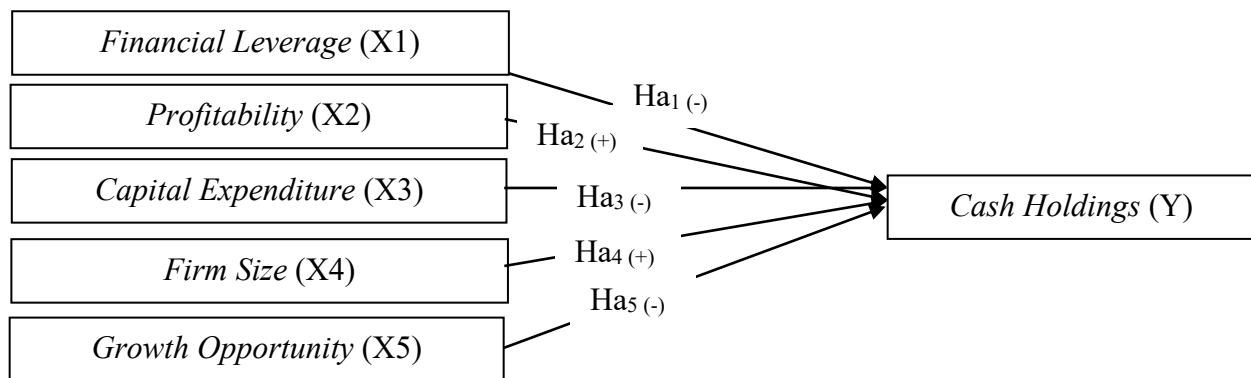


Figure 1. Theoretical Framework in this Research

2. RESEARCH METHOD

This Research use quantitative method. The data used for this research was secondary data in the form of firm's financial statements which is obtained from the websites www.idx.co.id, firm's official website, and other website that contain the necessary data used in this research. The data was organized and calculated using microsoft excel 2016 and the statistical tool used for data processing in this research was evIEWS version 12.0. The sampling method used in this research was purposive sampling. The firms were selected using these criteria: 1) consumer non-cyclicals firms listed on the Indonesia Stock Exchange in 2020-2022, 2) consumer non-cyclicals firms whose financial statement data was complete for the year 2019-2022, 3) consumer non-cyclicals firms whose financial statement used rupiah currency during 2019-2022. The population in this research was 105 consumer non-cyclicals firms listed on the Indonesia Stock Exchange during 2020-2022. The sample obtained in this research was 50 consumer non-cyclicals firms listed on the Indonesia Stock Exchange during 2020-2022.

According to Eneh, Okegbe, and Ndubuisi (2019) cash holdings are the amount of cash kept by a company in order to meet its financial requirement. Cash holdings are considered as cash and cash equivalents which are company's current assets that are the most liquid and are located in statement of financial position. According to Le *et al.* cash holdings can be measure as following:

$$\text{Cash Holdings (CH)} = \frac{\text{cash and cash equivalents}}{\text{total assets}}$$

According to Berk, DeMarzo, and Harford (2015) financial leverage is a ratio that measure how much company is reliant on debt as their source of financing. Arfan *et al.* (2017) said that financial leverage is a ratio that compare total debt to total assets that can be measure as following:

$$\text{Financial Leverage (DAR)} = \frac{\text{total debt}}{\text{total assets}}$$

According to Jason and Viriany (2020) profitability is company's ability to generate profit that are bigger than the incurred costs during operational activities. This ratio can be interpreted as the results obtained by managers for the funds invested from shareholders. According to Aftab *et al.* (2018) profitability can be measured by return on assets ratio (ROA) which is as followings:

$$\text{Profitability (ROA)} = \frac{\text{net income}}{\text{total assets}}$$

Capital Expenditure is an expenditure in the form of investment in long-term assets which are property, plant and equipment. Those assets will be depreciated periodically (Setiawan and Rachmansyah, 2019). Kudu and Salim (2021) measure capital expenditure using the following formula:

$$\text{Capital Expenditure (CAPEX)} = \frac{\text{net fix assets}}{\text{total assets}}$$

Romadhoni *et al.* (2018) said that firm size is a scale for measuring a company, whether it is small, medium, or large. Large companies usually find it easier to obtain funds due to collaboration with other companies and are known to many investors. According to Chireka and Fakoya (2017) firm size can be formulated as follows:

$$\text{Firm Size (SIZE)} = \text{natural logarithm of total assets}$$

According to William and Fauzi (2013) growth opportunity can be define as the opportunity a company has to make investments that are supported by the assets owned by the company. According to Endri *et al.* (2020) growth opportunity can be calculated using the following formula:

$$\text{Growth Opportunity (GROWTH)} = \frac{\text{sales period}_t - \text{sales period}_{t-1}}{\text{sales period}_{t-1}}$$

Table 1. Variables Measurement in this Research

Variable	Measurement	Scale	Source
Dependent Variable			
Cash Holdings	$CH = \frac{\text{cash and cash equivalents}}{\text{total assets}}$	Ratio	Le <i>et al.</i> (2018)
Independent Variable			
Financial Leverage	$DAR = \frac{\text{total debt}}{\text{total assets}}$	Ratio	Arfan <i>et al.</i> (2017)
Profitability	$ROA = \frac{\text{net income}}{\text{total assets}}$	Ratio	Aftab <i>et al.</i> (2018)
Capital Expenditure	$CAPEX = \frac{\text{net fix assets}}{\text{total assets}}$	Ratio	Kudu and Salim (2021)
Firm Size	SIZE = natural logarithm of total assets	Ratio	Chireka and Fakoya (2017)
Growth Opportunity	$GROWTH = \frac{\text{sales period}_t - \text{sales period}_{t-1}}{\text{sales period}_{t-1}}$	Ratio	Endri <i>et al.</i> (2020)

3. RESULTS AND DISCUSSIONS

Before the hypothesis testing, the data being analyzed needs to fulfill the requirements of 4 classic assumption tests, which are normality test, multicollinearity test, heteroskedasticity test, and autocorrelation test. For the normality test, it was done using Jarque-Bera probability test. The value of Jarque-Bera Probability is 0.077598 which is higher than 0.05, that means the data is distributed normally. The multicollinearity test was done by analyzing the correlation matrix between all independent variables. The value of correlation coefficient between all independent variables are all below 0.85 which means there is no correlation between all the independent variables. The heteroskedasticity test was done using the white test. The value of Probability Chi-square in the Obs*R-squared is 0.1606 which is higher than 0.05, that means there is no heteroskedasticity in the data of this research. The autocorrelation test was done by using Durbin-Watson test. The value of the Durbin-Watson stat is 1.788567 which is located between -2 and 2, that means there is no autocorrelation in the data of this research.

After the classic assumption test requirements was all fulfilled, the Chow test, Hausman test, and Lagrange Multiplier test are all done to determine the best model used for the data in this research. First, Chow test was done to determine which is the best model between fixed effect and common effect. The value of probability in the cross-section f is 0.0000 which is less than 0.05, that means fixed effect model is more suited for this research than common effect model. Second, Hausman test was done to determine which is the best model between fixed effect and random effect. The value of probability in cross-section random is 0.505 which is higher than 0.05, that means random effect model is more suited for this research than fixed effect model. Third, LM test was done to determine which is the best model between common effect and random effect. The value of Breusch-Pagan probability is 0.0000 which is lower than 0.05, that means random effect model is more suited for this research than common effect model. From the test done in the above, it can be concluded that the best model for the data in this research is the random effect model (REM). The multiple linear regression test results can be seen in the table below:

Table 2. Multiple Linear Regression Test Results

<i>Variable</i>	<i>Coefficient</i>	<i>Prob.</i>
C	-0.844736	0.1660
DAR	-0.528181	0.0010
ROA	0.728422	0.0006
CAPEX	-1.280461	0.0000
SIZE	0.014734	0.4640
GROWTH	-0.235839	0.0000

Based on the test results in the table above, the regression equation obtained in this research is as follows:

$$\text{LOG_CH} = - 0.844736 - 0.528181 \text{ DAR} + 0.728422 \text{ ROA} - 1.280461 \text{ CAPEX} + 0.014734 \text{ SIZE} - 0.235839 \text{ GROWTH} + \varepsilon$$

Financial leverage (DAR) has a regression coefficient value of $- 0.528181$ this means that one unit of increase in financial leverage will decrease the amounts of company's cash holdings by 0.528181. Financial leverage has probability value of 0.0010 which is lower than 0.05. So financial leverage has a significant negative effect on company's cash holdings. On the other hand, profitability (ROA) has a regression coefficient value of 0.728422 this means that one unit

of increase in profitability will increase the amounts of company's cash holdings by 0.728422. profitability has probability value of 0.0006 which is lower than 0.05. So, profitability has a significant positive effect on company's cash holdings. Capital expenditure (CAPEX) has a regression coefficient value of -1.280461 and a probability value of 0.0000 which is lower than 0.05, which means capital expenditure has a significant negative effect on company's cash holdings. One unit of increase in capital expenditure will decrease the amounts of company's cash holdings by 1.280461. Firm size (SIZE) has a regression coefficient value of 0.014734 and a probability value of 0.4640 which is higher than 0.05, which means firm size doesn't have any effect on company's cash holdings. Lastly, growth opportunity has a regression coefficient value of 0.235839 and a probability value of 0.0000 which is lower than 0.05, this means growth opportunity has a significant negative effect on company's cash holdings. The value of probability (F-statistic) is 0.000000 which is lower than 0.05, which means financial leverage, profitability, capital expenditure, firm size, and growth opportunity simultaneously affect company's cash holdings. The value of adjusted R-squared is 0.345407, which means financial leverage, profitability, capital expenditure, firm size, and growth opportunity can explain the variation of company's cash holdings by 34,54%. The rest can be explained by another variable.

Financial leverage has a significant negative effect on company's cash holdings, this means that a high debt will result in reduce cash because the company needs to finance the debt along with its interest. Financial Leverage can also be considered as a cash substitute. This result is consistent with the trade-off theory and agency theory. This result is also consistent with research conducted by Arfan *et al.* (2017), Aftab *et al.* (2018), and Shabbir *et al.* (2016), but inconsistent with research done by Endri *et al.* (2020), Selcuk and Yilmaz (2017), Chireka and Fakoya (2017), and Lintungan dan Surjadi (2023). Profitability has a significant positive effect on company's cash holdings, which means companies with large net income tend to have large amounts of cash available because company with high profitability will be viewed more favorably by investors, so investors are more willing to invest in company with high profitability. This result is consistent with signalling theory. This result is also consistent with research done by Vuković *et al.* (2022) and Lintungan and Surjadi (2023), but inconsistent with research done by Aftab *et al.* (2018) and Romadhoni *et al.* (2018).

Capital expenditure has a significant negative effect on company's cash holdings, which means companies with high capital expenditure hold less cash because the costs incurred in this activity are usually large, so company need to spend a large amount of cash to pay for this activity. Company with high level of capital expenditure also have many fixed assets that can be used as a collateral for debt. This result is consistent with pecking order theory. This result is consistent with research done by Bayyurt and Nizaeva (2016), Andreas and Tjakrawala (2023) and Jebran *et al.* (2019), but inconsistent with research done by Vuković *et al.* (2022) and Kudu and Salim (2021). Firm size doesn't have any effect on company's cash holdings, this means that firm size is not a consideration for company in holding cash. This result is inconsistent with trade-off theory and agency theory. The result of this research is consistent with Chireka and Fakoya (2017) but inconsistent with Bayyurt and Nizaeva (2016), Shabbir *et al.* (2016), Selcuk and Yilmaz (2017), and Suherman (2017).

Growth opportunity has a significant negative effect on company's cash holdings, so the companies that have the opportunity to continue to grow will use the cash they have to make investments to maximize the returns they obtain. Company will try to take advantage of growth opportunities available to them to maximize company's returns. This result is inconsistent with signalling theory and trade-off theory but consistent with agency theory. This result is also

consistent with research conducted by Lintungan and Surjadi (2023) and Nurjanah *et al.* (2023) but inconsistent with research conducted by Romadhoni *et al.* (2018), Suherman (2017), and Endri *et al.* (2020).

4. CONCLUSIONS AND SUGGESTIONS

This research showed that financial leverage, profitability, capital expenditure, and growth opportunity can determine the level of company's cash holdings. Meanwhile, firm size doesn't have any significant effect in determining company's level of cash holdings. High level of financial leverage will reduce company's cash holdings because the company needs to fulfill their debts. Companies with high profitability tend to hold more cash, which means companies tend to rely on the profit they generated to create cash reserves in order to maintain their liquidity. High level of capital expenditure means companies invest a lot on their fixed assets which will reduce the amount of cash held by company because this investment usually needs a large amount of costs. Companies with high growth opportunity tend to hold less cash, so it seems company will spend cash to funds for investment opportunity available to them which resulted in them holding less cash. This research has limitation which is it only studied companies in consumer non-cyclicals sector which does not represent the whole companies, so it is suggested for the next research to increase the number of companies studied to be more relevant. The other limitation in this research is it only analyzes a few variables, so it is suggested to also use other variable that wasn't used in this research but might affect the level of company's cash holdings such as net working capital, dividend payment, cash flow, and cash flow volatility. This research also only studied 3 years period, so it is suggested to increase the period studied to produce more accurate results. For theory, this research supported a view things stated in trade-off theory, signalling theory, pecking order theory, and agency theory. The results of this research implied that manager should considerate the level of financial leverage, profitability, capital expenditure, and growth opportunity in determining the level of firm's cash holdings because they will affect the level of cash holdings needed by the company. This research also implied that investor should pay more attention to the level of financial leverage, profitability, capital expenditure, and growth opportunity in assesing company's cash holdings policy to make better investment decision.

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