

Financial Determinants of Corporate Cash Holdings: Evidence from Property and Real Estate Companies in Indonesia

Muhammad Kemal Almagribi
Faculty of Economics and Business, Andalas University,
Padang, Indonesia

Niki Lukviarman
Faculty of Economics and Business, Andalas University, Padang, Indonesia

Erna Setiany*
Faculty of Economics and Business, Universitas Mercu Buana, Jakarta, Indonesia

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ABSTRACT

This study aims to identify the determinants of cash holding in property and real estate sector companies listed on the Indonesia Stock Exchange for the 2017-2020 period. The chosen determinants include leverage, profitability, liquidity, firm size and opportunity growth. Using a method of purposive sampling, 45 property and real estate sector enterprises were selected for the sample of this study. Using multiple regression, the study's findings indicated that leverage, profitability, liquidity, and growth opportunity are significant drivers of cash holdings. This finding provides insights for managers in determining the level of cash holdings and that maintaining cash holdings at the optimal level is contingent to the company's requirements.

Keywords: Cash holdings, leverage, profitability, liquidity, growth opportunity.

1. INTRODUCTION

Cash plays a crucial function for an organization, particularly in financing its operating activities. In imperfect capital markets, external sources of finance are costly, making cash on hand a necessity for businesses (Maheswari and Rao, 2017). As a result, businesses frequently have excess cash on hand. Therefore, it is essential to understand and empirically assess the elements that influence cash on hand.

There are two types of cash: cash on hand and cash deposited with a bank. The availability and storage of cash is referred to as cash holding. Holding cash has both benefits and drawbacks. Profits from trade discounts, maintaining the company's credit rating, and financing unanticipated cash demands are some advantages coming with a high level of cash on hand for a business (Maheswari and Rao, 2017). The corporation can save conversion fees to cash, allowing it to meet huge, unexpected liquidity needs. The company's high level of cash on hand may indicate that it has a high level of liquidity, ability to meet obligations and a low risk of default. However, the corporation can incur losses if it consistently holds a large cash balance, e.g., a loss of opportunities to generate a profit.

Keynes identified three motives for companies to hold cash: transactional motives, precautionary motives, and speculation motives (Ross *et al.*, 2010). Three theories may

explain why companies hold cash: the trade-off theory, the pecking order theory, and the free cash flow theory. Several studies have investigated the factors that influence a company's cash holdings. For instance, Bagh *et al.* (2021) and Aftab *et al.* (2018) found that leverage and dividends paid have a considerable impact on a company's cash holdings. In addition, Al-Najjar (2013) and Kwan and Lau (2020) discovered that liquidity and firm size have a substantial effect. According to the research undertaken by Mugableh (2021) and Ali *et al.* (2021), profitability has an impact on a company's cash holdings. Numerous studies have demonstrated that growth opportunities have an effect with mixed results. Maheshwari and Rao (2017) assert that growth opportunities have a positive impact on a company's cash holding. However, Mumtaz *et al.* (2020) found that the opposite is true.

Companies in the property and real estate industries are the focus of this study because they are susceptible to liquidity issues due to their reliance on non-current assets such as land and buildings. Since land and buildings are categorized as noncurrent assets, it will be difficult for businesses to make up for sudden financial shortages if they cannot do so with their cash on hand. Consequently, it is necessary to identify the ideal cash-holding firm in the property and real estate sectors. In addition to enterprises in the building and real estate sectors, each company offers cash reserves to finance the daily operations of the business.

The results of this study show that, at the 1% level of significance, profitability, leverage, liquidity, and growth opportunities have positive effects on a company's cash on hand, while there is no evidence that firm size influences cash holdings. These findings demonstrate that leverage, profitability, liquidity, and growth potential are significant predictors of cash holding corporations in Indonesia's property and real estate industries.

The rest of this paper is organized as follows: The second section is a literature review and develops the main hypotheses. The third section describes the methods used in this research for sampling, data collection, and data analysis. The fourth section presents the research findings.

2. LITERATURE REVIEW

Determinants of Cash Holdings

Leverage

Adrian *et al.* (2010) describe leverage as a technique for measuring how dependent a business is on creditors to finance its assets. Organizations with a low degree of leverage rely on their own capital to finance their assets. Conversely, organizations with a high level of leverage depend heavily on external loans to finance their assets. Based on the trade-off theory, Ozkan and Ozkan (2004) looked at UK corporations and found that there is strong evidence for a negative link between leverage and cash holding, which means that firms with higher leverage ratios hold less cash. A high leverage ratio is also a good indicator of a company's ability to issue debt. It means that the company can use loans instead of cash on hand. In their research, Ferreira and Vilela (2004) found that organizations with a higher level of leverage can easily obtain funding from outside sources, so they can hold less cash. Similarly, the pecking order theory assumes that cash reduces debt. The theory of free cash flow suggests that leverage and cash on hand have a negative relationship because firms with low leverage are subject to less outside monitoring, which gives the managers more freedom.

Based on previous research, trade-off theory, pecking order theory, and free cash flow theory, the first hypothesis of this study is that leverage reduces cash holdings.

H1: There is a negative association between leverage and cash holdings.

Profitability

In this study, the Return on Equity (ROE) ratio is used to measure the profitability of a firm. The findings of Al-Najjar and Belghitar (2011), Dittmar *et al.* (2003), and Ferreira and Vilela (2004) demonstrate that cash reserves correlate strongly with profitability. Nguyen (2005) discovered that a company's cash holdings increase when its profitability grows. To avoid risks, creditors are more likely to lend money to more profitable businesses. As a result, according to trade-off theory, the relationship between cash holdings and profitability is negative. According to the pecking order idea, internal funds are the primary source of funding; hence, profitable businesses with large cash flows attempt to acquire more cash. In addition, managers under this circumstance have greater financial policy freedom that results in larger cash holdings. Based on prior empirical findings, the trade-offs theory, and the pecking order theory, the following is stated as the third hypothesis for this study:

H2: There is a positive association between profitability and cash holdings.

Liquidity

In this study, current ratio is used to measure liquidity. Ferreira and Vilela (2004) argue, based on the trade-off theory, that in case of a cash shortage, liquid assets can be easily liquidated and hence are substitutes for cash. Based on the trade-off theory and previous empirical findings, the third hypothesis in this research can be formulated as follows:

H3. There is a negative association between asset liquidity and cash holding

Firm Size

Size is an important variable influencing the level of financial constraints that influence the level of cash holdings (Ozkan and Ozkan, 2004). Firm size may influence the behaviour of cash holdings. Large companies have better access to capital markets at lower costs (Al-Najjar & Belghitar, 2011), while small companies face difficulties in accessing capital markets because they are usually classified as new companies that are less well known and therefore more vulnerable to capital market imperfections (Saddour, 2006). Therefore, unlike small companies, large companies usually do not hold a large amount of cash so as to avoid underinvestment.

Total assets are chosen as a proxy for company size. According to the trade-off theory, small firms have a higher level of cash holdings than large firms because large firms have greater diversification than small ones, making them less vulnerable to bankruptcy costs (Al-Najjar and Belghitar, 2011). Ferreira and Vilela (2004) also found a negative relationship between firm size and cash holdings. On the other hand, the pecking order theory predicts that the relationship between firm size and cash holdings is positive because large companies typically perform better than small ones and should have larger cash holdings (Opler *et al.*, 1999). Bates *et al.* (2009) and Endraswati (2018) found a different result and concluded that the cash ratio increased during the sample period for small firms compared with large firms. Based on past evidence and the trade-off theory, the following is the fourth hypothesis:

H4: There is a negative association between firm size and cash holdings.**Growth Opportunity**

Opler *et al.* (1999) state that growth opportunities are a mix of possible future investment opportunities. They show that leverage is related to growth opportunities. A growth opportunity can be considered as an investment opportunity. A high growth opportunity, according to the pecking order theory, encourages the company to hold more cash for financing their investment opportunities (Ogundipe *et al.*, 2012). Companies with growth opportunities, according to Ogundipe *et al.* (2012), use liquid assets (such as cash) as insurance policies to reduce the possibility of financial distress and to prioritize good investment opportunities when external financing is costly.

H5: There is a positive association between growth opportunity and cash holdings.**3. RESEARCH METHOD**

The sample for this research contains property and real estate companies listed on the Indonesia Stock Exchange over the period 2017–2020. This study used the purposive sampling method, which is a sampling technique on selecting elements of a population that meet the criteria set by the researcher (Sekaran and Bougie, 2016). The sample criteria of this study are as follows:

- All the properties and real estate companies in the sample are listed on the Indonesia Stock Exchange over the 2017–2020 period.
- All the properties and real estate companies in the sample have published annual financial reports during 2017-2020 through the Indonesia Stock Exchange website (www.idx.co.id) or the companies' official websites.
- All the properties and real estate companies in the sample have all the information in their 2017-2020 annual reports and financial statements needed to measure the research variables.

The total number of property and real estate companies listed on the IDX during the sample period is 76. Excluding missing observations and outliers, the total number of sample companies is 45 with 180 firm-year observations. Multiple linear regression analysis on panel data is used to test the hypotheses. The regression model is as follows:

$$\text{CASH} = \beta_0 + \beta_1\text{LEV}_{it} + \beta_2\text{ROE}_{it} + \beta_3\text{LIQ}_{it} + \beta_4\text{SIZE}_{it} + \beta_5\text{Growth opportunity} + \varepsilon_{it}$$

CASH = Cash Holdings = Cash and Cash Equivalent / (Total Asset - Cash and Cash Equivalent)

β_0 = Constant

$\beta_1, \beta_2, \beta_3$ = Coefficients

LEV = Leverage = Total Debt / Total Assets

ROE = Return on Equity = Net Income / Owners Equity

LIQ = Liquidity = Net of Cash / Current Liabilities

SIZE = Firm Size = Ln(Total Asset)

Growth Opportunity = Stock Price / Book Value

ε = Error term

4. RESULT AND DISCUSSION

Table 4.1 shows that the minimum and maximum values of cash holding are 0.00036 and 0.69388. The average cash holding is 0.0769599 with a standard deviation of 0.09880823. It shows that property and real estate companies in Indonesia have an average cash holding of 7.69599% of total assets. The mean value of leverage is 0.3583 (35.83%). It also shows that the average debt level is 35.83%. This indicates that the companies use equity sources of funds more than debt sources. Profitability has a mean value of 0.0185194. Furthermore, the mean value of liquidity is 0.6271562. the mean value of PBV = 1.0303889 suggests that the sample companies' stock market prices are greater than their book values.

Table 4.1 Descriptive Analysis

	N	Minimum	Maximum	Mean	Std. Deviation
Cash Holding	180	.00036	.69388	.0769599	.09880823
Leverage	180	.02430	.91495	.3583935	.19190865
Profitability	180	-.55540	.32030	.0185194	.10268216
Liquidity	180	.01613	5.43045	.6271562	.97516845
Size	180	23.87424	31.73965	28.856696 9	1.64436899
Growth	180	-.32000	8.74000	1.0303889	1.32729210
Valid N (listwise)	180				

The regression results show that the estimated model is significant at the 1% level in explaining the determinants of cash holdings with an F value of 272.975. The adjusted R-square is 0.884, indicating that 88.4% of the cash holdings variable can be explained by the independent variables, namely Liquidity, Leverage, Profitability, Firm size, and Growth opportunity. The t-statistics of the coefficients on Leverage, Profitability, Liquidity and Growth Opportunity confirm that these variables are significant as determinants of cash holdings at the 1% level. However, firm size is an insignificant variable in determining cash holdings. The regression coefficients of the variables Leverage, Profitability, Liquidity and Growth Opportunity are positive, showing that these variables have positive effects on cash holdings.

The findings of this study confirm those of Bagh *et al.* (2021), which suggest that enterprises with high leverage incur substantial expenditures if they require externally funded cash. Therefore, organizations with high leverage tend to preserve more cash to capitalize on existing investment opportunities. Mumtaz *et al.* (2018) notes that companies with a high level of debt keep more capital to avoid insolvency and financial difficulties. Similarly, Endri *et al.* (2020) indicate that a higher leverage level and an increase in net working capital result in a higher cash balance, and thus highly liquid companies tend to have a higher cash balance and are able to meet their short-term debt obligations. Such

companies also have more favourable options of investing their capital (Setiany *et al.*, 2022).

Table 4.2 Multicollinearity and t-Statistic Test Result

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-.963	.640		-1.504	.134		
LnLeverage	.804	.046	.466	17.489	.000	.916	1.092
Profitability	.814	.339	.064	2.399	.017	.903	1.107
LnLiquidity	.840	.026	.861	32.107	.000	.903	1.107
Size	-.009	.021	-.012	-.431	.667	.900	1.111
Growth	.077	.026	.078	2.990	.003	.945	1.058

F statistic 272.975
 Prob (F Statistic) 0.000
 R-Square 0.887
 Adjusted R Square 0.884

This study's results are different from what Al-Najjar (2013) and Ferreira and Vilela (2004) who show that leverage reduces cash holdings. The results are also in contrary to the Free Flow Theory saying that organizations with low leverage are less likely to be monitored, give managers more freedom, and hold more cash.

This study shows that profitability, as measured by return on equity (ROE), has a significant effect on holding cash on hand. This study is consistent with the concept and confirms the findings of Nguyen (2006), Al Najjar (2013), Trinh, and Mai (2016), and Mugableh (2017, 2021). According to Al Najjar (2013), companies with the ability to earn substantial revenues can save substantial sums of cash. Furthermore, Trinh and Mai (2016) contend that organizations with the ability to profit invest more in cash. This is viewed through the lens of the speculative theory and the cautious theory. From the standpoint of speculative theory, real estate companies typically use their wealth to speculate and seize future investment opportunities. However, from the standpoint of the preventive motives, companies keep a significant amount of cash on hand to deal with unforeseen disasters. This study's findings are inconsistent with Bagh *et al.*'s (2021) findings, which claim that there is a substitution between profit and cash, and thus profitability has a negative impact on cash holding.

The results demonstrated that liquidity has a positive effect on holding cash on hand. The results of this study reject Hypothesis 3 and are inconsistent with the findings of Ferreira and Vilela (2004) and Kwan and Lau (2020), who suggest that, based on the trade-off theory, liquid assets are cash substitutes because they can be quickly liquidated in the event of a cash shortage. The outcome, however, is consistent with the findings of Mumtaz *et al.*'s 2020 study, which concludes that liquidity has a beneficial effect on cash holdings. He concludes that liquidity has a favourable impact on cash holdings and supports the trade-off argument. The increasing information asymmetry and

unpredictability of the liquidation value of liquid assets reduce the borrowing capacity of businesses, so they must hold more cash. In the case of enterprises in the real estate and property industries, assets are mostly held in non-fixed assets, such as buildings and lands, which have an uncertain liquidation value and are difficult to liquidate. As a result, companies in these sectors must keep more cash.

The results demonstrated that firm size does not influence cash holdings. This findings contradict those of Al Najjar (2013), Yogesh & Rao (2020), and Susan *et al.* (2022), who discovered that firm size had a significantly negative effect on holding cash on hand. They argued that when the size of a company expands, the cash on hand decreases due to the larger ownership structure. This analysis verifies the findings of Suhardjanto *et al.* (2017), which suggest that firm size has no effect on financial performance.

The t-test results indicate that growth has a positive and statistically significant effect on holding cash on hand. This finding supports hypothesis 5 and is consistent with the findings of Ogundipe *et al.* (2012) and Hardin, W. G., *et al.* (2009). Hardin, W.G., *et al.* (2009) who noted that enterprises with rapid growth are typically the focus of capital market oversight since they require capital to expand. The positive association between investment opportunities and cash on hand is also strongly supported by the cautious rationale for maintaining cash (Maheswari and Rao, 2017) - firms with more investment opportunities hold more cash because severe macroeconomic shocks and financial distress are more costly for firms with more investment opportunities than for firms with fewer opportunities (Bates *et al.*, 2009).

5. CONCLUSION

Using multiple regression on panel data, this study investigates the factors that affect cash holdings. According to the findings, factors including leverage, profitability, liquidity, and growth opportunity are significant drivers of cash holdings. However, firm size does not influence the cash holdings of the sample organizations. This study provides information on the effects of leverage, profitability, liquidity, firm Size, and growth opportunity on cash holdings, which assists academics and researchers in gaining a better understanding of the factors that influence a company's motivations to hold cash and guide managers in determining the appropriate level of cash holdings.

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