

## Examining The Excess Cash Holdings As An Indicator of Agency Problems

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### Abstract

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This research aims to examine the implications of excess cash holdings on firm value based on agency theory. Data were obtained from a total sample of 1828 non-financial public companies in Indonesia, with 672 exceeding normal cash holdings using the panel regression techniques. The result showed that excess cash holdings have a negative effect on the firm value which is stronger for more concentrated ownership, for more dispersed ownership and for more financially difficult firms. Overall the empirical finding showed that excess cash holdings acts as a significant indicator of agency problems.

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## INTRODUCTION

Theoretically, company managers need to properly allocate cash holdings to maximize the wealth of its shareholders by balancing the costs and marginal benefits using the right allocation strategy (Opler et al., 1999). However, the problem associated with the use of this technique is determining the cash holding excessiveness. This research, therefore, focuses on the real difference of the cash holding, with a strategic benefit for company values as opposed to the old viewpoint, which is only considered as part of the working capital. According to Powell and Baker (2010), a company's decision on the amount of money to be held can affect its value. Companies tend to allow flexibility to avoid poor investment and financial difficulties. Cash holdings are accumulated to anticipate future investment opportunity with higher values (Mikkelsen & Partch (2003), Simutin (2012), and Faulkender & Wang (2006)) According to Livdan et al. (2009), the effects of financial constraints on risk, showed that excess cash holdings contain information used to reduce financial constraints. Therefore, investors respond more positively. Conversley, Fresard, and Salva (2010) stated that excess cash holdings are monies that are not tied to operation and investment but inefficiently squandered and misused. Excess cash holdings are company resources that are not aligned with the interests of its shareholders (Jensen (1986); & Stulz (1990)). This argument is in line with Simutin's (2010) and Khieu & Phyles (2012) opinion, which stated that the agency problem tends to exist due to excess cash holdings.

Lower values are obtained with the exploitation of a company's resources by managerial shareholders. The lower value is in line with the research conducted by Faulkender and Wang (2006), Lee and Powell (2011), Chen, et al. (2012), which stated that the marginal value of cash holdings decreases following the increase in the company's income. According to Pinkowitz and Williamson (2004), a unit of currency significantly contributes to the return of less money, when the company's shareholders

invest in unprofitable projects. A decrease in market value shows a problem in the agency, with a possibility that the controlling shareholders (insiders) are exploiting its company resources.

This research aims to determine the implications of excess cash holdings to the value of a company using the agency theory empirically. It also defines the moderating variable of concentrated and dispersed ownership to strengthen the negative values of the company. Earlier methodologies were based on Fama and French (1998). However, this research applied the modern specification model based on the creation of value by Ramezani et al. (2002) and Bacidore et al. (1997).

## LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

According to Jensen and Meckling (1976), agency theory arises due to the presence of information asymmetry and conflict of interests. Excess cash holdings are the backup money allocated to a company for its daily operation (Attig et al. 2011). It is also defined as the most favored and cheapest kind of liquid asset converted into another asset. A company needs to allocate cash holdings at a reasonable price, to avoid paying off excesses to shareholders.

According to Faulkender and Wang (2006), the marginal cash value of nonfinancial companies in the United States from 1971-2001 decreased with an increase in cash holdings. Similarly, in 2012, Chen et al. researched 8016 companies in the United States and found that the addition of cash to an already abundant amount led to agency problems. Pinkowitz and Williamson (2004) stated that the presence of agency problems was due to the misuse of funds by the managers, thereby leaving debtors to enjoy the profit from the company liquidation. The description led to the following hypothesis:  
**H<sub>1</sub>:** excess cash holdings negatively affect the Value of a company.

This study emphasizes the availability of empirical evidence in dealing with the

problems associated due to excess cash holdings. According to the entrenchment theory, agency conflict type 2 has a higher chance of occurring in companies with a significant number of influential shareholders. These categories of people are capable of using their rights to redistribute wealth among themselves. According to previous research, reduction in company performance tends to occur due to the high distribution of shares among insiders (Mitton, (2002), Lemons & Lins (2003), Suranta & Midiastuty (2003), and Gunarsih (2003)).

Companies in many countries, including Indonesia, consist of a concentrated ownership structure with inner shareholders in dominant positions capable of controlling managers (La Porta et al., 1999). The shareholders can expropriate minority shareholders and creditors (Shleifer & Vishny (1986), Stulz (1988), and Burkart et al. (1997)). According to Faisal (2013), the concentration level of insiders following empirical testing is above 70%. Therefore, the second hypothesis is as follows:

**H<sub>2</sub>:** the negative effects of excess cash holdings on the value of the company are stronger when the ownership is concentrated.

Conflicts in agencies tend to arise from the separation of ownership and control, which occurs in companies with smaller investors (Jensen & Meckling (1976), and Morck et al. (1988)). According to a research conducted by Jani et al. (2004) using ownership of shares less than 30%, shareholders have low or none

incentives to supervise management due to the expensive rate of the monitoring fee. Also, when the performance of a company increases, the benefits are reaped by all investors.

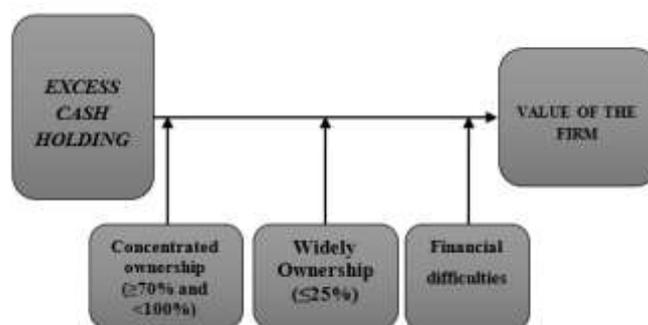
However, the lack of managerial supervision by shareholders leads to personal incentives by using company funds to carry out luxurious personal activities. Jensen (1986) stated that managers might accumulate cash holdings for their benefits, which tend to reduce the risk of companies from going extinct. Therefore, the following hypothesis is proposed:

**H<sub>3</sub>:** the negative effects of excess cash holdings toward the value of the company are stronger when the ownership is widely dispersed.

Jensen and Meckling (1976) proposed an agency conflict between shareholders and debtors. According to their research, some shareholders need excess cash holdings to be invested in high-return programs, which are risky. However, the shareholders believe that when a company has serious financial difficulties, the benefits associated with excess cash holding are allocated to the debt holders. A company's value tends to raise with benefit to the cash holdings of the shareholders and vice versa (Pinkowitz and Williamson, 2004). The proposed hypothesis is as follows:

**H<sub>4</sub>:** the negative effects of excess cash holdings toward the value of the company are stronger when it faces financial difficulties.

The following is a framework of conceptual research:



**Figure 1.** Research Framework: The Negative Effects of Excess Cash Holdings on Value of the Firm

## METHODS

### Methods To Estimate Normal Cash Holdings

Excess cash holdings are determined by the residual value of estimated cash holdings. This research, therefore, uses three approaches with a data panel structure to estimate the value of cash holdings.

**a. Static panel data regressive model.** The model implicitly estimates the value of the cash holdings of the static models, with the assumption that there is no need to adjust the new cash holdings target. The model is as follows:

$$CASHHOLDINGS_{i,t} = \sum_{i=1}^n \beta_i X_{i,t} + \alpha_i + \alpha_t + u_{i,t} \quad (1)$$

**b. Dynamic panel data regression model.** This model admits that there is an adjustment process to standard cash holdings, thereby leading to a lag.

The autoregressive dynamic regressive statistic model is as follows:

$$CASHHOLDINGS_{i,t} = CASHHOLDINGS_{i,t-1} + \sum_{i=1}^n \beta_i X_{i,t} + \alpha_i + \alpha_t + u_{i,t} \quad (2)$$

**c. The regressive model with the method estimated GLS through the procedure iterative Cochrane Orcutt.** Autocorrelation is showed by the interdependency of disruption from one regressive model following the AR (1) structure. The model is an estimator GLS method with the regressive statistic model of EGLS as follows:

$$CASH\ HOLDINGS_{i,t} = \sum_{i=1}^n \beta_i \bar{X}_{i,t} + \bar{u}_{i,t} \quad (3)$$

Explanation :

$$\begin{aligned} CASH\ HOLDINGS_t &= \\ CASH\ HOLDINGS_t - \rho CASHHOLDINGS_{t-1} \\ \bar{X}_{i,t} &= X_{i,t} - \rho X_{i,t-1} \\ \bar{u}_t &= u_t - \rho u_{t-1} \end{aligned}$$

Symbol  $\alpha_i$  and  $\alpha_t$  are *firm-specific effects* and *period-effects*. X is a vector containing independent variables, known as an investment opportunity (GROWTH), company size (SIZE\_RIIL), financial difficulties (DISTRESS), cash flow volatility (RV) or (VCF), cash flow (CFLOW), investment (CAPEX), convertibility (CONVERT), leverage (LEV), dividend (DDIV\_DPS), cash conversion cycle (CCC), debt maturity (MATURITY), assets tangibility (TANGIBLE). The cash holdings estimators are selected based on the criteria of the BLUE re-

gression model and the goodness of fit, which are the values of Adjusted R<sup>2</sup>, and SSR (Sum squared Residual). The higher the value of Adjusted R<sup>2</sup>, and less the SSR, the better the model.

According to those criteria, the excess cash holdings are calculated based on two of the best specification as follows:

$$\begin{aligned} CASH\ HOLDING_{estimation\ MODEL\ 1} = \\ 0,091 + 0,003GROWTH + 0,008SIZE\_RIIL - \\ 0,006DDISTRESS + 2,45RV - 0,011CFV \\ + 0,036CFLOW - 0,01CAPEX - 0,056CONVERT - \\ 0,057DDIV\_DPS + 0CCC + 0,007DEBTMAT - \\ 0,18TANGIBLE + 0,441AR(1) \end{aligned}$$

$$\begin{aligned} CASH\ HOLDING_{estimation\ MODEL\ 2} \\ 0,031 - 0,002GROWTH + 0,01SIZE\_RIIL - \\ 0,013DDISTRESS + 2,235RV - \\ 0,001CFV + 0,016CFLOW - 0,085CAPEX - \\ 0,034CONVERT - 0,031LEV \\ + 0,007DDIV\_DPS + 0CCC + 0,006DEBTMAT - \\ 0,151TANGIBLE + 0,243CASHHOLDING(-1) \end{aligned}$$

### Methods To Test Research Hypothesis

The research sample is selected from companies with positive excess cash holdings and complete data, which are determined by the value of residual estimation from the chosen specification model. A total number of 672 observations were obtained from consumer discretionary (185), Materials (143), staples (110), and industries (104).

**Research Variables** in terms of definition, formula, and identification used to test the hypothesis are provided in the table below.

The agency problem tends to exist due to excess cash holdings.

**The Research Statistics Model** of this research is  $Y_{i,t} = \alpha_0 + \beta_1 X_{i,t} + \Sigma \beta_2 CONTROLS_{it} + \varepsilon_{i,t}$ . Coefficient  $\beta$  is estimated by using the Moderated Regression Analysis approach, as seen in Table 2.

## RESULT AND DISCUSSION

The research hypothesis is tested using two models. The first calculates the value of the excess cash holdings using the residual value by estimating the static model regression.

The second calculates it using the residual value of estimated model dynamic regression. The estimated result of each hypothesis is as follows:

**Table 1.** Variable Definitions to Test Research Hypothesis

Variable	Definitions and Formulas	Variable Identification
$ABNRETURN_{i,t}$	Abnormal return is a proxy of the value of the firm, with excesses from the normal return as follows: $\alpha_{i,t} = R_{i,t} - E(R_{i,t})$ $\alpha_{i,t}$ is abnormal return $R_{i,t}$ is the individual return $E(R_{i,t})$ Expected return, using market return. Formula: $E(R_{i,t}) = (IHSG_t - IHSG_{t-1}) / IHSG_t$	Dependent Variable
$XCASH HOLDINGS_{i,t}$	Excess Cash Holdings is calculated from the residual value with a positive sign as follows: $XCASH HOLDING_{i,t} = CASH HOLDING_{i,t} - CASH HOLDING_{estimation MODEL1}$ $XCASH HOLDING_{i,t} = CASH HOLDING_{i,t} - CASH HOLDING_{estimation MODEL 2}$	Independent Variables
DOWN1	is dummy variable, DOWN1 set one if the most significant shareholders have some share 70% < share < 100%, and DOWN1 set zero, otherwise	Moderating Variables
DOWN2	is dummy variable, DOWN2 set one if the most significant shareholder has share < 25%, and DOWN2 set zero, otherwise.	
DISTRESS	is the dummy variable, which measured by the TIER ratio. Formula $TIER = \frac{EBIT_{i,t}}{Biaya Bunga_{i,t}}$ . Dummy variable set one if $TIER < 0$ , and zero otherwise	
$EVA_{i,t}$	<i>Economic Value Added</i> is a financial performance measure based on the shareholder's value creation. Formula: $(NOPAT - (WACC \times CAPITAL)) / TOTAL ASET$ NOPAT = Net Operating Profit After Tax CAPITAL = Book Value of Equity WACC = <i>Weighted Average Cost of Capital</i> , from Database Bloomberg	Controlling Variables
$RISK_{i,t}$	is the deviation of asset pricing as a proxy of unsystematic risk normalized by asset total $t$	
$SIZE_{i,t}$	is company size Formula: $\ln(TOTAL ASSET_{RILL})$	

**Table 2.** Statistics Test Model and Sign Prediction

Hypothesis	Sign Prediction	Regression Equation
H <sub>1</sub>	$\beta_1$ negative	$ABNRETURN_{i,t} = \alpha_1 + \beta_1 XCASHHOLDINGS_{i,t} + \Sigma \beta_2 CONTROLS_{it} + \varepsilon_{it}$
H <sub>2</sub>	$\beta_3$ negative	$ABNRETURN_{i,t} = \alpha_1 + \beta_1 XCASHHOLDINGS_{i,t} + \beta_2 DOWN1_{i,t} + \beta_3 i_{i,t} * DOWN1_{i,t} + \Sigma \beta_4 CONTROLS_{it} + \varepsilon_{it}$
H <sub>3</sub>	$\beta_3$ negative	$ABNRETURN_{i,t} = \alpha_1 + \beta_1 XCASHHOLDINGS_{i,t} + \beta_2 DOWN2_{i,t} + \beta_3 XCASHHOLDINGS_{i,t} * DOWN2_{i,t} + \Sigma \beta_i CONTROLS_{it} + \varepsilon_{it}$
H <sub>4</sub>	$\beta_3$ negative	$ABNRETURN_{i,t} = \alpha_1 + \beta_1 XCASHHOLDINGS_{i,t} + \beta_2 DISTRESS_{i,t} + \beta_3 XCASHHOLDINGS_{i,t} * DISTRESS_{i,t} + \Sigma \beta_i CONTROLS_{it} + \varepsilon_{it}$

**Table 3.** The Effect of Excess Cash Holding on Fir

Dependent Variable: ABNRETURN

	1		2	
	Coef.	t-Stat	Coef.	t-Stat
C	-0,209	1,340	0,441	5,769 **
XCASHHOLDING	-0,767	2,730 **	0,579	2,588 **
EVA	1,744	9,533 **	1,699	6,425 **
RISK	1,146	3,401 **	0,953	4,651 **
SIZE	-0,006	0,710	0,015	2,372 *
Observation	672		773	

**Table 4.** The Role of Concentrated Ownership in Strengthening the Negative Effect of Excess Cash Holding on Value of the Firm

Dependent Variable: ABNRETURN

	1				2			
	Concentrated Share Ownership							
	Coef.	t-Stat			Coef.	t-Stat		
C	-0,473	-3,326	***		0,442	7	***	
XCASHHOLDING	-0,184	-0,680			0,311	1		
EVA	1,706	40,285	***		1,739	02	***	
RISK	1,118	3,785	***		0,899	6	***	
SIZE	0,011	1,066			0,015	9	**	
DOWN1	0,058	1,237			0,103	6	**	
XCASHHOLDING*DOWN1	-4,433	-4,012	***		2,321	9	*	
Observation	644				734			

**Table 5.** The Role of Widely Spread Ownership in Strengthening the Negative Effect of Excess Cash Holding on Value of the firm

Dependent Variable: ABNRETURN

	1		2		
	Widely Spread Share Ownership				
	Coef.	t-Stat	Coef.	t-Stat	
C	-0,463	-2,485 **	-0,466	-5,312 ***	
XCASHHOLDING	-0,507	-3,926 ***	-0,050	-0,127	
EVA	1,657	32,845 ***	1,641	44,739 ***	
RISK	1,059	3,249 ***	0,858	4,528 ***	
SIZE	0,012	0,923	0,016	2,196 **	
DOWN2	0,032	0,673	-0,007	-0,208	
XCASHHOLDING*DOWN2	-2,537	-2,492 **	-2,385	-2,644 ***	
Observation	644		734		

1.

**Table 6.** The Role of Financial Difficulties in Strengthening the Negative Effect of Excess Cash Holding on Value of the firm

Dependent Variable: ABNRETURN

	1		2		
	Financial Difficulties				
	Coef.	t-Stat	Coef.	t-Stat	
C	-0,326	-0,326 *	-0,462	-0,462 ***	
XCASHHOLDING	0,451	0,451	-0,346	-0,346	
EVA	2,050	2,050 ***	1,504	1,504 ***	
RISK	1,256	1,256 ***	1,199	1,199 ***	
SIZE	-0,001	-0,001	0,014	0,014	
DISTRESS	-0,174	-0,174 **	-0,154	-0,154 ***	
XCASHHOLDING*DISTRESS	-2,853	-2,853 *	-4,794	-4,794 ***	
Observation	591		649		

2. The summary of the estimation is shown in Table 7.

**Table 7.** Summary of Estimated Result

Hyp	Model	$\beta$	Direction	Coeff.	t-Stat		Decision
H <sub>1</sub>	1	$\beta_1$	negative	-0,767	-2,730 ***		H <sub>1</sub>
	2	$\beta_1$	negative	-0,579	-2,588 ***		Support and robust
H <sub>2</sub>	1	$\beta_3$	negative	-4,433	-4,012 ***		H <sub>3</sub>
	2	$\beta_3$	negative	-2,321	-1,769 *		Support and robust
H <sub>3</sub>	1	$\beta_3$	negative	-2,537	-2,492 **		H <sub>4</sub>
	2	$\beta_3$	negative	-2,385	-2,644 ***		Support and robust
H <sub>4</sub>	1	$\beta_3$	negative	-2,853	-1,588 *		H <sub>5</sub>
	2	$\beta_3$	negative	-4,794	-8,526 ***		Support and robust

### **Result of The Effect Of Excess Cash Holdings Toward The Company Value**

Hypothesis 1 estimates that excess cash holdings negatively affect a company's coefficient value. Therefore, hypothesis 1, which stated that excess cash holdings affect a company's value negatively, is supported. This empirical finding showed that excess cash holdings are a significant pointer to supporting the agency hypothesis. Therefore, this research supports the agency cost of free cash flow theories of Pinkowitz & Williamson (2004), Faulkender & Wang (2006), Lee & Powell (2011), and Chen et al. (2012).

### **The Result Of The Effect Of Concentrated Ownership In Moderating The Effect Of Excess Cash Holdings Toward The Value Of A Company**

Hypothesis 3 estimates the effect of concentrated ownership in strengthening the negative effects of excess cash holdings toward the value of a company. The result shows that the negative effects of excess cash holdings toward the value of a company are stronger when the main shareholder is over 70%, as shown on model 2, with a similar significant sign of the coefficient. Therefore, the hypothesis is supported. The highly concentrated ownership affects the negative effects of excess cash holdings because over 70% of the proportion, are dominant (Jani et al. (2004), and Faisal (2013)). The expectations in the occurrence of agency problems are reflected in the cutting of company value by outside investors. This test result supports the findings of Liu (2011) and Attig, et al. (2011), Kusnadi (2011).

### **Result From The Effect Of Highly Dispersed Ownership In Moderating The Effect Of Excess Cash Holdings On Firm Value**

Hypothesis 4 estimates the effect highly dispersed ownership strengthens the negative effects of excess cash holdings toward the value of a company. The testing result shows a negative sign on the coefficient of interaction, which is supported by the result of the second model. Therefore the problem of agency between shareholders and the supported manager is in line with the findings of Kalcheva and Lins (2007), Lee and Lee (2009), and Faisal (2013). Highly dispersed ownership allows the entrenchment of company management due to

the free-rider problem. According to Faisal (2013), a company's value decreases when the concentration level of ownership is lower than 30% due to the problem associated with the free-rider.

### **The Result Of The Effect Of Financial Difficulties In Moderating The Effect Of Excess Cash Holdings Toward The Value Of A Company**

Financial difficulty is a problem caused by the inability of a company to fulfill its obligation. When a company faces financial difficulties, it means that the chosen investments are those with very low risk; therefore, shareholders do not have a choice in placing it in other projects with higher returns, to avoid agency conflict. The result of estimation and re-estimation shows that the coefficient interaction consists of negative signs and significance. Therefore hypothesis 5 is supported in that a company with severe financial difficulties. This research result is consistent with the findings of Pinkowitz and Williamson (2004), which stated that cash holdings are valued less when the company has financial difficulties and responded negatively by outside investors because they prefer investments with higher returns.

## **CONCLUSIONS**

In conclusion, the findings prove that excess cash holdings negatively affect the value of a company, therefore, it is a significant clue in supporting the agency hypothesis. The highly concentrated ownership structure is supported by the research data, that strengthens the negative effects of excess cash holdings toward the company's value. This is consistent with the expropriation/entrenchment hypothesis, which stated that the expropriation act is more dominant when the company ownership is highly concentrated. The result is consistent with the managerial entrenchment hypothesis, which stated that the act of expropriating excess cash holdings by management is more dominantly conducted when there is a free-rider problem amongst the shareholders due to dispersed ownership, thereby, leading to inadequate management supervision. Besides, the agency problem between the insider and the debt holders when the company has severe financial difficulties leads to low-risk investment.

The result elicits negative responses from outside investors. Therefore, the hypothesis is supported.

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