**THE EFFECT OF EXCESS CASH HOLDING ON CORPORATE VALUE THAT IS MODERATED BY FINANCING CONSTRAINTS**

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**ABSTRACT**

Cash holdings allocation exceeding normal cash holdings has multiple consequences, which are increasing financing flexibility and causing agency problems. This study is designed to examine the effect of excess cash holdings on corporate value by using agency theory framework. The sample of study is selected by using the criteria of non-financial companies in Indonesia in 2005-2014 that have cash holding exceeding cash holdings of the estimation result. The study result reveals that excess cash holdings can cause agency problems that negatively affect corporate value, and the negative effect of excess cash holdings on corporate value is stronger on the company that is financially unconstrained according to the compound criteria (dividend paying, high cash flow, low MTB, and low debt). This empirical finding shows that excess cash holding is a significant signal in supporting the agency free cash flow hypothesis.

**Keywords:** *excess cash holdings, agency problem, financially unconstrained*

1. **INTRODUCTION**
   1. **BACKGROUND**

Cash management is corporate important policy. As the agent that receives operational responsibility, management must allocate cash holdings based on the concept that cash holdings management must be able to maximize shareholders’ wealth referring to normal cash holdings level (Opler, *et al.*, 1999). Management of cash holdings exceeding normal cash holdings level has multiple consequences, which are (1) excess cash holdings give flexibility to avoid the costs emerging from underinvestment, (2) excess cash holdings indicate that the allocation is done inefficiently, improvidence, and misuse (Frésard and Salva, 2010). It is based on the thinking that excess cash holdings are corporate resources that their use is easy to be transferred for the interest of the shareholders. Therefore, excess cash holdings have the opportunity to be invested by corporate management into projects that decrease the corporate value for personal benefit (Jensen, 1986, Stulz, 1990). This argument is in accordance with the arguments of Simutin (2012) and Khieu dan Pyles (2012) stating that agency problems tend to be found in excess cash holdings.

This study emphasizes the view by focusing on the empirical evidence provision of the existing agency problems caused by excess cash holdings by relating excess cash holding with some corporate characteristics, among others are companies that have financially constrained condition or financially unconstrained condition. The results of previous researches showed that the average of cash holdings ratio to corporate assets is relatively big, such as the companies in the United States of America in 2006 which was 23.2% (Bates, *et al.*, 2009), in the countries of Economy and Monetary Union members which was 14.08% (Ferreira and Vilela, 2004) and in China, in 1998-2009 which was 16.9% (Alles, *et al.,* 2012). However, companies in ASEAN countries have cash holdings ratio to assets that is relatively low, such as Singapore and Malaysia in 1999-2000 as much as 12% (Kusnadi, 2011) and in five ASEAN countries (Malaysia, the Philippines, Indonesia, Singapore, and Thailand) in 2001-2005 as much as 12% (Lee and Lee, 2009).

The term of excess cash holdings is interpreted as cash reserves allocated to exceed the needs level for financial daily corporate operations and needs to reach investment opportunity (Attig, *et al.*, 2011). Excess cash holdings is a discretionary cash holdings derived from models using transaction motive and precautionary motive in determining cash holdings (Bates, *et al.*, 2009).

The transaction motive emerges from the cost to convert cash substitution into cash. According to this theory, there is an economic scale in transaction motive so that big companies will hold less cash compared to small companies. Riset Mulligan (1997) supports the existence of the economic scale. The precautionary motive increases when information asymmetry and debt agency cost make the company difficult to obtain external fund so that it needs cash holdings to avoid the cost emerging from underinvestment. The researchers focusing on those motives are the studies conducted by Opler, *et al.* (1999), Fereira and Vilela (2004), Ferrira, *et al.*(2005), Bates, e*t al.* (2009), Shah (2011), Lee and Powell (2012), Alles, *et al.* (2012) as well as Ogundipe, *et al.*(2012).

Other motive is the agency motive that will be the focus in this study. The agency motive uses the base of agency theory to explain why the management tends to maintain cash holdings so it exceeds the needs of corporate normal cash holdings. This action is done in order to maintain cash holdings to get the advantage that benefits the management personally (management and controlling shareholders) by involving in activities that can lower corporate value, such as (1) conducting bad corporate takeover activity (Harford, 1999), (2) spending cash inefficiently or (3) using cash reserves to involve in opportunistic behaviour that gives direct benefit (advantage) for personal and funds luxury excessively (Jensen, 1986).

Controlling shareholders use their dominant position to accumulate cash with the cost of other shareholders. The motivation of controlling shareholders to accumulate cash is because they want to keep the control of the company and use corporate resources to get personal benefit as the result of the control own by them (Morck, *et al.*, 1988; Shleifer and Vishny, 1997). The studies from Ozkan and Ozkan (2004) and Kalcheva and Lins (2007) as well as Liu (2011) supported that controlling shareholders accumulate cash holdings to fund family projects, such as a merger diversification and acquisition that can reduce the portfolio risks, but harm the investors.

There is the existence of the potential that corporate controlling parties (insiders) will exploit corporate resources by ignoring the interest of minority shareholders, so the company will be rated lower by investors. The researches supporting that marginal value of cash holdings decreases along with the increase of cash holdings are the ones done by Faulkender and Wang (2006), Lee and Powell (2011), Chen, *et al.*,(2012). The consistent research with the finding result is the research by Pinkowitz and Williamson (2004) showing that cash as much as 1 (one) unit of currency. It uses the rationale the investors have expectation toward excess cash that can push corporate controlling parties to conduct investment in unprofitable projects. The reduction of market value indicates the presence of agency problems.

Besides describing the indication of existing agency problems, excess cash holdingsalso can give the clue of financing flexibility (Ammann, *et al.*, 2011; Simutin, 2012; Khieu and Pyles, 2012). Financing flexibility shows the ability of company to access and restructure financial activity with the lowest cost. Company with flexible finance, when facing negative shocks, is able to avoid financial difficulty and is able to provide fund for the needs of investment if an investment opportunity emerges. Having big cash holdings can give flexibility for the company to avoid costs coming from underinvestment problems in the projects that have positive NPV as the result that the company is lack of financial resources.

Cash holdings are viewed as the form of cash accumulation to anticipate future investment opportunity, so cash holdings are worth higher or positive. The research results from Mikkelson and Partch (2003) and Simutin (2012) and the research of Faulkender and Wang (2006) are consistent with the hypothesis of financing flexibility that reveals the finding that marginal value of liquidity is higher in the company with lower liquidity, higher investment opportunity, and higher external financial constraint. Livdan, *et al*.(2009) investigated the effect of financial constraint on risk and return of expectation, with the research result showing that financially constrained company has higher risks and gives higher return of expectation compared to company that is less financially constrained.

The existence of excess cash holdings indicating the agency problems and as the clue of the financing flexibility, is the effect of excess cash holdings on the value of the company that does not have clear direction because on the other side, the implication of excess cash holdings is explained by the argument that excessive cash holdings with precautionary motive is not relevant in the company that is financially unconstrained, so it is reasonably predicted that there are other motives. Excessive cash holding will cause high transaction cost and agency cost so that shareholders will value excess cash holding negative that it is considered able to lower corporate value. Therefore, this study will include the financially unconstrained effect to argue the argument of finacing flexibility, so the direction and the intensity become firm to support the argument of the existence of agency problems.

* 1. **PROBLEM FORMULATION**

Excess cash holdings is cash reserves exceeding the needs for operational activity and investment (Dittmar and Mahrt-Smith, 2007). Empirical findings of available excess cash holding agency problems have not been clear, as the research done by Mikkelson and Partch (2003) did not find the existence of agency problems in the company that has high cash holdings. The research results reported by Harford, *et al.* (2008), Pinkowitz, *et al.* (2006), Pinkowitz and Williamson (2004), Faulkender and Wang (2006) and Dittmar and Mahrt-Smith (2007), Lee and Powell (2011) as well as Chen, *et al.* (2012) show the result that is consistent with the view that excessive cash holdings generate agency problems.

The difference of study result examining the effect of excess cash holdings on corporate value creates the rationale to examine empirically the effect of excess cash holdings on corporate value without relating to corporate characteristic previously, then it is continued by empirically examining the effect of excess cash holdings on corporate value by using financially constrained effect and financially unconstrained effect. So far, the researches examining empirically the company sample in Indonesia and using excess cash holdings as resources are still limited. Therefore, this study will focus on the problem formulated as the following:

1. Do excess cash holdings negatively affect corporate value?
2. Is negative effect of excess cash holdings on corporate value stronger in the company that is financially unconstrained?
3. **THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT**

**2.1. Concept of Cash Holdings**

Cash holdings is the amount of cash and cash equivalent as well as short-term securities. The definition of cash holdings refers to two theories of current asset demand, which are buffer-stock model and inventory model. According to the two models, short-term investment in marketable securities is a cash substitution (Jeffers and Kwon, 1969) or the form of excess cash allocation (storage) (Miller dan Orr, 1966, 1968). The term of excess cash holdings is interpreted as cash reserves that are allocated exceeding the level of needs to fund daily corporate operations and the needs to obtain investment opportunity (Attig, *et al.*, 2011).

**2.2. Cash Holding Motive**

Based on the study result on economic and financial literature done by Bates, *et al.* (2009), up to now, there are four motives for company to hold cash, which are (1) transaction motive, (2) precautionary motive, (3) the tax motive, and the agency motive. The bigger size of the company, the smaller cash needs because the transaction cost is cheaper, so it does not to hold cash in big amount. Precautionary motive explains the reason of company to hold cash for preventing adverse shock when the access of share market is expensive. In other words, the motive of company to hold cash is to overcome unpredictable surge related to the needs of liquidity when the access of share market is expensive. The company’s needs to be careful is higher in the financially constrained company compared to the companies that are financially unconstrained, ceteris paribus (Almeida, *et.al.,* 2004). Tax motive shows that in multi-national companies, they accumulate more cash holdings as the consequence of tax related to foreign profit obtained from affiliations abroad. Agency motive is experienced by the company that is controlled by corporate controlling parties. Controlling parties tend to prefer holding cash rather than paying it to external shareholders. As well as in companies in the countries that have bigger agency problems, the companies will hold more cash. Harford (1999); Pinkowitz and Williamson (2001); Dittmar and Mahrt-Smith (2007) and Harford, *et al.* (2008) found consistent evidence with agency problem view, but Mikkelson and Partch (2003) did not find evidence that company that its cash holdings are high show poorer performance than company that its cash holdings are low.

**2.3. Theoretical Framework of Cash Holdings Determinant**

The study of motives for company to hold cash holdings now has been in the important position in financial literature that is reflected through the determinant researches of cash holdings. The theoretical frameworks of cash holdings determinant in the world is with transaction cost, agency cost, and information asymmetry are trade off theory, pecking order theory, and agency theory. Trade-off theory between cost and the benefit of cash holdings can identify whether or not company holds the cash holdings too much from the viewpoint of shareholders’ welfare. Afterwards, the agency theory is the one that will answer why company holds or does not hold cash holdings that maximize the shareholders’ wealth, as well as helps identifying the company that wants excessive cash holdings (Opler, *et al.*, 1999).

According to **trade-off theory*,*** company chooses the normal level of cash by comparing the benefit and the cost of cash holdings. The benefit of cash holdings is related to transaction cost saving in order to obtain fund and the needs in liquidating assets. The other benefit is that liquidity can be used to fund activity and investment when other financial resources are not available or expensive. Meanwhile, cash holdings cost is the opportunity cost of capital investment in the form of liquid assets. The formal analysis related to the benefit and the cost of cash holdings must be done carefully. Short-term investment in marketable securities contains costs. First, the cost is as the result when company releases investment to assets that are not liquid but more productive. Second, company bears the cost of transaction when purchasing and selling marketable securities. Third, company is burdened with higher tax. The other cost is cash holdings that can increase bigger agency problems compared to assets that are less smooth (Kim, *et al.* (1998).

According to **pecking order theory** (Myers dan Majluf, 1984), there is not normal level of cash holdings. This theory states that initially company funds investment with retained profit, cash holdings, debt, and the last is with equity. Cash holdings have the role as buffer between retained profit and investment needs. If the retained profit is not enough to fund current investment, it uses the accumulation of cash holdings, and issues debt if it is necessary. The funding order that is followed by company is done to minimize the cost of information asymmetry.

According to **agency free cash flow theory**, proposed by Jensen (1986), it stated that cash accumulation is done to increase the number of assets that can be controlled in order to get bigger power on company’s investment decision. The existence of cash availability makes external funding is not needed and gives detailed information to capital market about company’s investment projects, so corporate controlling parties can allocate the excess cash in order to get personal benefit, for example investment to projects that are negative NPV that can harm the corporate value, conducting bad merger and acquisition and others.

**2.4. Hypothesis Development**

**The Effect of Excess Cash Holdings on Corporate Value**

Agency theory explains why management or controlling shareholders (insiders) tend to hold cash holdings until exceeding corporate normal cash holdings. Controlling shareholders use their dominant position to accumulate cash with other shareholders’ costs. The researches of Ozkan and Ozkan (2004) and Kalcheva and Lins (2007) as well as Liu (2011) support that shareholders accumulate cash holdings to be used in funding family projects, such as diversification of merger and acquisition that can reduce portfolio risks, but disadvantageous for investors. It causes company valued lower by investors. The study done by Faulkender and Wang (2006), Lee and Powell (2011), Chen, *et al.*,(2012) support that marginal value of cash holdings decreases along with the increase of cash holdings. Pinkowitz and Williamson (2004) also shows that cash as much as 1 (one) unit of currency significantly produces contribution to the return less than 1 (one) unit of currency. It discloses that investors have negative evaluation indicating that excess cash can push controlling parties of company (management and shareholders) to conduct investment to projects that are not profitable for the company.

Based on the rationale that is described above, hypothesis 1 (H-1) is formulated as the following:

**H-1: Excess cash holdings negatively affect corporate value**

**The Effect of financial unconstraint in strengthening the negative effect of excess cash holdings on corporate value**

Excess cash holdings is cash reserves exceeding the needs for operational activity and investment (Dittmar dan Mahrt-Smith, 2007).Excess cash holdingsalso can give the clue of financing flexibility (Ammann, *et al.*, 2011; Simutin, 2012; Khieu and Pyles, 2012). Financing flexibility shows the ability of company to access and restructure its financial activity with low cost. The company that is financially flexible when facing negative shocks is able to avoid financial difficulties, and is able to provide fund for investment needs if investment opportunity appears. Having big cash holdings can give flexibility for company to avoid costs coming from underinvestment problems in projects that have positive NPV as the result of the lack corporate financial resources. Livdan, *et al*.(2009) investigated the effect of financial constraint on risk and return of expectation. The result of the study shows that company that is more financially constrained has higher risks and gives higher return of expectation compared to companies that are less financially constrained.

. This study includes the effect of financially unconstrained. The companies that are categorized unconstrained are if the companies have adequate financial capacity to conduct normal investment, so a normal financial policy can be replaced by all other different financial policies (Han and Qiu, 2007). For financially constrained companies but having interesting growing opportunity, the consequence is that the companies will invest at the level that is less optimal, so the growth, corporate performance, and corporate value increase. Financially constrained company is the company that has limitation in obtaining debt capital.

Corporate investment decision is very affected by investment opportunity because the bigger profitable investment decision, the more investment will be done, in this case, manager tries to take those opportunities in order to maximize shareholders’ welfare. If there is a profitable investment opportunity, the company that does not have financial constraint will easily take the investment opportunity to invest. It is because the company that does not have financial constraint has easier access to capital market, so it easily adapt its financial to invest that shows bigger financing flexibility, in other words, the financially unconstrained company shows high corporate value (Chan and Chen, 1991, Fama and French, 1992).

Based on the description above, hypothesis 2 (H-2) is formulated as the following:

**H-2: The negative effect of excess cash holdings on corporate value is stronger in the company that is financially unconstrained.**

1. **RESEARCH METHOD** 
   1. **Data and Sample**

Data used in this study is secondary data from Bloomberg database, as well as annual report and consolidation report issued by issuer in 2005 to 2014. Data structure used in this study is the combination of cross section data and time series data starting from 2005-2014. Panel data used to calculate the estimation of normal cash holdings, and next, issuer sample is chosen by using purposive sampling method. Sample members are selected based on some criteria. The first criterion is non-financial public companies in Indonesia that are classified based on classification system of Global Industry Classification Standard (GICS) which is a global standard to classify companies in to sector and industry. The second criterion is non-financial public companies that have been go public at least for five years or maximally have conducted Initial Public Offering in 2001. The third is that those non-financial companies have all data of related variables in 2005-2014.

**3.2. Operationalization of research variable for examining the negative effect of excess cash holdings on corporate value**

Estimation of normal cash holdings is needed to investigate the amount of excess cash holding. The prime method to estimate normal cash holdings is forming baseline cash holding with regression model. Data structure used is panel data structure arranged by data longitudinal way, which is by determining a number of cross-section samples and following behaviour of variables that are observed from time to time. This study will conduct cash holdings estimation by using three approaches of regression estimation model, which are: 1) static panel data regression model, 2) dynamic panel data regression model, and 3) regression model with estimated GLS model through Cochrane Orcut iterative procedure.

This study uses specification model of corporate evaluation with value-based approach (Ramezani, *et al.*, 2002). This specification model uses abnormal return as the measure of corporate value measuring the amount of compensation received by shareholders on equity risks, that will place variable of **excess cash holding** **(EXCHOLD)**as the prime variable, as well as controlling other variables that are correlated with abnormal return **(AR).**Those variables are the variables that are consistent and in line with the objective of shareholders’ welfare maximization, which are variable of economic value added **(EVA),** corporate non-systematic risks **(RISK)** measuring corporate unique risk (idiosyncratic) toward abnormal return. The size of company **(SIZE)** is measured by total value of real assets.

Regression statistic model to test H-1 is:

***AR t,i = α1 + β1XCHOLDt,1 + β2EVA it + β3RISK it + β4SIZE it +ε it*……...................(1)**

**3.3. Operationalization of research variables for examining the effect of financial constraint in strengthening/weakening the negative effect of excess cash holdings on corporate value**

To examine the effect of excess cash holdings on corporate value, this study uses variable of financial constraint. The classification base of financial unconstraint uses determined criteria, which are: 1) single criterion **(variabel dummy DDIV),** that company conducts dividend payment. Financial unconstrained companies generally pay dividend, in contrast, if the companies do not pay dividend, they are classified as financially unconstrained companies. 2) multiple criteria **(variabel dummy MULTIPLE),** the criteria are determined by using more than one criteria, which are dividend payment criteria, cash flow, book to market, and debt.

Regression statistic model to test H-2 is:

***ARt,i = α1 + β1XCHOLDt,1 + β2DDIVi,t + β3XCHOLDi,t \* DDIV i,t + β4EVA it + β5RISK it + β6SIZE it +ε it*….....................................................................….(2)**

***ARt,i = α1 + β1XCHOLDt,i + β2DMULTIPLEi,t + β3XCHOLDSi,t \* DMULTIPLEi,t + β4EVA it + β5RISK it + β6SIZE it +ε it*…...............................................….(3)**

1. **RESEARCH RESULT AND DISCUSSION** 
   1. **Estimation Result of Cash Holdings**

Implicitly, static model of cash holdings estimation assumes that adjusting process on cash holdings target change does not occur so that there is no delay in the process of adjustment to the new cash holdings target. Dynamic regression model of cash holdings estimation accommodates static model of cash holdings regression estimation that has autocorrelation problem. Dynamic model of cash holdings adopts an approach admitting that the adjusting process to normal cash holdings (target) is having an adjusting process toward the change occurring in corporate characteristics and or shocking change (shocks) occurring randomly, so a delay (lag) occurs. This study uses dynamic autoregressive regression model to formulate dynamic regression model. Therefore, the existence of autocorrelation problems marked by the existence of interdependence disruption from a regression model following the structure of AR(1), which is: *ut = ρut-1 + ɛt.,* the correlation then is done iteratively by using Cochrane – Orcuttiterative method (Gujarati, 2009) to get estimation value of *ρ.* This procedure is done in two steps, which are estimating autocorrelation coefficient, unknown *ρ*, and using estimation result of *ρ* to transform variables in research model known as generalized least squares (GLS

**Hypothesis Testing Result**

H-1 testing result shows that excess cash holdings cause agency problems so that they negatively affect corporate value. The testing result shows that regression coefficient of variable excess cash holdings, XCHOLD(β1= - 0,767) is marked negative and significant at significance level of 1%. As well as re-estimation result, it shows negative and significant coefficient mark. Therefore, H-1 stating that excess cash holdings negatively affect corporate value is supported.

This empirical finding result shows that excess cash holdings become a significant clue to support agency free cash flow hypothesis. It means that excess cash holding is an asset of company that has high risk to be allocated in inefficient projects, wasted, and misused because cash holdings can be changed into any assets with relatively cheaper cost compared to other assets (Jensen, 1986, Myers and Rajan, 1998, Fresard and Salva, 2010, Attig, *et al.,* 2011). Agency cost of free cash flow theory explains that cash holdings that are excessively accumulated is perceived able to increase the incentive of corporate controlling parties (insider) to spend excessive cash holdings for projects that profitable only for corporate controlling parties, so it will be perceived negative by external investors. The finding of this study supports agency cost of free cash flow theory, in line with the findings of Pinkowitz and Williamson (2004), Faulkendar and Wang (2006), Lee and Powell (2011), Chen, *et al.* (2012).

H-2 is formulated to eliminate hypothesis of financing flexibility from study conceptual framework in order to be able to focus on the testing of agency of free cash flow hypothesis. H-2 is formulated with the argument to the contrary of financing flexibility hypothesis theory, which that the effect of financing unconstraint strengthens the negative effect of excess cash holdings on corporate value. The estimation result of moderating variable interaction regression with the prime variable with moderated regression analysis approach shows that interaction coefficient of XCHOLD\*DDIV is marked negative (β3 = -1,674) and significant at significance level of 1% when financing unconstraint is classified by using criterion of dividend payment.

By using multiple criteria, interaction coefficient of XCHOLD\*DMULTIPLE is also marked negative and significant at significance level of 10% with coefficient value of β3 = -1,671. The result of re-estimation using MRA approach shows that moderating variable is homologizer variable, so to examine the effect of moderating effect, the testing must be done with subsample analysis. Its result supports that the negative effect of excess cash holdings on corporate value is stronger in the subsample of companies that are financially unconstrained by using multiple criteria.

The study result shows that the effect of financing unconstraint affects on negative return, and it is consistent with the finding results of Pinkowitz and Wiliamson (2004), Denis and Sibilkov (2010) and Tong (2011), stating that financing unconstraint causes cash holdings less have value compared to cash holdings value when financing is constrained. The decrease value of cash holdings that is more negative is a response to the increase of agency cost of free cash flow.

* 1. **Robustness Checks**

This study examines the model reliability on the companies that do not have excess cash holdings (UNXCHOLD). This testing is done to strengthen the argument that agency of free cash flow hypothesis occurs in the companies that have excess cash holdings. If this research model is reliable, the companies that do not have excess cash holdings will have better performance compared to the ones that have excess cash holdings. Robustness checks use two measurements of unexcess cash holdings coming from the residual value of the same cash holdings regression estimation to test hypothesis and re-estimate hypothesis. The results of research model testing in model 1 and model 2 show the coefficient of variable UNXCHOLD is marked positive (β1=+1,438) and (β1=+0,770) and significant at the significance level of 1%. This result supports the argument that agency of free cash flow hypothesis occurs in the companies that have excess cash holdings not in the companies that have unexcess cash holdings.

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