The Factors Affecting the Corporate Cash Holdings in Listed Firms of Indonesia: Does Corporate Governance Matter?

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The prime objective of the current research is to investigate the impact of corporate governance on the corporate CCHs in the manufacturing sector. The study has employed the panel data methodology to achieve the objectives of the current study. The data of 60 manufacturing firms was collected from the audited accounts published on their official websites. The findings of the study are in line with the proposed hypothesis of the study. The results of econometric models show that except in the case of dividends, all the variables are in significant relationship with the corporate cash holdings (CCHs). Cash flow appears a significantly and positively related variable to corporate CCHs. The relationship between managerial ownership is inverted N shape i.e managerial ownership (MAN) and MAN^3 are negatively but significantly related with corporate CCHs however MAN^2 is positively related to corporate CCHs. This confirms the nonlinear relationship between managerial ownership and corporate CCHs. As controller dummy has a positive but family controller and institutional controller has a negative relation with corporate CCHs, it indicates that the identity of controlling shareholders has a negative impact on CCH. The study has also presented the analysis of managerial ownership in the manufacturing sector of Indonesia. The impact of awareness of the CG on corporate CCHs will be helped by the results of this empirical investigation. Moreover, the findings provide support to investors for the mitigation of agency problems.

Keywords: *Corporate governance, Corporate cash holdings, Manufacturing sector, Indonesia.*

Introduction

A great saying is, 'Cash to a company is like nutrition to a human body'. From this saying we recognise that corporate cash holdings (CCH) are essential for any organisation because without CCH firms cannot exist. So, firms prefer to hold significant amounts of CCH. A company has already decided how much CCH they hold, but a question is why some firms hold large amounts of CCH and how a firm decides to hold how much CCH? Nowadays, reaching a decision about CCH is of great importance in all firms. Corporate governance (CG) mechanisms have a direct impact on firm's CCH decisions. Shareholders may be agreeing for large corporate CCHs (CCH) for investment purposes with good CG practices. Basically, CG is a system of law and sound approaches by which firms are directed and controlled. The corporate scandals like Enron and World-Com revealed the importance of CG in America and the rest of the world. CG can be defined as a set of principles and procedures to govern and control a corporation. Polovina and Peasnell (2020) provide evidence that companies with stronger legal protections have higher values of shares. CCH, here is defined as the sum of CCH (cash in hand) and marketable securities (bonds, treasury bills etc) which are easily convertible to cash (Gabor & Vestergaard, 2016). Previous research has found that a firm's CCH level is strongly related to a firm's size, growth opportunities and leverage. But here the researchers compare and analyse the firm's characteristics and are also interested in studying it from a CG perspective, such as CEO duality, family ownership, and board structure. The purpose of this study is to find out the impact of CG on corporate CCH and firms' value of the manufacturing sector of Indonesia. In Asia, Indonesia is the eighth largest importer of manufacturing products. Its share is more than 60% of the export earnings. According to the outlook of investment, the employment and export investment manufacturing sector is one of the most impressive, effective, absolute and profitable sectors. In rural areas it helps as a reliever of poverty and enhances the economic prosperity of country as a whole.

So, we have selected the manufacturing sector of Indonesia because it's one of the oldest and largest sectors in Indonesia. It has a central position in the exports of Indonesia. The objective of this research is as follows:

a) To examine whether a CCH is positively or negatively related with leverage, liquidity, cash flow (CFlow), CFlow variability, firm size, dividend, market book value.
b) To identify the dimensions that focus on CEO duality, managerial ownership, institutional controllers and family controllers.

Literature Review

The CCH decisions are among the most important decisions of corporate finance and researchers from the past six decades have tried to explore the factors which affect the CCH decisions in the manufacturing sector of Indonesia. In this section, different theories of CCH and results of prior findings are reviewed. We are starting with theories and reasons of CCH then determinants of CCH and finally the relationship of CG on CCH and firm value is discussed.

Theoretical Review

To explain how CG and other factors affect the CCH decisions of manufacturing firms, many prior researchers used the three-dimensional theoretical models the trade-off theory (Brito, Pinho, & Azevedo, 2020), the packing order theory (Amar, 2020; Basheer, 2014; Chasiotis, 2016; Waemustafa, 2018), and agency theory (Njuguna, 2016; Lubis, 2019; Waemustafa, 2018).

Trade-off Model

The trade-off model of CCH advocates that the firms optimal CCH level is a level which can be attained if and only if the marginal cost of CCH equates to the marginal benefits of CCH (Waemustafa, 2018). The marginal cost of the CCH is basically its opportunity cost. The opportunity cost of CCH is the earning that could be ensured by spending this cash on the best alternative; there are other costs too, like conversion cost and transaction cost etc. And the benefits of CCH are minimal risk of bankruptcy, smooth operation and exploiting unexpected investment opportunities. Trade of theory focuses on the cost and benefits of CCH and advocates an optimal CCH level at a point where the marginal cost of CCH becomes equal to its benefits, or more simply the optimal level of CCH is achieved by balancing the marginal cost and marginal benefits associated with CCH (Brito et al., 2020). Following this theory, managers of the firms gauge and compare the costs and benefits of the available alternative plans and then set a target CCH level. Brito et al. (2020) confirm this view and argue that a firm which is basing its CCH decision on trade off theory usually sets a target CCH level to maximise its value and then formulates strategies to achieve that target or optimal CCH level. Further, Waemustafa (2018) argued that target CCH level can be determined by an optimal balance blend of debt tax shield against cost. They further argued that profitable firms can manage under investment problems even with low CCH by taking returns on assets as proxy of CCH.

Pecking Order Theory

In pecking order theory there is no optimal level of CCH and it is the strict ordering of financing. According to Basheer (2014) it is the financing hierarchy model. The theory predicts that CCH generated from the internal sources can be a cheaper source of financing. Pecking order theory postulates a positive and significant relation between CCH and firm size, it further argues that large firms with more diversification and least threat of bankruptcy hold more CCH. The reason for this positive relation can be that large firms have a lower bankruptcy cost. A similar positive relation is predicted by trade off theory. The firm size and CCH can also be in a negative relation, which confirms the view that a growing firm spends more and holds less CCH and also as with increased size, information asymmetry decreases and firms can easily access capital markets. According to Brito et al. (2020), firstly firm finance investments with retained earnings then with debts and finally with equity. On the other hand, firms issue debt and use CCH when internally generated financing is not sufficient to finance investments. Many researchers argue pecking order theory is a stronger determinent of managerial CCH decision than the trade off model. Regarding the sample of the Dutch manufacturing firm Serban, Sordoni, and Lowe (2017) concluded that corporate liquidity and solvency are linked via available information and hedging channels and further they said firm value is a function of this link i.e between liquidity and solvency.

Agency Theory

This theory was suggested by a Bernile, Bhagwat, and Rau (2017) vintage article in which they explained a principle agent model. They stated that mangers are agents of owners and are hired to maximise their wealth, which is a function of higher risk, but mangers are risk averters.So here rises a conflict of interest between managers and owners whom initially object to job security and low risk while later wants their wealth maximised. For CCH, it was argued that entrenched managers prefer to hold more cash to increase their discretionary power; through which they can better control firms investment decisions.Actually, large CCH levels reduce the dependency on external financing and shareholders, which makes manager more autonomous and independent in investment decisions and increases information asymmetry. But this can have a negative impact on firm values as finance literature claims managers are risk averters, so with large CCH levels they will go with the projects with low NPV, which will increase the opportunity cost and reduce a firm's value.

Why Firms Hold Cash?

Every firm prefers to hold significant amounts of CCH for its survival. But a question arises as to why some firms hold large amounts of CCH and how they know how much cash they can hold? For some years, many researchers have been trying to explore the reasons. Farinha

and Borges (2017) suggest different reasons why firms hold CCH. According to Farinha and Borges (2017) the motives are: transaction motives, precautionary motives, speculative motives and agency motives of CCH as follows.

Precautionary Motives

The precautionary motive advocates that with large CCH levels, managers better manage emergencies, i.e any unanticipated expense or penalty, which suggests that a firm holds CCH to manage emergency risks effectively. Another reason for this large CCH can be to manage adverse industrial or economic shocks (Amar, 2020; Waemustafa, 2018). Managers of manufacturing firms want to invest in projects with positive NPV, meanwhile they also yearn for large CCH to invest cash through cheaper internal methods. External financing is costly and there are so many constrains in its outsourcing.In the literature, this motive was first highlighted by Farinha and Borges (2017) whom named this as precautionary motive of CCH. Precautionary motives support an argument that financially constrained firms in cases of higher CFlow will increase their cash levels, or more specifically we can say that these firms are in positive sensitivity of CFlows with cash levels. And for financially constrained firms there is no hard and fast rule. Erel, Jang, and Weisbach (2015), with different dimensional models, divided firms into subsamples firms on the basis of financial constraints. To measure financial constraints, data of asset size, bond rating, dividend policy, commercial paper ratings and an index of some other factors is collected and analysed.The results showed consistency with the above mentioned view that in financially constrained firms increased CFlow means higher cash reserves, but results showed no significance for financially unconstrained firms.

Transactional Motives

When CCH is explained by this motive: it means firms hold cash to meet their operational requirements (for day to day activities) or more broadly to smoothen the operating cycle. Farinha and Borges (2017) explain these motives as one of the important determinants of CCH and say that firms prefer to hold large amounts of cash to fulfil their operating expense obligations. Otherwise they will either go to the capital market or will liquidate their assets to fulfil operational obligations.Meanwhile, as per deviation from the perfect market hypothesis, modern market theory explains other costs as well, like transitional cost agency cost and opportunity coast of liquidating assets and agency and bankruptcy of raising funds from capital markets.So because of these costs, transactional motives of CCH support the trade off theory.

Speculative Motives

These motives of CCH justify firms' CCH levels with an argument that firms prefer to hold a significant amount of cash to exploit unanticipated investment opportunities. Managers following this view justify large CCH with an argument that accessing to capital market is a time consuming and lengthy process and a firm cannot forego positive NPV projects by just relying on capital markets alone. Smirnova, Tabriztchi, and Lange (2015) found that the CCH enabled the firm to properly respond to new opportunities. Therefore, firms seek to hold cash for protecting their competitive advantages.

Agency Motives

It is expected that cash held for this reason will have a lower value (Basheer, 2014). This theory was given by Bernile et al. (2017); Lubis (2019); Pratama (2019); Pratama (2020) in a vintage article in which they explained a principle agent model. They stated that managers are agents of owners and are hired to maximise their wealth, which is function of higher risk, but managers are risk averters.So here rises a conflict of interest between managers and owners, where earlier there is an objection to job security and low risk while later wanting wealth maximised. For CCH, it was argued that entrenched managers prefer to hold more cash to increase their discretionary power; through which they can better control a firm's investment decisions. Actually, CCH level reduces the dependency on external financing and shareholders, which makes managers more autonomous and independent in investment decisions and increases information asymmetry. But this can have a negative impact on a firm's value as finance literature claims managers are risk averters, so with CCH levels they will go with the projects with low NPV, which will increase the opportunity cost and reduce the firm's value.

Determinants of CCH

In this section, an explanation of different determinants of CCH is given and some prior investigations are discussed. After reviewing the literature on CCH, one can conclude that, though a lot of work has been done to explore the issue of corporate CCH and to answer why managers hold a significant amount of cash, this area has central importance in corporate finance research, and researchers across the world are using different the dimensional theoretical model to explain the reasons for CCH.Recently Jamalinesari and Soheili (2015) explained that cash includes all one has in hand or for investments or that is held for dividend payments. So, cash holdings can be defined as the total of cash and marketable securities (cash equivalent).

Thanatawee (2019), investigated different factors responsible for different cash levels in manufacturing firms of Economic and Monetary Union (EMU) with a sample of 12 countries of the Economic and Monetary Union (EMU), with a final balance sample of 400 firms over the period of 13 years from 1987 to 2000.He found CFlow firm size, leverage, and liquidity bank debt as important determinants of CCH. The results indicated that firms with more CFlow volatility and investment opportunities hold more cash than firms with stable CFlows and fewer investment opportunities. Whereas leverage, liquidity and bank debt appear to be in negative relations with CCH, which means firms with more debt in their capital structure, with more liquid assets and in good relations with banks prefer low cash reserves. Along with this, they also found that ownership concentration and managerial entrenchment is also important while discussing the role of agency cost in CCH (Ranajee & Pathak, 2019). Finally, they also observed that market imperfections also have a significant impact on CCH.

Villiers and Rouse (2016), researching a sample of manufacturing firms listed in New Zealand, investigated factors which managers of New Zealand firms consider important, while deciding about levels and values of cash. They suggested that the more liquid assets in asset structures act as proxy for cash, so firms with more liquid assets hold less cash, meanwhile they concluded growth opportunity, CFlow volatility, dividend payment and leverage as important determinants of CCH. The results indicate that firms with more CFlow volatility and investment opportunities hold more cash than firms with stable CFlows and fewer investment opportunities. Whereas leverage, asset tangibility, liquidity and bank debt appear to be in negative relations with CCH, which means firms with more debt in their capital structure, with more liquid assets and in good relations with banks prefer low cash reserves. Finally, they also observed that market imperfections also have a significant impact on CCH.

Rizwan (2015), researching a sample of Indonesian non-financial firms of varying size and a diverse range of industries over the period of 1998-2005 studied the factors that Indonesian manufacturing firms take into account when making CCH decisions. Siddiqua, Rehman, and Hussain (2019) on a sample of 178 Swiss firms aimed to investigate the factors which Swiss firms consider important when making CCH decisions. They firstly recorded the CG variable for the Swiss firms. They found that the market to book ratio, net working capital, leverage cash and dividends are in negative relations, while size, CFlow volatility are in negative relation with CCH. Along with it they also found that asset tangibility is in negative relations with cash levels. Meanwhile, they explored that CEO Duality has a significant impact on cash levels while board structure has little or no impact on CCH. Market to book ratio is used as a proxy of growth, so one can conclude that growing firms hold more cash to invest in projects with NPV or to enjoy the growing market share. Meanwhile they also found operating funds as inverse proxy of cash. Ali, Ullah, and Ullah (2016) with the sample Chinese listed firms explored the factors which affect liquidity management of Chinese manufacturing firms. In

their regression analysis, they found profitability and growth as two of the important determinant of cash and argued that small, profitable and growing firms hold more cash to enjoy sustainable growth by capturing a growing market share. Meanwhile they found that firms with more debt and more liquid assets hold less cash and finally they concluded a negative relation between state ownership and cash levels.

Jain, Kashiramka, and Jain (2018), with a sample of 1540 non-finance and non-utility Indian National Stock Exchange firms, explored the factors which Indian managers take into account while making cash decisions. The sample was selected from 2001 to 2011 and findings showed that corporate CCH is influenced by market to book ratio, leverage, dividends, net working capital, CFlow volatility, firm size, R&D to sales, ROA, and capital expenditure to assets. Chireka and Fakoya (2017) determined what variables played a major role in the decisions of CCH in manufacturing firms of Bangladesh for a period from 2006 to 2010. They found that market to book ratio, net working capital, leverage cash and dividends are in negative relations, while size, CFlow volatility are in negative relations with CCH. They also found that asset tangibility is in negative relations with cash levels. Meanwhile, Tobin's Q and tangibility was also indicated as a significant determinant.

Magerakis, Siriopoulos, and Tsagkanos (2015) studied the determinants of CCH with a sample of 876 public limited companies listed in the German Market for a period from 2000 to 2010. In this study initially a pooled regression model was used. These results showed that the CCH were negatively correlated to the size of the firm (LTA), market to book value and leverage. In addition to this it is important to note that with the Lagrange Multiplier Test, it was found that random affect is the best representation of the model. On comparison with the random affect model, it was found that the results are not too much different from the pooled regression with CFlow and insider ownership changes significantly under the random effect model. This exerted a negative effect on firm's CCH as it can be seen as working capital negatively related to the level of CCH. Basheer (2014) with a sample of 138 firms listed on the PSX during 2008 to 2012, explored the effect of CG on managerial CCH decisions. The regression results of our study showed that CFlow appears as the only significantly and positively related variable to CCH. The relationship between managerial ownership is N shaped, i.e managerial ownership (MAN) and MAN^3 are negatively but significantly related with CCH, however MAN^2 is positively related to CCH.

CG and CCH

CG is concerned with the ways that ensure the firm with a constant supply of capital and investors with safe and consistent earnings. It is basically a mechanism which helps management to make an exorbitant increase in shareholders' values through minimal agency cost. Moreover it also protects individuals and the collective rights of all stakeholders.

Therefore, CG variables such as board size, board composition, CEO duality and managerial ownership may have a direct impact on a firm's financial decisions and agency costs. Manuel, with a sample of 1875 firms from 46 countries, explored the concept that CG has a significant impact on CCH decisions. He concluded that managers of the firms operating in countries with poor CG practices hold more cash, while managers of those operating in countries with sound CG practices hold less cash with more value and their results were consistent with the prior findings of Chireka and Fakoya (2017) and Basheer (2014). To examine how CG affects cash policy formulation and for better argumentation on their relationship we are using flexibility, shareholder power and spending hypotheses which were used earlier by Kuppuswamy and Villalonga (2016).

Family owned firms are considered to be a family ownership if there is at least two people from a single family and collectively they hold more than a block holder i.e 10% shares (Basheer, Hassan, & Shah, 2018; Basheer, Hidthiir, & Waemustafa, 2019; Lubis 2019). The board structure consists of two variables: 1) Board composition, which is defined as friction of non-executive directors to total number of directors. It measures the board's independence, as having a greater number of directors simply indicates strict scrutiny and mitigation of agency problems, whilst offering better protection of minority stakes. 2) CEO/Chairman Duality. As proxy of leadership it measures that a CEO as chief decisional authority and a COB as chief controlling authority is a similar individual; in our measure it is a dummy variable. Siddiqua et al. (2019) showed a positive relation with CEO duality. Several facts about the CG of the Indonesian manufacturing sector, which is largest sector in Indonesia, have made this analysis more interesting. Here we will try to become familiar with some of these facts in order to have more comprehensive discussions regarding our results.

Variables, Data, and Methodology
Data

Initially, all the manufacturing firms listed in the Indonesia stock Exchange were part of the sample, but later firms with missing data or firms with leverage of more than one were excluded from the sample. Thus, the final sample was composed of a balanced panel of 60 firms over a period of six years from 2013 to 2018.

Variables

All the Variables adopted in this study or modelled in this study and their definitions are from prior investigations; this was done with the objective of having a meaningful and justifiable comparison with our findings and those in earlier studies. The details of the definitions are given in Appendix A.

Methodology

This section explains the methods adopted in the analysis of the data to achieve the objectives of the study. This study used both static and dynamic panel data analysis. The study basically employs panel data analytical tools in achieving the set goals of the research. The choice of the panel data approach is informed by a number of methodological advantages it offers. Many studies postulate that panel data allows for exploration of many effects that are otherwise unidentifiable using cross-section and time series data (Omay, Van Eyden, & Gupta, 2018). However, it is important to note that panel longitudinal data gives room to examine crucial researchable questions that cannot be covered or catered for using times series or cross section. The panel data analysis is the most suitable to capture the variations of the performance indicators over time. Similarly, it controls individual country specific heterogeneity as well as the changes in the countries' operating environments as is applicable to this study.

Panel data has the advantage of uncovering dynamic relationships in econometric analysis (Basheer et al., 2018; Basheer et al., 2019). Economic behaviour is inherently dynamic; therefore, the relationships are implicitly or explicitly dynamic. Nevertheless, it is important to note here that for objective one to objective five; both the static and dynamic panel data analysis was used through statistical techniques for the assessment and possible recommendations proffered.

Panel data methodology is adopted in this study.

$$Y_{it} = \alpha_{it} + \beta X'_{it} + \varepsilon_{it} \tag{1}$$

$i=1,\ldots\ldots\ldots\ldots\ldots, 138,\ t=1,\ldots\ldots\ldots\ldots, 5$

Where i represents the cross-sectional dimension, t donates the time-series dimension. Y_{it} denotes the dependent variable in our model, which is corporate CCH. where α refers to a constant term which is expanded over time t and is subject to a single firm i, meanwhile β is the value of the estimated coefficient. X_{it} represents the set of independent variables being used in the model and finally ε_{it} is the error term whose vector is given below:

$$\varepsilon_{it} = v_{it} + u_{it} \tag{2}$$

$$CASH_{it} = \alpha_0 + \alpha_1 CFLOW_{it} + \alpha_2 LIQ_{it} + \alpha_3 LEV_{it} + \alpha_4 BB + \alpha_5 MBR_{it} + \alpha_6 SIZE_{it} + \alpha_7 VAR_{it} + \alpha_8 DIV_{it}$$
$$+ \alpha_9 MAN_{it} + \alpha_{10} MAN^2{}_{it} + \alpha_{11} MAN^3{}_{it} + \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(3)$$

$$CASH_{it} = \alpha_0 + \alpha_1 CFLOW_{it} + \alpha_2 LIQ_{it} + \alpha_3 LEV_{it} + \alpha_4 BB + \alpha_5 MBR_{it} + \alpha_6 SIZE_{it} + \alpha_7 VAR_{it} + \alpha_8 DIV_{it}$$
$$+ \alpha_9 MAN_{it} + \alpha_{10} MAN^2_{it} + \alpha_{11} MAN^3_{it} + \alpha_{12} CEOD_{it} + \alpha_{13} NEDDIR_{it} \varepsilon_{it} \dots\dots\dots\dots\dots\dots\dots\dots(4)$$

$$CASH_{it} = \alpha_0 + \alpha_1 CFLOW_{it} + \alpha_2 LIQ_{it} + \alpha_3 LEV_{it} + \alpha_4 BB + \alpha_5 MBR_{it} + \alpha_6 SIZE_{it} + \alpha_7 VAR_{it} + \alpha_8 DIV_{it}$$
$$+ \alpha_9 MAN_{it} + \alpha_{10} MAN^2_{it} + \alpha_{11} MAN^3_{it} + \alpha_{12} CONT_{it} + \varepsilon_{it} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(5)$$

$$CASH_{it} = \alpha_0 + \alpha_1 CFLOW_{it} + \alpha_2 LIQ_{it} + \alpha_3 LEV_{it} + \alpha_4 BB + \alpha_5 MBR_{it} + \alpha_6 SIZE_{it} + \alpha_7 VAR_{it} + \alpha_8 DIV_{it}$$
$$+ \alpha_9 MAN_{it} + \alpha_{10} MAN^2_{it} + \alpha_{11} MAN^3_{it} + \alpha_{12} FAM_{it} + \alpha_{13} INST_{it} + \varepsilon_{it} \dots\dots\dots\dots\dots\dots\dots\dots(6)$$

$$CASH_{it} = \alpha_0 + \alpha_1 CFLOW_{it} + \alpha_2 LIQ_{it} + \alpha_3 LEV_{it} + \alpha_4 BB + \alpha_5 MBR_{it} + \alpha_6 SIZE_{it} + \alpha_7 VAR_{it} + \alpha_8 DIV_{it}$$
$$+ \alpha_9 MAN_{it} + \alpha_{10} MAN^2_{it} + \alpha_{11} MAN^3_{it} + \alpha_{12} FAM_{it} + \varepsilon_{it} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots(7)$$

Analysis
Descriptive Statistics

Table 2 shows the descriptive statistics of all variables used in this study.

Table 2: *Descriptive Statistics*

Variables	Obs.	Mean	Std. Dev.	Min	Max
$CASH_{it}$	360	0.0469	0.0777	2.89e-06	0.5805
$CFLOW_{it}$	360	0.1206	0.1327	-0.4456	0.6287
LIQ_{it}	360	0.0394	0.1848	-0.8072	0.7645
LEV_{it}	360	0.5525	0.2038	0.0059	0.9201
BB_{it}	360	0.3638	.2852	0.000	1.0000
MBR_{it}	360	48.4580	12.4570	-4.6151	38
$SIZE_{it}$	360	15.4160	1.4624	11.0620	19.6650
VAR_{it}	360	4.7126	11.7051	.0246	34.3620
DIV_{it}	360	0.0295	0.0586	-0.0680	0.4665
MAN_{it}	360	0.2165	0.2555	0	0.9835
$MANS_{it}$	360	0.1120	0.1120	0	0.9673
$MANC_{it}$	360	0.0696	0.1514	0	0.9835
ED_{it}	360	1.3217	0.8420	1	6
NED_{it}	360	6.9420	1.7884	2	13
$NEDDIR_{it}$	360	0.8372	0.1029	0.25	0.9285

$CEOD_{it}$	360	0.2710	0.4448	0	1
$CONT_{it}$	360	0.9768	0.1506	0	1
FAM_{it}	360	0.3744	0.4843	0	1
$INST_{it}$	360	0.7159	0.4512	0	1

Regression Results

The regression results of our study are shown in Table 3. The results of the equation show that except for dividends, all the variables are in a significant relationship with the CCH. CFlow appears a significantly and positively related variable to CCH. The relationship between managerial ownership is inverted N shape i.e managerial ownership (MAN) and MAN^3 are negatively but significantly related with CCH however MAN^2 is positively related to CCH. This confirms the nonlinear relationship between MO and CCH.

The results of equation four are in in with equation three. Moreover, the direct independence and corporate CCH are in positive and significant relations, whereas the relationship between leadership and cash is negative and significant. Furthermore, the results of equation five are indicating a positive but significant impact of controller on CCH. Furthermore, equation six also indicates a negative but significant relationship between family controller and CCH and negative significance between institutional controller and CCH.   Finally, the results of equation seven also indicate a negative but significant relationship between family controller and CCH.

Table 3: *Regression Results*

Variables/Model	Equation 3	Equation 4	Equation 5	Equation 6	Equation 7
C	0.1763	0.1560	0.1517	0.1607	0.1810
$CFLOW_{it}$	0.1091***	0.1088***	0.1091***	0.2103***	0.2293***
LIQ_{it}	-0.2796***	-0.2818***	-0.2801***	-0.2789***	-0.2295***
LEV_{it}	-0.3748***	-0.3752***	-0.3755***	-0.2744***	-0.3741**
BB_{it}	-0.4836***	-0.4837***	-0.4836***	-0.4211***	-0.4802***
MBR_{it}	0.3902***	0.4001***	0.4021***	0.3991***	0.3131**
$SIZE_{it}$	0.3434***	0.3336***	0.3231***	0.3236***	0.3037***
VAR_{it}	0.3217***	0.3337***	-0.3217***	-0.3427***	-0.3217***
DIV_{it}	0.4144	0.4251	0.4116	0.4115	0.4115

MAN_{it}	-0.1913***	-0.1806***	-0.1800***	-0.1862***	-0.1839***
$MANS_{it}$	0.4434***	0.4073***	0.4248***	0.4684***	0.5780***
$MANC_{it}$	-0.2978***	-0.1806***	-0.2910***	-0.3251**	-0.4368***
$NEDDIR_{it}$		0.3293***			
$CEOD_{it}$		-0.1237***			
$CONT_{it}$			0.2201***		
FAM_{it}				-0.3142***	-0.3118***
$INST_{it}$				-0.2175**	
R^2	0.821	0.921	0.893	0.832	0.732
F-statistic	19.70	19.72	19.432	18.723	19.76
Prob.(F – Statistics)	0.000	0.000	0.000	0.000	0.000

Discussion on Empirical Investigations

The main objective of the current study is to examine the role of the CG in explaining the level of CCH in the manufacturing firms of Indonesia. The regression results of our study revealed the fact that the firm level factors such as liquidity, leverage, bank borrowing, size, market to book ratio are in a significant relationship with CCH, and CG variables are significant determinants of CCH. Thus we confirm the proposed or hypotheses results' relationship between managerial ownership is inverted N shape i.e. managerial ownership (MAN) and MAN^3 are negatively but significantly related with CCH, however MAN^2 is positively related to CCH.

The leverage is in a negative relationship with CCH, which is in line with trade off theory, pecking order theory and agency theory, i.e all three theories. The argument given for this negative relation is that firms with huge amounts of debt in their capital structure prefer low CCH because ease of access to capital markets makes it easier to raise funds for any of precautionary, speculative or transactional motive, meanwhile through debt BOD can better control the performance of management so debt can act as way of mitigation of agency problems. This relationship is in line with the empirical findings of Rizwan (2015), Najjar and Clark (2017), and Basheer (2014), as they observed a negative relation between leverage and CCH. The negative relationship also prefers low CCH because ease of access to capital markets makes it easier to raise funds for any of precautionary, speculative or transactional motive, meanwhile through debt BOD can better control the performance of management so debt can act as way of mitigation of agency problem (Lei & Chen, 2019).

There is a positive and statistically significant relationship between controller and CCH. This positive relationship is consistent with shareholder hypothesis, which states that firms with controlling shareholders allow managers to hold more cash. Under this hypothesis, because of information asymmetry managers prefer internally raised funds to costly external funds. This positive relationship is also consistent with prior empirical findings of Basheer (2014) and Najjar and Clark (2017).

Institutional dummy is in negative and statistically significant relation with CCH. The negative relation is stable with previous empirical findings of Basheer (2014) and also consistent with the flexibility hypothesis which suggests that firms with controlling shareholders hold less cash. Furthermore, these insignificant results indicate that in firms with high managerial ownership, the institutional owner has little or no impact on levels of CCH (Donelson, Glenn, & Yust, 2018). As the controller dummy has a positive, but the family controller and the institutional controller has a negative relation with CCH, so it indicates that the identity of the controlling shareholders has a negative impact on CCH.

Limitations of the Study

Initially the researchers collected the data of 180 firms, but the final sample contains the data of 60 firms due to non-availability of relevant data. For better understanding, sample size should be large. Another limitation is that previous studies took place for more than ten years, but this research was carried out for only six years. The reason is this study was smaller and time constraints applied to the research, so in a limited timeframe it was difficult to study determinants of CCH for ten or more years.

Practical Implications of the Study

Impact awareness of the CG on corporate CCH will be helped by the results of this empirical investigation. Moreover, the findings provide support to investors for mitigation of agency problems.

Suggestions for Future Research

On the basis of data availability, this study has explored the impact of CG on corporate CCH. For better understanding, the impact of corporate CCH on the value of Indonesian firms should be analysed.

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