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Corporate Governance and Cash Holdings in Emerging Market: Evidence from Indonesia

ABSTRACT: *The purpose of this study is to find out the influence of corporate governance on cash holdings in non-financial companies that are listed in the Indonesian Stock Exchange for the period 2010-2017. The method used in this study is a quantitative method equipped with purposive sampling, the list used is time-series data obtained from the Indonesian Stock Exchange. The data analysis technique used in this study, which was based on the result of the research model test, is the fixed effect model. Companies that have poor corporate governance tend to accumulate cash (cash holdings) compared to companies that have good corporate governance. The result of this study supports the flexibility hypothesis that companies in Indonesia tend to hoard cash as in Singapore and Malaysia, even though they do not have a single ownership structure. This possibility is influenced by a weak legal system, where the legal system in Indonesia does not act as a supervisor of corporate management practices, so that the company without control from the regulator. The government as the regulator only has the role of providing a legal umbrella and full corporate governance submitted to each company. In this sense, there are no standards used as references by the companies in corporate governance. It implies that the company with the poorer implementation of corporate governance tends to hold the cash compared to the company with the better corporate governance. This study may contribute more to the comprehensive review and the development of financial management discipline.*

KEY WORDS: *Flexibility Hypothesis; Corporate Governance; Cash Holdings; Family Pyramid; Sales Growth; Capital Expenditure.*

INTRODUCTION

Companies worldwide have considerably increased their cash holdings over the past two decades. A recent report by *Deloitte Review*, in 2014, stated that the top 1,000 non-financial companies globally are holding

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USA\$ (Dollar United States of America) 2.8 trillion in cash. The sum of cash holdings by all USA firms alone is estimated by *Forbes* to be USA\$ 5 trillion. From the 1990s to 2000s, the cash holdings of USA firms more than doubled to about 13% of firms' total assets, amounting to 10% of annual USA Gross Domestic Product (*cf* Dittmar & Mahrt-Smith, 2007; Macmillan, Prakash & Shoult, 2014; and Magerakis *et al.*, 2020).

In addition, T.W. Bates, K.M. Kahle & R.M. Stulz (2009), and other scholars, reported that cash holdings increasing by 0.46% per annum over the 1980-2006 period. Large corporate cash holdings are not confined to the USA. For example, Japanese firms hold USA\$ 2.1 trillion in cash, which accounts for 44% of their GDP (Gross Domestic Product). Similar figures for Korean firms are respectively USA\$ 440 billion and 34%. Three continental European firms at the beginning of the 2000s held 15% of their total assets in cash, while it is more than 20% for Chinese listed firms (Ferreira & Vilela, 2004; Bates, Kahle & Stulz, 2009; Chen, Li & Lei, 2012; and Alves, 2018).

Cash is a needed asset in exchange for values between economic parties. Hence, any firm can't survive without generating positive cash inflow in the long-run. Cash holding is cash in hand or readily available for investment in physical assets and to distribute to investors (Gill *et al.*, 2012; Joshi, 2019; and Sitorus, Simbolon & Hajanirina, 2020).

Accordingly, excessive cash holding increases its opportunity cost, if firms trade-off their profitable projects to hold it; whereas, less cash holding may let investment opportunities to pass and make firm prone to financial distress. In the case of unexpected economic hardships, firms with fewer cash amounts need to bear additional costs as transaction costs of asset liquidation and security issuance, interest expenses of borrowing. Moreover, hoarding cash leads to agency problems, since conflicts of interests between shareholders and managers over payout policies are especially severe when the organization generates substantial free cash flow, since shareholders are on the side of investing free cash and receiving more dividends; where managers as agents have incentives to increase the resources under their control (Jensen, 1986; Al-Najjar, 2013; and Joshi, 2019).

Recent studies have documented that cash and cash equivalents, along with constituting a significant percentage of total assets, change across countries and across industries. Cash holding level represents in average 10% in the USA; 8% in the UK (United Kingdom); 5% in Russia; 3.5% in China; 3% in India; 2% in Brazil; 9.1% of total assets in Turkish firms; and 10% of total assets in Italian private firms. Those mentioned consequences of certain cash holding levels and its differences across countries are what deserve investigations to find its determinants (Bigelli & Sánchez-Vidal, 2012; Al-Najjar, 2013; and Uyar & Kuzey, 2014).

Cash is one asset that is ready to be converted into another type of asset. Cash is a very liquid asset, so it's very easy to hide and move. Because of these characteristics, cash is the most likely asset to be used and spent by management inappropriately. Cash is also the most vulnerable asset to management's careless behavior in determining cash policy (cash holdings). Establishing a good cash policy will be very beneficial for a company. The existence of management errors in determining cash policies will harm the company, both in the short and long term. These cash holdings are the main indicators that describe the movement of a company's cash finance; cash holdings are the most important part of the company (Bates, Kahle & Stulz, 2009; Isshaq, Bokpin & Onumah, 2009; and Weygandt, Kimmel & Kieso, 2009).

Cash holdings are an important thing in the balance sheet that gets a lot of attention from both companies and investors. Cash becomes something very important, especially during times of recession. Companies in determining the cash holdings policy will consider the level of profits and expenses of these cash holdings. Companies that hold more cash usually can stay afloat and continue their investment at the level of expected growth and growth of the company. This happens because companies tend to have the opportunity to enjoy lower cost of capital, compared to using cash from outside the company (Harford, Mikkelson & Partch, 2003; Joseph *et al.*, 2019; and Wang, 2019).

However, when the company holds a lot of cash, of course it will cause other problems, namely agency problems between management and company owners. There are unequal interests in the cash holdings policy between management, as an agent, and shareholders, as the owner of the company. Retaining cash that is not utilized will bear no fewer burdens and this burden will be a value that reduces the profit of the company, whose costs have implications for the profit values that should be enjoyed by shareholders. As a result, the principal differences in interests can cause managers to fail to maximize the welfare of principals as shareholders. This failure is the agency cost of agency problems between principals and managers (Jensen, 1986; Chen, 2010; and Paterson, 2016).

Research in the USA (United States of America) shows an increase in cash holdings in USA companies since 1980-2006. The existence of a comprehensive review of the determinants of corporate cash holdings in a number of companies found that the exchange between the costs and benefits of hoarding cash holdings was to establish a balance of cash. In the case of Indonesia, the movement of corporate cash holdings from various sectors on the IDX (Indonesia Stock Exchange) during 2010-2017 indicates a rising trend. Cash holdings until 2017 reached the highest value

of 10.95, which equaled the value of cash holdings in 2012.

Cash holdings in 2010 were cash with the lowest score of 10.57. In 2011, the cash value increased to 10.64; and increased very sharply in 2012 with a value of 10.94. However, in 2013-2014, each value decreased by 10.69; and 10.69 after that in 2015-2017, each increased by 10.80, 10.90, and 10.95 respectively. This shows that the cash holdings of companies listed on the IDX over the past 8 years tend to accumulate cash. This phenomenon is influenced by corporate governance. These companies prefer to hoard cash rather than spend it.

In fact, cash holdings in Indonesia are very volatile with the trend tending to increase in the sense that they save more cash. The phenomenon of cash holdings refers to policies that are influenced by corporate governance, with the interests of management that are not necessarily linear or the same as the interests of holders. This policy is related to agency conflict.

In this research, corporate governance is considered as a tool that can control management in all matters, including the policy of holding cash or unrelated matters at the general meeting of shareholders. The corporate governance itself is a percentage of board size, board independent, managerial ownership, in which relationships and agency problems have been suspected, which have led to agency costs (Harford, Mansi & Maxwell, 2008; Kuan, Li & Chu, 2011; and Kusnadi, 2011).

Basically, corporate governance is one of the important things in determining the company's cash policy. The latest study concludes the relationship between agency cost and cash holdings into three hypotheses: flexibility hypothesis, spending hypothesis, and shareholder power hypothesis. Several studies have examined the role of Corporate Governance in regulating cash holdings policies for both the United States of America and other international companies, testing the explanation of costs for cash holdings. The studies analyzed the importance of corporate governance at the state level in determining cash holdings as an international sample (Kim, Mauer & Sherman, 1998; Opler *et al.*, 1999; Dittmar & Mahrt-Smith, 2007; and Harford, Mansi & Maxwell, 2008).

Referring to the anti-management rights variables developed, they found that companies in countries with weak legal protection tend to hold cash more than companies in countries that have stronger legal protection. The results support a flexibility hypothesis, where when a company produces excess cash flow, the manager does not invest everything. Instead they chose to save large amounts of cash compared to returning excess funds to a minority of shareholders. Meanwhile, shareholder power hypothesis is where shareholders who have more effective oversight of the manager will allow the manager to save excess internal funds to avoid the lack of

investment caused by external funds that have the potential to cause great losses due to capital market friction such as information asymmetry.

In short, flexibility and spending hypothesis predict the opposite relationship between agency problem and cash reserves. The flexibility hypothesis predicts that controlled managers will have larger cash reserves and the spending hypothesis predicts that they will have smaller cash reserves. The shareholders power hypothesis show that there will be a negative relationship between agency problems with cash reserves, the same as the spending hypothesis but the predictions are driven by controlled managers who have greater cash reserves than uncontrolled managers who have smaller reserves.

This study will examine board attributes and also how much ownership concentration represents the company's internal management habits and try to explain the role of the board better. The proxies tested were: board of directors, independent commissioners, and managerial ownership. With the sample of non-financial companies listing on the Indonesia Stock Exchange, the researchers tested whether the variable is associated significantly with the company's cash policy. The company's annual report is available on the stock exchange site and has enough board attribute data to be analyzed. This situation is ideal for testing significant relationships between agency conflicts and cash holdings.

This study was designed to examine the effect of corporate governance on cash holdings to continue the results of research by Y. Kusnadi (2011), and other scholars, who examined the relationship between corporate governance mechanisms and cash assets of companies in Singapore and Malaysia. This study, then, focuses in Indonesia. While previous research has extensively tested the consequences of large controls on firm value, few studies have examined the interactions between ownership control and board character. There have been many studies conducted with the discussion of corporate governance issues as described above. Most of the research attempts to link corporate governance to company performance, earnings management, or shares (*cf* Kusnadi, 2011; Arifin, 2017; and Putra, 2018).

This study examines the effect of corporate governance on cash holdings on companies listed on the Indonesia Stock Exchange for the period 2010-2017.

Literature Review. The company is an organization that combines and regulates all available resources to produce goods and services that are ready for sale. The company is in the middle of the community, because of its benefit in the process of distributing goods and services that are difficult for individuals to do separately. In the long run, the existence of

a company is not only beneficial for the owners or shareholders, but also will bring benefits to the broader community and government through the process of the flow of economic activity.

The separation of ownership and control functions within a company is often discussed. This is the beginning of forming the main problem in writing company theory. In short, H. Demsetz (1983), and other scholars, described the separation of ownership and supervision which results in conditions where the interests of owners and managers are often found to be different or distorted, where initially limiting the use of power is lost. In forming this new relationship, the company worked enough to make a revolution. Corporate ownership is divided into nominal ownership and those with power also join, so the company changes its nature to be profitable. The company's shareholders incur losses due to too much ownership by shareholders who cannot use their power to carry out managerial oversight of the company. Management has the freedom to use company resources than if the company is managed by the owner, or at least if the interests of the company's owners are more concentrated (Demsetz, 1983; Laiho, 2011; and Rasiah, 2012).

Because management and company owners have different interests, H. Demsetz (1983), and other scholars, saw a conflict of interest between company owners and management. There are two corporate concepts that motivate the level of inefficiency in modern companies. First, company theory is seen as a good approach for real company's precursors, and this theory is without managerial facilities. The second concept is a company that is largely controlled by management with a significant interest in the profitability of the company's activities (Demsetz, 1983; Laiho, 2011; and Rasiah, 2012).

Firstly, *Agency Theory*. Agency Theory, according to M.C. Jensen & W.H. Meckling (1976), and other scholars, originated from the separation between ownership and control in modern companies that issue shares. This separation, when combined with a truly inability to determine contracts, will give agents or managers the opportunity to pursue activities that will benefit themselves at the expense of their principal or owner (Jensen & Meckling, 1976; Laiho, 2011; and Hussain *et al.*, 2015).

M.C. Jensen & W.H. Meckling (1976), and other scholars, state that the principal differences of interest cause managers to fail to maximize the welfare of principals. This failure is the most important cost that results from principal and manager conflicts and is known as the agency problem. Agency Theory views corporate management as an agent for shareholders who will act with awareness for their interests, not as a wise and prudent and fair party to shareholders as assumed in the previous theory (Jensen &

Meckling, 1976; Laiho, 2011; and Hussain *et al.*, 2015).

This Agency Theory considers that management cannot be trusted to act as well as possible for the public interest in general and shareholders in particular. Agency Theory emerged based on the phenomenon of separation between company owners (shareholders) and managers who manage companies.

According to E.F. Brigham & L.C. Gapenski (1991), and other scholars, agency problems stem from three things, namely: (1) the interests of management require resources and interests of the company for personal interests; (2) so, there is no purpose to advance the company; and (3) the presence where the manager just want to play it safe in making decisions, managers do not want to take risks when a profitable investment. Agency problems lead to the need for supervision of management actions and have oversight for the benefit of the company owner or the principal (Brigham & Gapenski, 1991; Rensburg, 2001; and Atia, 2016).

However, such supervision may not require a fee. The cost of the agency itself will be borne by the owner of the company as the owner of capital. The company owner must reimburse costs and utilize the oversight that has been chosen for management purposes. In overcoming conflicts that occur within the company or more resolved to overcome this agency problem various systems can be done, one of which is by implementing corporate governance.

Secondly, *Stewardship Theory*. According to the 2004 OECD (Organization for Economic Co-operation and Development) Principles Study Team in BAPEPAM (*Badan Pengawas Pasar Modal dan Lembaga Keuangan* or Capital Market and Financial Institutions Supervisory Boards), regulations regarding corporate governance; there is a theory that can be used to explain the concept of corporate governance, the Stewardship Theory. This theory assumes that human nature is inherently trustworthy, capable of acting responsibly, and has integrity and honesty with others. If the assumptions in this theory are applied in company management, stewardship theory views management as a party that can be trusted to act as well as possible for the public interest in general and shareholders in particular (OECD, 2004; Caldwell, Karri & Vollmar, 2006; and Jones, Felps & Bigley, 2007).¹

Thirdly, *Good Corporate Governance*. For many business actors, the concept of good corporate governance must be applied to ensure business continuity, because basically good corporate governance is a system and structure to manage the company with the aim of increasing shareholder value and various other interested parties such as creditors, suppliers,

¹See also, for example, www.bapepam.co.id [accessed in Bandung, West Java, Indonesia: October 17, 2020].

business associations, consumers, workers, government and the wider community. Good corporate governance is closely related to business ethics, which means how a business should be run properly. The term corporate governance comes from an analogy between the government of a country or city with the government in a company (Becht, Bolton & Roëll, 2002; Bates, Kahle & Stulz, 2009; and Bottenberg, Tuschke & Flickinger, 2017).

Corporate governance also deals with the alignment of the problem of collective action that involves a variety of different interests from stakeholders. Without good corporate governance, there will be a conflict of interest that can harm company performance. Corporate governance is a concept proposed for the sake of improving company performance through supervision or monitoring of management performance and ensuring management accountability to stakeholders by basing it on the regulatory framework. OECD (2004) defines corporate governance as a system for directing and controlling companies. The corporate governance structure determines the distribution of rights and obligations among various parties involved in a corporation such as the board of directors, managers, shareholders, and other stakeholders (OECD, 2004; Solihin, 2009; and Rubino & Napoli, 2020).

According to S. Nuryanah (2004), and other scholars, corporate governance is the standard rules and organizational standards in the economy that govern the behavior of company owners, directors, and managers as well as their accountability to investors (shareholders and creditors). In short, corporate governance is a system where companies are directed and controlled (Nuryanah, 2004; Zelenyuk & Zheka, 2006; and Banda, 2019).

S. Claessens (2006), and other scholars, suggested two definitions of corporate governance. First, corporate governance is defined as a system that measures performance, efficiency, growth rates, financial structure, and management actions in managing company understanding. The second is the rules that are used as a reference for companies in managing their business. The implementation of good corporate governance can be successful if it has some principles (Claessens, 2006; Ahmed *et al.*, 2008; and Rubino & Napoli, 2020).

According to the Indonesian Good Corporate Governance Guidelines, corporate governance has the following principles: (1) *Transparency*: to maintain objectivity in conducting business, companies must provide relevant information in ways that are easily accessible and can be understood by stakeholders; (2) *Accountability*: the company must be able to account for its performance transparently and fairly so that the company must be managed properly, measured and following the interests

of the company while taking into account the interests of shareholders and other parties; (3) *Responsibility*: companies must understand the legislation and carry out responsibilities to society and the environment so that business sustainability can be maintained in the long term and be recognized as a good corporate citizen; (4) *Independence*: to implement good corporate governance, companies must be managed independently so that each element of the company does not dominate each other and cannot be intervened by other parties; and (5) *Fairness*: in carrying out its activities, the company must always pay attention to the interests of major shareholders and other stakeholders based on fairness and equality.

Corporate governance seeks to assist companies in improving the welfare of shareholders. The company will get many benefits and benefits from implementing good corporate governance. The benefits of corporate governance are to help reduce transaction costs and capital costs, help develop capital markets, help overcome financial crises, and help overcome relationships between stakeholders to increase company value.

In addition, the OECD (2004) concluded that the benefits of corporate governance are improving the decision-making process for shareholders. With corporate governance, management can better control elements in the corporate environment, align the company's survival, help overcome market pressures, reduce capital players, increase stock prices, attract investors, to invest, liquidity and portfolio portfolios from investors. Corporate governance is very important for the company. By implementing good corporate governance, companies can improve performance, share prices, share returns for shareholders, and firm value (OECD, 2004; Solihin, 2009; and Rubino & Napoli, 2020).

The corporate governance system in a company is divided into two parts, namely the internal governance mechanism and the external governance mechanism. The second indicator of the mechanism is the number of boards of directors, the proportion of independent commissioners, and ownership structure. The board of directors is an economic institution that helps solve agency problems, which are inherent in public companies. Directors are company organs for the benefit of the company, following the aims and objectives of the company and represent the company, both inside and outside the court following the provisions of the articles of association (Beiner *et al.*, 2004; Weir *et al.*, 2008; and Samasta, Muharam & Haryanto, 2018).

According to Law No.40 of 2007 concerning Limited Liability Companies, the board of commissioners is the organ of the company that is tasked with conducting supervision in general and/or specifically following the articles of association and giving advice to directors. Egon

Zehnder (2011), and other scholars, stated that the board of commissioners who is the core of corporate governance ensuring the implementation of corporate strategy, overseeing management in managing the company, and requiring the implementation of accountability. While the independent board of commissioners themselves is members of the board of commissioners who are not from the company's internal environment or do not have a direct relationship with the company (Hermawan, 2011; Zehnder, 2011; and Lasnita & Utama, 2020).

The separation of ownership and control causes agency problems between the owner and the manager. By having the authority to manage the owner's funds and decision making, a manager may not act in the best interests of the owner. Corporate governance is a mechanism that can limit the manager's authority so that what is done and decided by the manager is solely in the interests of the owner. Two important aspects of ownership structure are ownership concentration and ownership composition. The more concentrated an ownership, the shareholders will represent themselves which may be different from the interests of other investors, workers, and managers so that it can reduce the company's performance. In this case, there are three types of ownership structures: managerial ownership structure, foreign ownership structure, and family ownership structure (Isshaq, Bokpin & Onumah, 2009; Zhang *et al.*, 2016; and Setiawana *et al.*, 2019).

Fourthly, *Cash Holding*. Cash is one of the assets that are ready to be converted into other types of assets. Cash is very easy to hide and move, and very desirable. Because of these characteristics, cash is an asset that is most likely to be used and spent inappropriately. Cash is also the most vulnerable asset to careless management behavior (Isshaq, Bokpin & Onumah, 2009; Weygandt, Kimmel & Kieso, 2009; and O'Sullivan & Sheffrin, 2020).

In general, companies that are financially weaker with corporate governance, tend to invest more cash and spend available cash more quickly. Therefore, weaker corporate governance has consequences for cash management, namely to expand managers in weak corporate governance that have smaller cash reserves. Managers under weak supervision prefer external investment through cash acquisition rather than internal investment, through R&D (Research & Development) and capital. Investments in acquisitions, R&D, and capital expenditure by companies with poor corporate governance will reduce future profitability and firm value (Harford, Mansi & Maxwell, 2008; John, Litov & Yeung, 2008; and Safarova, 2010).

In previous studies, many researchers found evidence that in general companies determine the level of company cash holder policies by

considering the benefits and costs of holding cash. Cash holdings are very beneficial for companies because holding cash companies can reduce the problem of underinvestment in companies that have expensive external funding costs and have great opportunities to develop their business. Companies with a lot of cash during and after a crisis can usually stay afloat and continue their investment opportunities to increase company growth. Holding too much cash for the company can be an indication of agency problems between management and company shareholders (Jensen, 1986; Kim, Mauer & Sherman, 1998; Opler *et al.*, 1999; Harford, Mikkelsen & Partch, 2003; and Mikkelsen & Partch, 2008).

Fifthly, *Theoretical Framework*. This study looks at whether corporate governance has a positive effect on cash holdings. In accordance with the background of the problem that has been described in detail, this study focuses more on the influence of corporate governance on cash holdings. This study also sees the effect of several control variables.

This study has one independent variable, corporate governance proxied by the size of the board of directors, independent commissioners, managerial ownership and dummy variables as supporters. The dependent variable of this study is cash holdings. Family pyramid is a moderator variable, while the control variables consist of four proxies namely leverage, net working capital, sales growth, and capital expenditure. The hypotheses tested in this study are: Corporate governance has a significant influence on cash holdings. The equation models of this research are:

$$\begin{aligned} CH &= CG + FP + CG*FP + LEV + NWC + SALES + CAPEX. \\ CH &= BSIZE + BINDEP + INSIDER + FP + BSIZE*FP + BINDEP*FP + INSIDER*FP + LEV \\ &+ NWC + SALES + CAPEX. \end{aligned}$$

RESEARCH METHOD

This research method uses a quantitative approach. Based on the time dimension, this study is a pooled cross section and time series (data panel) study. This research uses quantitative data collection techniques with existing statistics. This research uses the dependent variable, namely CH (Cash Holdings); independent variables, namely Corporate Governance that are proxied by the size of the BSIZE (Board of Directors), BINDEP (Independent Commissioners), and INSIDER (Managerial Ownership); moderating variable, namely FP (Family Pyramid); and control variables consists of LEV (Leverage), NWC (Net Working Capital), SALES (Sales Growth), and CAPEX (Capital Expenditure).

The population in this study consisted of companies listed on the IDX (Indonesia Stock Exchange) for the period 2010-2017. In this study, the sample

selection technique used was non-probability purposive sampling. The sample selection is done by purposive sampling method, which is the selection of samples with certain criteria set beforehand in order to obtain samples that are suitable with the purpose of the study. Of the 608 populations, there are 219 companies that fulfill the requirements to be sampled.

The dependent variable in this study is CH. Total cash is used as a proxy for CH. So, CHs are measured by the natural logarithm of the total year-end Cash Balance (CH) as of December 31 held by the company. CH variables can be formulated as follows: $CH = \log(\text{year-end balance sheet cash balance})$.

The independent variable is a variable that influences or is the cause of changes or the emergence of the dependent variable. The independent variable in this study is corporate governance. In this study corporate governance is proxied by using: BSIZE (Board Size) is the number of members of the board of directors in each company; BINDEP (Board Independence) is the proportion of independent directors on the board of commissioners in the company; and INSIDER (Managerial Ownership Structure) is the percentage of share ownership owned by insiders consisting of directors or board of commissioners of the total number of shares outstanding.

In the model, the FP (Family Pyramid) is the moderating variable. It is a dummy variable of the companies that have insider ownership of more than 20%. Control variables are those that are made constant so that they do not affect the main variables studied (Ghozali, 2005; Pearl & Mackenzie, 2018; and Lenz & Sahn, 2020).

The control variables in this study are as follows: LEV (Leverage), defined as how much the company is financed with debt; NWC (Net Working Capital), the proxy of this variable is current assets minus current liabilities, and this variable describes the availability of liquid assets in lieu of cash in the company; SALES_G (Sales Growth), can be calculated by comparing the difference between current year's sales and last year's sales, and sales growth data can be obtained directly from the financial base provided on the IDX official website; and CAPEX (Capital Expenditure), defined as the ratio of capital expenditure to total assets.

The research model used was adapted from Y. Kusnadi (2011) and other scholars. This study was tested using multiple linear regression analysis to examine the relationship between independent variables, corporate governance and the dependent variable, cash holdings, with family pyramid as a moderating variable (*cf* Kusnadi, 2011; Safitri & Kamil, 2020; and Setiawan & Adelisa, 2020). This research model can be formulated as follows:

$$CH_{it} = \alpha + \beta_1 BSIZE_{it} + \beta_2 BINDEP_{it} + \beta_3 INSIDER_{it} + \beta_4 FP_{it} + \beta_5 BSIZE_{it} * \beta_4 FP_{it} + \beta_6 BINDEP_{it} * \beta_4 FP_{it} + \beta_7 INSIDER_{it} * \beta_4 FP_{it} + \beta_8 LEV_{it} + \beta_9 NWC_{it} + \beta_{10} SALES_{it} + \beta_{11} CAPEX_{it} + \epsilon_{it}$$

Secondary data management for this study uses several programs and for descriptive analysis, classic assumption test, and panel data analysis using E-Views 10 as data processing. Descriptive statistical analysis aims to obtain a general description of the study sample, namely the mean, median, mode, max value, min value, variance, and standard deviation of each variable used in the test model. The classic assumption test follows the BLUE (Best Linear Unlimited Estimate), by conducting a normality test, an autocorrelation test, and a heteroscedasticity test (Faraway, 2002; Siagian, 2006; and Mishra *et al.*, 2019).

In the OLS (Ordinary Least Squares) model, each individual of the variables is considered to have a constant intercept and slope and it is assumed that there are no differences in the characteristics of both the time and space of each individual data. All data will be grouped together for each data cross section and regressed with the OLS method. But this OLS method has a weakness where it is difficult to see changes between individuals because this method considers all individuals to be the same (homogeneous).

FEM (Finite Element Method) is done to overcome the weaknesses that exist in the OLS method, where the OLS method produces a constant α for each individual and the time is considered less realistic. This FEM method allows changes in α on each i and t . In the REM (Random Effects Method), differences in characteristics between individuals and/or time are accommodated through errors. Individuals have common mean values for intercepts, while individual differences in intercept values are reflected in error terms.

To choose the approach between FEM and REM, the formal statistical tests used are the Chow Test and the Hausman Test. Chow Test aims to choose between OLS and FEM methods. This test is done by comparing the value of Chow with F-stat. If the Chow is greater than the F-stat then the method chosen is FEM. The Hausman Test aims to choose between FEM and REM. This test tests whether the coefficient estimated by random effect is the same as the coefficient estimated by fixed effect. If the probability of p-value is greater than the level of significance (5%) then it is not significant, which means that REM can be used as a technique in the parameters of the panel data.

Significance tests were carried out to test the independent variables in the research model. This test can help see how well the independent variables are used in the model to explain the dependent variable. Some

Table 1:
Descriptive Statistics

CG Variable	Mean	Median	Maximum	Minimum	Std. Dev.	Probability	Observations
CH*	8.381558	8.792944	12.71397	0.010187	2.239975	0.000000	1744
BSIZE	0.614828	0.602060	1.041393	0.100000	0.167398	0.000000	1744
BINDEP	1.130318	1.000000	5.000000	0.250000	0.545431	0.000000	1744
INSIDER	27.78764	24.93000	94.15000	0.050000	19.07020	0.000000	1744
FP	0.912271	1.000000	1.000000	0.000000	0.282982	0.000000	1744
LEV	6.947973	0.869356	926.6731	0.001247	53.31460	0.000000	1744
NWC	1.15E+11	4075120.	1.60E+13	-7.08E+12	8.51E+11	0.000000	1744
SALESG	5.06E+10	345869.0	2.14E+13	-2.72E+13	1.04E+12	0.000000	1744
CAPEX	2.559029	0.530860	561.0304	3.46E-10	30.45266	0.000000	1744

Notes:

CASH (Natural Cash Holdings Logarithm), BSIZE (Board Size), BINDEP (Proportion of Independent Directors), INSIDER (Percentage of Managerial Stock Ownership), FP (Companies with INSIDER more than 20% Family Ownership), LEV (Total Liabilities Divided by Total Equity), NWC (Current Asset Less Current Liabilities), SALESG (Difference in Current Year's Sales with the Previous Year), CAPEX (Ratio of Capital Expenditure to Total Assets).

significance tests conducted in this study are the F-test, t-test, and the Coefficient of Determination (R^2 and Adjusted R^2). See table 1.

F-test is a hypothesis testing the regression coefficient (slope) simultaneously. This test is to test the significance of the independent variable on the dependent variable as a whole. If the slope coefficient is zero, it means that there is not enough evidence to say the independent variable (corporate governance) has an influence on the dependent variable (cash holdings). This F-test is based on criteria:

Firstly, Comparison of F-stat and F-table: If $F\text{-stat} > F\alpha (k, n-k-1)$ then H_0 is rejected; If $F\text{-stat} < F\alpha (k, n-k-1)$ then H_0 is not rejected.

Secondly, Probability: $\text{Prob} (p\text{-value}) > \text{significance level}$, then H_0 is not rejected; $\text{Prob} (p\text{-value}) < \text{significance level}$, then H_0 is rejected.

The t-test is to calculate the regression coefficient individually. From the results of the t-test can be known whether the hypothesis is accepted or rejected, so it can be seen whether the independent variable has a significant effect on the dependent variable or not. This t-test is based on criteria:

Firstly, Comparison of t-stat and t-table: If $t\text{-stat} > t\text{-table}$ then H_0 is rejected; If $t\text{-stat} < t\text{-table}$ then H_0 is not rejected.

Secondly, Probability: $\text{Prob} (p\text{-value}) > \text{significance level}$, then H_0 is not rejected; $\text{Prob} (p\text{-value}) < \text{significance level}$, then H_0 is rejected.

Determination Coefficient Test is conducted to see the magnitude of the ability of all independent variables (corporate governance) in the regression model in explaining the dependent variable (cash holdings). The greater R^2 is, the stronger the relationship between the dependent variable and the independent. The value of R^2 is in the range of $0 < R^2 < 1$.

The value of R^2 close to 0 indicates that the dependent variable is

increasingly unable to be explained by the independent variable, while the value of R^2 which is close to 1 shows a good regression model, meaning that the independent variable can explain the dependent variable. Adjusted R^2 functions to measure the independent variable, corporate governance, in explaining the dependent variable, namely cash holdings. The greater adjusted R^2 shows that the effect of the independent variable is greater on the dependent variable.

RESULTS AND DISCUSSION

Descriptive Statistics. Descriptive statistics aim to summarize the size of centralization and dissemination of data used so that the characteristics of the sample used in the study are seen. The results of a descriptive statistical analysis of the influence of CG (Corporate Governance) on CH (Cash Holdings) on companies listed on the Indonesia Stock Exchange in the period 2010-2017. Descriptive statistics in this study refer to the average value (mean) and standard deviation, the minimum and maximum values of all variables in this study. See again the table 1.

The descriptive statistics regarding the variables used in this study. Cash holdings have an average value of 8.381558, this indicates that companies listed on the Indonesia Stock Exchange for the period 2010-2017 have an average cash or cash equivalent of 8.381558 (in million) with a minimum cash holdings value of 0.010187 (in millions) and maximum cash holding value of 12.71397 (million), with a standard deviation of 2.239975 this means that the data distribution of cash holding is low, because the standard deviation is smaller than the mean, this shows that the average cash holding of the companies in this study is relatively homogeneous.

The average size of the Board of Directors of companies listed on the IDX (Indonesia Stock Exchange) is 0.614828, the size of the board of directors is measured in units of numbers, and this indicates that the companies sampled in this study have an average of more than one board of directors. With a standard deviation of 0.167398, this shows that the companies in this study had more than one board of directors that was very instrumental in providing control over the company, especially maintaining the running of the CG mechanism in these companies.

BINDEP (Board Independence) or Proportion of Independent Directors is measured using a ratio that is the number of independent directors to the number of commissioners of companies, the average number of independent directors in companies listed on the IDX is 1.130318, based on capital market regulations the number of independent directors is 30%. Based on the data, the average company listed on the IDX has more than one independent board of commissioners, with the lowest number being 0.25 and the highest 5, with a standard deviation of 0.545, meaning that the proportion of independent board of commissioners in the companies

in this study is heterogeneous or the proportion exceeds provisions set by regulations regarding the capital market.

INSIDER (Managerial Ownership Structure) is the number of shares owned by the board of directors and the board of commissioners as measured by presentation, the average managerial ownership of companies listed on the IDX is 27.78%, this shows that 27.78% of company ownership is controlled by INSIDERS, with a minimum ownership of 0.05 and a maximum ownership of 94.15%, with a standard deviation of 19.07020 meaning that the average managerial ownership of companies listed on the IDX is very small, this can be seen from the standard deviation values that are smaller than the mean.

FP (Family Pyramid) describes the number of company ownership owned by insiders more than 20%, the average family ownership is 0.91, this indicates that the family controls 91% of companies listed on the IDX, the lowest family ownership is 0.00% and the highest ownership is 100 %, the percentage of Family Ownership is very high because on average companies listed on the IDX have managerial share ownership of more than 20%. The standard deviation of family ownership is 0.282982, which is smaller than the mean of 0.91; this indicates that the average companies listed on the IDX majority of the shares are owned by the family.

The control variables used in this study are leverage, net working capital, sales growth, and capital expenditure. Leverage is a comparison between Total Liabilities to Total Equity, the average value of leverage is 6.947973, this shows that companies listed on the IDX have a leverage or debt value of 6,947 of the company's equity value, with the lowest leverage value of 0.001247 and the value of leverage the highest is 926.6731, which indicates that the company has the lowest Deb to Equity 0 and the highest Debt to Equity is 926.6731. The average annual sales growth of the company is 5.06% with an average working capital used by the company every year is 1.15 (in million) and the company spends an average budget of 2.559029 (in millions) for capital expenditure with a standard deviation of 30.45, standard deviation capital expenditure of companies listed on the IDX is greater than the mean value, this shows that capital expenditure is very high.

Firstly, *Classic Assumption Test*. The Classic Assumption Test is conducted to fulfill the BLUE (Best Linear Unlimited Estimation) assumption, to fulfill these assumptions, the classic assumption tests in this study include: Normality Test, Multicollinearity Test, Autocorrelation Test, and Heteroscedasticity Test. The calculation results show: the data in this study are normally distributed; the model is free from multicollinearity problems; the model is free from the autocorrelation problem; and the

model is free from the problem of heteroscedasticity.

Secondly, *Panel Data Test and Best Model Selection*. Panel data regression in this study uses three approaches namely the common effect model approach, the fixed effect model, and the random effect model. To determine the most suitable model approach for panel data regression three tests were used. The F-test (Chow test) is to choose between the common effect model and the fixed effect model. Then, the Hausman test to choose between the fixed effect model and the random effect model. Next is the LM (Lagrange Multiplier) test to select the common effect model and the random effect model. The LM test is performed, if there is a difference in the results between the Chow Test and the Hausman Test, if the results of the two tests are the same, then the LM test does not need to be done, because the appropriate panel data model in this study has been found.

All of these tests indicate that the best model according to the Hausman Test is the Fixed Effect model, according to the results of the Chow Test and the Hausman Test, the best model used in this study is the Fixed Effect model. Because the results of the Chow test and the Hausman test show a fixed effect model that is more appropriate to choose, then the LM test is not necessary.

Thirdly, *the Effect of Corporate Governance on Cash Holdings in Non-Financial Companies Listed on the Indonesia Stock Exchange in the 2010-2017 Period*. After a series of tests conducted previously to determine, which model is the most appropriate to be used to test the effect of CG (Corporate Governance) on CH (Cash Holdings), then based on the best model selection test, the most appropriate model used in the research is the fixed effect model. Individuals differ because the slope between times is constant. In this model, each individual has fixed constants for various periods of time, as well as slope between fixed times. This technique uses a dummy variable to capture the intercept differences between companies. This estimation model is often also called the LSDV (Least Squares Dummy Variable) technique. Table 2 shows the effect or research variables on GC with family pyramid as moderating variable.

Based on the results of the regression with the fixed effect model, the regression equation is obtained as follows:

$$\text{CH} = 8.0345751351 + 1.76905283298 * \text{BSIZE} + 0.0336522687874 * \text{BINDEP} - 0.0224659367883 * \text{INSIDER} + 0.860663743563 * \text{FP} - 2.02050061991 * \text{BSIZE} * \text{FP} - 0.43230183633 * \text{BINDEP} * \text{FP} + 0.0255483121517 * \text{INSIDER} * \text{FP} - 0.00115721091635 * \text{LEV} + 1.21624055864e-13 * \text{NWC} + 9.14316230815e-14 * \text{SALSG} - 0.00143271474911 * \text{CAPEX}$$

Based on the results of the F-test together the independent variables, namely CG (Corporate Governance) are proxied by the BSIZE (Size of

Table 2:
 Effect of Research Variables on CG with Family Pyramid as Moderating Variable

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.034575	0.790768	10.160470	0.000
BSIZE	1.769053	1.086152	1.628734	0.104
BINDEP	0.033652	0.524413	0.064171	0.949
INSIDER	-0.022466	0.008315	-2.702011	0.007
FP	0.860664	0.801687	1.073566	0.283
BSIZE*FP	-2.020501	1.090415	-1.852965	0.064
BINDEP*FP	-0.432302	0.533175	-0.810806	0.418
INSIDER*FP	0.025548	0.008574	2.979730	0.003
LEV	-0.001157	0.000437	-2.647492	0.008
NWC	1.22E-13	3.14E-14	3.872985	0.000
SALESG	9.14E-14	2.09E-14	4.365490	0.000
CAPEX	-0.001433	0.000731	-1.960315	0.050
Effects Specification Cross-section fixed (dummy variables)				
R-squared	0.88169	Mean dependent var		8.381558
Adjusted R-squared	0.863253	S.D. dependent var		2.239975
S.E. of regression	0.828327	Akaike info criterion		2.586427
Sum squared resid	1034.677	Schwarz criterion		3.325813
Log likelihood	-2019.365	Hannan-Quinn criter.		2.859799
F-statistic	47.82206	Durbin-Watson stat		1.051122
Prob(F-statistic)	0.00000			

the Board of Directors), BINDEP (Independent Commissioners), and INSIDER (Managerial Ownership), FAMILY PYRAMID (Moderating Variables) and control variables consisting of LEV (Leverage), NWC (Net Working Capital), SALESG (Sales Growth), and CAPEX (Capital Expenditure) have a significant effect on the dependent variable which is proxied by CH (Cash Holdings). So, it can be concluded that the H₁ research hypothesis is accepted, that Corporate Governance has a significant influence on Cash Holdings.

The CGM (Corporate Governance Mechanism) is basically the implementation of corporate governance based on the principles of openness, accountability, accountability, professionalism, and fairness that are realized in the mechanism regulated by the regulator. The CGM aims at how management as a trusted party acts as well as possible for the benefit of the public and shareholders. Stewardship Theory views that human beings are essentially trustworthy, able to act responsibly, and have integrity and honesty towards others, these qualities are needed by managers in an effort to realize the achievement of Corporate Governance in the company.

This research, in Indonesia, has the aim of knowing whether the CGM can affect the company's Cash Holdings. The results of this study

provide empirical evidence that Corporate Governance has an impact on corporate Cash Holdings, from three proxies to measure CG (Corporate Governance) only Managerial Ownership that affects Cash Holdings while Size the Independent Board and Commissioners do not exert influence on Cash Holdings, as well as Family Pyramid has no effect on Cash Holdings, while the control variables namely leverage, net working capital, sales growth and capital expenditure all affect cash holdings. These findings support the results of studies previously, including the results of research that be conducted by: T. Opler *et al.* (1999); J. Harford, W. Mikkelsen & M.M. Partch (2003); A. Dittmar & J. Mahrt-Smith (2007); Y. Guney, A. Ozkan & N. Ozkan (2007); J. Harford, S.A. Mansi & W.F. Maxwell (2008); T.W. Bates, K.M. Kahle & R.M. Stulz (2009); and Y. Kusnadi (2011).

CG implementation is to improve the protection of the interests of investors, especially shareholders in public companies. CG encourages the growth of a check and balance mechanism at the management level in giving attention to the interests of shareholders and other stakeholders, related to the rights and responsibilities of shareholders to appoint boards of commissioners and directors who can influence fundamental corporate policies.

The size of the board of directors describes the strength in determining and taking policies related to the company's strategic decisions. The number of board of directors plays an important role in increasing effectiveness and efficiency in the company, the greater the board of directors can improve control and supervision so as to minimize agency problems. Agency problems in the company arise, due to differences in interests between managers as agents with company owners, these differences in objectives will ultimately have an impact on the company's objectives, especially cash holdings (*cf* Jerzemowska, 2006; Hussain *et al.*, 2015; and Acero & Alcalde, 2016).

CONCLUSION ²

The results of this study support Flexibility Hypothesis, where companies in Indonesia tend to hoard cash like in Singapore and Malaysia, even though they do not have a single ownership structure; possibly this is influenced by the legal system that is still weak, where the legal system in Indonesia does not act as a supervisor of corporate management practices, so the company *de facto* has extensive autonomy in determining company

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policy without any control from regulators.

The government as a regulator only has the role of providing a legal umbrella and CG (Corporate Governance) is entirely left to the respective companies, so that there are no standards that have been put forward by companies in their CG practices.³

References

- Acero, I. & N. Alcalde. (2016). "Controlling Shareholders and the Composition of the Board: Special Focus on Family Firms" in *Review of Managerial Science*, Volume 10(1), pp.61-83.
- Ahmed, Homayara Latifa *et al.* (2008). "A Conceptual Review on Corporate Governance and its Effect on Firm's Performance: Bangladesh Perspective" in *AIUB Business Economics Working Paper Series*, No.10. Available online also at: <http://orp.aiub.edu/WorkingPaper/WorkingPaper.aspx?year=2008> [accessed in Bandung, West Java, Indonesia: October 28, 2019].
- Al-Najjar, B. (2013). "The Financial Determinants of Corporate Cash Holdings: Evidence from Some Emerging Markets" in *International Business Review*, Volume 22(1), pp.77-88.
- Alves, Paulo. (2018). "Cash Holdings around the World: Financial Crisis, Culture, and Shareholder Rights" in *MPRA [Munich Personal RePEc Archive] Paper*, No. 89861. Available online also at; <https://mpra.ub.uni-muenchen.de/89861/> [accessed in Bandung, West Java, Indonesia: October 1, 2019].
- Arifin, Jauhar. (2017). "Corporate Governance and Intellectual Capital on Firm Value of Banking Sector Companies Listed at Indonesia Stock Exchange in Period 2008-2012" in *WACANA*, Vol.20, No.1, pp.36-47. Available online also at: <https://media.neliti.com/media/publications/164622-EN-corporate-governance-and-intellectual-ca.pdf> [accessed in Bandung, West Java, Indonesia: October 9, 2019].
- Atia, Ola. (2016). "Cash Dividend Policy and Firm Risk: UK Evidence". *Unpublished Ph.D. Thesis*. Salford, UK [United Kingdom]: School of Business, University of Salford. Available online also at: <http://usir.salford.ac.uk/id/eprint/41485/1/Ola-Final%20Submission-Feb-2017-PDF.pdf> [accessed in Bandung, West Java, Indonesia: October 24, 2019].
- Banda, Zondwayo. (2019). "Corporate Governance Structures: The Performance of Zambian Listed Companies". *Unpublished Ph.D. Thesis*. Bloemfontein, South Africa: Faculty of Economic and Management Sciences, University of the Free State. Available online also at: <https://www.ufs.ac.za/docs/librariesprovider26/university-of-the-free-state-business-school-documents> [accessed in Bandung, West Java, Indonesia: October 28, 2020].
- Bates, T.W., K.M. Kahle & R.M. Stulz. (2009). "Why Do US Firms Hold So Much More Cash than They Used to?" in *The Journal of Finance*, Volume 64(5), pp.1985-2021.
- Becht, M., P. Bolton & A. Roëll. (2002). "Corporate Governance and Control" in *National Bureau of Economic Research: Working Paper*, No.9371.
- Beiner, S. *et al.* (2004). "An Integrated Framework of Corporate Governance and Firm Valuation: Evidence from Switzerland" in *ECGI Working Paper in Finance*, No.34, pp.2-54.
- Bigelli, M. & J. Sánchez-Vidal. (2012). "Cash Holdings in Private Firms" in *Journal of Banking & Finance*, Volume 36(1), pp.26-35.
- Bottenberg, Konstantin, Anja Tuschke & Miriam Flickinger. (2017). "Corporate Governance between Shareholder and Stakeholder Orientation: Lessons from Germany" in *Journal of Management Inquiry*, Volume 26(2), pp.165-180. Available online also at: <https://core.ac.uk/download/pdf/324186104.pdf> [accessed in Bandung, West Java, Indonesia: October 17, 2019].
- Brigham, E.F. & L.C. Gapenski. (1991). *Financial Management: Theory and Practice*. USA [United States of America]: Orlando Dryden Press, 6th edition.

³**Statement:** We, the undersigned, certify that this article is the academic work of both of us; it is not the result of plagiarism, because the sources that we quote and refer to are listed clearly and completely in the Bibliography or References. We have never submitted this article for being reviewed and published by other scientific journals. We are ready to accept academic sanctions, if what we state correctly is not in accordance with the applicable academic rules and regulations.

- Caldwell, Cam, Ranjan Karri & Pamela Vollmar. (2006). "Principal Theory and Principle Theory: Ethical Governance from the Follower's Perspective" in *Journal of Business Ethics*, Volume 66, pp.207-223.
- Chen, D., S. Li & G. Lei. (2012). "Government Governance, Ownership Structure, and Investment Decision: Evidence from Chinese Family Listed Firms" in *Journal of Financial Research*, Volume 3, pp.124-137.
- Chen, Yuezhaoh. (2010). "Agency Issues and the Effects of Corporate Governance Mechanisms on Agency Costs in Chinese Listed Companies". *Unpublished Ph.D. Thesis*. USA [United States of America]: Accounting and Finance Group, Cardiff Business School, Cardiff University. Available online also at: <https://core.ac.uk/download/pdf/19396719.pdf> [accessed in Bandung, West Java, Indonesia: October 9, 2019].
- Claessens, S. (2006). "Corporate Governance and Development" in *The World Bank Research Observer*, Volume 21(1), pp.91-122.
- Demsetz, H. (1983). "The Structure of Ownership and the Theory of the Firm" in *Journal of Law and Economics*, Volume 26, pp.375-390.
- Dittmar, A. & J. Mahrt-Smith. (2007). "Corporate Governance and the Value of Cash Holdings" in *Journal of Financial Economics*, Volume 83(3), pp.599-634.
- Faraway, Julian J. (2002). "Practical Regression and ANOVA using R". Available online at: <https://cran.r-project.org/doc/contrib/Faraway-PRA.pdf> [accessed in Bandung, West Java, Indonesia: October 28, 2020].
- Ferreira, M.A. & A.S. Vilela. (2004). "Why Do Firms Hold Cash? Evidence from EMU Countries" in *European Financial Management*, Volume 10(2), pp.295-319.
- Ghozali, I. (2005). *Aplikasi Analisis Multivariate dengan Program SPSS*. Semarang: Badan Penerbit UNDIP [Universitas Diponegoro], edisi ke-3.
- Gill, A. et al. (2012). "Corporate Governance and Capital Structure of Small Business Service Firms in India" in *International Journal of Economics and Finance*, Volume 4(8), pp.83-92.
- Guney, Y., A. Ozkan & N. Ozkan. (2007). "International Evidence on the Non-Linear Impact of Leverage on Corporate Cash Holdings" in *Journal of Multinational Financial Management*, Volume 17(1), February, pp.45-60.
- Harford, J., S.A. Mansi & W.F. Maxwell. (2008). "Corporate Governance and Firm Cash Holdings in the US" in *Journal of Financial Economics*, Volume 87(3), March, pp.535-55.
- Harford, J., W. Mikkelsen & M.M. Partch. (2003). "The Effect of Cash Reserves on Corporate Investment and Performance in Industry Downturns". *Unpublished Working Paper*. Available and Owned by the Authors.
- Hermawan, Ancella Anitawati. (2011). "The Influence of Effective Board of Commissioners and Audit Committee on the Informativeness of Earnings: Evidence from Indonesian Listed Firms" in *Asia Pacific Journal of Accounting and Finance*, Volume 2(1), December, pp.1-38. Available online also at: https://accounting.feb.ui.ac.id/apjaf/pub/pub3/3.%20paper%201_ancella.pdf [accessed in Bandung, West Java, Indonesia: October 28, 2020].
- Hussain, Hafezali Iqbal et al. (2015). "Agency Problems and its Impact and Relevance on Firms Borrowings" in *Review of Integrative Business & Economics Research*, Volume 4(3), pp.272-282. Available online also at: http://buscompress.com/uploads/3/4/9/8/34980536/riber_k15-005_272-282.pdf [accessed in Bandung, West Java, Indonesia: October 17, 2020].
- Isshaq, Z., G.A. Bokpin & J.M. Onumah. (2009). "Corporate Governance, Ownership Structure, Cash Holdings, and Firm Value on the Ghana Stock Exchange" in *The Journal of Risk Finance*, Volume 10(5), pp.488-499.
- Jensen, M.C. (1986). "Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers" in *The American Economic Review*, Volume 76(2), pp.323-329.
- Jensen, M.C. & W.H. Meckling. (1976). "Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure" in *Journal of Financial Economics*, Volume 3(4), pp.305-360.
- Jerzemsowska, Magdalena. (2006). "The Main Agency Problems and Their Consequences" in *Acta Oeconomica Pragensia*, Roè.14, E.3, pp.9-17.
- John, K., L. Litov & B. Yeung. (2008). "Corporate Governance and Risk-Taking" in *The Journal of Finance*, Volume 63(4), pp.1679-1728. Available online also at: <http://www.jstor.org/stable/25094487> [accessed in Bandung, West Java, Indonesia: October 28, 2020].
- Jones, Thomas M., Will Felps & Gregory A. Bigley. (2007). "Ethical Theory and Stakeholder Related

- Decisions: The Role of Stakeholder Culture” in *Academy of Management Review*, Vol.32, No.1, pp.137-155. Available online also at: <https://core.ac.uk/download/pdf/18516741.pdf> [accessed in Bandung, West Java, Indonesia: October 17, 2020].
- Joseph, Andreas *et al.* (2019). “All You Need is Cash: Corporate Cash Holdings and Investment after the Financial Crisis”. Available online at: https://neeltjevanhoren.com/wp-content/uploads/2019/11/All-you-need-is-cash_website.pdf [accessed in Bandung, West Java, Indonesia: October 9, 2020].
- Joshi, Himanshu. (2019). “Cash Holding or Net Debt, Which is More Relevant for Indonesian Firms?” in *The SEAM: South East Asian Journal of Management*, Vol.13, No.1, pp.18-36.
- Kim, C.S., D.C. Mauer & A.E. Sherman. (1998). “The Determinants of Corporate Liquidity: Theory and Evidence” in *Journal of Financial and Quantitative Analysis*, Volume 33(3), pp.335-359.
- Kuan, T.H., C.S. Li & S.H. Chu. (2011). “Cash Holdings and Corporate Governance in Family-Controlled Firms” in *Journal of Business Research*, Volume 64(7), July, pp.757-64.
- Kusnadi, Y. (2011). “Do Corporate Governance Mechanisms Matter for Cash Holdings and Firm Value?” in *Pacific-Basin Finance Journal*, Volume 19(5), pp.554-570.
- Laiho, Tuomas. (2011). “Agency theory and ownership structure - Estimating the effect of ownership structure on firm performance”. *Unpublished M.A. Thesis*. Finland: Department of Economics, School of Economics, Aalto University. Available online also at: <https://core.ac.uk/download/pdf/80700484.pdf> [accessed in Bandung, West Java, Indonesia: October 17, 2019].
- Lasnita, F.A. & M.A.R. Utama. (2020). “Authorized Failure: How is Company Status?” in *Indonesian Journal of Advocacy and Legal Services*, Volume 2(2), pp.223-242. Available online also at: <https://doi.org/10.15294/ijals.v2i2.37721> [accessed in Bandung, West Java, Indonesia: October 28, 2020].
- Lenz, Gabriel & Alexander Sahn. (2020). “Achieving Statistical Significance with Control Variables and without Transparency”. *Unpublished Academic Paper*. Berkeley, USA [United States of America]: University of California.
- Macmillan, Iain, Sriram Prakash & Russell Shoult. (2014). “The Cash Paradox: How Record Cash Reserves are Influencing Corporate Behavior” in *Deloitte Review*, Issue 15, pp.83-99. Available online also at: https://www2.deloitte.com/content/dam/insights/us/articles/excess-cash-growth-strategies/DR15_Cash_Paradox.pdf [accessed in Bandung, West Java, Indonesia: October 1, 2019].
- Magerakis, E. *et al.* (2020). “Firm Size Does Matter: New Evidence on the Determinants of Cash Holdings” in *Journal of Risk and Financial Management*, Volume 13(8). Available online also at: <https://doi.org/10.3390/jrfm13080163> [accessed in Bandung, West Java, Indonesia: January 5, 2021].
- Mikkelsen, W.H. & M.M. Partch. (2008). “Do Persistent Large Cash Reserves Hinder Performance?” in *Journal of Financial and Quantitative Analysis*, Volume 38(2), pp.275-294.
- Mishra, P. *et al.* (2019). “Descriptive Statistics and Normality Tests for Statistical Data” in *Annals of Cardiac Anaesthesia*, Volume 22(1), pp.67-72. Available online also at: https://doi.org/10.4103/aca.ACA_157_18 [accessed in Bandung, West Java, Indonesia: October 28, 2020].
- Nuryanah, S. (2004). “Analisis Hubungan Board Governance dengan Penciptaan Nilai Perusahaan: Studi Kasus Perusahaan-perusahaan Tercatat di BEJ”. *Unpublished Master's Thesis*. Jakarta: Pascasarjana FE UI [Fakultas Ekonomi, Universitas Indonesia].
- OECD [Organization for Economic Co-operation and Development]. (2004). *OECD Principles of Corporate Governance*. Paris, France: OECD Publications. Available online also at: <http://www.oecd.org/corporate/ca/corporategovernanceprinciples/31557724.pdf> [accessed in Bandung, West Java, Indonesia: October 17, 2020].
- Opler, T. *et al.* (1999). “The Determinants and Implications of Corporate Cash Holdings” in *Journal of Financial Economics*, Volume 52(1), pp.3-46.
- O’Sullivan, A. & S.M. Sheffrin. (2020). *Economics: Principles in Action*. Washington, DC: Pearson Prentice Hall.
- Paterson, S. (2016). “The Paradox of Alignment: Agency Problems and Debt Restructuring” in *European Business Organization Law Review*, Volume 17, pp.497-521. Available online also at: <https://doi.org/10.1007/s40804-016-0056-9> [accessed in Bandung, West Java, Indonesia: October 9, 2020].
- Pearl, Judea & Dana Mackenzie. (2018). *The Book of Why: The New Science of Cause and Effect*. London: Allen Lane.
- Putra, Adhitya Agri. (2018). “Role of ASEAN Corporate Governance Scorecard in Relationship between Foreign Ownership and Profitability of ASEAN Countries” in *Research Journal of Finance*

- and Accounting, Vol.9, No.8, pp.160-170. Available online also at: <https://core.ac.uk/download/pdf/234632319.pdf> [accessed in Bandung, West Java, Indonesia: October 17, 2020].
- Rasiah, Devinaga. (2012). "The Separation of Ownership and Control in Malaysian Domestic Companies" in *Proceeding of International Conference on Economics, Business Innovation IPEDR*, Vol.38. Singapore: IACSIT Press. Available online also at: <http://www.ipedr.com/vol38/024-ICEBI2012-A10014.pdf> [accessed in Bandung, West Java, Indonesia: October 5, 2020].
- Rensburg, Hermanus Lourens Janse Van. (2001). "Aspects of Banker Liability: Disclosure and Other Duties of Bankers towards Customers and Sureties". *Unpublished Doctoral Thesis*. South Africa: The University of South Africa. Available online also at: <https://core.ac.uk/download/pdf/43164258.pdf> [accessed in Bandung, West Java, Indonesia: October 17, 2020].
- Rubino, Franco & Francesco Napoli. (2020). "What Impact Does Corporate Governance Have on Corporate Environmental Performances? An Empirical Study of Italian Listed Firms" in *SUSTAINABILITY*, Volume 12:5742, pp.1-21. doi:10.3390/su12145742.
- Safarova, Yana. (2010). "Factors That Determine Firm Performance of New Zealand Listed Companies". *Unpublished M.Bus. Dissertation*. New Zealand: School of Business, Auckland University of Technology. Available online also at: <https://core.ac.uk/download/pdf/56361591.pdf> [accessed in Bandung, West Java, Indonesia: November 3, 2019].
- Safitri, Dini & Krishna Kamil. (2020). "The Effect of Good Corporate Governance on Financial Performance in the Mining Sector Registered in Indonesia Stock Exchange, 2016-2019 Period". *Unpublished Academic Paper*. Jakarta: Department of Accounting STIE [Sekolah Tinggi Ilmu Ekonomi] Indonesia. Available online also at: http://repository.stei.ac.id/3104/6/11150600060-Dhini%20Safitri_Naskah%20Publikasi%20Ingggris.pdf [accessed in Bandung, West Java, Indonesia: January 5, 2021].
- Samasta, A.S., H. Muharam & A.M. Haryanto. (2018). "The Effect of Board of Director, Audit Committee, Institutional Ownership to Firm Value, with Firm Size, Financial Leverage, and Industrial Sector as Control Variables (Study on Listed Companies in Indonesian Stock Exchange Period 2011-2015)" in *STRATEGI: Jurnal Bisnis*, Vol.27, No.1 [Juli], pp.53-62.
- Setiawana, Doddy *et al.* (2019). "Does Ownership Structure Affect Dividend Decisions? Evidence from Indonesia's Banking Industry" in *International Journal of Business*, Volume 24(3), pp.329-343. Available online also at: <https://lppm.unmer.ac.id/webmin/assets/uploads/lj/LJ201908201566287444816.pdf> [accessed in Bandung, West Java, Indonesia: October 28, 2020].
- Setiawan, Rahmat & Rana Adelisa. (2020). "Audit Committee, Ceo Tenure and Capital Structure" in *SINERGI: Jurnal Ilmiah Ilmu Manajemen*, Volume 10(2), pp.12-18.
- Siagian, Sondang P. (2006). *Teori dan Praktek Kepemimpinan*. Jakarta: Bina Aksara, edisi revisi.
- Sitorus, Muhammad Ilham Prasetyo, Ika Pratiwi Simbolon & Andrianantenaina Hajanirina. (2020). "The Determinants of Corporate Cash Holding in Indonesia: Manufacturing Company" in *JAAF: Journal of Applied Accounting and Finance*, Vol.4, No.2, pp.120-13. Available online also at: <http://dx.doi.org/10.33021/jaaf.v%vi%i.1243> [accessed in Bandung, West Java, Indonesia: January 5, 2021].
- Solihin, Ismail. (2009). *Corporate Social Responsibility*. Jakarta: Salemba Empat.
- Uyar, A. & C. Kuzey. (2014). "Determinants of Corporate Cash Holdings: Evidence from the Emerging Market of Turkey" in *Applied Economics*, Volume 46(9), pp.1035-1048.
- Wang, Q. (2019). "Economic Cycle, Uncertainty of Economic Policy, and Cash Holding of Listed Companies" in *Modern Economy*, Volume 10, pp.281-297. Available online also at: [10.4236/me.2019.101019](https://doi.org/10.4236/me.2019.101019) [accessed in Bandung, West Java, Indonesia: October 9, 2020].
- Weir, Charlie *et al.* (2008). "Performance Effects of Appointing Other Firms' Executive Directors to Corporate Boards: An Analysis of UK Firms" in *Journal of Economic Literature*, No.G34 and G39 [Spring].
- Weygandt, J.J., P.D. Kimmel & D.E. Kieso. (2009). *Financial Accounting*. New York: John Wiley & Sons.
- Zehnder, Egon. (2011). "Egon Zehnder International". Available online at: <http://www.egonzehnder.com/global/office/Berlin> [accessed in Bandung, West Java, Indonesia: October 17, 2020].
- Zelenyuk, Valentin & Vitaliy Zheka. (2006). "Corporate Governance and Firm's Efficiency: The Case of a Transitional Country, Ukraine" in *Journal of Productivity Analysis*, Volume 25(1-2), April, pp.143-157. doi:10.1007/s11123-006-7136-8.
- Zhang, Hong *et al.* (2016). "Ownership Structure, Diversification, and Corporate Performance Based on Structural Equation Modeling" in *Journal of Real Estate Portfolio Management*, Volume 22, pp.63-73.



The Indonesia Stock Exchange

(Source: <https://arthagraha.net/project/indonesia-stock-exchange-building>, 09/10/2020)

The existence of a comprehensive review of the determinants of corporate cash holdings in a number of companies found that the exchange between the costs and benefits of hoarding cash holdings was to establish a balance of cash. In the case of Indonesia, the movement of corporate cash holdings from various sectors on the IDX (Indonesia Stock Exchange) during 2010-2017 indicates a rising trend. Cash holdings until 2017 reached the highest value of 10.95, which equaled the value of cash holdings in 2012.