Evaluation of Systematic Risk, Corporate Governance, and Cash Holding: Evidence from Indonesia

Abstract: *Profits that are calculated to finance unexpected cash needs expedite management. We explore to investigate the effect of corporate governance on cash holdings with systematic risk as a moderating variable. The population is aimed at the property and real estate sectors listed on the IDX for the period 2012-2020. Through the purpose sampling technique, the sample obtained 41 companies as the object of study. Data analysis in this study is focused on panel data and its interpretation through MRA. Hypothesis testing uses statistical terms at the 5% probability level. Important findings underline that on cash holdings, corporate governance has a positive-significant effect, while systematic risk has a negative-insignificant effect. Another result, the moderation between corporate governance and cash holdings through systematic risk is positive-significant. Systematic risk reflects the reliability of a stock, where the higher the risk, it tends to increase in cash flow situations and investors prefer high-risk investments with the expectation of profit from returns. It is hoped that future contributions will serve as reference material for academics, government, and companies engaged in the financial services sector.*

Keywords: *Stock portfolio, financial risk, investment management, MRA, Indonesia*
JEL Classification: *G11, G32, C24, G1*

Introduction

The very important activity in a company without any cash or activity operational company that could not go generally. Cash holding is the cash in the hands or available to invest in the form of assets or assets smoothly physically (Gill & Shah, 2012). But, have cash in the number of which loads can turn a profit and losses for the company. The advantage count as to finance the need for cash that unexpected. On the other, have cash in the number of which loads can create conflicts agency because the manager has the desire to gain dominion over an investment decision the company as a basic interest self (Jensen, 1986; Azis et al., 2020).

Many investigating the cash holding, but with the results of research inconsistent. Theoretically, corporate governance is part in to overcome the problem of an agency that is a conflict of interest

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Other research is to identify the effects used systematic risk with cash holding. They used systematic risk otherwise known as risk market is risk relating to changing as a whole that it can be removed through diversified by investors. Associated research shows positive relationship welfare between used systematic risk against cash holding (Cheung, 2016). But, contrary to Palazzo (2012) and Acharya et al. (2013) which showed that used systematic risk has negative effects significantly to cash holding.

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The very important activity in a company without any cash or activity operational company that could not go generally. Cash holding is the cash in the hands or available to invest in the form of assets or assets smoothly physically (Gill & Shah, 2012). But, have cash in the company of which loads can turn a profit and losses for the company. The need for cash that unexpected. On the other, in the number of which loads can create conflicts agency because the manager has the desire to gain dominion over an investment decision the company as a basic interest self (Jensen, 1986; Azis et al., 2020).

Many the cash holding, but with the results of research inconsistent. Theoretically, corporate governance to overcome the problem of an agency that is a conflict of interest between managers and shareholders, because when a company with corporate governance weak can increase conflict agency. Relevant studies related to corporate governance and cash holding have been highlighted by various researchers and produce a variety of evaluations (Cheung, 2016; Harford et al., 2008; Dittmar & Mahrt-Smith, 2007; Khan et al., 2016).

Another research is to identify the effect of systematic risk used with cash holdings. The presentation of systematic risk or known as market risk is the risk associated with changes as a whole that can be eliminated through diversification by investors. Related research shows a positive welfare relationship between the systematic risk used for cash holdings (Cheung, 2016). However, it is different from Palazzo (2012) and Acharya et al. (2013) ensure that the systematic risk used has a significant negative effect on cash holdings.

A company with corporate governance are things that are bad put a little money cash were forced to do their high agency cost and cause to the purse of the twelve small mortgage loan dubbed, agency cost of itself the result of a conflict of interest between to calculate the ranking of and agent. So if in company with corporate governance are bad things can drive down the value of cash holding company. So, corporate governance has positive on cash holding (Cheung, 2016). The same thing happened if used low risk systematic that the company has plans to lower the interest of investors to invest their capital to the company so it can lower the cash holding company value (Muliadi et al., 2020). Then, there will be a positive relationship between used systematic risk against cash holding. The relationship between corporate governance against cash holding has some positive effects when corporate governance decreasing so cash holding will have a decline. The same thing could be seen in the used systematic risk where systematic risk banks used had a positive impact on cash holding. Used systematic risk can be a moderating influence on corporate governance to cash holding. When used systematic risk declining, it will strengthen the influence of corporate governance on cash holding (Acharya et al., 2013; Ikbal et al., 2020).

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Poor corporate governance has had a systematic impact by putting in little cash and IDXng forced to undertake high agency fees, earning the nickname twelve small mortgage loan wallets. The agency fee itself results from a conflict of interest between calculating ratings and the agency. If in a company with bad corporate governance, it can reduce the cash value of the parent company. Cheung (2016) emphasizes that corporate governance has a positive effect on cash ownership. The same thing happens if you use a low-risk systematic that the company plans to reduce the interest of investors to invest in the company so that it can reduce the value of the company holding cash (Muliadi et al., 2020). Then, there will be a positive relationship between the systematic risk used and cash holdings.

The relationship between corporate governance and cash ownership has several positive effects when corporate governance decreases so that cash ownership will decrease. The same can be seen in the systematic risk used where the systematic risk used by banks has a positive impact on cash holdings. The systematic risk used can be a moderating effect on the corporate governance of cash holdings. The reduction in systematic risk used will strengthen the effect of corporate governance on cash holdings (Acharya et al., 2013; Ikbal et al., 2020).

Based on the phenomenon and several previous studies, this study aims to investigate the effect of corporate governance on cash holding with systematic risk as a moderating variable with empirical studies for Indonesia. The contribution of this study is expected to be a reference material for further researchers, the government, and companies engaged in financial services. Several sections for this study are described in a structured manner. In the first session, the introduction clearly outlined the background, problem statements, and objectivity of the paper. In the second session is a literature review, describing the basic theory related to variables and an empirical review based on several studies. Third, the research method session illustrates the sample size, data, and data processing techniques. From the fourth session, the findings presented descriptive statistics, the results of hypothesis testing based on study objectives, and data interpretation. Fifth, for discussion sessions to clearly demonstrate the results of statistical findings compared with several relevant studies, whether they are in line or contradictory, then it can be seen the number of hypotheses that have been accepted and rejected. In the last session, the conclusions, consisting of a brief overview of empirical findings, study weaknesses, and policy implications.

Literature Review

The characteristics of the company's cash ownership are broadly explained on the basis of three basic theories, namely free cash flow, pecking order, and trade-off theory. Each of these theories is intended to clarify the review of the predictions of each theory (e.g. Ferreira & Vilela, 2004; Ngoc et al., 2020). As additional information, Gill & Shah (2012) defines cash holding as cash available to be invested or cash on hand in the form of physical assets and to be distributed to investors. Meanwhile, Gore (2009) illustrates that cash holding is the ratio between cash and cash equivalents to monthly interest expenses and operating expenses.

Cash holding is the ratio that compares the amount of cash and cash equivalents the company has with the number of assets the company as a whole (Cai et al., 2016). A company that referred to here is companies in the property and real estate enrolled in the Indonesia Stock Exchange in the period 2012-2020.

Corporate governance is a system where business directed and controlled describing the framework of regulations with the separation between principal and agent (Manzaneque et al., 2016). An agent referred to here is a board of directors an appointed principal responsible for all cash management, corporate governance, and another policy in a sector property company and real estate listed in the Indonesian Stock Exchange for the period 2012-2020.

Used systematic risk is the risk that about transformation occurring in the market as a whole who do not may be omitted through diversification in economic activities shows by investors. Beta used to describe the risk of systematic of a securities or portfolio assessment became relatively against a risk its shares in companies in the research products which are and real of an estate who is enrolled in the Indonesia Stock Exchange between 2012 and 2016.

Corporate governance is a concept relating to maximizing shareholder profit and protection from economic agents providing the capital to the company. One of the main role of corporate governance is dealing with an agency that is a conflict of interest between managers and shareholders reasonable by weak governance management of excessive cash possession for personal gain them by investing in the net present value (NPV) negative. Because of this reason this agency will weaken the conflict between the two sides (Jensen, 1986). Corporate governance associated positively significantly to cash holding by looking from the perspective agency because of the company by the conflict agency high with weak governance which keeps less cash (Manzaneque et al., 2016).

Corporate governance associated negative cash holding by significant to see motive agency cost because firms to governance bad cause agency cost was high and cause the ownership small, agency cost itself because of the conflict of interest between principal and agent (Cheung, 2016). It is not surprising that in companies that complex with the agency conflict crucial height is a problem because the board of directors has a desire to build cash to self-interest and not employed in support shareholders.

Used systematic risk changes that occurred in the risks market could affect all companies. There are two views about the relationship between systematic risk and cash holding. The first sight that low systematic risk may reduce cash holdings to reduce motive transaction to keep cash which means systematic risk associated positive significantly to cash holding because the company with a low correlation with the shock of the aggregate tend to a shortage of cash flow in a situation where companies need (Palazzo, 2012). The other view that systematic risk can affect how the company chooses between cash and bank credits, the bank cannot guarantee liquidity for all the company at any time and inclined to grant line of credit to all companies systematic at the risk is low so small cash ownership and thus the systematic risk associated positive significantly to cash holding (Acharya et al., 2013).

Methods and data

The population in this research is all companies and real estate property sectors listed on the period 2012-2020 Indonesia Stock Exchange (IDX) who total about 41 property sector and real estate companies. The sampling technique in research has used the criteria upon (sampling purposive), with certain consideration must be fulfilled to sampling in Table 1.

Table 1. Sample criteria based on purposive sampling technic

Criteria	Total
Sector property and real estate companies listed in Indonesia Stock Exchange periods for December 2016	47
Sector property and real estate companies not given annual reports since the period 2012-2020.	(6)
Sample count	41

Source: Formed by the authors

Then, with the support of secondary data from the IDX website, the variables are presented into 3 functions based on the study objectives. In the two hypotheses, the analysis of systematic risk and corporate governance on cash holding. This involves systematic risk and corporate governance as independent variables and cash holding is the dependent variable. For the third hypothesis, the systematic risk becomes a moderating variable that affects the relationship between corporate governance and cash holding.

From this difference, Indriastuti et al. (2020) emphasize if the position of the independent variable functions to predict the independent variable, while the dependent variable is the variable that is influenced or predicted by the independent variable. The two variables are still in the form of a oneway relationship. On the one hand, specifically for moderating variables like the previous case, it serves to weaken or strengthen the direct relationship between the independent variable and the dependent variable, which is played by systematic risk. As many as 41 samples based on the population have done filtering technique sampling purposive. Moderation research used Moderated Regression Analysis (MRA) give a model as follows:

$$CH_{it} = \alpha + \beta 1CG_{it} + \beta 2SR_{it} + \beta 3SR{*}CG_{it} + e_{it} \qquad (1)$$

Where, CH (cash holding), α (constant), β (regression coefficient), GG (corporate governance), SR (systematic risk), * (multiplication of systematic risk and cash holdings), it (time series), and e (error term). The provisions of each variable clarify the size and scale used. To simplify the measurement of variables, we arrange the following scale and estimate from Table 2.

Table 2. Estimated of variables

Variables	Code	Measurements	Scale	References
Cash holding	Y	Cash holding = the ratio of cash and cash equivalents / total assets	Ratio	Cai et al. (2016)
Corporate governance	X1	Board size = number of boards of directors	Ratio	Manzaneque et al. (2014)
Systematic risk	X2	CE = RF + β*(MR – RF)	Ratio	Jogiyanto (2008)

Source: The IDX, 2020

Where, CE (cost of equity), RF (risk-free rate), β (beta on non-diversifiable risk which cannot be eliminated through diversification by investors such as political factors and certain economic conditions), MR (market return) for Indonesia using the Index Composite Share Price (IHSG).
This study's analysis model is the development of several previous studies that discuss the linkages of systematic risk, corporate governance, and cash holding that are listed by manufacturing companies (Ozordi et al., 2019; Tong, 2008; Ajanthan & Kumara, 2017; Azis et al., 2020).

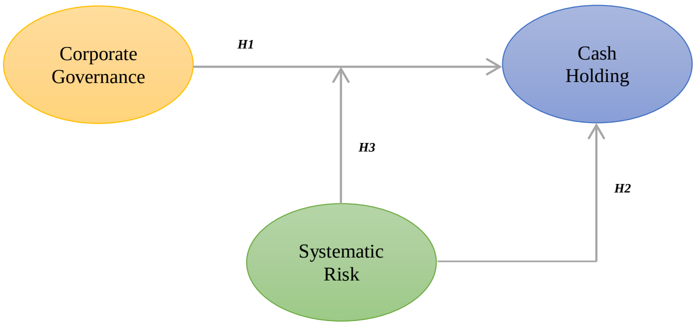

Figure 1. Framework
Source: Created by the authors

Figure 1 illustrates the direct influence (corporate governance and systematic risk) on cash holding and the moderating effect of systematic risk on cash holding through the role of corporate governance. The hypothesis design and expected signs for this study are detailed as follows:

H1: It is assumed that there is a positively-significant relationship between corporate governance and cash holding.

H2: It is assumed that there is a positively-significant relationship between systematic risk and cash holding.

H3: It is assumed that there is a positively-significant relationship of systematic risk to moderate corporate governance and cash holdings.

Results

In this section, we need to describe an overview of the study and statistical tests based on the proposed hypotheses. Referring to cash holding calculations to the property and real estate company as a sample of Indonesia stock exchange 2012-2020 period can be averaging from Figure 2.

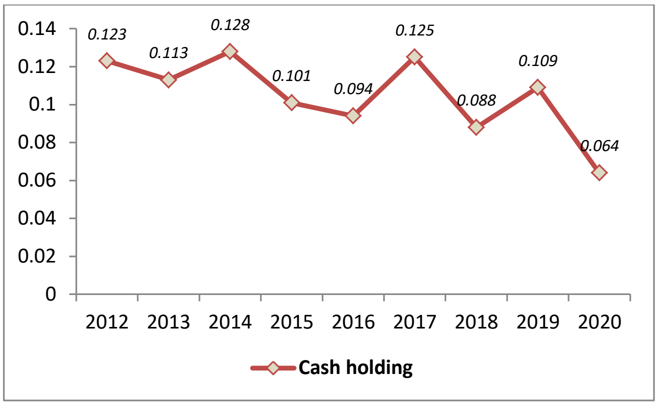

Figure 2. Cash holding average value of property and real estate sample companies in IDX

Source: Formed by the authors

Over the nine periods, the growth in cash holdings in property and real estate companies appeared inconsistent. The highest average cash holding value in the 2014 period was 0.128. On the one hand, a decrease in the average value of cash holding also occurred in 2020 by 0.064, where a decrease in the value of cash holding showed that the company was using excessive funding, so if the cash holding was low it could result in not being able to achieve the company's goals. company and missed an investment opportunity.

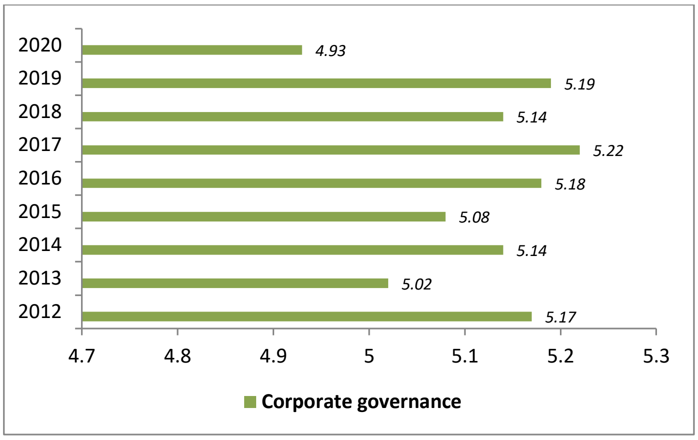

Figure 3. Corporate governance average value of property and real estate sample companies in IDX

Source: Formed by the authors

From Figure 3, the average value of corporate governance also fluctuates over nine periods. The peak increase in corporate governance value by companies for 2017 was 5.22. This shows that the higher the level of compliance of the company to maximize shareholder profits and protection from economic actors provides capital for the company. Meanwhile, the lowest corporate governance score was at the level of 4.93, to be precise in 2020.

By the presence of instability of the corporate governance, value shows that when board size mean value has experienced a fall in means conflict agency higher and having an impact for a cash holding decreased level. While at the time of the board size average value increased indicates that the increase in cash holding because corporate governance played an important role in cash maintaining the level to do so from the company in shareholder support.

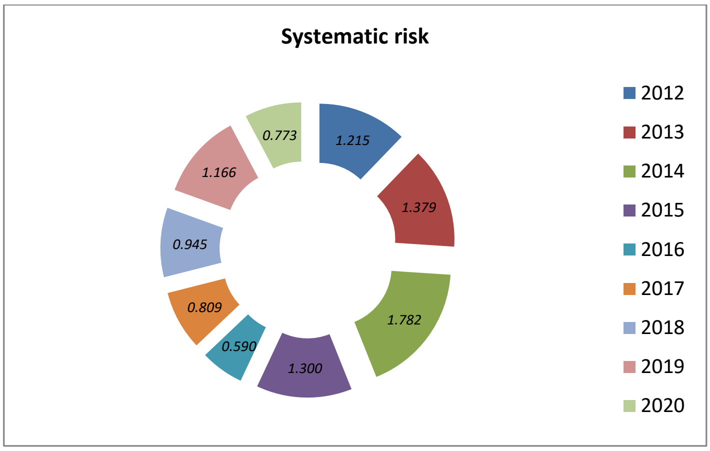

Figure 4. Systematic risk average value of property and real estate sample companies in IDX

Source: Formed by the authors

A high-risk level of an investment company reflects the high rate of expected return. Then we can conclude that investors always expect to benefit from investments but cannot be separated from them. existing risk in this research to measure systematic risk value used a measuring instrument beta because beta is a stage stock sensitivity towards affecting factors changes that occurred in the market. Based on the beta value calculations of property and real estate companies (see Figure 4). In 2012, an achievement of 1,215 was a systematic risk position. Next, 2013 was a dramatic increase, where the value reached 1.379 and the peak of the increase occurred in 2014 with 1.782 points. The increase in mean value indicates a higher beta a higher risk for taking any stock market risk. When a stock has a high beta, it reflects a high-risk stock. A fantastic decline was in 2016, where the average value of systematic risk was up to 0.590.

In this research for measuring systematic risk use of the tools measuring beta which is greatly affected by investment opportunities. While for measuring corporate governance use board size as indicated as a director board of responsibility for all cash management, corporate governance, and another policy. To see if beta affects corporate governance, so corporate governance multiplied by beta. This was done to see if there is a powerful relationship between corporate governance and systematic risk to cash holding

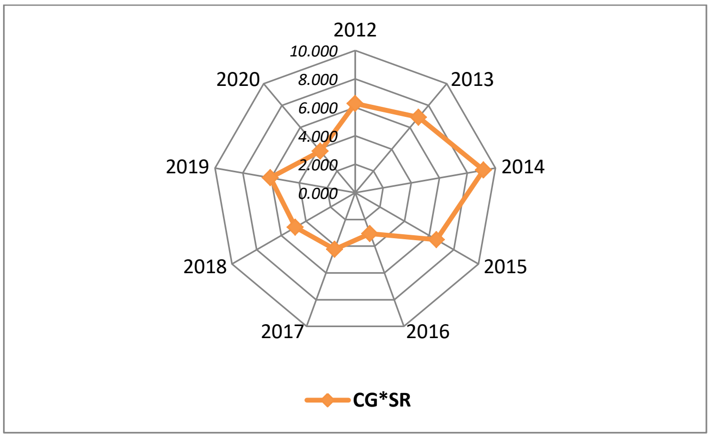

Figure 5. Moderation average value of property and real estate sample companies in IDX

Source: Formed by the authors

Figure 5 confirms that the results of the moderating variables on corporate governance and systematic risk experience instability. The biggest peak was in 2014, where the average moderation value reached 9,159. In 2016 was the lowest period, as property and real estate values reached the level of 3.056.

Spriestersbach et al. (2009) inform that descriptive statistics function to explain data, understand, and interpret an event that is collected on a particular object, investigation, and do not arrive at generalizations or conclusions about the observations being investigated. The distribution of data relating to the variables in this session is calculated through Table 3 including the mean, maximum, minimum, median, SD, skewness, and kurtosis with varying values.

Table 3. Review of descriptive statistics (n = 369)

	CG	SR	CH	CG*SR
Mean	5.118	1.106	0.105	5.663
Maximum	5.22	1.78	0.13	9.16
Minimum	4.93	0.59	0.06	3.06

Median	5.14	1.116	0.109	6.052
Std. Deviation (SD)	0.093	0.366	0.020	1.876
Skewness	-1.189	0.429	-0.877	0.444
Kurtosis	0.833	-0.020	0.460	0.082

Source: Formed by the authors

The output on descriptive statistics evaluates that corporate governance has the highest mean, maximum, minimum, median, and kurtosis acquisition when compared to the other two variables. For primary school achievement and skewness, it is precisely the systematic risk that is greatest. In contrast to cash holding, the overall score in the descriptive statistical component is the lowest. Moderation of corporate governance using systematic risk (beta) proved to be positive, where the standard deviation was quite high at 1.876 and the maximum value reached 9.16.

Table 4. Data panel regression analysis

	Coeff.	Std. Error	t-Statistic	Prob.	Direction	Conclusion
(Constant)	0.255	0.069	5.490	0.017 <0.05		
CG	1.528	0.038	4.184	0.033 <0.05	(+)	Accepted
SR	-0.146	0.078	-1.328	0.304> 0.05	(-)	Rejected
CG*SR	2.763	0.169	3.142	0.026 <0.05	(+)	Accepted
R	0.964					
R^2	0.929					
F-Statistic	2.876					
F-Sig.	0.025					

Source: Formed by the authors, *Note:* p> 0.05

Simultaneous testing ensures that the three recommended variables (corporate governance, systematic risk, and cash holding) have a significant impact, where the coefficient is a constant of 0.255 with a probability of 0.017 or the level of significance is greater than the F-statistic. Overall, the proposed model is feasible or has met the assumptions based on statistical criteria because the correlation (R) is classified as very close and the coefficient of determination (R^2) reaches 92.9%. That is, 7.1% are other variables outside the study model or can be said to be a residual factor.

Furthermore, for partial and moderation testing based on Table 4, it appears that the results are very different from the previous ones. Corporate governance has a positive-significant effect on cash holding, whereas systematic risk has a negative-significant impact on cash holding. Interestingly, the relationship between corporate governance and cash holding is moderated by systematic risk, the result is positive-significant so that systematic risk is a variable that is considered appropriate in influencing the two relationships. Brief explanations of the achievements in each hypothesis, interpreted by corporate governance on cash holding are p-value <0.05, systematic risk and cash holding are indicated by p-value> 0.05, then systematic risk on corporate governance and cash holding is obtained. amounting to 0.026 <0.05. The probability level used as a standard in this model is 5%.

Discussions

With EViews 8, it can be seen that the systematic risk variable used as a moderating variable (a type of moderation potential) can affect the relationship between corporate governance and cash holding, or the third hypothesis is accepted.

The findings highlight the moderation between the systematic risk used and corporate governance that has had a significant impact on the sustainability of cash holding. In addition, these results are in line with the hypothesis that has been developed, in which systematic risk has played a significant role as a moderating variable that strengthens the relationship between corporate governance and cash holding. This also reflects that through systematic risk, investors can get profit now to predict future profits and income. The future profit if the investor is at risk of the company's windfall income is also lower. Thus, if the point is high, corporate governance beta will also increase and will cause the effect of systematic risk which is used as a moderating variable on corporate governance to increase rapidly and its effect on cash holdings is very close. Based on significant achievements, it confirms that in general companies contain the same pattern.

These results also present several previous studies that have discussed the close relationship between systematic risk, corporate governance, and ownership. The government allows managers to control cash flow to avoid under-investment and plays a monitoring role in regulating industry behavior. According to Hsu et al. (2014), this corresponds to the size of the responsibility of the independent director because it aims to monitor the manager's cash expenditure behavior and avoid investment restrictions.

Cash owned by investors plays an important role in company policy, even as the main thing. The dramatic increase in cash reserves, despite alternative instruments such as debt, derivatives, and lines of credit. Discussion of financial behavior, as a determinant of cash ownership and various reasons for companies to save cash. A systematic understanding of cash ownership in the financial sector certainly becomes the main focus to determine the direction of a company's sustainability (Cruz et al., 2019).

Ownership of corporate cash throughout the world has grown rapidly so far. As a result, various studies have highlighted and examined the ownership of cash on company results and company values. The effectiveness and efficiency of various corporate governance tools to limit cash ownership are important because these factors are fundamental to investor confidence that cash will not be wasted. The measurement scale associated with the empirical cash ownership study is closely related and has always been an interesting issue to be discussed (Amess et al., 2015).

Conclusions

This discovery made three important points. First, corporate governance has a positive and significant impact on cash in property and real estate companies. In line with the proposed hypothesis, that corporate governance has a positive significant effect on cash holdings. The relevance of agency theory seen from an agency perspective includes the problem of companies with high agency conflicts with weak corporate governance reducing cash holdings. Second, the systematic risk used has a negative and significant effect on cash holdings. Because the systematic risk used can be understood as the risk of a stock, where a higher risk tends to increase in cash flow situations, where investors prefer high-risk investments with large returns looking for returns. Third, the systematic risk that is used as a moderating variable (moderation type) can affect the potential for corporate governance in holding cash. There is an agreement with moderation through the systematic risk that we evaluate so that corporate governance has a significantly positive relationship with cash holdings.

The limitations and weaknesses that refer to the results of the presentation, we recommend that in future studies consider other aspects related to the weak moderation of systematic risk in its effects on corporate governance and cash storage. In general, the focus on the value of corporate governance, systematic risk, and cash retention for 2020 is below average when compared to other periods. As is well known, the effects of Covid-19 have triggered global problems, including financial markets. Falling share prices in various countries triggered drastic declines in a number of sectors and had a very real impact on the macroeconomy. Thus, the relevant dimensions have attracted attention and can be a reference for future follow-up.

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